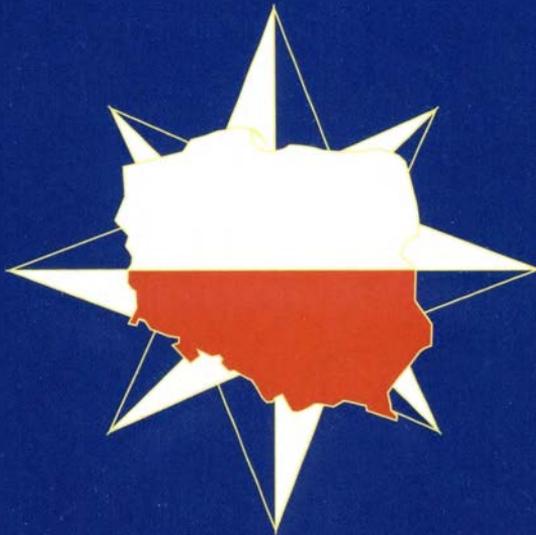


POLISH ACADEMY OF SCIENCES
INSTITUTE OF GEOGRAPHY AND SPATIAL ORGANIZATION

Geopolitical Studies

vol. 15

**COUNTRIES OF CENTRAL & EASTERN EUROPE
VERSUS GLOBAL ECONOMIC CRISIS**



Warsaw



2009

POLISH ACADEMY OF SCIENCES
INSTITUTE OF GEOGRAPHY AND SPATIAL ORGANIZATION

UNIVERSITY OF RZESZÓW
COMMISSION OF COMMUNICATIONAL GEOGRAPHY
OF THE POLISH GEOGRAPHICAL SOCIETY

Geopolitical Studies

vol. 15

**COUNTRIES OF CENTRAL & EASTERN EUROPE
VERSUS GLOBAL ECONOMIC CRISIS**

edited by

Jerzy Kitowski

Warsaw



2009

Institute of Geography and Spatial Organization
Polish Academy of Sciences
Twarda 51/55, 00-818 Warszawa, Poland

Reviewer
Prof. dr Tadeusz PALMOWSKI

Translation from English
by Authors and Krzysztof TUCHOLSKI

Technical Edition
Dorota WALCZYK-KWOKA
Renata GANCARZ

ISSN 1429-009X

**The publication partly financed by the Ministry of Science
and Higher Education**

CONTENTS

| | | |
|---|--|-----|
| R. SZUL | – CRISIS, THE WORLD POLITICAL AND ECONOMIC SYSTEM, AND ECONOMIC THEORIES..... | 5 |
| Z. ZIOŁO | – CONDITIONS OF SOCIO-ECONOMIC TRANSFORMATIONS IN COUNTRIES OF CENTRAL AND EASTERN EUROPE..... | 19 |
| L. JODKOWSKA | – POLISH ECONOMY IN THE TIME OF CRISIS AGAINST THE BACKDROP OF CEE COUNTRIES..... | 29 |
| R. NESTEROWICZ | – GLOBALIZATION OF FINANCIAL MARKETS AND RISK OF ECONOMIC CRISIS..... | 45 |
| L. NIEMCZYK | – MONETARY CRISIS AS ELEMENT OF FINANCIAL CRISIS 2007-2009..... | 57 |
| T. ŚPIEWAK | – FOREIGN CURRENCY OPTIONS – INSTRUMENTS OF RISK MANAGEMENT IN TIMES OF CRISIS. OPPORTUNITIES AND THREATS..... | 69 |
| P. FILIP | – TAX COMPETITION WITHIN THE EUROPEAN UNION AS AN OPPORTUNITY OF REGIONAL DEVELOPMENT..... | 87 |
| B. SOWA | – VALUE ADDED TAX IN TURNOVER WITHIN THE EUROPEAN UNION (SELECTED ASPECTS) | 99 |
| R. KATA | – SECTOR OF CO-OPERATIVE BANKS IN POLAND UNDER CRISIS CONDITIONS ON FINANCIAL MARKETS..... | 109 |
| P. GANCARZ | – BANKCARDS AS STIMULATING FACTORS OF ECONOMIC GROWTH..... | 123 |
| T. RACHWAŁ | – CHANGES OF INDUSTRY IN THE COUNTRIES OF CENTRAL AND EASTERN EUROPE UNDER CONDITIONS OF ECONOMIC TRANSFORMATION AND EUROPEAN INTEGRATION..... | 133 |
| T. KOMORNICKI | – ASSESSMENT OF REGIONAL ECONOMIC HAZARD BASED ON EXPORT STATISTICS..... | 165 |
| P. FRĄCZEK | – THE PROSPECTS OF ENSURING SECURITY OF NATURAL GAS DELIVERIES TO POLAND..... | 183 |
| W. KARPIŃSKA- -MIZIELIŃSKA T. SMUGA | – STRUCTURAL FUNDS – ENTERPRISE – CRISIS..... | 199 |
| M. ZALESKO | – STATE AND MARKET AS THE INSTITUTIONS COOPERATING DURING A RECESSION..... | 211 |

| | | |
|---------------------------------------|---|-----|
| Ł. FURMAN W. FURMAN J. KITOWSKI | – ECONOMIC SITUATION OF COMPANIES DURING THE CRISIS 2008-2009..... | 221 |
| | – INFLUENCE OF GLOBAL ECONOMIC CRISIS ON OPERATION OF SPECIAL ECONOMIC ZONES IN POLAND..... | 235 |
| V. SZEKELY | – CONCEPT OF CLUSTERS – SOLUTION TO THE ECONOMIC CRISIS?..... | 263 |
| L. KALISZCZAK | – ENTREPRENEURSHIP IN POLAND IN THE DAY OF THE GLOBAL CRISIS AND ITS CONDITIONS..... | 275 |
| W. LICHOTA | – INFLUENCE OF GLOBAL ECONOMIC CRISIS ON FINANCIAL STANDING OF HSW – ZAKŁAD ZESPOŁÓW MECHANICZNYCH SP. Z O.O. – (VERIFICATION OF FINANCIAL ANALYSIS METHODS)..... | 289 |
| M. KOSNO | – BIPOLARITY OF COACHING IN ECONOMIC CRISIS..... | 299 |
| J. ROGOWSKI | – ROLE OF SMALL AND MEDIUM ENTERPRISES IN ECONOMY IN TIMES OF GLOBAL CRISIS... | 305 |
| J. BRDULAK | – INFRASTRUCTURAL OPPORTUNITIES FOR DEVELOPMENT OF BORDERLANDS (ON THE EXAMPLE OF AIRPORT INFRASTRUCTURE)... | 319 |
| S. CIOK | – REGIONAL IMAGE OF GLOBAL ECONOMIC CRISIS ON THE EXAMPLE OF LOWER SILESIA..... | 325 |
| J. KĘDRA | – ATTITUDES TOWARDS GLOBAL ECONOMIC CRISIS ON EXAMPLE OF SELECTED INHABITANTS OF PODKARPACIE..... | 335 |
| S. TARKHOV | – CHINESE RAILWAYS IN THE CONDITIONS OF GLOBAL ECONOMIC CRISIS..... | 345 |
| V. DAVGIRDAS | – EMIGRATION FROM LITHUANIA AND DISTRIBUTION OF LITHUANIANS IN THE WORLD | 369 |
| E. KRIAUCIVNAS | – REGIONAL ASPECTS OF ECOTOURISM IN LITHUANIA..... | 383 |
| E. RABIEJ | – DIAGNOSIS RELATED GROUP SYSTEM AS A COST REDUCING TOOL IN HEALTH CARE (ON THE EXAMPLE OF POLAND AND ESTONI | 395 |
| S. MACIOŁ | – STUDIES SYSTEM IN THE BEST EUROPEAN UNIVERSITIES – LESSONS FOR POLAND..... | 419 |

CRISIS, THE WORLD POLITICAL AND ECONOMIC SYSTEM, AND ECONOMIC THEORIES

Roman SZUL

University of Warsaw
Institute for Regional and Local Studies
Warsaw, Poland
ul. Krakowskie Przemiescie 30
r.szul@chello.pl

Introduction

The present global economic crisis raises some fundamental questions concerning composition and functioning of the world political and economic system, economic policy and economic theories behind this policy. In particular, the questions relate to globalisation and its philosophy and way of working (whether globalisation is a *perpetuum mobile* that can only expand and strengthen its power), the role of state (nation state) as an economic agent (is it really disappearing in the globalising economy?), position of individual states (or nations) in the global political-economic setting, especially the position of the USA in it, the philosophy of democracy, free market and neo-liberalism as until recently considered as self-evident principles and goals of evolution of political and economic system.

Attempts at answering these questions gives opportunity to re-examine the world political and economic system and economic theories.

Evolution of the world system and globalisation

The notion of globalisation has been very popular over recent twenty years or so. The question is, however, whether process forming globalisation also started twenty years ago or are much older

According to one opinion globalisation is really something new that started in the last quarter of the 20th century. According to this opinion globalisation is irreversible, because irreversible is the power and progress in technology (especially IT and transportation technology – the very engine of globalisation), irre-

versible is the interest of business in free circulation of capital and goods in search for better location and profits, irreversible is the desire for freedom of action intrinsically linked with globalisation. According to this view any obstacle to free circulation of capital, goods and information (not necessarily to free circulation of persons) are going to be removed. One such obstacle is the institution of nation state. Consequently, nation state is wreaking and is going to disappear replaced by a network of global companies, non-governmental organisations, supranational institutions (like the European Union, IMF, World Bank, etc), subnational (regional) governments, etc.¹ This opinion is strictly connected with the liberal (or neo-liberal) economic philosophy and policy which emphasises merits of free circulation of capital, free entrepreneurship, limitation of the power of state (government), dismantling of the welfare state and destroying the power of workers' organisations. This opinion on globalisation also took for granted the international political order in which the United States played the role of the sole global superpower.

According to the other view, the present situation is nothing completely new in the history of humankind. If we consider globalisation as a process of spreading of ideas, information, economic relations and political power worldwide, then we see that the situation at the turn of the 20th and 21st century is similar to other situations in the past². What makes the present situation different from those in the past is the intensity and speed of circulation of goods, money and information, and not the logic of the circulation. As the history demonstrates, one of characteristics of this process is its instability and changeability. In other words, the process of globalisation has had its ups and downs, centres propelling globalisation have been moving (from one country or continent to another one) together with changes in driving forces of globalisation.

If one accepts the latter opinion, and according to this author this opinion is more reliable than the previous one, several (at least three) stages or waves of globalisation can be distinguished.

The first really „global” **wave of globalisation** started in the XV and XVI centuries in the epoch of great discoveries and early expansion of European colonialism. It was characterized by a worldwide expansion of trade and interna-

¹ The mechanism of weakening the role of state in recent years has been subject of many analyses. Among the most outstanding see Manuel Castells's „The Power of Identity”, especially chapter 5 „Globalization, Identification, and the State: A Powerless State or a Network State? M. Castells „The Power of Identity”, 2-bd Edition, Blackwell Publishing, 2003.

² This way of thinking is close to the Immanuel Wallerstein's concept of World-System. See I. Wallerstein; *World-System Analysis. An Introduction*. Duke University Press, 2004. In Polish literature Wallerstein's idea is best described in Zbigniew Rykiel, *Podstawy Geografii Politycznej*, PWE, Warszawa 2006, rozdz. 7, „Ekonomiczno-polityczna struktura współczesnego świata”.

tional division of labours, worldwide circulation of persons (quite often involuntarily – as slaves), ideas, diffusion of Christian religion and (some) European languages, mixing of races, etc. It was also accompanied by conflicts between expanding and dominating Europeans and local populations, by attempts of non-Europeans at defending themselves by self-isolation (Japan) or waging wars. Driving forces behind this process were „three Gs” – God, Gold and Glory³, in other words the mission of bringing the true faith to pagans and infidels, the desire for profits (from robbery of gold) and glory for missionaries, conquerors and their rulers (kings, emperors). Centres of this wave of globalisation were moving from the Iberian Peninsula (Spain and Portugal) to the Netherlands and then to England. In this very period the world started to emerge as an internally interlined system or the world system. This system was composed by a centre and peripheries, centres being located in the aforementioned countries of Western Europe, and peripheries in other continents, although large parts of the globe (first of all interiors of Africa and Asia) were outside the world system.

In the 19th century the first wave of globalisation lost its momentum and its decline lasted to the first decades of the 19th century. Evidences of this decline was independence of American colonies from European empires (England, Spain, Portugal and France) by the end of the 18th and in the early 19th century. Together with the political control European metropolises lost possibility to impose their economic division of labour to newly emerged American states and to control its social and cultural development. New centres of power started to grow in America eventually challenging the central position of (Western) Europe.

The second wave of globalisation started in the first half of the 19th century. Its driving ideas were Civilisation (instead of God), Gold (profitable trade by imposing unequal international division of labour, often by force) and Glory (this time Glory of a given nation). The centres of globalisation were the United Kingdom, followed and challenged by some other European states: France, the Netherlands, Belgium, Russia, and, later Germany and Italy. This wave of globalisation was largely due to progress in technology: steam engine (especially important was steam ship), railway, machine gun, then electricity, telegraph, telephone, etc. This wave of globalisation, usually called colonialism, was characterised by imposition of (Western) European states of unequal division of labour to their colonies and dependent states in search for sources of cheap raw materials and markets for their industrial products. By the end of the 19th century the UK, being economically, technologically, militarily and politically the most powerful nation, managed to impose liberalisation of international trade,

³ See David S. Landes: *The Wealth and Poverty of Nations*, Polish edition: *Bogactwo i nędza narodów*, Muza, Warszawa 2005.

because it was in interests of British industry as liberalisation opened up foreign markets for its products without presenting a threat of competition in domestic market due to British technological superiority.

The second wave of globalisation strengthened and broadened political, economic and cultural domination of the European centre over peripheries in Africa, Asia and Latin America.

Among leading driving forces of the second wave of globalisation was nationalism in Europe resulting in aggressive competition among European nations for new territories (imperialism) and acceptance of using arm forces (wars) as a means of solving international disputes⁴. The final outcome of this logic was the outbreak of the World War (1914-1918) and its immediate and more distant consequences: weakening of the European powers in the world system, Russian socialist revolution (1917), Second World War, Chinese socialist revolution, division of the world into two camps: socialism and capitalism (the cold war). The Great Recession of the 1920s/30s can also be attributed to the logic of the 19th century nationalism: nationalistic attitudes of governments (the so called „beggar your neighbours” economic policy) – protectionism, bans on imports etc. aggravated the economic slowdown turning it into a global crisis. The joint result of all the above mentioned events was the decline (retreat) of globalisation.

The third wave of globalisation started around 1980 (deregulation of financial and commodity markets leading to acceleration of the speed of circulation of capitals, especially financial capital). This was also possible due to a rapid progress in technology, especially in information and telecommunication technology, and due to the development of long distance air transport. This wave of globalisation got momentum with the end of the cold war (1989/91) and (apparent) victory of Western values of democracy and free market in the former socialist countries.

The „Golden Decade” of the 1990s and globalisation

Decade of the 1990s deserves special attention as it was that time when globalisation and the world system took their clearest (model) form.

The world system was centred on the USA as the sole and multidimensional global superpower. The USA dominated militarily, politically, economically, technologically and culturally. US American values of liberal democracy, free

⁴ This philosophy and its political results were very well described in Rykiel, op. Cit, and R. Kuxniar; *Polityka i siła. Studia strategiczne – zarys problematyki*. Scholar, Warszawa 2005, especially Chapter 2 *Idea i naród w służbie strategii, czyli strategii wiek dojrzały*.

market, human rights, etc., American pop culture and the English language were generally perceived as universal values and the United States as the model to be followed. American dollar was unquestionable world currency. American demand for foreign goods stimulated export and economic growth of many countries. American technological innovations contributed to the global progress in technology and confirmed the position of the USA as the most competitive and innovative economy – pillar of the global economic system.

The rest of the world formed (or was perceived as forming) concentric rings around the USA: Western Europe and Japan as weaker elements of the „triad” composing (together with the USA) the global centre, some countries (South-Eastern Asia, Southern Europe, some former socialist countries in Central-Eastern Europe) as the first (or semi-) periphery, and others as more distant peripheries.

Of special importance was economic policy and economic theories behind this policy. These theories are usually called neo-liberalism (or neo-liberalism-monetarism). The central element of the policy and theory was belief in free market as the best mechanism of regulation of economic activity and the conviction that private ownership and unfettered entrepreneurship and competition are an indispensable precondition for the smooth functioning of the market economy. Consequently, privatisation and deregulation of financial markets and liberalisation of international trade got high priority in this theory. These elements were combined with the idea of „sound” monetary and fiscal policy which meant elimination of public deficits and reducing taxes resulting, among other things, in cuts in public spending and dismantling of welfare state. These theories were fundament of the famous Washington consensus (1983) – a set of norms of good economic policy that largely influenced governments of Western countries, international institutions (first of all the IMF) and governments of peripheral countries dependent on the former. Interestingly and very importantly, government of the USA didn't consider that the Washington consensus was to be applied in the USA too, and the USA run high budget deficits⁵.

Theory and ideology of neo-liberalism-monetarism in Western countries replaced the Keynesian theory which was a basis of economic policy during the „thirty glorious years” (1945-1975) and which attributed the state (government) the role of active economic regulator, first of all responsible for stimulating economic activity via sustaining adequate demand (high public spending, if necessary financed by budget deficits).

The neoliberal-monetarist theory won (although to various degree in various countries) in the USA and Western Europe, it was perceived as the only really

⁵ A critical analysis of the Washington consensus and neo-liberal economic theory and policy can be found in J. Stiglitz *Globalization And Its Discontents* W. W North & Company, New York, London, 2002.

capitalist model in Central-Eastern European countries that had recently decided to build capitalist economy, and was imposed by international financial institutions to many countries dependent on financial assistance of those institutions.

The aforementioned deregulation of financial markets and liberalisation of international trade resulted in acceleration of world-wide circulation of capital, especially because it enabled gaining high profits from short term financial investments (speculation). Opening up of huge markets in Russia, China, India etc. only contributed to this process. It was the most visible phenomenon of the process of integration of the world economy, called globalisation. In such a way, globalisation (in our terminology – the third wave of it) was inseparably connected with liberalisation and deregulation.

Mobility of capital and competition for investments (among national, regional and local governments) strengthened the position of the investor, or more correctly – of top managers of companies. Additionally, transformation in relationships between shareholders and managers in companies giving preponderance to the latter, even strengthened the economic and financial position (enormous salaries and bonuses) of the CEOs, especially in the banking sector. The high increase in income of the CEOs was in sharp contrast with slow increase or even stagnation or decrease in incomes of other sectors of the population. It was, however, accepted (except for radical and marginal political groups) as „normal” in a market economy.

There were not only governments competing for investors, but also companies, deprived from protection of national governments and attracted by perspectives of high profits abroad, were competing for old and new markets. Competition was necessity, or it was presented as such by the mainstream economic theory. The key to success in the competition, according to this theory, was innovation, information and knowledge (since: the very popular notion of „knowledge-based economy”).

It should be stressed that the ideology of neo-liberalism and globalisation promised benefits to whole societies, and not to a handful of successful CEOs of international companies and bankers.

The end of the „Golden Decade” – changes in the world system after 2000

The decade that followed the „Golden Decade” of the 1990s has brought about significant changes to the construction and functioning of the world system, to globalisation and to economic theories.

From the geopolitical point of view the most spectacular is the multidimensional weakening of the power of the USA. It is weakening of the economic, political, military and cultural („soft”) power of the USA.

The current (2009) global economic recession which started in the USA with the crisis in the housing market in 2007 and then spread to the US banking sector and finally „infected” the global economy, has revealed both importance of the USA for the world system and the economic weakness of the USA. Some characteristics of the US economy has demonstrated structural shortcomings of potentially serious consequences for its position in the world system. It is first of all its low propensity for accumulation which combined with its high propensity for consumption and other spending results in high budget and trading deficits and high dependence on foreign borrowings. It became visible that the high demand of the US economy is hardly possible without borrowings and growing debts (of American households, firms and government). Decrease in demand resulting from decrease in financing of the economy by banks and from the pessimistic mood of American consumers shortened output in the American economy and in countries exporting to the USA (such as China and most EU countries). Measures undertaken by the US government in late 2008 and early 2009 aiming at stimulating demand and output, regardless of their short term efficiency only add to the already enormous public debt and to concerns about perspectives of the US economy in the longer term. It also raises doubts concerning American political and economic sovereignty given the high financial dependence of the USA on China and other countries.

Terrorist attacks of September 11th 2001 in New York and Washington demonstrated vulnerability of the USA to such attacks and thus its limited military power and security. More importantly, they triggered a series of events that undermined position of the USA as the unquestionable sole military and political superpower. These events include first of all unilateral decision to attack Iraq (without approval of any international institution and neglecting opinions of European allies) and the endless wars in Afghanistan and Iraq. These events sharply deteriorated political relationships between USA and almost the whole world and undermined prestige of the USA as a democratic nation respecting international law as well as revealed inability of the USA to win the wars. It turned out that the USA can generate an international problem but can't solve it.

Weakening of the „soft power” of the USA only added to the above developments. For many observers, especially politicians and political forces not very much inclined to respect democracy (in such countries as Russia, China, Venezuela, North Korea, Iran, etc.), it was an encouragement for their attitudes.

In the time of weakening of the economic and political position of the USA other powers emerged as challengers – first of all China, Russia, India and Brazil with explicit ambition to transform the US-cantered world system into a multipolar system. Of special importance is China – while almost the whole world has fallen into recession, China's economy in 2009 still reveals a robust growth of 8-9% per year. The question is whether the economically and politically (as well as ideologically and culturally) multipolar or China-centred world

system would function the same way as it did in the time of Pax Americana of the 1990s. The question is related also to globalisation. There are signs, for instance in China, of greater reliance on own market (instead on foreign markets), of boosting internal demand as a means to overcome recession, combined with efforts to ensure future supplies of energy by buying sources of energy (oil field etc) abroad⁶, etc. This would mean a new model of international economic relations with lesser importance of international trade and circulation of capital – the fundament of the third wave of globalisation, as well as a new structure of the world economic system in China as its biggest player.

The present economic crisis quite suddenly restored the position of state (nation state) as an economic (as well as political) agent. There were national governments to take crucial decisions during the present economic recession. First they quite quickly and energetically acted in autumn 2008 to save banking system in their respective states. Symptomatically, governments of EU member states completely ignored EU rules of competition, of public assistance for private sector, etc. Later on most highly developed states undertook expensive programmes of stimulating demand and output, of nationalisation and restructuring of ailing branches and firms (with the case of General Motors as the best evidence of this activity).

What is even more important in the long term, the present engagement of governments in rescuing banks, in stimulating demand, in saving and restructuring industrial firms, etc. resulting in accumulating huge budget deficits and public indebtedness, will not allow national governments to „resign” and withdraw from the economy. Simply they will have to deal with economy in order to find money for repaying or servicing the debt.

Another field of activity of national governments enforced by the financial crisis is re-regulating and controlling of the banking system and capital markets. Apart from increased role of governments it will probably lead to a lesser intensity of global circulation of capital (too risky, speculative and doubtful financial operations will be blocked by the controlling system).

Last but not least, the present financial crisis has toppled down the „hero of the Golden Decade” – the rich, clever banker. Now, in the public opinion even in such liberal countries as the USA and Britain, „the greed of bankers” is to blame for crisis and there is little acceptance for enormous incomes (especially for the so called „bonuses”) of bankers and of top managers in general. It is a significant change in public opinion in comparison with the „Golden Decade”.

⁶ See: *In the time of crisis China has went out to the world .to overtake deposits of oil and natural gas. The biggest Chinese oil company CNPC this year spent 46 billion dollars for this, and has received from Beijing more 30 billion for further purchases „Chiny wykupują ropę świata”*, Gazeta Wyborcza 31.09.2009.

As can be seen from the above analysis, the present economic crisis imposes or requires introducing serious changes into the working of the economy – more governmental engagement in the economy, more public control over financial markets, less freedom and less power and revenues for top managers and bankers, less power of international (transactional) companies etc. These changes inevitably will affect global flows of capital and functioning of the global capital markets. Their outcome will probably be a decreased speed of circulation of capital, lesser amount of foreign direct investment (a tendency that has already been observed)⁷. This can be called „deglobalisation” or correction to the mechanism of globalisation.

The crisis has, however, revealed another phenomenon, which in a way confirms the logic of globalisation. It is the generally perceived consciousness of necessity of cooperation of national governments in coping with the crisis. The G-20 meetings and decisions, the re-strengthened and re-modelled role of the International Monetary Fund, cooperation of national governments within the EU in dealing with the crisis confirm this tendency. It is, however, a significantly different mode of globalisation – the leading role belongs to governments rather than to companies. Of interest is the new position and attitude of the IMF – it is no longer enforcing the Washington consensus, privatisation, „sound” financial policy, etc.

The crisis and economic theories

As was pointed out earlier, the „golden age” of globalisation was strictly connected with the economic theory usually called „neoliberalism”. Therefore, position of this theory in the time of crisis deserves an attention.

All economic (and not only economic) theories emerge as a response to a given situation, to a given problem and are connected with interests and mentality of a specific group. After their birth theories start living their own life, acquiring their supporters and opponents, changing their focuses, losing their original meaning, getting stronger or weaker, etc. Some of them, in some circumstances, become „systemic” (or supporting a given social, political and economic system) or anti-systemic. As regards economic theories, in recent decades three large groups of economic theories could be distinguished:

- Neoliberal (sometimes called neoclassical) or neoliberal-monetarist.
- Keynesian (some economists consider Keynesianism as a specific kind of neoclassical economics).
- Marxist or radical leftist.

⁷ According to UNCTAD, foreign direct investment in 2008 amounted to 1,7 trillion dollars and in 2009 will probably fall to 1.2 trillion. *Kryzys tlumi zagraniczne inwestycje*, Gazeta Wyborcza, 18.09. 2009.

As it is known, Marxist theory, created as a reaction to social injustice of the „wild” 19th century capitalism, laid ideological foundations to economies of „real socialism” as well as has been an intellectual instrument in criticising shortcomings of the capitalist (free market) economy and related phenomena, including unjust social and international division of labour. After the collapse of the „real socialism” and rejection of Marxism in former socialist countries, it remained (in many variations) present in universities in Western Europe and USA, among leftist intellectuals and anti-globalisation activists and among many political activists in the „third world”, especially in Latin America.

Keynesian theory emerged as a reaction to the Great Depression of the 1920/30 attributed by J. M. Keynes and his followers to insufficient demand and inability of the free market to overcome the crisis without state intervention. After the WWII this theory was intellectual fundament of the so called welfare state – state controlled and regulated market economies of Western Europe. The primetime of this theory were „thirty glorious years” of economic growth and prosperity (1945-1975)⁸. In the 1970s economic policy based on Keynesian recipes stopped giving expected results: it was blamed for „stagflation” – a combination of inflation and stagnation of economic growth, for low competitiveness of European (and American) economies in comparison with Eastern Asia and other NICs (Newly Industrialized Countries), etc. In the 1980s Keynesian theory conceded its place as a leading economic theory to neoliberalism, but still remained quite popular among those who didn’t agree with neoliberalism and didn’t accept Marxism and radical anti-systemic ideologies.

Neoliberalism as the dominant theory and ideology appeared in the early 1980s (also known as „Thatcherism and Reaganomics”). It was a return to principal ideas of pre-Great Recession liberalism and classical economics. As noted earlier, it was a reaction to shortcomings of (late) Keynesianism. It advocated private entrepreneurship, „small government” (or withdrawal of state from economy), elimination of obstacles to free market etc. It was strictly connected with monetarism – a theory and ideology stressing the need for reducing public deficits and public spending. The primetime of neoliberalism-monetarism was the „Golden Decade” of the 1990s when former socialist countries embarked on building capitalism in accordance to this theory and when international financial institutions (like the IMF) confessed it in its activity all over the world. Due its emphasis on liberalisation of financial and commodity markets world-wide, it can be seen as the theory or ideology of globalisation.

The present economic crisis has changed the „theoretical landscape”, First of all, the crisis changed the mood of followers of various economic streams. Then, it forced policy makers to find responses and thus to look for practical

⁸ On the theory and ideology behind the „thirty glorious years” see e.g. R. Sakwa and A. Stevens *Contemporary Europe*, second edition, Palgrave, Basingstock, 2006.

theories or approaches how to deal with the crisis. Followers of Marxism and radical Left, apart from expressing their overt satisfaction that „capitalism is dead”, can not offer any solution. Adherents of neoliberalism have found themselves in a difficult situation as for many the economic crisis is also a crisis of neoliberalism. Some followers of neoliberalism try to persuade that nothing special is happening: economic ups and downs is a normal economic cycle in the market economy, you must only wait and see the recovery. Others argue that it is not economic liberalism and monetarism, but its absence to blame, because the principal cause of the financial crisis was the hyper-activity of American banks in lending credits, activity encouraged by the American government which didn't respect rules of sound monetary policy.

Policymakers confronted with the crisis and pressed by public opinion and voters in most cases felt being obliged to act quickly, without waiting for self-recovery of the economy and ignoring accusations of lack of market freedom and lack of sound monetary policy of the USA for the crisis as useless for guidance of anti-crisis economic policy. In such a situation the only theoretical basis for economic policy remained Keynesianism, considered as the theory which helped rescue the world from the Great Recession. As a result Keynesianism or Neo-Keynesianism, has become, again in the centre of economic thinking. Whether, however, Keynesian theory is adequate, or to what extent it is adequate, to the present conditions, is to be seen in the future.

Poland as a special case

The case of Poland during the crisis deserves some attention as it demonstrates paradoxes of economy. In mid-2009 Poland is the only country in Europe to have positive growth of GDP (despite a significant drop in the index of growth). It is attributable to several factors. First, it is result of Poland's relatively low dependence on foreign markets. While the share of exports in GDP in such countries like Hungary or the Czech Republic amounts to about $\frac{2}{3}$, in Poland it is about 40%. This low share of exports in GDP, in turn, is due to the relatively large internal market (of 38 million inhabitants, compared to 10 millions in Hungary and the Czech Republic) but also to Poland's lower competitiveness on global markets. Therefore the decrease in exports, a very important factor of crisis world-wide, hit Poland less than other countries. Second, it is low impact of decline of shares on stock exchange on behaviour of Polish consumers. While in most countries this decline made shareholders-consumers consider themselves poorer and forced them to save money and reduce demand, in Poland such a link between developments on the stock exchange and consumer mood didn't exist. This results, among other things, from underdevelopment of capital market, poverty and conservative-

ness of Polish society: about $\frac{3}{4}$ of Polish households don't have any saving, and most of those who do have, keep their savings in other instruments than stock exchange company shares. Therefore, developments on the stock exchange are irrelevant for behaviours of vast majority of households. Third, it is conservatism of Polish banking system and conservatism of Polish consumers and companies as bank credit borrowers. This conservatism has made Polish consumers and firm less dependent on bank credits in comparison to the rest of the developed world, and Polish banks less vulnerable to bad. debts. Consequently, turbulences in the credit action in 2008 and 2009 were in Poland relatively mild (no bank was in serious troubles) and had minor impact on consumers behaviour. Forth, it is a result of activity of other governments, notably of the German government, stimulating demand, for instance for cars, which also helped Polish producers. Fifth, it is a result of Poland having its own currency – zloty, and its weakness during the crisis. The weak Polish currency, especially in comparison to the euro, helped Polish exporters, encouraged foreigners from the euro zone (first of all Germans and Slovaks) to make shopping in Poland and forced many Poles to spend holidays in Poland rather than abroad. It should be noted that possessing its own currency was regarded as a sign of weakness of Polish economy, because otherwise Poland would have had introduced euro. Sixth, it is a result of behaviour of Polish society which didn't change its consumer habits not reducing its demand. Poles generally ignored information on economic crisis. This can be attributed to a lesser economic education of poles or to their extraordinary wisdom.

As can be seen, the success of Poland during the crisis is, paradoxically, generally due to its relative backwardness measured by standards of neoliberal economics: lower competitiveness, lower internationalisation of the economy, conservatism of consumers and banks, underdevelopment of capital and money market, failure to enter euro zone, etc.

Conclusions

The present economic crisis is another of a series of events that started at the beginning of the current decade (or earlier) which are introducing substantial corrections to the world political and economic system. How deep and lasting these corrections are going to be and which results they may bring about, is uncertain as the turmoil is not over, yet, and there are aftershocks to be expected (e.g. as consequences of huge indebtedness of the USA and European countries accumulated to boost economy). These events include September 9, 2201 terrorist attacks on the USA, the still unfinished wars in Afghanistan and Iraq, the rise of new (and old) superpowers, such as China, Russia, India and Brazil with

clear ambitions to challenge the US global leadership, introduction and success of euro as a global currency – competitor to the US dollar, and others.

The combined impact of those events on the world political and economic system can be summarized as follows:

- transformation of the world system from a uni-polar US-centred system towards a multi-polar system, with pronounced role of China world-wide, and Russia in Europe, India in Southern Asia, and Brazil in South America. In this context the future position of the European Union is uncertain,
- crisis of neo-liberal economic theory and ideology as intellectual fundament of the world system. One of the most important element of this crisis is crisis of the ideology of disappearing state,
- retreat of the globalisation as known in the „Golden Decade” of the 1990s with declining amounts of global trade and investments,
- consciousness of global interdependence of states leading to international cooperation in dealing with the crisis, e.g. G-20 summits, strengthened role of the IMF to help countries in financial needs, global solidarity to countries most affected by the crisis (Iceland, Latvia, etc), avoidance (despite some attempts) from protectionist policies.

Streszczenie

KRYZYS A ŚWIATOWY SYSTEM POLITYCZNO-EKONOMICZNY I TEORIE EKONOMII

Obecny kryzys gospodarczy na świecie można interpretować jako kryzys światowego systemu polityczno-ekonomicznego i aktualnej fazy (fali) globalizacji oraz jako czynnik przewartościowujący obowiązujące teorie ekonomii i politykę gospodarczą. Obecny kryzys jako kryzys światowego systemu i globalizacji nie jest czymś wyjątkowym, gdyż światowy system polityczno-ekonomiczny przeżywa od czasu jego ukształtowania w połowie minionego tysiąclecia fazy wzrostu i regresu. Można mówić o trzech falach globalizacji: pierwsza w okresie XVI – połowa XVIII wieku, druga: początek XIX wieku do 1914, trzecia od ok. 1980 do chwili obecnej. Każda miała swoje siły napędowe, centra i peryferie, ideologie i technologie. W I fali siłami napędowymi były: szerzenie religii chrześcijańskiej, pogoń za złotem i chwała zdobywców i władców, centrami były Hiszpania, Portugalia, Niderlandy i Anglia; w II fali były to odpowiednio: szerzenie cywilizacji europejskiej jako uniwersalnej, pogoń za zyskiem z nieekwiwalentnego handlu, nacjonalizm, centrami były Anglia oraz konkurujące z nią mocarstwa europejskie: Francja, Niemcy, Włochy, Rosja, w III fali były to: szerzenie demokracji i wolnego rynku jako wartości uniwersalnej, pogoń za zyskiem (głównie z operacji finansowych) i dążenie do indywidualnych korzyści satysfakcji, głównym centrum były Stany Zjednoczone. Obecnie system światowy okresu

III fali globalizacji przechodzi zmiany: słabnie rola USA, erozji ulega model gospodarki wolnorynkowej, powraca aktywna rola państwa. W sferze teorii ekonomii następuje osłabienie dominującego dotąd nurtu neoliberalnego. Do łask wraca szkoła keynesowska. Aktywizują się różni inni krytycy neoliberalizmu.

CONDITIONS OF SOCIO-ECONOMIC TRANSFORMATIONS IN COUNTRIES OF CENTRAL AND EASTERN EUROPE

Zbigniew ZIOŁO

The Blessed Father Władysław Findysz
Podkarpacka Higher School
in Jasło

Under the conditions of the intensifying globalization and the associated European integration processes, and now of the intensifying world economic crisis, an important issue is becoming to analyze conditions of behaviour processes in various spatial scales, from the regional and national scale to the scale of the European continent, or the global scale. An important role in this respect is played by the changing economic, social and political situations in the global space, which affect individual countries with various intensification. As the consequence of the developing diverse economic and spatial links, other links are transformed and they change their meaning; they either integrate or disintegrate specific places of economic performance in the economic, social and cultural space. Intensification of economic and spatial links depends on the one hand on the degree of a given place attractiveness for generating endogenic development factors and attracting exogenic factors.

Taking the above assumptions, in this paper I will discuss the topic of shaping conditions for socio-economic transformation processes in countries of Central and Eastern Europe. Such conditions result from the intensifying globalization processes, implementation of new management forms connected with introduction of the market economy rules, forming of the knowledge-based economy and entering of the population into the informatics-based phase of development. These problems gain a special meaning in the face of the intensifying economic crisis that entails specific behaviour of economic entities, and elites of business and politics. The change of the global conditions is primarily affected by the world poles of economic growth such as the United States, Japan, and countries of Western Europe. Recently, an increasingly important role has been played by China, India, Russia and Brazil. Economies of those countries in the global space are becoming more and more competitive in relation to the previously formed global poles of growth. Today, as the result of the changing resources of capital and the increased possibilities of its flow, a new economic

division of the world is taking place. There are changes to attractiveness of places for new localization and starting of production, and market organization. The world players represented by various world corporations, supported by national governments look for the best places for their investing in order to gain the most favourable economic effects. This also creates new conditions and provokes respective political actions aiming at animation of economic growth and limitation of negative effects of the emerging crisis.

In face of the advancing process of the European integration, the development problems of central and eastern European countries, and shaping of economic, social, political and cultural relations between them belong to very important research and application topics. The solution of them should create good attitudes for specific strategic goals whose realization will affect forming modern socio-economic structures. Such problems are specifically stressed in work series prepared under the direction of J. Kitowski (1999, 2000, 2001). In the published volumes the Authors representing individual countries of Central and Eastern Europe presented interesting results of their own research. In understanding of the processes occurring on the areas of that part of Europe a meaningful role also play works by the following Authors: Eberhardt P., Komornicki T., 1995, Hauser J., Pedersen O. K., Ronit K., 1995, Kosiedorski 2008, Kostrubiec, Maik W., Jabłoński Z., 1997, Stasiak, Zgliński 1995, Komornicki, Zgliński 1995, Wysokińska 1995, Ziolo 1987, Ziolo, Rachwał 2006, 2009. This important research output gives some grounds for attempting to model conditions for forming transformation processes in the countries of Central and Eastern Europe.

Under these conditions in the global and European economy, the situation of the central and eastern European countries is also changing, as they must seek for themselves the most favourable place in the global space and undertake activities aiming at enhancing their attractiveness to attract external factors of development, and try to attain internal generation factors. The present economic transformations in these countries occur under conditions of polarization of the global economic space, a new situation evoked by the global economic crisis, and also resulting from the historic process that has formed specific social attitudes, and internal and external relations, and political relations between individual countries.

In these distributions we assume that the process of socio-economic and political transformations in the countries of Central and Eastern Europe takes place under influence of impulses of diverse categories that result from the different category, and they are also formed by external conditions (Ziolo 1998). For the needs of the model we assume that for forming of the transformation process the most important influence is from impulses of diverse type and conditions occurring in the space: global (S – światowe), European (E), internal occurring in the structure of individual countries of Central and Eastern Europe (W – wewnętrzne), and internal occurring in the structure of individual states (P – państw).

Thus, the processes of the socio-economic and political transformations occur under the influence of many transformation factors. Between the stressed categories of conditions there occur diverse functional links in the form of social, economic, cultural, political and other links (relations). Intensification of mutual relations may be exposed by: growth, stagnation, regress or loss of the already existing links and elements, and also by appearance of new elements and the related networks of links.

The stressed categories of the environment are in a hierarchical system that should be analysed according to the mutual active and passive relations. This means that the forming economic, social and political processes in a given country of Central and Eastern Europe are dependent not only on internal conditions but also on the global and European conditions.

In the proposed model three categories of relations can be identified (table 1):

Table 1. Model of relations of central and eastern European countries with environment.

| Conditions (environment) | | Global | West European | Countries of Central and Eastern Europe | Individual states |
|---|-------|-------------------|-------------------|---|-------------------|
| | | S_1, \dots, S_n | E_1, \dots, E_m | W_1, \dots, W_z | P_1, \dots, P_k |
| Global | S_1 | s^s | s^e | s^w | s^p |
| | . | | | | |
| | S_n | | | | |
| West European | E_1 | e^s | e^e | e^w | e^p |
| | . | | | | |
| | E_m | | | | |
| Countries of Central and Eastern Europe | W_1 | w^s | w^e | w^w | w^p |
| | . | | | | |
| | W_z | | | | |
| Individual states | P_1 | p^s | p^e | p^w | p^p |
| | . | | | | |
| | P_k | | | | |

Source: Own study.

I. Relations occurring between specific categories of the environment are presented by matrixes located on the diagonal of the presented model. They are:

1. relations between impulses and global conditions (S_i):

$$S_{ij}^s \quad (i = j = 1, n)$$

2. relations between impulses and European conditions (E_i):

$$e_{ij}^e \quad (i = j = 1, m)$$

3. relations between impulses and conditions in the countries of Central and Eastern Europe (W_i):

$$W_{ij}^w \quad (i = j = 1, h)$$

4. relations between impulses and internal conditions occurring on the territories of individual states (P_i):

$$P_{ij}^p \quad (i = j = 1, k)$$

II. The second group is passive relations presented by matrix columns. E.g. the influence upon the conditions of the transformations processes in the countries of Central and Eastern Europe is illustrated by a matrix column represented by:

1. the influence of the global conditions upon them:

$$S_{ij}^w$$

2. the influence of the European conditions:

$$e_{ij}^w$$

3. the influence of conditions in a given country:

$$p_{ij}^w.$$

Similarly, the matrix columns specify the influence of diverse categories upon the global and European environment, and the situation in a given country.

III. The third group constitutes active relations that are illustrated by the matrix lines, e.g. the influence of the conditions in the countries of Central and Eastern Europe on the remaining categories of the conditions are illustrated by the matrix lines:

1. the influence of the state group on the global conditions:

$$W_{ij}^s$$

2. the influence on the European conditions:

$$W_{ij}^e$$

3. the influence on the mutual conditions in the individual states:

$$W_{ij}^p.$$

Similarly, the remaining matrix lines specify the influence of the remaining categories on the global and European environment, and the situations in a given country.

E.g. the matrix w_{ij}^s specifies the influence of the conditions in the states of Central and Eastern Europe on the global conditions, whereas the matrix S_{ij}^w

refers to the influence of the global conditions on the conditions in the states of Central and Eastern Europe. This means that the matrixes w^s_{ij} and s^w_{ij} are not equal and describe opposite directions of the links.

The basic factor of the economic development in individual states, including in the countries of Central and Eastern Europe, are international links that may be described by volumes of export and import. The relations are described by a matrix built of four blocks (table 2):

Table 2. Place of central and eastern European countries in space of world economy.

| Countries | | | Countries of Central and Eastern Europe | | | | | | | | | | Global poles of growth | | | | | | | Remaining countries | |
|---|------------|----------|---|--------|-----------|--------|------------|----------|---------|---------|----------|----------|------------------------|-------|--------|-------|-------|-------|-------|---------------------|--------|
| | | | Estonia | Latvia | Lithuania | Poland | Czech Rep. | Slovakia | Hungary | Romania | Bulgaria | Ukraine | Belarus | EU-15 | Russia | USA | Japan | China | India | | Brazil |
| | | | W_1 | W_2 | W_3 | W_4 | W_5 | W_6 | W_7 | W_8 | W_9 | W_{10} | W_{11} | Z_1 | Z_2 | Z_3 | Z_4 | Z_5 | Z_6 | | Z_7 |
| Countries of Central and Eastern Europe | Estonia | W_1 | w^w_{ij} | | | | | | | | | | w^z_{ij} | | | | | | | | |
| | Latvia | W_2 | | | | | | | | | | | | | | | | | | | |
| | Lithuania | W_3 | | | | | | | | | | | | | | | | | | | |
| | Poland | W_4 | | | | | | | | | | | | | | | | | | | |
| | Czech Rep. | W_5 | | | | | | | | | | | | | | | | | | | |
| | Slovakia | W_6 | | | | | | | | | | | | | | | | | | | |
| | Hungary | W_7 | | | | | | | | | | | | | | | | | | | |
| | Romania | W_8 | | | | | | | | | | | | | | | | | | | |
| | Bulgaria | W_9 | | | | | | | | | | | | | | | | | | | |
| | Ukraine | W_{10} | | | | | | | | | | | | | | | | | | | |
| | Belarus | W_{11} | | | | | | | | | | | | | | | | | | | |
| Global poles of growth | EU-15 | Z_1 | z^w_{ij} | | | | | | | | | | z^z_{ij} | | | | | | | | |
| | Russia | Z_2 | | | | | | | | | | | | | | | | | | | |
| | USA | Z_3 | | | | | | | | | | | | | | | | | | | |
| | Japan | Z_4 | | | | | | | | | | | | | | | | | | | |
| | China | Z_5 | | | | | | | | | | | | | | | | | | | |
| | India | Z_6 | | | | | | | | | | | | | | | | | | | |
| | Brazil | Z_7 | | | | | | | | | | | | | | | | | | | |
| Remaining countries | Z_8 | | | | | | | | | | | | | | | | | | | | |

Source: Z. Ziolo, own study.

- The first block W_{ij}^w , describes internal links occurring in the structure of the central and east European countries (W_1, \dots, W_n),
- The second block W_{ij}^z , presents the interaction (e.g. the value of commercial links) of the countries of Central and Eastern Europe with the global poles of economic growth (Z_1, \dots, Z_7) and the remaining countries (Z_8),
- The third block Z_{ij}^w presents the influence of the global poles of growth and the remaining countries on the economies of central and eastern European countries,
- The fourth block Z_{ij}^z , illustrates the relations occurring among the global poles of growth and the remaining countries.

The relations, depending on the research purpose, can be specified in relation to the value of import, export, the balance of commercial links or the capital flow.

Important issues in the animation process of the economic development are the sources of the financial supply. They may be, e.g. direct foreign investments or credits granted by banks operating on the domestic market. In the years 2008-2009 among the countries of Central and Eastern Europe the highest values of direct foreign investments featured Poland, where came 80.7 bn USD, then the Czech Republic (20.7 bn USD), Hungary (45.7 bn USD), Romania (35.6 bn USD), Slovakia and Bulgaria (17.2 bn USD each), and then Estonia and Lithuania. Whereas concerning the value of direct foreign investments per capita the highest indexes featured the Czech Republic (5,500 USD), Estonia (5,100 USD), Hungary (4,500 USD), Slovakia (3,100 USD), and the next place was held by Poland – 2,100 USD. (Kosiedorski 2008). This underlines a much differentiated influence of this factor on generating the socio-economic development processes. Hence, as recently as last year Estonia and Latvia were treated as the most dynamically developing new EU countries.

The second important factor animating the economic development is possibility to get favourable credits for the economic performance. Such actions are conditioned to some extent by links of bank institutions with the economy of a given country. In 2008 the share of foreign banking capital on the market of the analysed countries was much differentiated (table 3). The highest share of the foreign capital in the banking system was in Estonia (98%), the Czech Republic (97%), and Slovakia (96%); a much lower share of foreign banks featured Poland (67%), and Slovenia (29%); and the lowest share was in Russia (12%). A high share of the foreign capital on the market of a given country substantially affects the weakening of the economy during the crisis. A much smaller share of the foreign capital is on the market of Russia (12%) and Germany (ca. 3.5%). Shares of individual banks on the market in the countries of Central and Eastern Europe are differentiated. On the markets of the Baltic states it is Scandinavian banks that have the dominating share. The most important are here Swedbank and SEB, which in total have 75% of the market in Es-

tonia, 54% – in Lithuania, and 36% – in Latvia. Unicredit has the highest shares on the markets of Bosnia and Herzegovina, and Croatia (23% on each), and of Bulgaria, and Poland (15% on each). In Romania the dominant importance have Erste Bank and Societe Generale bank, which cover jointly 41% of the market. It should be stressed that banking institutions in the years of the crisis, mostly as the consequence of a specific state policy to save own economies, usually draw financial resources to the countries where their managements are located. This gives some possibilities to mitigate the crisis effects in those countries by means of proper economic instruments. As a consequence the negative influence of the crisis was marked to the most important extent in small countries with the highest share of foreign capital on their financial markets (e.g. in Estonia, Lithuania, Ireland, and Iceland). It must be stressed that the present economic crisis has its foundations in the financial crisis.

Table 3. Foreign banks on financial markets of central and eastern European countries in 2008.

| Countries | Shares of foreign banks on local markets | Shares on markets of biggest foreign banks | | | | | | | | | | | | | | | | |
|------------------------|--|--|-----|-------------|----------|-----|--------|----------|------------|------------------|-----|-------|--------|-------------|----------|--------|------------|-----|
| | | Unicredit | ING | Commerzbank | Swedbank | SEB | Nordea | DnB Nord | Raiffeisen | Societe Generale | KBC | Erste | Intesa | BNP Paribas | Bayrnt B | Intesa | Hypo Group | OTP |
| Estonia | 98 | | | | 52 | 23 | 8 | | | | | | | | | | | |
| Czech Republic | 97 | | | | | | | | 16 | 21 | 18 | | | | | | | |
| Slovakia | 96 | | | | | | | 15 | | | 18 | 17 | | | | | | |
| Bosnia and Herzegovina | 91 | 23 | | | | | | 20 | | | | | | | | | 21 | |
| Croatia | 90 | 23 | | | | | | | | | 12 | 18 | | | | | | |
| Lithuania | 88 | | | | 24 | 30 | | 13 | | | | | | | | | | |
| Bulgaria | 75 | 15 | | | | | | 10 | | | | | | | | | | 12 |
| Serbia | 75 | | | | | | | 10 | | | | 12 | | | | | 9 | |
| Hungary | 68 | | | | | | | | | 9 | | | | | 9 | 8 | | |
| Poland | 67 | 15 | 7 | 6 | | | | | | | | | | | | | | |
| Latvia | 56 | | | | 22 | 14 | | 8 | | | | | | | | | | |
| Romania | 55 | | | | | | | 6 | 16 | | 25 | | | | | | | |
| Ukraine | 33 | 6 | | | | | | 7 | | | | | 6 | | | | | |
| Slovenia | 29 | 5 | | | | | | | 5 | | | 5 | | | | | | |
| Russia | 12 | 2 | | | | | | 2 | 2 | | | | | | | | | |

Source: Foreign currency credits after Fitch, shares of foreign banks after Unicredit, exposition of countries after IMF; after Smoczyński W., *Kłopoty jak w banku*, Polityka 28 February 2009.

To sum up, one may assume that the suggested methodological approach allows for:

- a holistic analysis of the economy transformation process in the countries of Central and Eastern Europe by specification of relations occurring between them and the distinguished categories of the environment, and also their internal links (S, E, W, P),
- specification of the place for individual categories of the environment and the related conditions in the hierarchical economic system from the global to the domestic ones,
- specification of plausibility of the undertaken actions concerning economic links of individual categories of states with various categories of the environment,
- consideration of possibilities to form links from different points of view: of the world, Europe, states of Central and Eastern Europe, or a given country.

In the light of the above, one may assume that thinking in the convention of the model allows for a more precise analysis of the modern links and enables forecasting possibilities of changes as the result of maintaining the conditions and possibilities to generate impulses coming from various categories of the environment (of the lower level to the conditions of a higher level system and the other way round). This also gives some orientation for individual economic entities and institutions connected with specific categories of the conditions (S, E, W, P) for creating the rational strategy of development.

Literature

- Eberhardt P., Komornicki T., 1993, *Problematyka wschodniego pogranicza. Podstawy rozwoju zachodnich wschodnich obszarów przygranicznych Polski*, IGiPZ PAN, Bulletin No. 2, Warszawa, July.
- Grimm F. D. (ed.), 1994, *Zentrensysteme als Trager der Raumentwicklung in Mittel – und Osteuropa. Beitrage zur Regionalen Geographie 37*. Institut fur Landeskunde Leipzig.
- Hausner J., Pedersen O. K., Ronit K., 1995 (ed.), *Evolution of Interest Representation and Development of the Labour Market in Post-Socialist Countries*, Cracow Academy of Economics, Cracow.
- Kitowski J. (ed.), 1999, *Problematyka geopolityczna Europy Środkowej i Wschodniej*. IGiPZ PAN Warszawa, Wydział Ekonomiczny Filii UMCS w Rzeszowie Komisja Geografii Komunikacji PTG w Warszawie, Rzeszów.
- Kitowski J. (ed.), 2000, *Eastern Borders of European Integration Processes*. IGiPZ PAN Warszawa, Wydział Ekonomiczny Filii UMCS w Rzeszowie Komisja Geografii Komunikacji PTG w Warszawie, Rzeszów.

- Kitowski J. (ed.), 2001, *Spatial Dimension of Socio-Economic Transformation Processes in Central and Eastern Europe on the turn of the 20th Century*. IGiPZ PAN Warszawa, Wydział Ekonomiczny Filii UMCS w Rzeszowie, Wyższa Szkoła Administracji i Zarządzania w Przemysłu, Komisja Geografii Komunikacji PTG w Warszawie, Rzeszów.
- Kostrubiec B., *Aktualne reorientacje powiązań w systemie krajów Europy Środkowo-Wschodniej* [in:] Strategiczne problemy rozwoju regionalnego w procesie integracji europejskiej (ed. Z. Mikołajewicz), Uniwersytet Opolski, Polskie Towarzystwo Ekonomiczne Oddz. w Opolu, Opole.
- Jabłoński Z., Maik W. (ed.), 1997, *Procesy integracji i transformacji systemowej w jednoczącej się Europie*, Przegląd regionalny nr 2, Toruń No. 2, Toruń.
- Stasiak A., 1996, *Problemy zagospodarowania przestrzeni przygranicza zachodniego i wschodniego na tle miejsca Polski w Europie* /w:/ Gospodarka, Przestrzeń, Środowisko (ed. U. Wich), Wyd. UMCS, Lublin.
- Stasiak A., Zgliński 1995, *Problemy polsko-białoruskiej współpracy przygranicznej*. Podstawy rozwoju zachodnich i wschodnich obszarów przygranicznych, Bulletin No. 8.
- Wysokińska Z., 1995, *Dynamiczne współzależności wymiany handlowej Krajów Europy Środkowej i Wschodniej w świetle teorii integracji i wymiany międzynarodowej*. Wyd. Uniwersytetu Łódzkiego. Łódź.
- Zgliński W., Komornicki T., 1995, *Problemy polsko-ukraińskiej współpracy przygranicznej*. Podstawy rozwoju zachodnich i wschodnich obszarów przygranicznych, Bulletin No. 9.
- Zioło Z., 1995, *Międzynarodowe uwarunkowania procesu restrukturyzacji przemysłu w Polsce* [in:] Człowiek a środowisko, 44 Zjazd Polskiego Towarzystwa Geograficznego. Toruń.
- Zioło Z. (ed.), 1996, *Wpływ procesów transformacji gospodarki narodowej na funkcjonowanie jednostek gospodarczych i układów przestrzennych*. Komisja Geografii Przemysłu PTG, Instytut Geografii WSP w Krakowie, Warszawa-Kraków.
- Zioło Z., Rachwał T., 2006 (ed.) *Międzynarodowe uwarunkowania rozwoju polskiego przemysłu*. Prace Komisji Geografii Przemysłu PTG, No. 8, Warszawa-Kraków.
- Zioło Z. Rachwał T., 2009, *Wpływ globalizacji i integracji europejskiej na transformację struktur przemysłowych*. Prace Komisji Geografii Przemysłu PTG, No. 12, Warszawa-Kraków.
- Zioło Z., 1997, *Uwarunkowania rozwoju społeczno-gospodarczego państw Europy Środkowo-Wschodniej* [in:] Procesy integracji i transformacji systemowej w jednoczącej się Europie (ed.) Z. Jabłoński, W. Maik, Przegląd regionalny nr 2, Toruń No. 2, Toruń, pp. 115-124.

Streszczenie**UWARUNKOWANIA PRZEMIAN
SPOŁECZNO-EKONOMICZNYCH W KRAJACH
EUROPY ŚRODKOWEJ I WSCHODNIEJ**

W pracy zaproponowano model określający uwarunkowania przemian społeczno-gospodarczych krajów Europy Środkowo-Wschodniej. Model obejmuje cztery bloki macierzy, które określają powiązania zachodzące między krajami Europy Środkowo-Wschodniej, wpływ na te kraje światowych biegunów wzrostu i relacje odwrotne oraz relacje zachodzące między światowymi biegunami wzrostu.

POLISH ECONOMY IN THE TIME OF CRISIS AGAINST THE BACKDROP OF CEE COUNTRIES

Lilianna JODKOWSKA

Fachhochschule für Technik und Wirtschaft Berlin

Introduction

In 2006, The Economist praised economic growth in the new millennium, „having grown at an annual rate of 3.2% per head since 2000, the world economy is over halfway towards notching up its best decade ever”¹. Only a few months later the situation changed dramatically. At the turn of the years 2008 and 2009, the world economy shrank and the resulting decline will have a negative impact on economic development in the coming years. The current crisis is characterized as the most severe since the end of World War II, and the forecast growth of world economy will amount to only 2.5%².

Even at the beginning of 2008, it seemed that the global financial crisis that was already apparent in Western countries would not affect countries of Central and Eastern Europe (CEE). Previous financial crises that occurred in these countries in the 1990s had been caused by political transformations and the related lack of credibility and instability of monetary policy. In this situation, the dominance of international banks in domestic markets has led to stabilization and growth of credibility. The current crisis is not comparable in its scope to any other crisis that has happened so far and foreign banks that are dominant in the financial sectors, shifted risk of international investors also to the markets of CEE countries. Synchronization of Polish economy with the business cycles of other countries and lack of demand for export goods are likely to worsen the Polish economic situation very soon.

¹ Cited after Greenspan, A., *The Age of Turbulence. Adventures in a New World*, The Penguin Press, New York 2007, p. 14.

² At the same time it is worth noting that the IMF defines recession as growth below 2.5%. See Perry, J., Davis, B., *Ekonomiści mocno przestrzegają przed skutkami protekcjonizmu (Economists strongly warn against the consequences of protectionism)*, the Wall Street Journal. Poland, 30.01.2009, p. 03.

The objective of this study is to analyze the situation of the Polish economy against the backdrop of CEE countries³, to present the main goals of anti-crisis (economic) programs of Poland and other countries in the region, as well as to draw and formulate conclusions for economic policies for the period of working the way out of the crisis.

Etymology of the crisis

One of the direct causes of the global banking and economic crisis of the years 2007-2009 was the situation in the real estate market, financed by high-risk mortgage loans in the United States. Cheap money (low interest loans) available in the first years of the new millennium led to emergence of real estate bubble and outburst of acquisitions financed by foreign capital. Blame for this situation is often attributed to Fed, which, after the crisis caused by the burst of the Internet bubble (dot-com boom⁴), decreased the interest rate from 6.5% to 3.5% and after the events of September 11, 2001 to 1% in July 2003 for a year (that was the lowest rate in 50 years). Because inflation remained higher than the interest rates, money was invested in real estates, raising their values. At the same time, in pursuit of profit realization, American banks introduced various forms of mortgage, by the award of which neither financial credibility nor solvency was checked. These forms include Liar Lions – a loan without documentation, NINA – No Income No Assets, NNJA – No Income No Job No Assets. Banks that offered these types of loans sold risky mortgages further and transformed them into *subprime* bonds that, in further sales, obtained an undeserved AAA rating. In this way, more AAA-commitments than AAA-assets / market value of assets were made. These synthetically created values amounted to 50% of the trade volume immediately before the outbreak of the banking crisis.

Raising interest rates to a level of 5.25% in 2006 resulted in a significant increase in interest charges, and insolvency of many borrowers. Re-reduction of the interest rate to 2% in 2007 was meant to reduce the burden of credit. During this period, the situation had already been out of control. The crisis, becoming apparent by a decline in property prices in late 2006, showed that the *subprime* bonds were securities without coverage, which first of all led investment funds of the Bear Stearns bank to bankruptcy. In the face of losses in March and April

³ In notes that concern CEE countries, it is not always clearly specified, which countries the author has in mind. This study focuses on the former socialist countries that now belong to the EU. Ukraine has been omitted and, in a closer analysis, the Baltic republics which are very small economies and do not play a significant role in shaping the economic situation of the EU.

⁴ Dot-com boom is dated for the years 1995-2000 and was caused by excessive overvaluation of enterprises from the IT sector and similar industries.

2008, major American banks were capitalized, including Merrill Lynch, Goldman Sachs, Morgan Stanley, Lehman Brothers and Citigroup. A similar tactic was applied a little later, when it turned out that the banking crisis which originated in the USA had already reached Europe, by capitalizing Hypo Real Estate in Germany – German central bank that provided loans to the state to finance its activities, including for example the investment to expand infrastructure. Saving the above-mentioned banks from bankruptcy was considered necessary in order to prevent a possible domino effect. Bankruptcy of these banks would entail the collapse of other banks, leading to fracture of the international and national financial systems and enterprises, which would directly result in mass unemployment. In the face of prolonged absence of the EU's decision on granting assistance to CEE countries in January 2009, nine internationally active banks in Austria called on the EU to assist banks in the region⁵.

The factor that facilitated spread of the crisis was high indebtedness. Many developed economies of the so-called first world consumed more than produced over the years. This situation was reflected in current accounts by means of growing deficits (6-12% of GDP). This effect was accompanied by decrease in the savings rate, and hence by import of foreign savings to finance consumption (external financing). Especially in the USA the deficit is financed by borrowing in China⁶. Chinese stocks of foreign currencies may contribute, in case of reduction of effective interest rate, to emergence of further credit and speculative bubbles.

Back in 2008 it seemed that the steps taken in the USA would halt the crisis spread in Europe. However, international financial links between highly developed economies, facilitated and accelerated by globalization, began to affect the situation of entrepreneurs. On the one hand, it became increasingly difficult to obtain loans for investments, on the other hand, financial problems of American entrepreneurs and limitation of household consumption negatively affected the value of import to the USA, and hence the decline of export, mainly for Germany. Poland's economy is also intertwined with the European and world markets. A survey of synchronization between the Polish economy and the economies of the EU, the euro zone and Germany, has shown at least its moderately high degree⁷. World Economic Outlook showed the highest correlation

⁵ M. et al. Bank Austria, Erste Bank, Raiffeisen International. The desire to help stems from the fact that Austrian banks have granted loans for CEE countries totaling €230 billion. Suggestions of the Austrian government were directed to Osteuropabank EBRD and the sum amounted to €100-150 billion. See Höller Ch. Österreichs Ruf nach Hilfe für Osteuropa verhallt, *Financial Times Deutschland*, 12.2.2009, p. 15.

⁶ Fischer M., Goodbye Dollar, *Wirtschaftswoche* of 22.6.09, No. 26, p. 21.

⁷ The specification includes results of 11 surveys conducted in the years 2001-2003 by different authors. See Borowski J. (ed.) *Raport nt. korzyści i kosztów przystąpienia*

coefficient of Polish economic growth with economic growth of the world, Russia, EU, Germany and CEE countries⁸. This means, therefore, that the improvement of the situation in Poland will also be influenced by external factors⁹. Especially for the Polish economy, improvement of economic situation in Germany, as the leading country in shaping EU economy, will play an important role¹⁰.

Economic situation in CEE countries during crisis

After 2001 CEE economies reached (Table 1) very good economic performance – economic growth at 5% or more (about 10% and above) was a rule rather than an exception. In a comparable period, economies of western part of Europe did not grow so dynamically. Even at the beginning of 2008, the economic performance of CEE countries was better than of other countries. That situation gave people hope that if they managed to respond to the crisis quickly and to take appropriate stabilizing steps, it would not reach Eastern Europe.

Economic development and consumption¹¹, however, were financed in these countries with foreign savings (consumption value exceeded value of manufactured goods and low savings rates led to import of savings necessary for their financing from abroad). In this way, dependence on external financing was increasing. Partially overheated economies, such as those of the Baltic republics („Baltic tigers”), easily available, cheap loans and low savings rates negatively affected the situation at the time when the U.S. investment bank Lehmann Brothers announced its insolvency. As a consequence, criteria to grant

Polski do strefy euro (Report on benefits and costs of Poland's accession to the euro zone), Narodowy Bank Polski (National Bank of Poland), Warszawa 2004, p. 33.

⁸ See *World Economic Outlook. Housing and the Business Cycle April 2008*, International Monetary Fund, Washington DC 2008.

⁹ Factors affecting economy can be divided into internal (endogenous) and external (exogenous) as well as predictable e.g. growth of social expenditure with left-wing parties in power or unpredictable – internal, e.g. crop failure and external e.g. war.

¹⁰ After creating the Exchange-Rate-Mechanism, cycles of countries included in this system have become more synchronized with the German cycle. See Schirwitz B. K. Wilde, *Synchronization of Business Cycles in G7 and EU14 countries*, European Commission, 2004, <http://www.waelde.com/pdf/Schirwitz-WaeldeTIERsynchronization.pdf>.

¹¹ Polish households are also increasingly indebted. This debt (loans and credits) rose from PLN 70.00 billion in 2001, to PLN 232.70 billion in 2007. First of all, the value of consumer loans rose. In 2007 23% of Polish borrowers earmarked loan funds for purchase of household appliances, 20% for current needs, 17% for house equipment, 17% for purchase of electronic equipment, 9% for purchase of a computer, 1% for purchase of a car. See P. Stasiak, *Big Loan*, Policy No. 44, 3.11.2007, pp. 93-94.

loans were tightened and western banks operating in Eastern Europe started to withdraw significant financial resources.

Table 1. Growth of selected countries in the years 2001-2009.

| Year | Estonia | Latvia | Lithuania | Poland | Czech Rep. | Slovak Rep. | Hungary | Slovenia | Romania | Bulgaria |
|---------------|---------|--------|-----------|--------|------------|-------------|---------|----------|---------|----------|
| 2001 | 7.7 | 8.0 | 6.7 | 1.2 | 2.5 | 3.4 | 4.1 | 2.8 | 5.7 | 4.1 |
| 2002 | 7.8 | 6.5 | 6.9 | 1.4 | 1.9 | 4.8 | 4.4 | 4.0 | 5.1 | 4.5 |
| 2003 | 7.1 | 7.2 | 10.2 | 3.9 | 3.6 | 4.8 | 4.2 | 2.8 | 5.2 | 5.0 |
| 2004 | 7.5 | 8.7 | 7.4 | 5.3 | 4.5 | 5.2 | 4.8 | 4.3 | 8.5 | 6.5 |
| 2005 | 9.2 | 10.6 | 7.8 | 3.6 | 6.3 | 6.6 | 4.1 | 4.3 | 4.2 | 6.2 |
| 2006 | 10.4 | 11.9 | 7.8 | 6.2 | 6.8 | 8.5 | 3.9 | 5.9 | 8.2 | 6.3 |
| 2007 | 6.3 | 10.2 | 8.9 | 6.7 | 6.0 | 10.4 | 1.1 | 6.8 | 6.0 | 6.2 |
| 2008 | 0.2 | 0.5 | 7.0 | 6.3 | 3.5 | 9.3 | 1.8 | 5.7 | 8.2 | 7.0 |
| 2008 | -3.6 | -4.6 | 3.0 | 5.0 | 3.0 | 6.4 | 0.6 | 3.5 | 6.0 | 7.1 |
| 2009 forecast | -10.3 | -13.1 | -11.0 | -1.4 | -2.7 | -2.6 | -6.3 | -3.4 | -1.6 | -4.0 |

Source: Own work on the basis of Eurostat data, <http://cpp.eurostat.ec.europa.eu>, Real GDP growth rate.

Good economic performance of CEE countries resulted from the need to catch up with the standard of life measured in thousands euros per citizen, compared to the, so-called, old EU members. Despite this, none of CEE countries was among the leading most competitive countries in the world. Out of 134 countries, only Estonia and Czech Republic were in 32nd and 33rd place, Poland in 53rd¹². Although among the first 20 positions there are as many as 12 western EU countries, the ranking of CEE countries mentioned in this paper is closed by Bulgaria in 76th place. This highlights the development differences that still occur among the EU countries and, irrespective of the crisis, worsens EU's chances of transformation into the world's most competitive economic region in the near future.

Competition from Asian countries plays an important role here. A comparative study of the attractiveness of CEE countries and Asia places to invest for foreign investors, conducted in 2006/2007 by Euro Asia Consulting, showed that rising wages in CEE countries make them less attractive as investment locations. Because of the wage gap (e.g. €7.80/h in the Czech Republic industry, €0.40 per hour in Vietnam) they are no longer competitive compared to China, India and Taiwan. CEE countries, however, have lower political risk and a sta-

¹² Schwab K., Porter M., *The Global Competitiveness Report 2008-2009*, World Economic Forum 2008, Geneva 2008, pp. 12-15.

ble situation and, at the same time, provide outlets. They are dynamically developing economies and offer highly qualified workforce, also in the engineering sciences¹³. In recent years, there appeared clusters in these countries that mostly specialize in the field of automotive (3 stars cluster in the Czech Republic, Hungary, Poland, Romania and Slovakia), metal manufacturing (Czech Republic, Slovenia, Poland, Romania), and heavy construction services (Hungary)¹⁴. Concentration of these products in CEE countries affects their dependence on the situation in Germany, as they are in a large part (half) products used in the production chain in Germany and exported from Germany to third countries. In this context, problems of car manufacturers such as GM, including Opel, are not only internal problems of the country where the head office of the firm is located (USA) but also of the countries where production plants are located. Saving Opel is a European problem and, in view of thereby needed to protect workplaces, it is to a large extent a German and Polish problem¹⁵.

Depending on the economic situation (getting out of the recession by Western European countries and the USA and thus bigger demand for imported goods), situation in CEE countries, including Poland, will be improving. Especially exports of Poland, the Czech Republic and Slovak Republic, which consist mainly of machinery parts from suppliers to produce cars, steel products and other metal products, will increase again (see Table 2). The earliest sign of getting out of the crisis could be seen in the revival in the logistics industry, but also on the market of semiconductors, which is analogous to economic cycles. In May 2009, Deutsche Post DHL and Fa. Infinion already experienced such revival¹⁶, which allows adoption of an optimistic outlook for the second half of 2009. The Munich Ifo Institute, which investigates monthly opinions among 7000 companies, also noticed positive trends. Business climate index rose from 84.3 to 85.9 points¹⁷. In the second quarter of 2009, after 4 quarters of recession, there was a positive economic growth of 0.3% compared to the previous quar-

¹³ *Von West nach Ost, Restrukturierung & Finanzierung*, Financial Times Dossier, 26.4.2007, pp. 6-7.

¹⁴ See *Innovations Clusters in Europe. A statistical analysis and overview of current policy support*, DG Enterprise and Industries Report, European Commission 2007, pp. 33-65; Ketels Ch., Sölvell Ö., *Clusters in the EU-10 new member countries*, pp. 62-73, www.scanbalt.org.

¹⁵ Opel produces in Germany (25.667 workers, 549.349 vehicles produced), in Spain (7.255, 489.276), in the UK (4.989, 222.992), in Sweden (4.991, 102.909), in Belgium (3.743, 196.315), in Poland (2.819, 189.554), in France (1.726, 27.509), in Austria (1.679, 169.79) and in Hungary (874, 378). Ruch M., Stiller K., *Insolvenzrisiko ängstigt GM-Investoren*, Financial Times Deutschland, 18.02.2009, p. 4.

¹⁶ *Hoffen und bangen*, Wirtschaftwoche No. 21, 18.5.2009, p. 23.

¹⁷ Kaelble M., *Deutsche Wirtschaft fühlt sich wieder besser*, Financial Times Deutschland of 23.06.2009, p. 9.

ter. Revival in the German market will equal revival in metal and car industry as the industry that propels the volume of export there and thereby reactivation of relations with supplier-companies from CEE.

Polish situation continues to be assessed positively against other countries. The result of the crisis most perceptible by enterprises is limitation of bank loans and reduction of PLN value, which causes financial problems in enterprises with currency options. Dependence of the zloty on speculative short-term investments and a high share of import in production are also, in their own way, threats to development and continuation of entrepreneurship.

Table 2. Import /export value of selected CEE countries from and to Germany.

| Specification | Poland | Czech Republic | Slovenia | Hungary | Romania |
|---|----------------------|-------------------------------|---------------------------------|--------------|--------------------|
| Import value | € 139 billion | € 96 billion | € 48 billion | € 73 billion | € 56 billion |
| Percentage of import from Germany in the total import | 22.8% | 26.7% | 19.7% | 25.4% | 16.3% |
| Export value | € 115 billion | € 99 billion | € 48 billion | € 73 billion | € 34 billion |
| Percentage of export from Germany in the total export | 25.0% | 30.7% | 20.2% | 26.6% | 16.6% |
| Car industry and related industries in TOP 5 German enterprises that operate in the market according to turnover (without German banks and insurance companies) | Volkswagen, VW Motor | Skoda (VW), Barum Continental | Volkswagen, Matador Continental | Audi | Porsche, Schäffler |

Source: own work on the basis of *Impulse. Das Unternehmermagazin*, Hamburg June 2009, pp. 30-31.

Ways out of the crisis

Not for the first time does the current financial crisis cause debates about the „end of capitalism” or its new form. These voices, however, seem to be too fatalistic and comparisons with the crisis of the 1930s are not entirely accurate. New Deal that was initiated at that time did not succeed in the short term, and did not lead to achieving full employment despite high spendings on countering unemployment. Economic programs will have similar effects. Immediate improvement of the situation cannot be expected and, moreover, anti-crisis packages contribute to a significant increase in the indebtedness of countries, and in

the EU they are a problem in the context of maintaining indebtedness within the set convergence criteria.

2 trillion euros were earmarked worldwide for economic programs designed to support functioning of the economies, to protect and support activities of enterprises as well as to protect workplaces. The largest funds for this purpose will be allocated in the near future by the United States (€733.0 billion / 5.6% of national GDP in 2008), China (€429.5 billion), Russia (€89 billion), Germany (€82 billion / 3% of national GDP in 2008), Spain (€49.1 billion), the UK (€28.9 billion / 1.4%), France (€28.6 billion / 0.6%)¹⁸. Anti-crisis packages are and will be largely spent to improve the existing, often neglected, infrastructure. Such use of these measures will not, however, improve the economic cycle in the short term, but it will allow further introduction, expansion and strengthening of the role of environmentally friendly technologies, the development and support of which has also been taken into account. Forecasts of the European Commission for Economic Affairs show that the positive effects of the implemented fiscal stimuli will be felt no sooner than in 2010¹⁹. Economic programs of CEE countries are much more modest than those introduced in Germany or the USA, but their aim is also to ease the impact of the crisis. However, they primarily focus on reducing the tax burden for households²⁰ in order to stimulate consumption and to relieve small and medium-sized enterprises (SMEs) (Table 3).

In the face of the crisis in Poland, in January 2009, instead of growth of expenditures, the parliament decided to introduce savings of €4.2 billion in the areas of foreign military missions and education²¹. In case of Poland, budgetary discipline may create a kick for the economy as it finds its way out of the recession²². With low inflation and low interest rates it will be easier to expand economically and to catch up on the development in relation to the old EU countries. This position is, however, in contradiction to the position of the European Commission which notes that government expenditures and public investments positively affect economy.

¹⁸ Ranking der Konjunkturtherhilfen, *Wirtschaftwoche* No. 29 of 13.7.09, p. 6.

¹⁹ Glapiak E., *Polska wciąż na plusie (Poland still in the black)*, Rzeczpospolita, *Ekonomia & rynek (Economy and market)*, 20. 01.2009, p. B1.

²⁰ It directly supports consumption. This goal could be also achieved e.g. by VAT reduction.

²¹ Rybak A., *Polen spart in der Not*, *Financial Times Deutschland*, 20.02.2009, p. 13.

²² Also relatively lower debt of Poland in relation to the old EU countries including the year 2008 (47.1% of GDP, for the EU 27 amounted to 61.5% of GDP, for the euro zone 69.6% of GDP, for France, 68.1% of GDP, for Germany 65.9% of GDP) will have a positive effect.

Especially in time of crisis, properly conducted, reasonable socio-economic policy of a country plays a special role²³. State budget revenue from tax receipts are lower and expenditures made in economic policy (economic programs) and social policy (welfare benefits, wage subsidies) are higher. USA's and EU's policies differ in terms of vision and methods to combat the crisis. The American president B. Obama endorses a loose fiscal policy, while EU countries generally cannot afford to exceed the Maastricht criteria. It can be assumed that in the European Union countries, funds to repay the debt will be collected by an increase in taxation, while in the USA, with high probability, by way of higher inflation.

Unintended side effects of the current crisis are, on the one hand, stronger cooperation of many countries with regard to reducing the financial consequences of the crisis and promoting economic prosperity, but on the other hand, within the framework of protecting domestic economy from the results of crisis, promotion of own products only²⁴ (Buy American, special protection for employees in the automobile industry in France against dismissal, the German labor market will still be, until 2011, unavailable to employees from CEE). Due to protection of internal markets, it can be expected that these trends will be further intensified. In the context of strengthening European cohesion, it is a trend which should be prevented. The goal should still remain to promote European countries in the EU. Growth of protectionist moods and protection of national interests is not the result of crisis. This trend was already noticeable during and in the breaking of the Doha negotiations.

As a result of the crisis, it can be expected that, in addition to efforts to place restrictions and regulations in the banking sector, the introduction of in-

²³ Assumptions made in previous years for supporting the development of knowledge-based economy in Poland, to improve innovation in the economy, improving the educational level of the population are part of not only the objectives of (renewed) Lisbon strategy, but also correlate with the OECD recommendations, which call for other than the current means of redistribution of tax revenue. Labor market policy priorities also need to be reconsidered. Governments must also improve their policies in other areas:

- Education policies should aim to equip people with the skills they need in today's labour market.
- Active employment policies are needed to help unemployed people find work.
- Access to paid employment is a key to reduce the risk of poverty.
- Welfare-in-work policies can help hard-pressed working families to have a decent standard of living by supplementing their incomes.

²⁴ Also in Poland, presidents and owners of the largest companies started the action „buy Polish”, which aims to develop a joint program to support the development of Polish products. The idea of consumer patriotism (attachment to domestic products and brands, the barrier to the idea is still widespread perception of imported products as synonyms of luxury), used on a large scale in economically-developed countries, underlies the project. In this case, it may be a question for discussion whether the primary goal is protection of Polish producers or strengthening the position of own products on the market.

ternational flows of capital control, protectionism will increase, against which the WTO warns²⁵. Strengthening of the state role in economy can also be expected (leading role of the state as a guarantor of smooth functioning of the market). For years, especially in the last twenty-five years, regulations in international trade and international exchange were loosened (lower customs duties, cash flow, the movement of labor), all this period was characterized by a 6% annual growth in world trade. The resulting international production chains through their complexity are much more vulnerable to interference than before. A new wave of protectionism would be such interference and can lower the value of world economy's growth.

The establishment of certain regulations in the financial market does not necessarily mean protectionism²⁶. In April 2009 during the G-20 summit in London, it was agreed that financial markets will be subject to appropriate regulation and supervision. International credit market is insufficiently regulated, much less than the domestic credit markets. More stringent regulations on hedge funds will probably be introduced. Regardless of whether such regulations will be implemented in individual countries and also in international turnover, these regulations should not impede or inhibit development of entrepreneurship, but only constitute reasonable regulations aimed at stabilizing all the economy – medium participation of the state – as the golden mean between protectionism and regulations and libertarianism.

²⁵ WTO warns against increasing protectionism and favors unlimited free trade, so as not to deepen the crisis.

²⁶ One way to stabilize the banking sector is to create a „bad bank” (Bad-Bank). The way it functions is based on the Swedish hedge funds (Securum, Retriva) from the period of crises in 1987 and 1994. The task of the „bad bank” is taking over „toxic” assets and bad loans from the entire sector. The bad bank established in July 2009 in Germany is to restore investors’ confidence in the financial sector and revive the credit market; it will take over guarantees for the toxic assets of value from €150 to 300 billion. Stability in the banking sector may be expected, in the long term, to lead to economic revival. See Dunkel M., *Ab in den Mülleimer*, Financial Times Deutschland, 1.7.09, p. 16.

Table 3. Anti-crisis programs of selected CEE countries.

| Country | Main assumptions |
|----------|---|
| Slovenia | <ul style="list-style-type: none"> • Tax relief to boost consumption (not specified) • Industry programs for enterprises • CIT reduction in 2009 from 22% to 21% (20% starting 2010) • €1.2 billion in state guarantees on loans granted to enterprises since June 2009 a regulation has been introduced that makes it possible to qualify temporarily unemployed workers giving them 85% of the salary (50% is covered by the state budget, 35% by the employer) • unlimited guarantees on savings (till 2010) • money to develop modern and clean (eco-friendly) technologies |
| Bulgaria | <ul style="list-style-type: none"> • tax relief to boost consumption: keeping a 10% Flat Tax (CIT and PIT) – the lowest tax rates in Southeastern Europe • providing cheaper loans to SMEs • participation in the Currency Board system – ensures constant exchange rate for the euro |
| Romania | <ul style="list-style-type: none"> • keeping a 16% Flat Tax (CIT and PIT) • supporting the development and business activities of SMEs • reducing the interest rate by Romanian Central Bank from 10% to 9.5% (further reduction is expected in the near future) |
| Hungary | <ul style="list-style-type: none"> • Consolidation of the budget recommended by the IMF (implementation of counter-cyclical policy that stimulates economic growth was impossible to achieve) • The lowest PIT rate in 2010 will be reduced from 18% to 17% • Allocation of the structural funds for projects of SMEs • Projects to support maintenance of workplaces, also by reducing the burden that employers must pay for the social security system • Credits from IMF, the EU and the World Bank of €20 billion |
| Poland | <ul style="list-style-type: none"> • Since 1.1.09 two tax brackets of income tax, 18% and 32% • Within the framework of anti-crisis programs, possibility to deduct investment to purchase fixed assets for companies (excluding cars) • Project to promote formation of special economic zones (encouragement of innovative companies from the following industries: automotive, aviation, electronics, mechanical engineering, biotechnology and ecological energy solutions to settle in the area of Poland) • Loans to companies in the transport industry of €1.1 billion • the NBP purchase of long-term government bonds from banks – thanks to this action banks gained €8 billion, which could be spent on credits • Guarantees of the Bank Gospodarstwa Krajowego (BGK) of €4.5 billion to encourage commercial banks to lend • reduction of deposit interest rate from 4.50% to 2.25% |

Source: *Konjunkturprogramme weltweit – Chancen in der Krise*, Germany Trade&Invest, Gesellschaft für Außenwirtschaft und Standortmarketing, http://www.gtai.de/web_de/startseite.

Globally, it is worth looking at one phenomenon: the moment a little economic revival started and the situation concerning the development of leading economies seems to improve, voices that support financial sector regulation died down. Already in the era of crises of the 1990s, lack of sufficient regulations of financial transactions, including credit, between countries was criticized²⁷. Soros had already noticed that the impact of international capital on the fate of countries was so substantial that he called this phenomenon a world system in which capital moves to places where it is most likely to get profit (poor outskirts, where the capital is deducted from, and rich investment or capital lending center). Despite efforts by politicians regarding new regulations of financial markets, the summit of G-8 countries in the Italian L'Aquila in July 2009 did not bring the desired effect. Unity of majority of the EU countries shatters the UK's position (the plans are not supported by the USA as well). New regulations relate to, i.e. own capital share of investment funds, but still leave, on the other hand, a free choice of a rating agency to enterprises²⁸ – this regulation, or in fact proper establishment of specific rules and restrictions should be the goal for politicians. However, it seems that the saying „failures teach more than successes” did not reach principals and Schumpeter's creative destruction will be returning, unrestrained by regulations.

Conclusions

Thereby impact of the financial markets on the situation in Poland dates back to the year 1991, i.e. the creation of the Warsaw Stock Exchange. Today, supported by the flow and exchange of information, the expectations (feelings) from other countries are „imported” much faster, and foreign investment in Poland affect the susceptibility of the Polish economy to changes of economic situation in the investing countries (in crisis situations, the capital is pulled from abroad in the first place²⁹). Economic situation of „the rest of the world” will depend on steps taken by the Fed, the effects of which will indirectly affect other economies positively or negatively depending on the adopted tactics (lowering interest rates to stop inflation or increasing interest rates that will lead to deeper recession).

In the fourth quarter of 2008 economies of the OECD countries shrank by 7.8%, in the first quarter of 2009 by further 8.3%, -0.4 is expected for the third

²⁷ Soros G., *Die Krise des globalen Kapitalismus*, Alexander Fest Verlag, Berlin 1998, pp. 140, 159, 226.

²⁸ Blame for causing the current crisis is assigned to these agencies exactly. See Krumrey H., *Neue Regeln – was soll das denn*, *Wirtschaftwoche* of 29.6.09 No. 27, pp. 16-19.

²⁹ This was also the case during the Great Depression of the 1930s and resulted in withdrawal of North American capital from Europe.

quarter but +0.3% – for the fourth. Despite all this, predictions forcing thereby way out of this crisis are not optimistic. A pessimistic scenario of OECD's chief economist assumes that most countries will plunge in the long-term recession³⁰. In spite of this, it is assumed that economic revival will happen in 2010, when results brought about by economic programs will start to come into effect. The Polish economy, so far more of an average country – unfortunately not of a global player, has a chance to gain a good position while getting out of the crisis. Among the countries of the region, Poland emerged to be a leader even before the crisis due to steady growth and economic stability. Restraint in forcing anti-crisis programs paid off as well. In the 3rd quarter of 2009, Poland's economic situation against the countries of Europe and the world is very good. As the only EU country, the Polish economy had an increase in GDP of 1.1%³¹. Against the backdrop of economic growth in Lithuania of -22.6%, through Germany, Sweden, the Netherlands (about -5% to -6%) until Greece (-0.2%), it is a highly satisfactory result. Several factors contributed to this good result, among other large domestic market, influence of lower PIT rates on private consumption growth, weakening of the zloty at the beginning of 2009 (reduction of the exchange rate of the zloty against the euro) and through this support of export. Moreover, there was positive contribution of net export (export value was higher than import value), expensive imported products were replaced by domestic products, throughout the current year there was an influx of money from the EU funds. There is still a high value of public investments related to the development of infrastructure, i.e. in connection with the Euro 2012.

Although the current balance of 2009 in the existing situation is positive, in quarters 3 and 4, the situation may (slightly) worsen. The unemployment rate is still increasing; wage growth and level of private investments by private enterprises are almost stagnant. Assuming, however, that Germany's economic situation will improve in the corresponding period, it may lead to the reactivation of production and export and prevent decrease in economic growth in Poland.

Literature

- Begg D., Fischer, S., Dornbusch R., *Makroekonomia (Macroeconomy)*, PWE, Warszawa 2003
Berschens R., *27-EU-Mitglieder*; 28 Meinungen, Handelsblatt, 2.3.09

³⁰ See Hess D., Staatliche Hilfe nur für Finanzsektor, Handelsblatt online of 25.11.2008, <http://www.handelsblatt.com/politik/konjunktur-nachrichten/staatliche-hilfe-nur-fuer-finanzsektor;2097116>.

³¹ Cieślak-Wróblewska A., *Polska gospodarka najlepsza w Europie* (Polish economy best in Europe), Rzeczpospolita, 29-30.08.2009, p. 1.

- Cieślak-Wróblewska A., *Polska gospodarka najlepsza w Europie* (Polish economy best in Europe), Rzeczpospolita, 29-30.08.2009
- Dunkel M., *Ab in den Müllheimer*, Financial Times Deutschland, 1.7.09
- Fischer M., *Der Protektionismus kehrt zurück*, Wirtschaftswoche, 13.7.09, No. 29
- Fischer M., *Goodbye Dollar*, Wirtschaftswoche of 22.6.09, No. 26
- Glapiak E., *Polska wciąż na plusie (Poland still in the black)*, Rzeczpospolita, *Ekonomia & Rynek (Economy & Market)*, 20.01.2009
- Greenspan A., *The Age of Turbulence. Adventures in a New World*, The Penguin Press, New York 2007
- Greive M., *Analysten sehen Leitzins im Euro-Raum auf Rekordtief fallen*, Die Welt, 4.3.2009
- Höller Ch., *Österreichs Ruf nach Hilfe für Osteuropa verhallt*, Financial Times Deutschland, 12.2.2009
- Hoffen und bangen*, Wirtschaftswoche No. 21, 18.5.2009
- Kaczmarek T., *Globalna gospodarka, globalny kryzys* (Global economy, global crisis), Difin, Warszawa 2009
- Krumrey H., *Neue Regeln – was soll das denn*, Wirtschaftswoche of 29.6.09, No. 27
- Langhammer R., *Ziehkind der Krise*, Wirtschaftswoche, 23.3.09, No. 13
- Meier L., *Frankreich ignoriert Defizitgrenze*, Financial Times Deutschland, 26.6.09
- Perry J., Davis B., *Ekonomiści mocno przestrzegają przed skutkami protekcjonizmu (Economists strongly warn against results of protectionism)*, The Wall Street Journal. Polska, 30.01.2009
- Rybak A., *Polen spart in der Not*, Financial Times Deutschland, 20.02.2009
- Samuelson P., Nordhaus W., *Ekonomia*, v. 1, (Economy, volume 1) PWN, Warszawa 2006
- Soros G., *Das Ende der Finanzmärkte – und deren Zukunft*, FinanzBuch Verlag, München 2008
- Soros G., *Die Krise des globalen Kapitalismus*, Alexander Fest Verlag, Berlin 1998
- Willershausen F., *Großeinsatz im Osten*, Wirtschaftswoche, 11.5.09, No. 20

Internet sources

- Eurostat, <http://epp.eurostat.ec.europa.eu>
- Hess D., *Staatliche Hilfe nur für Finanzsektor*, Handelsblatt online of 25.11.2008, <http://www.handelsblatt.com/politik/konjunkturnachrichten/staatliche-hilfe-nur-fuer-finanzsektor;2097116>.
- Schirwitz B., Wilde K., *Synchronisation of Business Cycles in G7 and EU14 countries*, European Commission 2004, <http://www.waelde.com/pdf/SchirwitzWaeldeTIERSynchronization.pdf>.

Streszczenie**GOSPODARKA POLSKA W DOBIE KRYZYSU
NA TLE KRAJÓW EŚW**

Celem opracowania jest przedstawienie głównych czynników, które doprowadziły do ogólnoswiatowego kryzysu finansowo-gospodarczego (część pierwszy opracowania) oraz analiza sytuacji gospodarczej Polski na tle krajów EŚW w dobie kryzysu (część druga). W części trzeciej podjęto po przedstawieniu głównych założeń programów antykryzysowych (koniunkturalnych) Polski oraz innych krajów regionu dyskusję dotyczącą możliwych dróg wyjścia z kryzysu oraz sformułowano wnioski dla polityki gospodarczej na okres wychodzenia z kryzysu.

GLOBALIZATION OF FINANCIAL MARKETS AND RISK OF ECONOMIC CRISIS

Renata NESTEROWICZ

University of Rzeszów

Introduction

The globalization process of financial markets is largely a result of foreign currency liberalization and technical progress, because foreign exchange liberalization has created conditions and opportunities of making transactions on financial markets of various countries.

The beginnings of globalization are connected with development of international exchange, growing international ties, and openness of markets. As the effect of this the global integration of economic systems, the change to unification of economic and social behaviour took place¹.

The globalization led to the radical change of financial markets, and its most spectacular consequence was appearance of many liquid financial markets, i.e. the ones with low prices and easiness of transactions.

An increase in liquidity of financial markets occurred together with appearance of foreign investors on financial markets of various countries, and the following increase of transactions and the turnover size.

In that situation the liquid financial market became fast a relatively safe market, thus attracting investors.

Moreover, the globalization process became favourable not only for liquidity improvement of markets that already exist, but also for creation of new ones, and in particular for development of derivative instrument markets.

It should be added at the same time that one of the most important reasons for such transformations was the end of the fixed exchange rate system. Introduction of smooth exchange rates increased the risk of investing in securities. Variability of interest rates was also an impulse to look for new financial instruments, thanks to which the risk may be reduced.

¹ B. Bernaś, *Finanse międzynarodowe*, wyd. PWN, Warszawa 2006, p. 25.

Derivative instruments are always fixed, because their value depends on shaping of prices for financial instruments in the future, and the related payments result from agreements contracted now².

It should be stressed that the share of foreign savings in financing domestic investments is growing fast and the contemporary globalization of financial markets will favourably affect the development of the global economy³.

The purpose of this paper is to present the development of the globalization process of financial markets, and at the same time threats from the spreading economic crisis.

I have taken this subject because arising of the global system of liquid and much differentiated financial markets is a relatively new phenomenon and the contemporary global financial market offers differentiated opportunities not only for investment, but also of protection against the risk.

Innovations on financial markets

As it has been mentioned before, the globalization process favoured arising of new financial markets. One of such markets was the market of debentures issued by enterprises.

It happened so, as for large enterprises it was cheaper to take loans not from banks, but directly on the capital market, i.e. by means of emitting debentures. Lower interest rates on loans result first from the fact that for a bank granting a loan is connected with a greater risk than in case of buying a debenture. As in this case, one may rely on assessments of rating agencies, and the debenture itself can be easily sold on the secondary market.

The relatively low interest rates of commercial debentures in comparison with bank loans are also affected by the fact that they are purchased in high quantities by investment funds, which do not take risk by themselves, but they transfer it on their clients. Preference of large firms to take loans on the debenture market also resulted in a way from their wish to free themselves from control of the banks.

In the situation when the developing markets of debentures issued by enterprises took away the best clients from commercial banks, the latter were forced to look for income sources elsewhere. Thus, they sought them on financial markets where the globalization created a wider field for operation of bank dealings than in the past.

² J. Kudła, *Instrumenty finansowe*, Wyd. Key Text sp. z.o.o, Warszawa 2002, p. 105.

³ M. Feldstein, *Monetary Policy In Changing International Environment: The Role of Capital Flows*, NBER Working Paper, 2005, p. 265.

In a relatively recent past, bank dealings offered their clients mainly possibilities to transact on the money market, in this way enabling them to manage liquidity. Traditionally, they also made transactions on the foreign exchange market, enabling their clients to exchange currencies and protect themselves against the foreign-exchange risk. The globalization, causing a fast increase in number of liquid financial markets, enables bank dealings to increase the number of financial instruments „sold” by them.

An example of such a situation was also the Polish financial market. When in 1998, within the second stage of liberalization of foreign exchange turnovers foreign investors obtained a possibility to make fixed transactions on the Polish market, there was a very fast development of many markets of derivative instruments, and thanks to that diversity of financial instruments offered by the banks increased⁴.

The globalization enables not only increasing of the number of liquid financial markets, but also operating of the markets whose liquidity is able to maintain the global financial market.

Appearance of many financial innovations in the 1970s and 1980s, referred to as derivative financial instruments (derivatives) was considered as one of the most important phenomena in the international financial relations.

Among many financial innovations, a special attention is deserved by such derivatives like fixed-term financial contracts (forward, futures), options, and swaps.

There is an opinion that in the recent years the fastest developing segments of the derivative financial instrument market were not futures and option transactions, but interest-rate swaps, new foreign-exchange swaps and other new derivative financial instruments.

According to the definition by the Bank of International Settlements, a swap is a financial transaction in which two counterparties agree to exchange payment streams in the future⁵.

The World Bank has contributed to development of swap operations, as it looked for cheap credits in German marks and Swiss francs to finance various investment projects. It could obtain cheaper loans on the dollar market. Thus, there arose favourable conditions for the bank to exchange debts in European currencies into debts in US dollars.

One for the reasons for swap operations was foreign-exchange restrictions, impeding access to West European capital markets. Whereas, by means of such operation, entrance into the West European markets was possible.

⁴ A. Sławiński, *Rozwój rynków finansowych, stabilność systemu finansowego gospodarki*, Studia Ekonomiczne, INE PAN, Warszawa 2003, series No. 1-2, p. 67-80.

⁵ K. Zabielski, *Finanse międzynarodowe*, Wyd. PWN, Warszawa 2007, p. 287.

The speculation maintaining liquidity of interest rate swap (IRS) market, takes place mainly on the London financial market, being the centre of the global inter-bank market. The reason for that condition is that only on the London financial market there are many large banks having sufficient credibility and sufficiently high capitals so that they can participate in speculation transactions on the market of interest-rate swap market, which have many-year terms of maturity. Liquidity of the market enables easy protection against the interest-rate risk by businesses in all countries of Eastern Europe, at whose interest rates are IRS contracts.

We should also turn attention to another example of the derivative instrument market, which has developed very fast as a global market; this is the market of credit derivatives (protecting against the risk of debenture issuers' insolvency), which owes its development and operation to activity of the globally largest investment banks, which have sufficiently high capitals and well-developed systems of risk management in order to play the role of „producers” and agents on the market of credit derivatives.

Reasons for financial crisis

The financial crisis initially concerned only American investment banks. The crucial moment affecting the crisis was entering into the stock exchange of one of the largest investment banks – Goldman Sachs in the 1990s. Since that time the bank started to chase maximization of its profits (as any company), as high rewards for the management depended on it (thus honesty of stock emission of a given company was put aside). Banks started to perform high-risk operations. An important fact was also withdrawing in 1999 of a provision in the US banking law that banned joining two types of banking: investment banking (of high risk), deposit and credit banking (the provision was passed in the USA after Black Thursday in 1929).

In 1998, President Bill Clinton urged to allow less earning people to take mortgage credits. The role of a guarantor for such credits assured two sister companies: Fannie Mae and Freddie Mac.

Then after George Bush's election as President, in order to activate the economy by means of an injection of new credits, some statutes were amended to liberate provisions concerning protection against an excessive risk of banks and insurance institutions. That allowed banks to grant credits to a higher number of persons with lower incomes.

In 2001, „after breaking of the Internet stock bubble” the prices of stocks fell much, which gave rise to worries about the economic growth. Then interest rates were lowered and in 2002, they reached the level of 2%. In the situation of the inflation higher than the official interest rates, the money found a better in-

vestment in real estates. Their prices started to grow gradually. At the same time, their low interest rates motivated positively to take mortgage credits. It became popular to earn on real estates with help of a credit; the return from real estates was from a dozen to several dozen per cent. Bank agents encouraged persons with low incomes to take credits. After two years, the interest rates increased to 5%, which increased interest-rate burdens and the following attractiveness reduction of capital investment in real estates. Prices of real estates began to fall and many loan debtors stopped paying back their debts. Banks started seizing mortgages and trying to sell the real estates accelerated the process of the price reduction for them. In such a situation in 2007, the interest rates were lowered abruptly to the level of 2%. That aimed at lowering credit burdens, and at the same time at bringing cheap money to the market.

Now a deep crisis is rolling through the global financial markets, undoubtedly the deepest and the most severe since the terrible years of 1929-30, i.e. since the Great Depression. Comparisons suggest themselves: then and now the crises started from a severe breakdown on the stock exchange, and next – after a few months – they extended to the entire financial sector. Then and now the crises started in the United States, but next they reached Europe rather quickly in order to extend globally. Then and now the crises had initially the financial character mainly, but in time their effects started to affect less and less operating of the real economy, threatening a global recession. Many factors contributed to the global financial crisis of today. The origins can be seen as early as in the 1930s. One of the actions aiming at taking the US economy out of the Great Depression was establishment by President Roosevelt's administration of a governmental agency – Federal National Mortgage Association (FNMA), colloquially referred to as Fannie Mae. Its task was to give security for mortgage credits.

In 1970 Federal Home Loan Mortgage Corporation (Freddie Mac) – a second similar institution came into being. In recent years the institutions gave security for over half of the credits granted in the USA (the indebtedness of US households due to mortgage credits amounts to ca. 10 trillion USD). The purpose of those institutions' operation was to increase accessibility to credits and development of housing building.

However, indirectly both Fannie Mae and Freddie Mac contributed to launching an avalanche of the crisis.

The securities granted by Freddie Mac allowed banks to loosen much the criteria for granting credits. In that way US banks stopped to take sufficient care of the quality of the credit portfolio; they did not turn any attention to whom they were granting credits. In the 1990s advertisements with the wording „Non proof Incomes”, i.e. advertising granting mortgage credits without necessity to prove sources and amounts of incomes were not very rare. In that way on the US market a specific type of credits – the so-called subprime credits, of the

lowest quality, granted to persons hardly having credit capacity, came into being. The subprime credit volume in the USA abruptly grew in recent years. In 2006 they constituted over 5% of all the US mortgage credit value, and every fifth mortgage credit of lesser quality needed execution. It is assessed that the subprime credit market in the USA is 10-14% of all credits, i.e. their value is ca. 1.2-1.5 trillion USD.

It is, however, only part of a puzzle related to this crisis. The problem would not be so serious if securitization had not developed, i.e. a mechanism of exchanging liabilities into securities.

At the beginning of the 1980s the US financial market was enriched with new instruments – debentures secured with mortgage credits. In time they gained the highest share among securities secured with liabilities. Thanks to such an operation banks resold their debtors to other greater banks to gain means for further activity. The latter in turn divided the credits into smaller parts and issued debentures secured with mortgage credits (the first debentures of that type were issued in 1983).

Simplifying it much, the securitization mechanism caused the situation than an American borrower ceased to be a debtor of the bank where he had taken the credit (as it is the case in Poland), and in a sense became a debtor of a purchaser of such a debenture.

Banks and investment funds were interested in debentures of that type. Many entities were willing. In 2006 they even brought profit of over 10% yearly. Yet due to the type of their security they were featured by high risk. For their value depended on the credit portfolio. In other words when borrowers began to have problems with repayment of credits, mortgage securities became an even more risky investment.

It should be also reminded that twenty years ago one of the biggest and best known banks – Salomon Brothers disappeared. The reason for the fall was for example an uncontrolled development of asset backed securities (ABS). From day to day departments of mortgage bonds were closed in other banks. The risky papers turned out to be worthless. Warren Buffet himself was engaged in defence of Salomon. In 2008 other banks disappeared from the world of finances due to almost the same reasons. In both cases the source was simply the ordinary human greed.

Globalization and risk of crisis

The globalization of national economies, including the globalization of financial markets provokes necessity of proper adaptation of practically all countries to the changing situation in the world. Even if individual countries legally maintain their sovereignty, the globalization process enforces that they have to

shape their economic policy, including mainly their monetary and budget policies, in such a way that they should gain trust of players on international financial markets.

The globalization makes the economic growth more and more dependent on international competitiveness. The latter in turn is determined largely by the cost of capital obtained by enterprises, labour costs and tax burdens. Countries where such costs are relatively low attract foreign capital.

It is universally believed that the globalization of financial markets contributes to operational improvement of such markets. For it allows for geographical diversification of risk and favours economic growth. On the other hand, however, the globalization is often perceived as a factor substantially increasing the risk of financial crisis appearance.

It can be considered as justified the statement that financial crises that in the 1990s affected such countries as Mexico, Korea, Indonesia, Thailand, Brazil, may have not reached such extents if those countries had not been exposed to influence of financial markets. However, one must be aware of the fact that in the past those countries would not have reached such an impressive pace of economic growth if they had not used resources coming from international markets.

It should be added at the same time that the common feature of those countries were, e.g. the excessively fixed system of foreign exchange rate, a weak financial system, primarily including an insufficient supervision over banks, and lack of public finance stability.

In turn negative effects of the crisis are first of all a bankruptcy wave among enterprises and banks, an increase in unemployment, a sudden deterioration of the budget situation in the country, a high fall of the reserve level of foreign exchanges.

The practise has shown that many banks from industrialized countries were unable to compensate losses sustained from investments of countries afflicted by the crisis.

On the other hand, the financial crises made banks, especially those with the international activity, diversify their operations in such a way that credits granted to enterprises should not exceed a reasonable level in relation to the total assets.

This target may be achieved, for example by participation in consortial credits, where the credit risk is distributed among all borrowers in proportions corresponding to their share in the total amount of the credit.

An important meaning in increasing the operational security of banks had an agreement from the summer of 2002 by the Basel Committee on Banking Supervision on new capital requirements in relation to banks. They consider specific types of risk, with which banks have to do in conditions of the financial market globalization.

The fact that the International Monetary Fund concentrated their attention on the banking sector results from the dominant role of banks on financial markets practically in all countries. As it results from the recent financial crises, it is improper management of banks, resulting in increase of the so-called bad credits, and unsatisfactory supervision over them by the authorities, constituted favourable conditions for cumulating of problems that finally contributed to the outbreak of the crisis.

Now, we can observe subsequent stages of the financial crisis. Its origin was the breakdown of the sector of risky mortgage credits in the USA. Initially, the crisis was felt only on the American market, but due to international ties of the financial markets, it was also transferred to European states and countries of the Far East.

An example of it is, e.g. the fact that the present crisis struck all manufacturers of cars, but as the first it was felt by American concerns (GM, Ford and Chrysler).

Serious troubles have today the former flagships of the Japanese industry (Toyota, Sony, Nissan, or Hitachi), which limit their investments, close factories and dismiss their employees.

This phenomenon is the reason for many fears about stability of the Polish real estate market as well. In order to assess the actual risk of disturbing the economy stability in our country, one should primarily take into account all the circumstances that led to the breakdown of the market, and to analyze whether they may be an important threat in our country as well.

Since February 2009 governments of the G-8 states have launched rescue projects jointly amounting to over 3 trillion USD⁶. Some states like the USA or France have been accused of using protectionist practices (e.g. the US programme „Buy American”, officially included into the aid plan of President Obama, or obliging French car manufacturers to maintain jobs in France in the governmental aid package). After lowering interest rates reached a record low level (Japan – 0.1%, the USA – 0.25%, in the United Kingdom, Switzerland and Canada – 0.5%).

In April 2009, during the G-20 summit it was agreed that the financial markets could not exist without any supervision. They called for the most rigorous regulations for the activity of hedge funds. In the final communiqué after the G-20 summit there was a reference to increasing of the International Monetary Fund's resources by 500-750 billion USD. It was also planned to liquidate the

⁶ Rzeczpospolita, the addition „Ekonomia & rynek”, 16.02.2009, *G 7 bez nowych pomysłów*, p. B3.

so-called „tax paradises”; it was decided to create a fund for support of international trade⁷.

In turn, in order to fight the crisis in Poland the Monetary Policy Council lowered the deposit interest rate from 4.50% to 2.00%.

Yet, the economic crisis in Poland is felt to a much smaller extent than in other countries of the region. As the last data show⁸, in the second quarter of 2009, the GDP in Poland, adjusted seasonally, increased by 0.5% in comparison with the first quarter of 2009 and was by 1.4% higher in comparison to the second quarter of 2008. At the same time it should be added that an increase of GDP in Poland in this period of time was unique in the European Union.

The increase of GDP was positively affected by increased net export and total consumption, whereas it was adversely affected by a fall of accumulation.

What will be the world like after crisis?

It is true that the global crisis is still at the development stage and no one knows when it will end.

Despite this, analysts more and more ponder what will be the future of the global economy and what force system will be in it.

It results from the majority of statements that in this respect much depends on China and the USA.

Commentators turn attention to the fact that Americans have a responsibility today to put forward some initiatives enabling reconstruction of the international financial system.

Whereas China should support them in it, being at the same time the most interested in return of prosperity into the global markets.

Surely politicians from both superpowers are aware of their own interests and catalogues of plausible targets. Yet, much will depend on their bilateral relations and whether they will be based on a real assessment of advantages and possibilities, and also in what time horizon they will plan realization of their policies. Surely, elaboration of a new type of relations by countries of different advantages and possibilities, and also of various effects caused by the present crisis will not be easy, so there should be no hope for a fast success in this respect.

In the Far East there are still two other countries that will affect the situation in the post-crisis global economy, namely Japan and India.

The economy of Japan is dependent to a large extent on the situation of the economic prosperity on the global market.

⁷ *Grupa G-20 podaje własną receptę na zażegnanie kryzysu gospodarczego*, nasz dziennik.pl 03.04.2009.

⁸ http://www.stas.gov.pl/gus/5840_1338_PLK_HTML.htm.

A little different situation is in India, as this country is more self-sufficient.

In turn the Indian stock exchange suffered a lot; whereas the local banks (still mostly state-owned) did not suffer any greater losses. Analysts forecast that India will maintain a fast increase in infrastructural investments, and macroeconomic perspectives are better there than in majority of countries as well.

Attention should also be paid to serious changes to the previously existing financial centres, first of all in New York and London. Both in the USA and in other countries small banks bankrupt or are taken over by stronger ones, branches of big banks are liquidated, and there are numerous mergers and changes of shareholders. Programmes of cost reductions, including reductions of employment concern all firms of the banking sector and investment firms. Thousands of the dismissed employees can hardly find work in their former profession with the previous high salaries. Much time will pass as well before the financial markets become stabilized and in economy there will be a new cycle of growth. In addition, even in this case the organizational systems of firms will surely have to change, so there are small chances that employment will return to its previous level. This means that a large group of qualified specialists having knowledge about global markets and leading companies will remain unemployed. In such a situation there are opportunities for other centres that want to employ specialists in risk management, assets management, new product managers and macroeconomic analysts.

Thus there is the beginning of demand for those who may be included to the global premier league and are ready to agree for a change of their jobs.

Their ways most frequently lead to the Middle East, to China, and even to Moscow.

The Middle East counts on their knowledge allowing for an effective management of the region advantages, i.e. energy fuels and giant reserves of foreign exchanges.

On the other hand, the Chinese want to join this increasingly important sector of the global economy and to enhance to the world rank the financial centre in Shanghai. The delegation of the Shanghai Office of Financial Services recruits high class personnel in New York, Chicago and London. It is unknown, however, whether China will make use of the situation that befell to the financial institutions in New York and London, seeing a dynamic move of the gravity centre of the economy to the Far East.

Summing-up

The contemporary world undergoes continuous changes. Such changes are of dynamic character under the influence of the occurring processes of different types.

They are social, economic, political and cultural processes, and each of them is affected by the process of globalization treated first of all as a phenomenon or condition of the global economy.

In the globalization processes of the economy the increasing role is played by financial markets.

The reflections, which I have carried out, allow stating that the globalization of the financial markets was facilitated by liberalization of capital flows and technical progress.

The main result of the globalization process was creation of many liquid financial markets, which as a result make up the global market.

Activity of institutional investors worldwide is not only a factor increasing liquidity of local capital markets, as necessity to compete for foreign capital forces individual countries to make and promote on their own markets institutional changes, which in turn reinforce the owner's supervision, and this favours effectiveness improvement of listed companies, and at the same time the economic growth.

The growing activity of commercial banks on financial markets enables a dynamic development of the derivative tool market, and this in turn increases a possibility of an easy and cheap protection against the risk.

Despite the presented advantages brought by the globalization of financial markets, it must be noted that it also bears some fears.

They are related to the increased mobility of short-term capitals. Initially, such fears concerned possibility of occurrence of foreign exchange crises, yet now they also concern the spreading economic crisis.

Liberalization of short-term capital flows enabled abrupt speculation attacks against many currencies. In the 1990s it created easiness of taking loans in endangered currencies and their immediate resale in order to buy them afterwards with a profit after the fall of the exchange rate.

The proceeding globalization process of national economies and financial markets has led to a visible limitation of the state influence on the national economy.

The process enforces such an application of the economic policy that is indispensable for an effective competition for resources available on international financial markets, limiting effects of the economic crisis.

Initially, the economic crisis skipped the economy of Poland. As the main threat the following phenomena were indicated: a dangerous dependence of the zloty value on speculative short-term investments, high indebtedness of the State and a high share of import in production. Then there appeared some factors causing transfer of the crisis to Poland – limitation of the credit action by banks, a speculative attack at the Polish currency and a substantial reduction of zloty value and financial problems in enterprises with foreign exchange options. Yet in comparison to other European economies the situation of Poland was assessed positively.

Literature

- Bernaś B., *Finanse międzynarodowe*, Wyd. PWN, Warszawa 2006.
- Feldstein M., *Monetary Policy In Changing International Environment: The Role of Capital Flows*, NBER Working Paper, 2005.
- Kudła J., *Instrumenty finansowe*, Wyd. Key Text sp. z o.o, Warszawa 2002.
- Sławiński A., *Rozwój rynków finansowych, stabilność systemu finansowego gospodarki*, Studia Ekonomiczne, INE PAN, Warszawa 2003, series No. 1-2.
- Zabielski K., *Finanse międzynarodowe*, Wyd. PWN, Warszawa 2007.

Streszczenie

GLOBALIZACJA RYNKÓW FINANSOWYCH A RYZYKO KRYZYSU GOSPODARCZEGO

Początki globalizacji związane są z rozwojem wymiany międzynarodowej, rosnącymi powiązaniem międzynarodowymi i otwartością rynków.

W efekcie dokonana się ogólnoswiatowa integracja systemów ekonomicznych, zmiana unifikacji zachowań ekonomicznych i społecznych.

Powszechnie uważa się, że globalizacja rynków finansowych przyczynia się do poprawy funkcjonowania tych rynków. Pozwala bowiem na geograficzną dywersyfikację ryzyka i sprzyja wzrostowi gospodarczemu.

Z drugiej jednak strony globalizacja postrzegana jest często jako czynnik istotnie zwiększający ryzyko pojawiania się kryzysów finansowych.

Jak wynika z niedawnych kryzysów finansowych, to właśnie nieprawidłowe zarządzanie bankami, skutkujące narastaniem tzw. złych kredytów i niedostateczny nadzór nad nimi ze strony władz, stanowiły podatny grunt do kumulowania się problemów, które ostatecznie przyczyniły się do wybuchu kryzysu.

Możemy obecnie obserwować kolejne stadia kryzysu finansowego. Jego podstawą było załamanie się sektora ryzykownych kredytów hipotecznych w USA.

Początkowo, kryzys był odczuwalny jedynie na rynku amerykańskim, lecz ze względu na międzynarodowe powiązania rynków finansowych, przeniósł się on również do krajów europejskich a także krajów dalekiego wschodu. Zjawisko to jest powodem wielu obaw o stabilność również polskiego rynku nieruchomości.

MONETARY CRISIS AS ELEMENT OF FINANCIAL CRISIS 2007-2009

Lesław NIEMCZYK

University of Rzeszów

It is worth starting a discussion on the present financial crisis from a reflection that the crisis is a natural phenomenon in the market economy. A characteristic feature of the capitalistic economy development is periods of steady development intertwined with various crises. Although the crises are a kind of „shock therapy”, the market economies, all in all, come out tops from them. Hence, e.g. comes an assertion of superiority of the capitalistic economy over the centrally-controlled economy. One may say that decentralized economies can overcome crises much better.

Despite a sizeable dose of optimism based on historical data, one should not look at the present crisis (2007-2009) with a too favourable eye. This crisis is serious and dangerous because it affects the sphere of finances. The market economy is a monetary economy where the real sphere is operated by financial processes. Disturbances in the sphere of money and credits adversely affect the sphere of real economy – payment gridlocks are created, companies bankrupt, unemployment rises, demand drastically falls on various markets. Intensification of the crisis in the field of finances, or breakdown of the financial system would bring dramatic consequences in the real economy.

Image of crisis in mass media and reasons for crisis

Before we present the genesis of the monetary crisis, it is worth recalling how the crisis is „sold” by the mass media. Fairly universally is spread a thesis that the present financial crisis *started* in the United States on the market of real estates. It is claimed that the original *reason* for the crisis were risky operations of commercial banks, which granted subprime mortgages to persons without a proper credit rating (NINJA – no income, no job and other assets). Then in order to improve liquidity of banks, such credits were covered by securitization. This means, a special purpose corporation (Special Purpose Vehicle) was established, and it took over separated credit packages (assets of corporation), issued

securities (liabilities of corporation) – asset-backed securities (ABS). Banks „cleaned” their balances, and on the financial markets there appeared corporations that became „toxic”¹ at the moment when the scale of subprime credit insolvency was revealed and the real estate prices broke down. Credits and special purpose vehicles were backed by faith that prices on the market of real estates would be always rising.

Assuming this picture as a properly reflecting the essence of the problem the recipe for the crisis would be the following:

- 1) Governments will buy out or secure the value of „toxic” assets, which will save commercial bank from losses, raising their credibility,
- 2) Central banks will decrease interest rates, which will stimulate economic growth,
- 3) People (households) will start working, doing business and earning, which will have a secondary reflection on economic boom and will reverse the unfavourable trend, e.g. on the market of real estates.

Interest rates in many countries are close to zero, and public money is „pumped” into their economies. Why does not this mechanism work? Is it only a late reaction of the markets to the applied therapy? Or is it perhaps that the reasons should be searched elsewhere, i.e. deeper? What will happen if the crisis returns with the double force in 2-3 years?

Based on the initial analysis of the issue it seems justified to suspect that the crisis on the market of mortgages is rather the *result* of, and not the reason for, a reaction of much stronger factors, which, following John Naisbitt, should be called megatrends². Looking for a medical metaphor, one can say that the breakdown on the market of mortgages is already a symptom of a developed disease, and the disease itself has developed earlier under influence of complex reasons. Factors intensifying the crisis of 2007-2009 should be traced in several areas. The most characteristic ones are:

- the crisis of the monetary system (which will be the main motive of the studies in this paper),
- the crisis of central banking in the United States³,

¹ The problem of „toxic assets” depicts perfectly how relativism, which makes a precise analysis of events difficult, worms its way to the business language by means of the mass media. Some time ago „the toxic assets”, i.e. assets that have lost their value, would have been called, simply, a loss or suffering losses. Economic sciences, such as theory of economics, theory of finances and accountancy, dealing with a reliable description of economic phenomena do not know the concept of „toxic” assets.

² Cf. John Naisbitt, *Megatrendy [Megatrends]*, Zysk i S-ka, Poznań 1997.

³ The central bank (FED) is dependent on the Government policy and is responsible for economic growth.

- the crisis of the managerial capitalism⁴,
- the crisis of the American corporatism⁵,
- the crisis of derivative instruments⁶.

Well, this is not a closed collection of factors conditioning the present crisis. We should add a long-lasting influence of the welfare State's policies and a crisis of the recognized economic values of societies in the West. Although it is a simplification, one may say that only one hundred years ago the same societies worked, saved and invested. Today they wish, first of all, to buy, to consume and to incur debts. This thesis is perfectly illustrated by indebtedness of the American society. In the largest world economy, households do not supply the capital per saldo on the financial markets as it used to be for many centuries, but they are loaners.

Of course the mass media prepared to „sell” fast and easy information, because of various reasons, remind unwillingly about these megatrends. It is also impossible to analyze jointly all the factors in a short paper. That is why in the further part I will concentrate on one element, i.e. the crisis of money.

Economy and money

Money originates spontaneously in interhuman relations⁷. People act under conditions of limited resources and unlimited needs. That is why giving one commodity they demand in exchange another one, which is considered equally precious. Under conditions of the limited resources the exchange of „something” for „something” is a life necessity. The value of the exchanged goods is decided by their utility and rareness.

⁴ An inclination to undertake risky actions is greater for a manager than for an owner; despite bad economic effects and necessity to acquire public means, bonuses are paid for managers of ineffective enterprises.

⁵ Financing electoral campaigns in exchange of the administration favours; managers of great corporations are aware that a great corporation cannot bankrupt generating unemployment chiefly due to political reasons.

⁶ This crisis is perfectly illustrated by W. Buffet's words from the yearly report of Berkshire Hathaway for 2008: „Derivatives are dangerous. They have dramatically increased the leverage and risks in our financial system. They have made it almost impossible for investors to understand and analyze our largest commercial banks and investment banks. [...] Indeed, recent events demonstrate that certain big-name CEOs (or former CEOs) at major financial institutions were simply incapable of managing a business with a huge, complex book of derivatives”. Source: W. Buffet, *Warren Buffett's Letters to Berkshire Shareholders 2008*, www.berkshirehathaway.com, Omaha 2009, p. 16.

⁷ Cf. ed. Roman Milewski, *Elementarne zagadnienia ekonomii*, PWN, Warszawa 1994, p. 172.

Exchange transactions of „goods for goods” were the earliest stage in the development of economic relations, i.e. of the so-called natural economy⁸. In time, from the group of the exchanged goods were separated those that were accepted the most universally and they started to serve as *a standard defining value of other goods*. It is asserted that hide, salt, mussels, animal droves, decorative feathers of birds and other goods meeting basic needs first played the role of money.

An important moment in the development of economy is an origin of money based on precious metals. Silver and gold are divisible, fine and more durable than goods of every-day use. It is from silver or gold that the first coins were minted in the ancient times. From the macroeconomic point of view gold has another interesting advantage. For 5,000 years its supply to the economy has been at a steady level of 1-2% yearly, which in a long perspective corresponds to the economic growth rate. That is why gold plays perfectly the function of a *solid standard of economic value*.

Another important stage in the development of monetary relations is formation of banking. Although banking houses already existed in ancient Mesopotamia it is assumed that it is mediaeval Italy where the modern model of banking was born⁹. It was connected with the fact that ability of writing and access to paper became more universal, and the double entry accounting method had been developed. Mediaeval bankers received deposits, granted credits and supported payments. Issued deposit receipts for gold deposited in banks were transferred in time into banker's notes that were honoured in settlements of commercial transactions equally as gold. In that way beside the precious metal money was created the banknote, having a parity of exchange for the precious metal.

Gold currency system

The first international monetary system was „the gold currency system” (in other words „the gold standard” or „the gold parity”). In that system, as indicated by the name itself, the main role was played by gold – it was *the basis for banknote emission, the final measure of economic value and the international money*. The value of individual national currencies was specified by the parity, i.e. the weight of physical gold to which a monetary unit (a banknote) could be exchanged in the banking system.

How was „the gold standard” created? In 1844 the British Parliament, in connection with numerous cases of bankruptcies among commercial banks, passed „the Bank Charter Act”, which was to establish the stable foundation for

⁸ Dominated by gathering and hunting.

⁹ Ed. W. Jaworski, Z. Zawadzka, *Bankowość*, Poltext, Warszawa 2005, p. 19, p. 95.

operation of the financial system. The Act, e.g. specified the gold standard for the pound. Because the United Kingdom was the unquestioned economic leader, soon similar solutions became popular in many other countries. In that way the first common international monetary system based on uniform principles was shaped¹⁰.

The essential feature of the system was *the internal and external stability*. Exchange rates of the currencies, through their connection with gold, were fixed as a rule. Fluctuations oscillated within the range $\pm 1\%$. They could be involved only by a substantial unbalance in the international trade balance or discovery and exploitation of new gold fields. Substantial stability, transparent credit relations and low tax burdens, characteristic for that period, caused that it was the time favourable for owners and entrepreneurs. In the macroeconomic scale this resulted in a fast and stable economic growth.

It is worth noting that war periods disturbed both the economic and monetary stability. The necessity to finance excessive government expenditures enforced suspending the gold parity. The history of economy confirms that almost each major war was connected with diversion from the gold standard in order that the government could finance the excessive expenditures. Gold imposed too tight limits on the government expenditures. It is assumed that the age of the gold currency system was closed by the World War One. Although after the war there was an attempt to reconstitute the system, some unfavourable coincidences, e.g. the world economic crisis of the 1930s, made it impossible.

Great Crisis and New Deal

The years 1929-1933 came into history as the division line of the Great Crisis (the Great Depression). There are various views concerning the genesis of that phenomenon, i.e. why the economy fell into that long-lasting and deepening recession. It is completely sure, however, that on 24 October 1929 on Wall Street there started a sale panic („Black Thursday”), which was a specific eruption of previously growing economic moods. „Black Thursday” started a wave of bankruptcies in the United States. Step by step, the recession covered all sectors of the economy, and then the substantial part of the world. Industrial production drastically fell; unemployment rose to the scale causing social unrests; turnovers in international trade were reduced to $\frac{1}{3}$ of the pre-crisis level. Only

¹⁰ Cf. Stanisław Owsiak, *Podstawy nauki finansów*, PWE, Warszawa 2002, p. 90. The world expansion of the British pound, and then of the US dollar was assured to a great extent by the belief that they were money based on the gold standard, i.e. as good as the precious metal.

in the USSR there were no signs, which was then a serious argument asserting superiority of socialism and central planning.

Individual states tried to defend their own markets introducing barriers in international trade. Apart from protectionism, in politics a wave of populism and nationalism rose, and it, e.g. brought Hitler to power.

In the United States, critics of the situation started to look for reasons for the crisis in the internal operational malfunction of the capitalistic economy, which seemingly was unable to pass from the state of the deep and long depression to the economic revival. Those who doubted in self-regulation of the economy argued that an external impulse was needed that would galvanize the business cycle. Only State (Government) disposed of a proper potential to achieve that. Governmental expenditures will „drive” the business cycle. Thus there started an age of state intervention into the market economy to an unprecedented scale. It was the first practical application of Keynes’s doctrine, which in later years became one of the dominant movements in macroeconomics and economic policy of the 20th century¹¹.

President Roosevelt within his New Deal carried out comprehensive socio-economic reforms in the years 1933-1939. Benefits for the unemployed were paid; public works were organized; infrastructural investments were financed from government funds. Many legal regulations concerning industry, agriculture, banking, capital markets were developed and implemented. The reforms substantially increased the State expenses, which gave rise to strong pressure on devaluation of the dollar.

This was followed by *important changes in the monetary policy*. Roosevelt by his executive order 6102 of 5 April 1933 delegalized free circulation of gold. Each private holder of physical gold was obliged under penalty of fine or imprisonment to deposit their gold in the Federal Reserve bank. They received federal dollars for the deposited gold. It was an important event concerning the so-called *demonetization of gold*, i.e. displacement of gold from the monetary system. In several months from delegalization of gold the Government devaluated the value of money from \$20.67 per ounce to almost \$35 per ounce¹², i.e. they forcibly purchased gold from citizens with the „strong” dollar, and then they reduced its purchasing power.

Finally, the danger of the crisis return ended in 1939, with the outbreak of the World War Two.

¹¹ D. Kamerschen, R. McKenzie, C. Nardinelli, *Ekonomia [Economics]*, Fundacja „Solidarność”, Gdańsk 1993, p. 253.

¹² Cf. fig. 1 in sec. 6 of the paper.

Bretton Woods System

In July 1944, after the successful landing in Normandy and opening of the second front in Western Europe, the fate of the war, from the allied perspective, was predestined. It was then when in Bretton Woods (New Hampshire) the United Nations Monetary and Financial Conference was organized. The debate lasted three weeks, and 730 delegates represented 44 countries.

The conference had two main purposes. Firstly, not to allow for return of the deep international recession from the 1930s, sharpened by the protectionist reactions of individual countries. Secondly, to design anticipatedly an economic and monetary order in the bloc of western states. Concerning the economic doctrine there was a fairly unanimous advocating of *capitalistic economy, private ownership, development of free trade* (rejection of protectionism), allowing *state interventionism*.

How was the monetary order to look in that post-war economy? The US proposal was fairly unambiguous and obvious. It was all about legitimating the predominant position of the dollar in the future global economy. The dollar was to be the most important currency of the western bloc, and to play the role of the currency reserve money for states and international settlements. It was established that currencies of individual countries would be exchanged for the US dollar at a fixed exchange rate.

Gold was still an important (stabilizing) element of the world monetary system, although not directly any longer. Currencies were convertible to the dollar, and the dollar to gold at the rate of \$35 per ounce. It was only external conversion, i.e. for states not for citizens. That final reference to gold ensured stability of currency exchange rates that oscillated once again within $\pm 1\%$.

In order to introduce the new order, to support and control it, worldwide financial institutions were established – The International Bank for Reconstruction and Development (IBRD), generally known as the World Bank, and the International Monetary Fund (IMF)¹³.

In the first years after the war the system worked in a perfect way. Marshall Plan allowed Western Europe to stand on their feet, which once again proved values of interventionism. The world trade started to catch up the lost time. However, fairly fast, the gold standard, indirectly entered into the system, made its presence felt. The gold standard imposed too much pain on the Government expenditures of the United States. As early as in the 1960s financing of the war in Vietnam and expenditures of President L.B. Johnson connected with creation

¹³ D. Kamerschen, R. McKenzie, C. Nardinelli, *Ekonomia, op. cit.*, p. 890-891.

of the so-called „Great Society”¹⁴, gave rise to doubts if dollars circulating around the world were fully covered with gold.

Expansion of the „easy” dollar, which was to be based on gold, was interrupted by General de Gaulle. Having a good feeling for monetary matters, he demanded a more restrictive monetary policy. He demanded that the United States should regulate their external obligations in gold, and not in the printed dollar. Because his appeals remained unnoticed, France started a systematic exchange of its dollar reserves for gold at the established parity of \$35 per ounce. It was a threat for the United States that it would lose substantial gold reserves. On 15 August 1971 President Nixon, having no room for a manoeuvre, suspended convertibility of the dollar for gold at the rate from Bretton Woods¹⁵.

System of fiduciary money, and money value and its supply

In this way it was the beginning of the age of the fiduciary money (the so-called „fiat money”). This money is created by central banks *ex nihilo*, at almost zero cost. The fiduciary money in the banking system is not convertible for precious metals, but for another paper money¹⁶. *Paper money can be exchanged only for another paper money* („paper” for „paper”). Its postulated security (coverage) are goods offered in the economy. In that system it is also inflation that is entered into it, i.e. a systematic loss of the money purchasing power¹⁷.

Despite disintegration of the system from Bretton Woods, the architecture of the finance world did not change much. The American dollar has remained the most important reserve currency, and vast amounts of currency reserves are kept in it by individual states. The dollar operates international markets of raw materials, goods, and precious metals. The World Bank and the International Monetary Fund continue their activities.

Since 1971 not only prices of gold, but also currency rates have been regulated by the market. On the currency market their mutual valuation is made un-

¹⁴ E.g. the Civil Rights Act, the programme for fighting poverty, aid in education and access to Medicare, the development programme of underdeveloped areas, removal of obstacles in the right to voting.

¹⁵ This can be considered as unprecedented breaking of the rule „Pacta sunt servanda”, constituting the canon of international law.

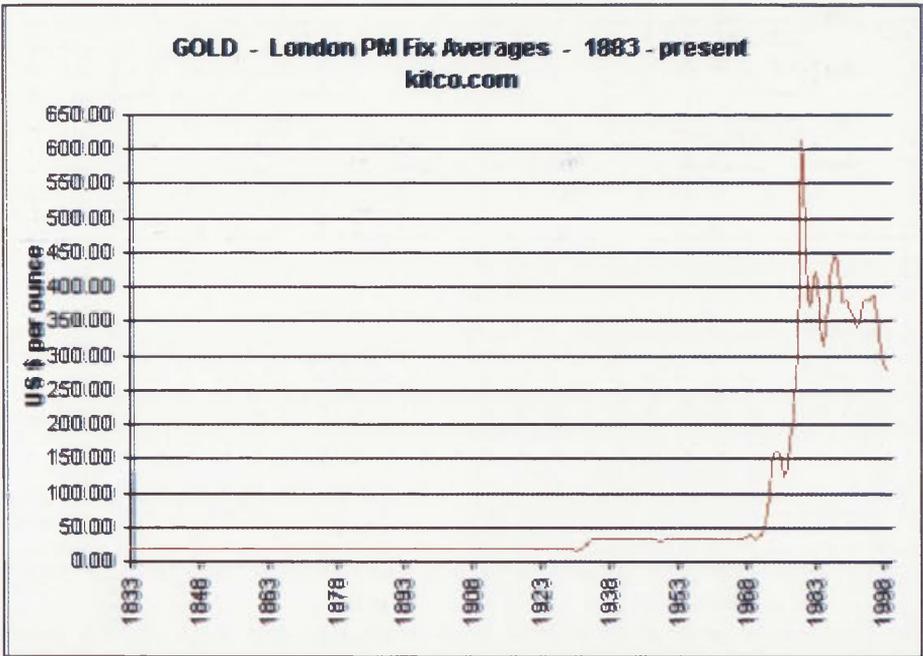
¹⁶ Stanisław Owsiak, *Podstawy nauki finansów*, *op. cit.*, p. 117.

¹⁷ It is single-digit inflation (1-4%) that is fairly universally accepted as something normal.

der the influence of demand and supply forces¹⁸. This causes high changeability and limited predictability of exchange rates. And this „incites” again clients for institutions offering derivative tools.

To sum up the paper, it is worth asking a question how this evolution of the monetary system has been influencing the price of gold and the purchasing power of the paper money. The two graphs below – fig. 1 and fig. 2 – show the price of gold throughout the last 126 years, i.e. from „the age” of the gold currency system to „the age” of fiduciary money.

Fig. 1. Average yearly prices of gold in the years 1883-1999 (USD/troy ounce of gold).



Source: www.kitco.com

¹⁸ An intensified interest in purchasing of X currency will raise its valuation. An aversion to X currency, however, will lower its relative rate in relation to other currencies.

Fig. 2. Prices of gold in the years 2000-2009 (USD/troy ounce of gold).

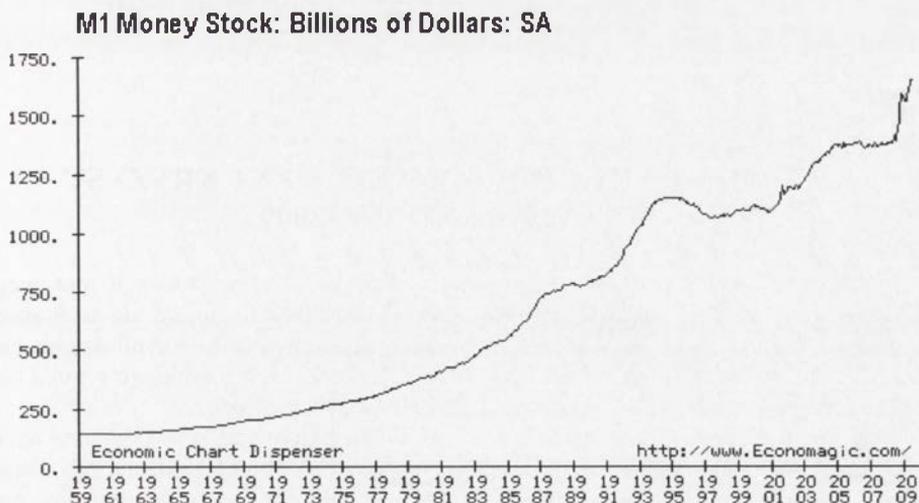


Source: www.kitco.com

From the graphs, there result two obvious tendencies whose common point is President Nixon's decision about suspending of the dollar convertibility for gold at the parity rate. Until 1971 the price of gold was stable and at a relatively low level. Since 1971 the price of gold has been oscillating substantially and growing systematically.

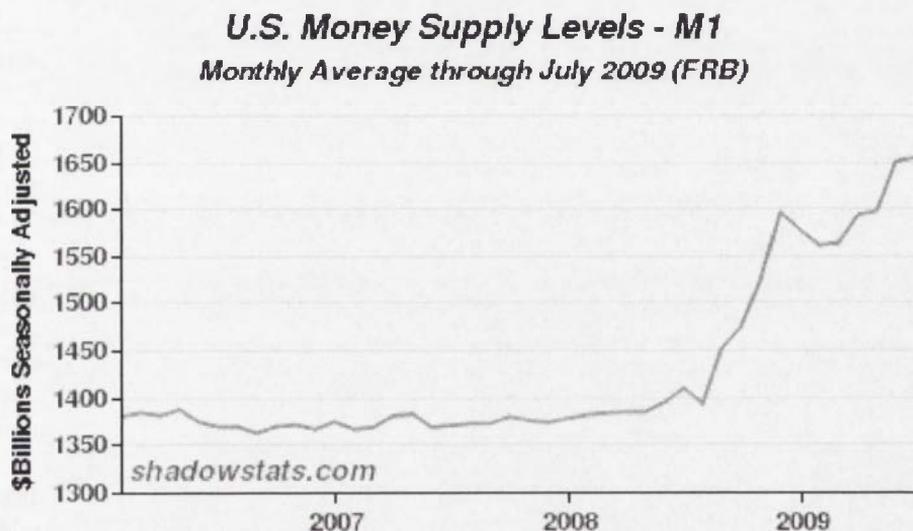
It is also possible to look at the problem from another perspective. Is it the price of gold that is creeping up? Or maybe, is it the American dollar, which is the measure of gold, that is losing its value so dramatically? Indeed, the supply of gold has been at a constant and low level for thousands of years. Maybe it is only that the number of banknotes grows substantially? How is the supply shaped to the economy of paper money? This question is answered by the two following graphs – fig. 3 and fig. 4.

Fig. 3. Supply of money M1 in the years 1959-2009 in billions of USD.



Source: www.economagic.com, cf. www.federalreserve.gov/releases/h6/hist/h6hist1.txt

Fig. 4. Supply of money M1 in the period of fighting with the crisis 2007-2009 in billions of USD.



Source: www.shadowstats.com

Graphs depicting supply of money explain a lot. Since the supply of the American dollar is still growing, its purchasing power must be falling. Not only prices of gold, but also prices of real estates, share prices of public companies,

and many other assets gain a strong impulse of growth. For accessibility of such goods is much more restrictive than the supply of the American dollar.

Streszczenie

KRYZYS MONETARNY JAKO ELEMENT KRYZYSU FINANSOWEGO 2007-2009

Artykuł stanowi próbę zakwestionowania eksponowanej w środkach masowego przekazu tezy, według której kryzys finansowy 2007-2009 rozpoczął się w Stanach Zjednoczonych na rynku nieruchomości i był spowodowany ryzykownymi działaniami banków komercyjnych, które udzielały kredytów hipotecznych wysokiego ryzyka (subprime mortgage) osobom bez odpowiedniej zdolności kredytowej.

Jest uprawnione przypuszczenie, że kryzys rynku hipotecznego w USA jest wynikiem (skutkiem) niekorzystnych zjawisk i procesów w gospodarce globalnej XX wieku. Istotnym składnikiem tych procesów jest powolna ewolucja systemu pieniężnego przechodząca przez następujące stadia: system waluty złotej, okres Wielkiego Kryzysu, system z Bretton Woods, system pieniądza fiducjarnego.

FOREIGN CURRENCY OPTIONS – INSTRUMENTS OF RISK MANAGEMENT IN TIMES OF CRISIS. OPPORTUNITIES AND THREATS

Tomasz ŚPIEWAK

University of Rzeszów

An English historian Henry G. Wells, in his most important work „The Outline of History” placed the following thesis: „History is a race between education and catastrophe”. The above statement fully refers to the process of managing an enterprise, where knowledge is one of the most important elements. The enterprise performs in a changing and unpredictable environment. In such a situation it is indispensable to build an effective system of risk management, which is an important factor affecting its competitive position.

The development of the derivative instrument sector in the 1970s caused an increase in interest in techniques of financial risk limitation among players of financial markets and contributed to development of risk management systems. In Poland, the first impulse of a change in the approach to management in enterprises, and as a consequence also to risk management, was the beginning of the socio-economic system transformation on the turn of the 1980s and the 1990s.

The purpose of this paper is presentation of basic opportunities and threats resulting from construction of security strategies whose basis are derivative instruments. In the paper, a special stress has been put on foreign currency options, which for the last several months have been the object of analyses by many institutions and economic entities, which have suffered heavy losses due to an irresponsible use of such instruments in security and speculative operations.

Derivative instruments on the Polish regulated market appeared in the second half of the 1990s and they gained fast and important share in trades on the Warsaw Stock Exchange. The oldest derivative instruments quoted on the Warsaw floor are futures contracts for the index WIG 20, which made their debut on 16 Jan. 1998. Then in the turnover of the regulated market there appeared derivative tools whose basis were exchange rates (USD/PLN – 25 Sep. 1998, EUR/PLN – 31 May 1999) and stocks of selected companies (the first quotations on 22 Jan. 2001).

Table 1. Derivative instruments on the floor of Warsaw Stock Exchange.

| Miesiąc Month | Kontrakty Futures contracts | | | Opcje Options | | | Jednostki indeksowe Participation units | | | Razem Total | | |
|------------------|---------------------------------------|-------------------|--|---------------------------------------|-------------------|--|--|-------------------|--|---------------------------------------|-------------------|--|
| | Liczba transakcji Number of trades | Wolumen Volume | Otwarte pozycje (na koniec) Open interest (eop) | Liczba transakcji Number of trades | Wolumen Volume | Otwarte pozycje (na koniec) Open interest (eop) | Liczba transakcji Number of trades | Wolumen Volume | Otwarte pozycje (na koniec) Open interest (eop) | Liczba transakcji Number of trades | Wolumen Volume | Otwarte pozycje (na koniec) Open interest (eop) |
| 1998 | 15 798 | 24 368 | 699 | --- | --- | --- | --- | --- | --- | 15 798 | 24 368 | 699 |
| 1999 | 88 876 | 206 873 | 5 360 | --- | --- | --- | --- | --- | --- | 89 434 | 208 101 | 5 360 |
| 2000 | 540 734 | 1 516 042 | 11 952 | --- | --- | --- | --- | --- | --- | 540 734 | 1 516 042 | 11 952 |
| 2001 | 1 238 229 | 3 754 854 | 12 815 | --- | --- | --- | 469 | 22 343 | 4 346 | 1 238 698 | 3 777 197 | 17 161 |
| 2002 | 1 052 971 | 3 175 890 | 19 283 | --- | --- | --- | 3 554 | 245 019 | 27 866 | 1 056 525 | 3 420 909 | 47 149 |
| 2003 | 1 267 348 | 4 231 949 | 22 535 | 8 087 | 20 647 | 847 | 2 484 | 132 459 | 20 336 | 1 277 919 | 4 385 055 | 43 718 |
| 2004 | 1 154 951 | 3 609 125 | 30 270 | 34 157 | 78 752 | 4 775 | 1 718 | 45 640 | 10 981 | 1 190 826 | 3 733 517 | 46 026 |
| 2005 | 1 573 953 | 5 378 517 | 33 418 | 86 476 | 254 432 | 6 845 | 1 312 | 18 580 | 6 692 | 1 661 741 | 5 651 529 | 46 955 |
| 2006 | 2 211 957 | 6 386 046 | 73 946 | 122 767 | 327 828 | 4 509 | 1 862 | 18 265 | 6 531 | 2 336 586 | 6 732 139 | 84 986 |
| 2007 | 2 955 950 | 9 477 868 | 53 430 | 117 276 | 399 186 | 11 181 | 1 840 | 22 258 | 6 099 | 3 075 066 | 9 899 312 | 70 710 |
| 2008 | 3 962 298 | 12 233 935 | 73 475 | 121 821 | 326 583 | 6 925 | 1 809 | 36 327 | 8 823 | 4 085 928 | 12 596 845 | 89 223 |

Source: Warsaw Stock Exchange, www.gpw.pl.

Futures contracts belong to the oldest derivative instruments quoted on the Polish regulated market, and they can be divided into three basic groups: equity index futures, currency futures, and single stock futures. Since 1998, based on historic data it has been possible to notice a systematic development of that segment on the Warsaw exchange. From 1998 to 2008, both the number of trades and the volume of trades, as well as the number of equity index futures, and single stock futures showed a rising tendency (Table 2).

Table 2. Futures contracts on the Warsaw Stock Exchange.

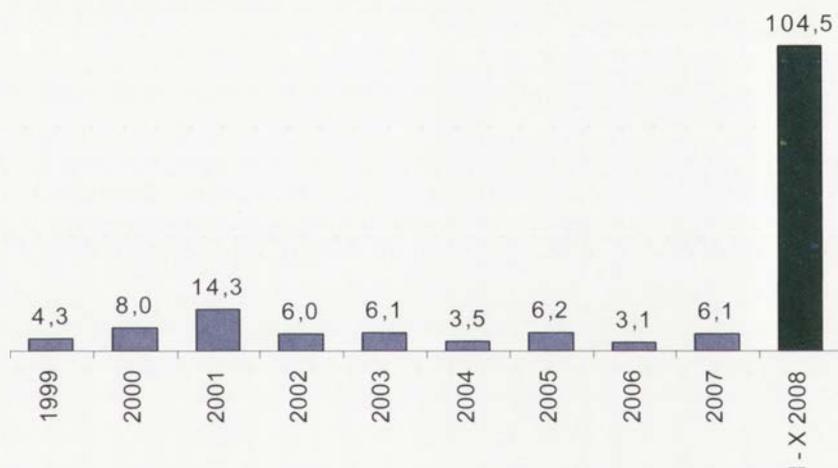
| Miesiąc Month | Kontrakty indeksowe Equity index futures | | | Kontrakty walutowe Currency futures | | | Kontrakty akcyjne Single stock futures | | |
|------------------|---|-------------------|--|--|-------------------|--|---|-------------------|--|
| | Liczba transakcji Number of trades | Wolumen Volume | Otwarte pozycje (na koniec) Open interest (eop) | Liczba transakcji Number of trades | Wolumen Volume | Otwarte pozycje (na koniec) Open interest (eop) | Liczba transakcji Number of trades | Wolumen Volume | Otwarte pozycje (na koniec) Open interest (eop) |
| 1998 | 15 774 | 24 298 | 675 | 24 | 70 | 24 | --- | --- | --- |
| 1999 | 88 667 | 203 843 | 4 845 | 767 | 4 258 | 515 | --- | --- | --- |
| 2000 | 537 691 | 1 508 075 | 11 722 | 3 043 | 7 967 | 230 | --- | --- | --- |
| 2001 | 1 186 794 | 3 679 972 | 11 558 | 7 692 | 14 325 | 478 | 43 743 | 60 557 | 779 |
| 2002 | 981 720 | 3 077 836 | 17 866 | 3 742 | 5 957 | 126 | 67 509 | 92 097 | 1 291 |
| 2003 | 1 196 302 | 4 132 749 | 20 313 | 3 947 | 6 145 | 250 | 67 099 | 93 055 | 1 972 |
| 2004 | 1 088 755 | 3 517 782 | 27 787 | 2 900 | 3 455 | 215 | 63 296 | 87 888 | 2 268 |
| 2005 | 1 437 611 | 5 167 111 | 30 348 | 5 184 | 6 216 | 84 | 130 674 | 172 828 | 2 928 |
| 2006 | 2 121 215 | 6 257 203 | 72 706 | 2 579 | 3 144 | 68 | 87 999 | 112 824 | 1 122 |
| 2007 | 2 874 112 | 9 355 799 | 50 533 | 4 717 | 6 101 | 494 | 77 089 | 114 021 | 2 403 |
| 2008 | 3 662 352 | 11 769 730 | 68 780 | 68 662 | 132 559 | 2 069 | 231 284 | 331 646 | 2 626 |
| 2009 | 961 135 | 2 759 756 | 91 378 | 50 738 | 69 790 | 3 245 | 87 716 | 130 025 | 6 450 |
| 01.2009 | 277 718 | 738 536 | 75 969 | 15 801 | 21 706 | 2 293 | 21 033 | 27 009 | 4 085 |

Source: Warsaw Stock Exchange, www.gpw.pl.

A very interesting is an analysis of statistics of currency futures. Starting from the appearance of currency futures on the regulated market in 1999 until 2007, they were the background for equity index futures and single stock futures. In 2008, there was a diametrical change – the trade volume of currency futures grew almost 16 times.

An increase of interest of currency investors in derivative instruments during the recession on the global financial markets resulted on the one hand from possibilities of using derivative instruments in construction of security strategies against exchange rate risk, on the other hand, however, it was a consequence of a specific feature of such instruments – possibility to earn also on price falls for underlying instruments. The trade volume of all derivatives quoted on the floor of the Warsaw exchange increased, but statistics concerning currency derivative instruments showed the highest dynamics. An increase in the number of open interests preceding the period of a substantial consolidation of the Polish currency had a strong influence on the pricing of the interests in the second half of 2008, and as a consequence the level of the financial standing of enterprises holding derivative instruments.

Fig. 1. Currency futures – trade volume (in thousands of interests).



Source: Warsaw Stock Exchange, www.gpw.pl.

In 2008, there was an increase in the value of the market of currency derivative instruments based on both EUR and USD. The value of currency futures trade for EUR increased in the period of 2007-2008 from 38.3M PLN to the level of 2,071.3M PLN; for futures based on USD the value increased respectively from 294.0M PLN to the level of 4,873.1M PLN. Practically all statistics

of currency derivative instrument trade showed in the period of 2007-2008 a very high dynamics of growth.

An increase of interest in derivative instruments among investors resulted from a specific construction of the instruments, which makes them very effective investment tools especially in the period of recession on the global financial markets. Such instruments enable reaching positive growth rates, even in the situation when prices for underlying instruments fall. A similar effect may be obtained in case of stocks using short sales; yet, they are still hardly popular among investors on the Warsaw Stock Exchange. It should be remembered, however, that derivative instruments can be a source of significant profits, but also of high losses, whose source can be insufficient protection against the accompanying market risk.

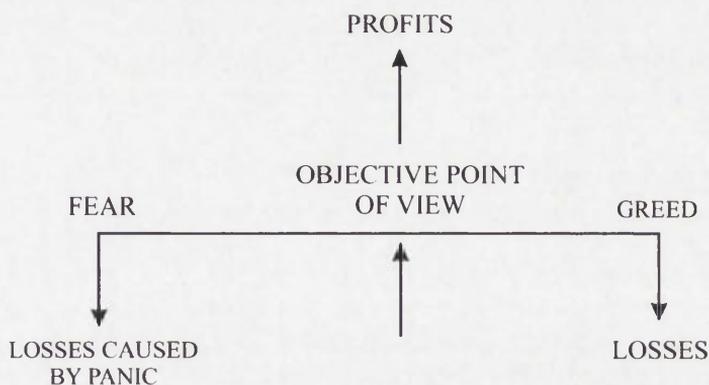
The market risk connected with derivative instruments:

- it results from changes to the trade value, which depends on price changes of the of the primary instrument,
- it is increased by the leverage effect – small changes to exchange rates on the spot market have a proportionally greater influence on the value of funds on the account, which are security deposits,
- it may lead to losses exceeding the value of the initial investment – losses may be higher than the originally paid security deposit, which will lead to the situation when the investor will be forced to supplement the initial deposit.

The risk connected with a given investment should be precisely specified, in order that the investor should be prepared for a situation of a threat of financial liquidity loss, occurring in the situation when the investor is unable to cover losses. Players of financial markets have problems with identification and measurement of risk; moreover, according to one theory (scientifically proved) discovering of the risk and avoiding it is not managed by this part of our brain that is responsible for thinking, but by the one that is connected with emotions¹. As a consequence, this means that in reality the investor's actions whose purpose is to limit the risk may have nothing to do with rational thinking.

¹ Cf. N.N. Taleb, *Ślepy traf. Rola przypadku w sukcesie finansowym*, GWP, Gdańsk 2006, p.76.

Fig. 2. Balance of fear-greed.



Source: M. J. Pring, *Psychologia inwestowania*, Oficyna Ekonomiczna, Kraków 2006.

Finally, in the investment process it is very difficult to reach an objective point of view, which would enable to gain such a level of rational decisions that would lead to magnification of profits at the acceptable level of risk.

In the analysis process of the phenomenon of currency derivative instruments, which occurred in the second half of 2008 one should ask a basic question: what has made entrepreneurs contract currency options, which have led to deepening of financial problems of entities performing under the economic recession. The basic factor that caused that security strategies were used by enterprises to a limited extent was costs of securities. The financial institutions, using tools of financial engineering, found a way to increase popularity of derivative instruments – they proposed their clients zero-cost strategies whose general rule was that purchasing of one instrument is financed by sale of another one, with a reservation that prices of both instruments are identical.

At the very beginning, let us have a look at selected fragments of an announcement placed by one financial institution that presented its offer concerning use by enterprises of derivative instruments in zero-cost security strategies.

Offer: corridor – exporter

Are you an exporter? Do you want to secure yourself against the risk connected with the range of currency exchange rates? The option structure Corridor is an ideal solution for exporters ready to accept a small variability of the currency exchange rate.

Advantages:

- *protection against the foreign exchange risk – the strategy Corridor will provide you an ideal security against the range of currency exchange rates, the so-called corridor, by means of closing the foreign exchange risk within a range (the foreign exchange „not lower than..., but not higher than...”),*

- zero costs – we guarantee a zero-cost character of the strategy,
- clear rules – you know at what minimal and maximal exchange rate your incomes will be secured,
- two options – the option Put, bought by you, has a lower strike price than the sold one, Call.

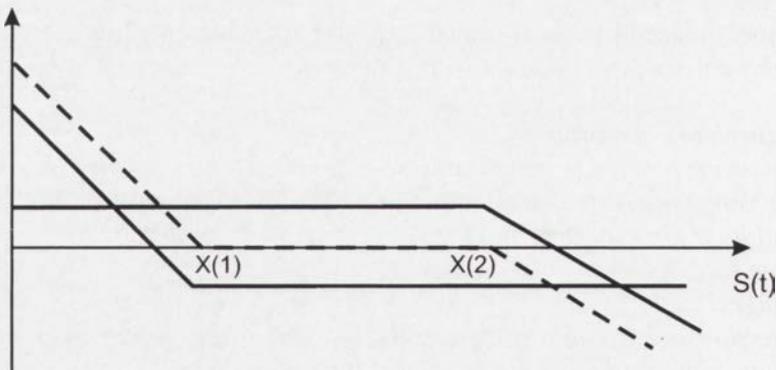
Profits for the company:

- money saving – buying Corridor, you do not bear any costs,
- time saving – you can make a transaction with a dealer by phone, and its confirmation you will receive by email or fax,
- a greater security – thanks to closing the foreign exchange risk within the range („not lower than..., but not higher than...”) – you protect better your Company against the foreign exchange risk,
- a higher profit – the corridor gives you an opportunity for selling a foreign currency at the low exchange rate of the strategy, if the market exchange rate is lower than that level.

The general rule of using derivative instruments in security strategies is as follows: possible losses on the spot market are compensated by profits gained on the futures market.

The advantage of the proposed strategy corridor-exporter is security against the foreign exchange risk in a specified range of foreign currency exchange rates, and also limitation of such a security costs. In the above strategy the investor takes at the same time a long position in the put option at the strike price x_1 (buying of the option) and a short position in the call option at the strike price x_2 (selling of the option). The graph of the strategy is presented by figure 2.

Fig. 3. Option strategy – a long position in the put option and the short position in the call option.



Source: own study.

In an analysis of the profitability level of security strategies, the following designations have been taken:

- $S(t)$ – a trade price of the underlying instrument,
- $X(1)$ – a strike price of the put option,
- $X(2)$ – a strike price of the call option,
- $pr(p)$ – a put option premium,
- $pr(c)$ – a call option premium.

Assuming equal values of option premiums occurring in the range of foreign currency exchange rates ($X(1);X(2)$), the analysed strategy does not bring any costs or profits, whereas it protects an exporter against an excessive consolidation of the currency in a situation when the market exchange rate at the moment of the option settlement is lower than the strike rate of the put option ($S(t) < X(1)$). At the same time the strategy has assumed that possible losses resulting from the option settlement at the settlement rate higher than the strike rate of the put option ($S(t) > X(2)$), will be covered by profits generated on the spot market.

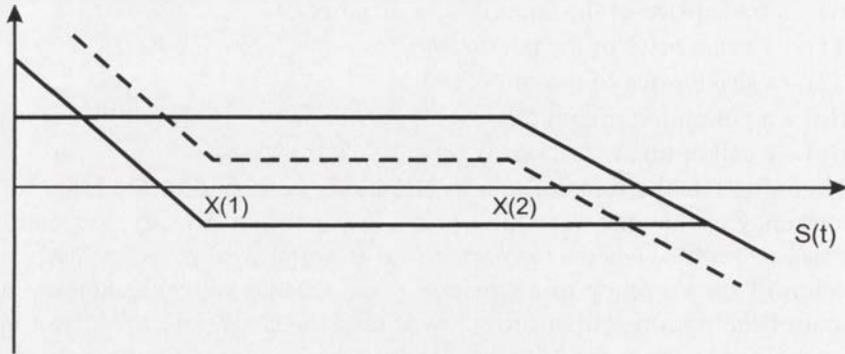
Table 3. Analysis of symmetrical strategy value.

| range of stock prices | income from long position in put option | income from short position in call option | total income |
|-----------------------|---|---|-------------------------------|
| $S(t) < X(1)$ | $X(1) - pr(p) - S(t)$ | $pr(c)$ | $X(1) - pr(p) - S(t) + pr(c)$ |
| $X(1) < S(t) < X(2)$ | $- pr(p)$ | $pr(c)$ | $pr(c) - pr(p)$ |
| $S(t) > X(2)$ | $- pr(p)$ | $X(2) + pr(c) - S(t)$ | $X(2) + pr(c) - S(t) - pr(p)$ |

Source: own study.

The situation seemed to be very favourable for the investor, especially in the situation of the systematic consolidation of the Polish currency. In case of many enterprises there was, unfortunately, a temptation to gain above-average profits at the parallel limitation of invested resources. A balance in the decision-taking process, where an objective point of view is reached, was shaken. The risk occurring in case of the described security strategy consisted in the fact that in a situation when the market exchange rate on the date of the option implementation is above the exchange rate $X(2)$ – the bank will implement the bought call option and the other party to the transaction will be obliged to pay the settlement amount resulting from the product of the option amount and the difference between the exchange rate $X(2)$ and the market exchange rate.

Fig. 4. Asymmetric option strategy – long position (one put option) and short position (2 call options).



Source: own study.

Investors began to implement investment strategies consisting in taking unbalanced positions – the quantity of the sold call options exceeded the quantity of the bought put options. In such a situation the investor gained profit also in the range $(X(1); X(2))$; yet, the risk of suffering losses in case of an increase of a foreign currency exchange rate was much higher. A graph of the strategy consisting in buying of one put option at the parallel sale of two call options has been presented in figure 5. An analysis of the amount of the total income of the asymmetric strategy depending on the value of the underlying instrument will be presented in table 4.

Table 4. Analysis of asymmetric strategy value.

| range of stock prices | income from long position in put option (1 interest) | income from short position in call option (2 interests) | total income |
|-----------------------|--|---|-------------------------------------|
| $S(t) < X(1)$ | $X(1) - pr(p) - S(t)$ | $2 * Pr(c)$ | $X(1) - pr(p) - S(t) + 2 * pr(c)$ |
| $X(1) < S(t) < X(2)$ | $- pr(p)$ | $2 * Pr(c)$ | $2 * pr(c) - pr(p)$ |
| $S(t) > X(2)$ | $- pr(p)$ | $2 * (X(2) + pr(c) - S(t))$ | $2 * (X(2) + pr(c) - S(t)) - pr(p)$ |

Source: own study.

The underlying instrument of derivative instruments constituting the construction basis of the above strategies was the exchange rate of the following couples of currencies: USD/PLN and EUR/PLN. Representatives of financial institutions offering derivatives constructed in such a way presented shaping forecasts of exchange rates for those currencies in the future, indicating a fur-

ther consolidation of the Polish currency. Some exemplary forecasts of exchange rates for the currencies, published by selected financial institutions at the beginning of 2008, have been presented below. Practically, all the forecasts envisage a further consolidation or at least lack of a visible trend indicating a strong impairment of the Polish currency in relation to the most important foreign currencies – EUR, USD, and CHF. The forecasts formulated like that constituted an important premise for investors, which were taken into account while constructing investment and security strategies.

Table 5. Forecasts of exchange rates of foreign currencies in 2008 (as of 02 Feb. 2008).

| type of currency | beginning of February | end of March | end of June | end of December |
|------------------|-----------------------|--------------|-------------|-----------------|
| EUR | 3.59 | 3.57 | 3.61 | 3.51 |
| USD | 2.42 | 2.44 | 2.48 | 2.54 |
| CHF | 2.24 | 2.22 | 2.21 | 2.18 |

Source: www.gazetaprawna.pl, 02 Feb. 2008, (prepared based on forecasts by BZ WBK, Deutsche Bank, JP Morgan, Raiffeisen, PKO BP).

In justifications of their forecasts, the financial institution included the following to the factors that can potentially affect consolidation of the Polish currency: decisions taken concerning interest rates in Poland, decisions taken by the European Central Bank, influx of funds from emigrants, reform plans of finances, and plans of fast accession to the EURO zone. Whereas, the following phenomena affecting impairment of the currency were listed: a slowdown in the economy in Poland and all Europe, and an increase in deficit of current turnovers.

Table 6. Forecast of foreign currency exchange rates (22 Aug. 2008) made by Fortis Bank.

| | EUR/PLN | USD/PLN | CHF/PLN |
|----------|---------|---------|---------|
| Sep. '08 | 3.38 | 2.28 | 2.10 |
| Oct. '08 | 3.36 | 2.30 | 2.09 |
| Nov. '08 | 3.36 | 2.33 | 2.09 |
| Dec. '08 | 3.35 | 2.36 | 2.08 |
| Jan. '09 | 3.35 | 2.38 | 2.09 |
| Feb. '09 | 3.33 | 2.39 | 2.08 |
| Mar. '09 | 3.33 | 2.41 | 2.08 |
| Apr. '09 | 3.30 | 2.41 | 2.07 |
| May '09 | 3.30 | 2.43 | 2.07 |
| June '09 | 3.28 | 2.43 | 2.06 |
| July '09 | 3.28 | 2.46 | 2.06 |

| | EUR/PLN | USD/PLN | CHF/PLN |
|----------|---------|---------|---------|
| Aug. '09 | 3.28 | 2.49 | 2.06 |
| Sep. '09 | 3.30 | 2.54 | 2.08 |

Source: L. Kraskowski, *Analiza: przedsiębiorców wprowadzono w błąd*, Dziennik, No. 41(862) / 2009, p. 4.

In the meantime, it turned out that in the second half of 2008 the Polish currency was much impaired in relation to the currencies that were the construction basis of the offered strategies. The graph by the National Bank of Poland (NBP) presenting shaping of exchange rates: USD/PLN and EUR/PLN has been presented below.

Fig. 5. Average exchange rates of EUR and USD by the National Bank of Poland.



Source: NBP, www.nbb.pl.

The impairment of the Polish currency was sudden and very strong. During only half a year the average exchange rate of EUR by NBP grew by 53% from the rate of 3.2026 PLN/EUR (as of 31 July 2008) to the rate of 4.8999 PLN/EUR (as of 18 Feb. 2009). The change to the average exchange rate of USD was even greater: an increase by 77.63% from the rate of 2.1340 PLN/USD (as of 23 Apr. 2008) to the rate of 3.7906 PLN/USD (as of 04 Mar. 2009). Such a strong impairment of the Polish currency meant enormous problems for the Polish financial institutions and investors that at that time held open interests whose basis were derivative instruments.

In its communiqué the Polish Financial Supervisory Authority (PFSA) informed that a negative pricing due to involvement of enterprises into currency options reached ca. 9 billion zlotys (ca. 52%) as of 13 February 2009².

A negative pricing of the remaining currency derivative instruments:

- forward transactions – ca. 7 billion zlotys (ca. 38%),
- swaps, including CIRs (Cross Currency Interest Rate Swaps) – ca. 2 billion zlotys (ca. 10%).

The euro currency constituted the underlying instrument for trades constituting ca. 77% of the negative pricing, ca. 14% of such a pricing befell to the US dollar. According to the report by the PFSA, the negative pricing of a trade should not be identified with losses of companies: 80-85% of the enterprises that contracted trade of derivative instruments should not have suffered any losses due to such trade, because of the character of such transactions, which secure incomes from export³.

It results from an analysis carried out by the Office of the Polish Financial Supervisory Authority (OPFSA), based on the information obtained from banks in the form of supervision that:

- an unfavourable negative pricing of derivative trade may be materialized as a loss in the general result of a given enterprise, if such trades were of speculative character or they reduced incomes from export by this enterprise,
- the share of clients contracting speculative trades does not exceed 10%,
- costs borne by the banking sector due to involvement into derivative trades do not threaten solvency of banks; banks created reserves and made updating corrections due to derivative trades at the total amount of 1.34 billion zlotys (at the end of 2008).

² Cf. *Podstawowe wnioski z analizy zaangażowania przedsiębiorstw w walutowe instrumenty pochodne*, The Communiqué of the Polish Financial Supervisory Authority of 11 Mar. 2009.

³ Cf. *Podstawowe wnioski z analizy zaangażowania przedsiębiorstw w walutowe instrumenty pochodne*, The Communiqué of the Polish Financial Supervisory Authority of 11 Mar. 2009.

The influence of the present expositions due to currency derivative trades on results of banks may take place by means of⁴:

- non-fulfilment of an obligation by enterprises due to settlement of derivative trades,
- non-fulfilment of other credit obligations by clients whose financial standing deteriorated as the result of negative effects of speculative derivative trades.

Banks operating on the Polish market did not issue options by themselves, but had an identical exposition as the company, with the reservation that one party was one of London market makers. Banks not having their own portfolio secured contracts of enterprises according to the back-to-back rule – the maker called the Polish bank to pay the security, and the latter in turn called the Polish exporter⁵. In the situation when the entrepreneur was unable to pay back his obligations to the bank, the latter was forced to pay the security out of its own resources.

Table 7. Losses of listed banks due to currency options.

| Bank | Value of reserves in the fourth quarter of 2008 for currency trades with corporate clients (in PLN) | Value of reserves in the first quarter of 2009 (in PLN) Forecast |
|--------------------|---|--|
| Pekao | 30M | 0M |
| Bank Handlowy | 114M | 57M |
| ING Bank Śląski | 235M | 140M |
| Fortis Bank Polska | 217M | no forecasts |
| Kredyt Bank | 19M | 30M |
| Millenium Bank | 152M | 80M |
| Bank BPH | 11M | 6M |
| BRE Bank | 84M | 70M |
| PKO BP | 30M | 0M |
| Bank Zachodni WBK | 81M | 30M |

Source: J. Iskra, *Analitycy: opcje już nie takie groźne*, Gazeta Prawna, No. 89/2009, p. A9.

Trades with currency options between enterprises and banks were the source of losses in the companies that had entered the currency option structures. Their purpose was to secure against the exchange rate risk of open currency interests. Enterprises that exported or had domestic contracts expressed in foreign currencies contracted options because the zloty consolidated systematically and many analyses proved that the trend would last. In order to limit costs

⁴ Cf. Komunikat KNF z dnia 17 grudnia 2008 r. w sprawie wpływu walutowych instrumentów pochodnych na banki i spółki publiczne, The Communiqué of the Polish Financial Supervisory Authority of 17 Dec. 2008.

⁵ Cf. Mielus P., *Nie takie opcje straszne, jak je malują*, Rzeczpospolita, www.rp.pl/artukul/247925.

of security strategies companies decided to contract strategies whose example is the contract „exporter-corridor” earlier described. The process of strong impairment of the Polish currency in the second half of 2008 led to substantial financial losses that deteriorated the financial standing of many enterprises.

The losses, which the Polish enterprises having open security strategies started to have, resulted from the following factors:

- dominance of speculative trades over security ones – options were issued to a much greater value than the secured trades – the differences were even 8:1 – the enterprises contracted options with many financial institutions at the same time,
- investors, tempted by derivative instrument dealers, took the zero-cost strategy not having an open interest on the spot market – this meant no safety buffer in case of impairment of the Polish currency (in such a case losses on the futures market would have been compensated by losses on the spot market).
- the entrepreneur was eager to have the value of the implementation price $X(2)$ (see fig. 5) as high as possible, which meant that in order to maintain the zero-cost character of the strategy, the entrepreneur had to take the short position in the call option in a greater number of options (in other words he had to sell more of them); this meant that in case of an unfavourable change to the price of the underlying instrument the losses were much higher,
- the enterprises had in their contracts a clause that they were obliged to pay security for future obligations (collateralization) – in course of impairment of the Polish currency investors were called by financial institutions to increase values of paid security deposits, despite the fact that the option maturity period was very long – banks feared that the companies having options issued in several banks could bankrupt and would be unable to settle their obligations.

Losses of the enterprises were a consequence of a change to value pricing of currency options within the security strategies and resulted, e.g. from a change to exchange rate differences that affected the internal and external value of instruments. As the result of changes occurring on the currency spot market the time value of the strategies changed – the negative pricing of contracts increased. For example, the market volatility of contracts changed. At the beginning of September (before the fall of the US investment bank Lehman Brothers), for the exchange rate of EUR/PLN the volatility was quoted at the level of 6-7%, for the option of USD/PLN – 12-13% – two months later twice more was demanded for yearly options, and even four times more for monthly options⁶.

⁶ Cf. Mielus P., *Nie takie opcje straszne, jak je malują*, Rzeczpospolita, www.rp.pl/arttykul/247925.

A change to parameters affecting pricing of option contracts caused a meaningful reduction of their value, which as a consequence led to high nominal losses of Polish enterprises, which had opened security interests in an irresponsible way.

Examples of enterprises whose financial standing deteriorated much as the result of a change to the value of the held derivative instruments.

Fabryka Elektrofiltrów ELWO S.A. in Bankruptcy

On 26 February 2009 Fabryka Elektrofiltrów Elwo S.A. received from the District Court Katowice-Wschód in Katowice, 10th Business Division a decision declaring its bankruptcy, including liquidation of its property.

The manufacturer of electrofilters had contracted options with four banks. It has to settle €48.7M with the bank Millenium, €46.1M with Fortis, €28.6M with Pekao S.A., and €25,6M with ING Bank Śląski.

CIECH S.A.

The current report No. 68/2008, the date of the report publication: 07 Nov. 2008.

The change to the financial forecast for the Group CIECH S.A. for 2008:

– the forecast net result: 225M PLN,

– the actual forecast of the net result: 88M PLN.

One of the main reasons for lowering of the forecast was, e.g. the negative pricing of trades with use of derivative instruments.

CERSANIT S.A.

The current report No. 2/2009, the date of publication: 27 Jan. 2009.

The result from the futures trades settled in 2008: – 11,700,285.61 PLN.

The total pricing of futures trades as of 31 Dec. 2008: – 52,948,418.03 PLN.

KROSNO S.A.

The current report No. 12/2009, the date of publication: 30 Jan. 2009.

The result from the futures trades settled in 2008: + 1,330,730.26 PLN.

The total pricing of futures trades as of 31 Dec. 2008: – 37,826,992.47 PLN.

A motion to start bankruptcy proceedings with possibility to negotiate an agreement.

FOTA S.A.

The current report No.14/2009, the date of publication: 03 June 2009.

The result from the currency options settled in May 2009: – 1,253,916.88 PLN.

The total pricing of futures trades as of 29 May 2009: – 10,175,708.85 PLN.

PKM DUDA S.A.

The current report No. 26/2009, the date of publication: 18 Mar. 2009.

The contents of the report: The Board of PKM DUDA S.A. informs that on 17 March 2009 they received from Kredyt Bank S.A. with the seat in Warsaw

a notice of closing 17 trades, including option trades. The total amount of closing, indicated by Kredyt Bank S.A. in the notice, was 27,566,400.00 zł. The date of the closing amount payment is on 18 March 2009. The current report No. 27/2009, the date of publication: 24 Mar. 2009. Subject: PKM DUDA S.A. – starting of corrective proceedings.

ZAKŁADY MAGNETYZOWE ROPCZYCE S.A.

The current report No. 44/2008, the date of publication: 27 Nov. 2008. An earlier conclusion and settling of currency option trades on the couple EUR/PLN, calling for payment of 19,505,569.52 PLN. The current report No. 47/2008, the date of publication: 06 Dec. 2008. On 5 December 2008 an agreement was concluded with the Bank Millennium S.A. The parties agreed that the Company would pay to the Bank due to the above the amount of 12M zł, out of which the amount of 0.7M zł had already been paid, and the remaining amount would be paid in the period of 5 years in equal monthly instalments, with a grace of one year.

GRUPA KAPITAŁOWA GRUPY LOTOS S.A.

Comments of the Board of Lotos Group to the results for the 4th quarter of 2008. The balance of the financial operation in the analysed period of 2008 was negative and amounted to –451.5M zł, against the positive balance in the fourth quarter of 2007 amounting to 164.0M zł. The high negative balance in the fourth quarter of 2008 was primarily connected with negative exchange rate differences from overpricing of credit at the level of –348.7M zł, and with pricing and settlement of trades securing the market risk in the amount of –135.5M zł.

In case of many enterprises there was no proper protection against trades that did not correspond to their business profile. Financial institution could not have offered strategies too risky for clients, if the EU Markets in Financial Instruments Directive (MiFID) had been implemented into the Polish legislation, unless a company had obtained a professional status. Contracts signed between banks, enterprises were concluded in a voluntary way, and it is hard to dent them from the point of law in light of the regulations that are in force in Poland.

Table 8. Influence of open interests of derivative instruments on the market value of selected enterprises (rate of return after session on 02 Feb. 2009).

| Company | Date of communiqué | Contents of communiqué | Change to exchange rate from publication date |
|----------------|---------------------------|--|--|
| Ciech | 07 Nov. 2008 | lowering of forecast for profit for 2008 | –41% |
| Odlewnie | 16 Jan. 2009 | motion for bankruptcy | –53% |
| Cersanit | 27 Jan. 2009 | loss from exchange options | –10% |

| Company | Date of communiqué | Contents of communiqué | Change to exchange rate from publication date |
|----------|--------------------|--|---|
| BRE Bank | 20 Jan. 2009 | initial results for the fourth quarter of 2008 | -23% |
| Krosno | 30 Jan. 2009 | motion for bankruptcy | -21% |

Source: www.money.pl/gielda/raporty (03 Feb. 2009).

The development of the derivative instrument market has been a consequence of the proceeding globalization process of the world financial market, which increases much the performance risk of enterprises. Knowledge of operation rules of derivative rights should contribute to enhancement of security in performance of enterprises, whereas lack of basic information on derivatives may cause losses that are a consequence of erroneous decisions concerning construction of security strategies.

The development of the derivative instrument market cannot be stopped; however, one may and should use opportunities coming from that development that affects the player of the financial market both in the micro scale – by means of reduction of the individual risk, and macro – by means of reduction of the operation risk of all the financial system.

A way to implement such targets would be implementation of the following actions⁷:

- reinforcement of corporate control – risk limitation for operation of enterprises by means of security trades of the denomination corresponding to, e.g. incomes from export,
- appointment of competent persons responsible for construction and realization of security strategies in the enterprise; use of analyses of unfavourable scenarios of currency exchange rate risk (stress tests) was insufficient both in banks and in enterprises,
- improvement by financial institutions of the pricing process of credit risk; methods applied by banks concerning collection and verification of information in relation to criteria considered at acceptance of exposition limits – the natural exposition and level of involvement into derivative trades in other banks are not fully effective,
- for limitation of the operational risk and ensuring indispensable protection of clients' interests it is necessary to conclude the transposition process of the MiFID directive (Markets in Financial Instrument Directive) to the Polish legislation; banks have mostly applied the standard documentation.

⁷ Cf. Komunikat KNF z dnia 17 grudnia 2008 r. w sprawie wpływu walutowych instrumentów pochodnych na banki i spółki publiczne, The Communiqué of the Polish Financial Supervisory Authority of 17 Dec. 2008.

People managing risk in Polish enterprises must be aware that the derivative instruments are not an exotic financial instrument, used only by speculators on the stock exchange, but they should be one of the foundations of the policy aiming at protecting the company against the risk of economic performance. Times when in reality there was no need to form the exchange rate risk or interest rate risk have passed irretrievably with development of the global financial markets. The proceeding globalization of the world economy is a sufficient condition for breaking through barriers for development of the Polish market of derivative instruments. Thus, some actions should be undertaken that could help to break through educational barriers of proper use of derivative instruments in construction of security strategies by Polish enterprises.

Literature

Reports of enterprises:

CIECH S.A. The current report No. 68/2008, the date of publication: 07 Nov. 2008.

CERSANIT S.A. The current report No. 2/2009, the date of publication: 27 Jan. 2009.

KROSNO S.A. The current report No. 12/2009, the date of publication: 30 Jan. 2009.

FOTA S.A. The current report No. 14/2009, the date of publication: 03 June 2009.

PKM DUDA S.A. The current report No. 26/2009, the date of publication: 18 Mar. 2009, the current report No. 27/2009, the date of publication: 24 Mar. 2009.

ZAKŁADY MAGNETYZOWE ROPCZYCE S.A. The current report No. 44/2008, the date of publication: 27 Nov. 2008, the current report No. 47/2008, the date of publication: 06 Dec. 2008.

GRUPA KAPITAŁOWA GRUPY LOTOS S.A. Comments of Board of Lotos Group to the results for the fourth quarter of 2008.

Iskra J., *Analitycy: opcje już nie takie groźne*, Gazeta Prawna, No. 89/2009.

Kraskowski L., *Analiza: przedsiębiorców wprowadzono w błąd*, Dziennik, No. 41(862)/2009.

Mielus P., *Nie takie opcje straszne, jak je malują*, Rzeczpospolita, www.rp.pl/arttykul/247925.

Pring M.J., *Psychologia inwestowania*, Oficyna Ekonomiczna, Kraków 2006.

Komunikat KNF z dnia 17 grudnia 2008 r. w sprawie wpływu walutowych instrumentów pochodnych na banki i spółki publiczne, The Communique of the Polish Financial Supervisory Authority of 17 Dec. 2008.

Podstawowe wnioski z analizy zaangażowania przedsiębiorstw w walutowe instrumenty pochodne, The Communique of the Polish Financial Supervisory Authority of 11 Mar. 2009.

Streszczenie**OPCJE WALUTOWE – INSTRUMENTY ZARZĄDZANIA RYZYKIEM W CZASACH KRYZYSU. SZANSE I ZAGROŻENIA**

Celem artykułu jest przedstawienie podstawowych szans i zagrożeń, jakie niesie ze sobą konstrukcja strategii zabezpieczających, których podstawą są instrumenty pochodne. W opracowaniu szczególnie nacisk położony został na opcje walutowe, stanowiących w ciągu ostatnich miesięcy przedmiot analiz wielu instytucji oraz podmiotów gospodarczych, które poniosły dotkliwe straty na skutek nieodpowiedzialnego wykorzystania tych instrumentów w operacjach zabezpieczających oraz spekulacyjnych. Rozwój rynku instrumentów pochodnych był i jest konsekwencją postępującego procesu globalizacji światowego rynku finansowego, który znacznie zwiększa ryzyko funkcjonowania przedsiębiorstw. Znajomość zasad działania praw pochodnych powinna przyczynić się do zwiększenia bezpieczeństwa funkcjonowania przedsiębiorstw, zaś brak podstawowych informacji na temat derywatów może spowodować powstanie strat, będących następstwem błędnych decyzji w zakresie konstrukcji strategii zabezpieczających.

TAX COMPETITION WITHIN THE EUROPEAN UNION AS AN OPPORTUNITY OF REGIONAL DEVELOPMENT

Paulina FILIP

University of Rzeszów

Introduction

In economy, there are two concepts of growth and development, which can concern regional economy. Economic growth is related to the growth of product per capita; economic development is a wider concept and means the increase in different aspects of levels of social and economic life; some of them are impossible to measure. Growth should be noticed as a quantitative change; development includes both quantitative and qualitative changes, which can be considered in process and target approach. The changes lead a region through a stage process – from the lower level to a higher level of development. Taking into consideration the fact that there are mutual relations between growth and development, it should be assumed that the growth is the basic condition for economic development to occur, whose results form a level and living conditions of the region inhabitants.

In developing countries in which the value of financial capital is relatively low, additional expenditure of financial capital brings higher effect in the form of product growth per capita than the same expenditure in developed countries. Thus, less developed countries should import financial capital, which will enable their quicker development and approach to the level of incomes in highly developed countries. In this context, acquisition of foreign financial capital in the form of competitive tax rates for foreign investors becomes important.

Tax is a public, gratuitous, compulsory, non-refundable pecuniary performance to the benefit of the Treasury. Taxes collected to the benefit of public law entities play an important role in economies of countries. The most important one is undoubtedly its fiscal function. Existing differences of political systems and economic concepts have never eliminated the fiscal function of tax¹. Taxes have remained the main source of public income. The differences between them are in

¹ J. Głuchowski, *Polskie prawo podatkowe*. Wydawnictwo Prawnicze „LexisNexis”, Warszawa, 2004.

the value of rates and mutual proportions between their different types. In the model of market economy there is a prevailing opinion – a good tax is a low tax.

Taxes have caused a lot of controversy because of their nature since the very beginning. They were an indispensable pillar in functioning of each state, on the other hand, a pecuniary obligation for citizens obliged to pay them. Such an attitude provoked more and more sophisticated methods to avoid existing tax obligations. Every tax regulation system contains smaller or bigger loopholes, which have always been a subject of research and analysis by those who specialize in optimisation of fiscal obligations. It should be noticed that behaviour aiming at limitation of tax obligation might be of different character, i.e. legal and illegal behaviour towards the taxation system.

Tax competition is a phenomenon associated directly with globalisation processes, particularly with the growth of international mobility of capital. Liberalisation of capital flow and decrease of transaction costs made investors, such as companies and private individuals, search for attractive deposits not only in their own countries but also abroad. To increase home investments governments try to make them as attractive as possible in entrepreneurs' opinion; it can be achieved, among others, by lowering taxes².

The notion of tax competition

Development of contemporary economies and globalisation trends cause that competing between enterprises, regions, countries can be done based on numerous features of market offer, such as price, quality, facilities, taxes. Competition is a process in which market entities compete in making market transactions by proposing more profitable market offer to accomplish their goals.

There are two basic trends in theory of economics explaining international tax competition³. According to one of them tax competition is a positive phenomenon and resembles perfect competition between companies. The final result of its presence is levelling of taxes on the socially effective stage, and a favourable factor is taxpayers' migration, searching for the best relation of the received public goods to the paid taxes. The other trend evaluates tax competition as a highly undesirable phenomenon leading to decline of tax obligations below the social optimum, and which in effect, entails a too small supply of public goods by the state. In the open economy, every tax rise causes tax drainage to countries where taxes can be much

² K. Burak, *Konkurencja podatkowa*. Kancelaria Sejmu, Biuro Studiów i Ekspertyz, Wydział Studiów Budżetowych. Information No. 1152, published on the website <http://biurosej.gov.pl>.

³ Ł. Ziółek, *Międzynarodowe planowanie podatkowe*, Difin, Warszawa 2007.

lower⁴. On the other hand, contrary to the closed economy, lowering of taxes will result in much lower decrease of budget income as they will attract home foreign capital. Such an analysis can be made with reference to each state respectively. Thus, it can be assumed that all countries will tend to lower tax rates. However, if they all do it, the profits resulting from such an action will disappear. Capital will not flow into the country with lowered taxes if the lowering occurs in other states. That is the idea of tax competition.

The idea of tax competition may concern relatively various phenomena. Firstly, a phenomenon of lowering income tax in order to make a country more attractive as a place of economic performance is in question. Its purpose is to cause actual and physical relocation of economic performance. A different aspect of the phenomenon is competition of tax regulations. Competition of taxes means expanding own tax basis at other countries' expense, such as existence of 'tax paradises'. Competition through taxes aims at attracting foreign investments. In such a case, not only the effect of expanding the base counts, but also other consequences of investment inflow, i.e. an increase of jobs or regional development, etc. The tax policy tools are much the same in both cases and consist in lowering tax rates in comparison to the neighbours or business partners. The tax competition understood in this way evokes most emotions in economists' discussions and opinions of international organizations because it is expressed in influence of tax rates on investment decisions.

Countries compete about the place where taxes should be levied on company profits, i.e. mainly about corporate income tax. An effective and verified method of tax optimisation is lowering of nominal tax rates. It is of particular importance in free capital flow. In theory, lowering of tax rates does not have to cause decrease of budget revenue. Through a longer time period, due to the inflow of investors, the tax basis that is the value of taxes collected and levied on resources and derivative results – possessions, salaries, growth of value – will grow in countries or regions where they function. The final result of tax competition will be levelling of taxes on the socially effective level. This will help to even disproportions and differences in social and economic development.

Tax competition in the European Union

The right variables allowing analyzing the tax competition are corporate income tax rates and capital income tax rates. The CIT rate, corporate income tax, paid mainly by companies varies throughout Europe.

According to an analysis of changes in CIT, which occurred between countries for 20 years before the accession to the European Union, there was a de-

⁴ K. Wach, *Systemy podatkowe krajów UE*, Oficyna Ekonomiczna, Kraków 2005.

crease in nominal CIT rates in all OECD countries except Spain between 1982 and 2003. The arithmetical mean of the rate decrease showed a greater fall than the weighted mean, which signifies that a bigger cut was made by small countries. In most countries lowering of the nominal rates was accompanied by cancelling of tax benefits and reliefs, which resulted in expanding of the base. The share of CIT incomes in total tax incomes has maintained unchanged in the last years; still, the analysis of the data within a longer period shows a declining trend⁵.

In 2004 the European Union enlarged by new countries of Central and Eastern Europe where the average GDP per capita was much lower than the EU average. In the late 1990s the difference in rates between countries of the „old” and „new” European Union did not grow in general; it peaked between 2003 and 2004 growing from approximately 7 per cent to over 15. Before the EU enlargement in most new countries there were tax reforms, making, in particular, these countries more attractive as far as CIT is concerned. From the point of view of new countries the changes were a tool preventing capital outflow to more stable economies of Western Europe; for the old EU states it was tax dumping, an element of unfair competition

CIT rates before the accession are shown in table 1.

Table 1. CIT rates in member rates and accessing and candidate states in 2003 (in %).

| Member states | Rate | Candidate states | Rate |
|-----------------|-------|------------------|---------------------|
| Austria | 34 | Bulgaria | 15 +10 (local rate) |
| Belgium | 30 | Cyprus | 25 |
| Denmark | 30 | Czech Republic | 31 |
| Finland | 29 | Estonia | 26 |
| France | 33 | Latvia | 22 |
| Greece | 35 | Lithuania | 15 |
| Spain | 35 | Malta | 35 |
| The Netherlands | 34 | Poland | 27 (2004 – 19%) |
| Ireland | 10 | Romania | 25 |
| Luxemburg | 22 | Slovakia | 25 |
| Germany | 25 | Slovenia | 25 |
| Portugal | 30 | Turkey | 30 |
| Sweden | 28 | Hungary | 18 |
| United Kingdom | 30 | | |
| Italy | 34 | | |
| Average rate | 29,32 | Average rate | 24,4 |

Source: Own study based on data from the European Taxation Database published by the International Bureau of Fiscal Documentation.

⁵ M. P. Devereux, R. Griffith, A. Klemm, *Corporate Income Tax Reforms and International Tax Competition*. Economic Policy 36/2004.

In most newly accepted countries the tax rates were at the level lower than the EU average, which entailed some old EU members' anxiety. The problem was especially pronounced by ministers of Germany and France, as these countries used to be given transfers now directed to the new EU member countries. They felt wronged not being able to adjust their own taxpayers' charges. Quite a different picture shows the average tax charge of capital income measuring the tax charge of the tax basis, which is capital revenue. The rate tended to grow not so long ago in old EU members; only for the last few years it has tended to decrease. These two factors can explain why now the tax competition of new member countries is found as especially strong⁶.

In international relations, since the late 1990s there has been the highest decrease in Europe, where a tax war is being discussed. For the last years after the accession, the rates have fallen in Romania, the Czech Republic, Turkey, and also in France, The Netherlands, and Switzerland. The biggest CIT fall by 9 per cent (from 34 % to 25%) has been noted in Austria. The lowest rate – apart from Ireland – up to 10 per cent has been reached in Bulgaria. Germany is planning the decrease. England, Italy, Sweden, Belgium and Luxemburg have not participated in this rate 'bidding' yet. The average CIT rate in the European Union is 23.5 per cent and is much lower than in Japan or the USA, where it estimates around 40 per cent⁷. The dropping trend is quite distinct, however, there are big differences between member countries – from 35 per cent in Malta, 34 per cent in France and Belgium to 10 per cent in Bulgaria and Cyprus. In Poland the CIT rate is 19 per cent. The tax charge lowers when we move towards the east of the European Union⁸. The data support the thesis that Central and Western European countries tend to use tax tools to create their own image of states promoting economic performance and labour by gentle fiscal systems, especially in comparison with countries of the old EU.

The Polish CIT rate has not changed in the last years. We lowered it earlier, similarly to Hungary, Slovakia, and the Baltic States. One can even say that lowering taxes is a key signature of countries in our region of Europe. It was they who evoked the tax war, in other words – the fashion to lower CIT. Ac-

⁶ Structures of the taxation systems in the European Union 2007. Office for Official Publications of the European Communities 2008, www.finfacts.ie.

⁷ Paying Taxes 2009. Global Picture, The World Bank and Pricewaterhouse Coopers 2008.

⁸ It results from a report by the European Commission, covering the data up to 2007 that the taxing level in the EU is on average 39.8% of GDP, whereas in the euro zone – 40.4%. Poland belongs to countries with a relatively lower level of charges: in 2007 all collected taxes amounted to 34.8% of GDP. Yet the record is held by Romania, Slovakia, and Lithuania (below 30%). The highest level of taxes is in Denmark and Sweden (over 48%), and it is also high in France, Italy, Belgium and Austria.; Index of Economic Freedom, The Heritage Foundation and „Wall Street Journal”, <http://www.heritage.org.aspx>.

According to international analyses, the average CIT rates fell last year by 3.2 per cent in OECD countries and by 2.5 in the EU. Thus, the average CIT rate in OECD countries dropped from 29.32% in 2003 to 26.49% in 2008; in the EU countries from 24.4% to 23.5%⁹.

Comparing tax rates themselves will not tell us much how the tax charge looks like in particular countries. Firstly, a tax rate itself is of smaller value. It is the way of levying taxes that also counts. In practice it means a catalogue of expenses that are not treated as costs of revenue. What counts is the system of paying a tax that influences tax charges or at least their spread in time. It is important whether a taxpayer pays it today or the tax is spread in time. We should also add cost-derived factors, such as tax service, administrative costs, accountancy costs, etc. Thus, when we analyze actual tax rate in Poland, we can notice it is several points higher than the official one.

Activities within the EU are closely related to the Community primary legislation (treaties) and the Community secondary legislation. Direct taxes have remained a subject of autonomic policy of member countries so far. The related powers have not been delegated to the Community level under any of the treaties. Thus, any common decision should be taken unanimously not in majority voting. However, it does not mean that the member countries are completely free in making their own fiscal decisions. They are limited with regulations ruling the single market, among others with the principle of capital free flow, the principle of non-discrimination and also limitations in admissibility of public aid application. It has been decided that common policies on direct taxes will be taken voluntarily. As a result, the European Council has passed a code of conduct concerning CIT. The code rulings are against harmful tax competition. 'Harmful' is a notion relating in this context to tax policy preferring certain groups of companies at others' expense. It is a similar approach to the OECD solutions in which the so-called 'ring fencing' – selective preference of certain entity groups through tax system – has been recognized as a criterion of 'harmfulness' in tax competition. High, extreme rates of direct taxes have been also recognized as the most harmful; they encourage people with high earnings to escape from paying taxes to countries with lower tax rates. The collapse of bilateral agreements on avoiding double taxation in certain transactions, which leads to maintain trade barriers inside the Community market, has also been treated as the most harmful. At present, countries complaining the most about tax competition cannot count on making the rest of the EU members increase taxes. It could be noticed during the debates on CIT rates of the EU ministers of finance¹⁰.

⁹ Paying Taxes 2009. Global Picture, The Word Bank and Pricewaterhouse Coopers 2008.

¹⁰ M. Kluzek, *Wpływ opodatkowania na inwestycje w warunkach rosnącej konkurencji podatkowej*. Materiały konferencyjne, Katedra Finansów Przedsiębiorstw, Wydział Zarządzania, Akademia Ekonomiczna w Poznaniu, 2006.

Tax competition and its influence on international economy

Competition promotes tax lowering, which otherwise would be calculated at a higher level because of political reasons by too much expanded country. The necessity of lowering taxes in this case puts discipline and tests the efficiency and effectiveness of administration paid out of taxes. Only effective state can afford to resign from tax revenues without worsening the level of supplied public services.

The recent theories show that tax competition does not lead to fall of tax rates but is surely beneficial. First of all, the character of competition between countries draws attention. The traditional analysis presumes a model of price competition, whereas for big countries monopolist competition with crucial share of transaction costs seems closer to reality. Big countries located in the middle of the integration area are presumed not to compete for capital with profitability ratios. On the contrary, they try to gain superiority in conditions offered to prospective investors. Keeping the superiority demands financing from taxes, in return it gives a tax advantage because of developed and centralized infrastructure. In result, states can introduce higher taxes without the threat of capital out-flow or drop of the existing level of welfare.

Differences in recognizing harmfulness of tax competition between countries were determined by taxation structure existing before the market liberalisation and the type of taxes that undergo adaptation. The competition is seen as harmful in countries with relatively higher PIT rates than CIT rates. The explanation for the phenomenon is as follows: With the adaptation of consumption taxes in the European Union, the adaptation should concern the proportion of taxes on income from work to taxes on capital. In practice, it is not possible to lower CIT without substantial increase of the tax on income from work. The latter demands low flexibility of tax on income from work and is socially unpopular. As the result, taxes drop mainly in countries with relatively high taxation on income capital. It means that in countries with high taxation on income from work the international tax competition does not lead to significant improvement of public welfare¹¹.

Tax competition is a positive phenomenon as it provokes increase in effectiveness and more successful offers. Countries that want to attract investors are interested in the lowest income tax rates. The phenomenon of tax competition will grow; all attempts to stop it are useless at the start. Every country will want to be more and more attractive; lowering of rates is one of the elements of this attractiveness. Tax rates reflect a country's interest in foreign investors.

¹¹ J. Kudła, *Międzynarodowa konkurencja podatkowa w zakresie opodatkowania przedsiębiorstw – przypadek akcesji do Unii Europejskiej*. Materials published on the website www.ekonom.univ.gda.pl.

Poland should compare with countries with which it competes in attracting investments, such as the Czech Republic, Hungary, Slovakia, and even Ukraine, Romania or Bulgaria. Against their background we do not look so attractive. Within this group, Estonia and Slovenia have higher taxes; Slovakia and the Czech Republic have comparable ones; Hungary and Bulgaria – lower taxes. In the group of developing countries, where the tax rate is important in the competition of attracting foreign capital, Poland is not a leader; we are on the middle position of the ranking.

Table 2. PIT and CIT rates in countries of Central and Eastern Europe in 2009.

| Country | Lowest PIT rate (%) | CIT rate (%) |
|----------------|---------------------|--------------|
| Bulgaria | 10 | 10 |
| Czech Republic | 15 | 20 |
| Estonia | 20 | 21 |
| Latvia | 23 | 15 |
| Lithuania | 15 | 20 |
| Poland | 18 | 19 |
| Romania | 16 | 16 |
| Slovakia | 19 | 19 |
| Slovenia | 16 | 21 |
| Hungary | 18 | 16 |

Source: www.worldwide-tax.com.

The essence and range of economic performance become more and more global. Companies move with comparatively no effort from one country to another. Tax competition is a positive phenomenon as it provokes increase in effectiveness and more successful offers. Countries that want to attract investors are interested in the lowest CIT rates.

European countries that have higher tax rates than countries in Central and Eastern Europe are more attractive to investors for different reasons. They are investment-friendly, safe, have a good tax structure. Poland does not have such qualities and that is why it should compete with tax rates.

Summing-up

The phenomenon of tax competition will grow; all attempts to stop it are impracticable. Every country will want to be more attractive; lowering of tax rates is one of the attractiveness factors. In Poland, further lowering of CIT rates by at least several percent to the level, which could be one of the lowest in Central and Eastern Europe, would be of significant marketing importance. The loss

to the budget would not be very dramatic as it would be compensated by growth of income from new sources. When tax rates are lowered taxpayers declare more taxes, and budget revenues grow. Further lowering of taxes could help Poland a lot on the international market of investor gaining. There are many supporters for lowering of CIT rates to 14-15 per cent. It must be underlined that the whole taxation structure should be worked out. In addition, a unique basis to calculate taxes is needed, that is implementation of identical principles of calculating and deducing taxes in all countries. Now, the European Commission is preparing a common project of calculating scheme for CIT for all EU countries.

Entrepreneurs from the EU countries support in majority the unification of the principles. The Commission will present the proposals this year; the new system will be probably in force in 2010. The Polish opinion on this issue is positive. According to the Ministry of Finance, Polish companies may profit more than the EU ones. Today, Polish companies are threatened with relatively higher costs associated with the necessity of assuring legal services for their performance when they want to function on the European market. The most enthusiastic about the reform are entrepreneurs from Spain, Denmark, and the Czech Republic. The British are the most dissatisfied with the changes. The principles of paying taxes are not known yet. There is going to be a unique specimen for calculating CIT rates for the EU countries. Companies performing in several countries would leave their taxes at a certain level in particular countries and would be taxed according to their rates. Polish entrepreneurs support the principles but are against the same rate as then they would pay more tax than now. The unification of the principles will allow for expanded investments for the European scale. The reform would stimulate enterprise development and activation of less developed regions in the European Union.

Literature

- Click R.L., Duening T.N.: *BPO-The Competitive Advantage*. John Wiley & Sons, New Jersey 2005.
- Collins M.H., *Evasion and Avoidance of Tax at the International Level*. *International Bureau of Fiscal Documentation*, „European Taxation” 1988, vol. 28, No. 9.
- Grądzki F., *Wstęp do teorii opodatkowania*. Warszawa: Szkoła Główna Handlowa, Oficyna Wydawnicza 2004.
- Kluzek M., *Wpływ opodatkowania na inwestycje w warunkach rosnącej konkurencji podatkowej*. Materiały konferencyjne, Katedra Finansów Przedsiębiorstw, Wydział Zarządzania, Akademia Ekonomiczna w Poznaniu, Poznań 2006.

- Kudła J.: *Międzynarodowa konkurencja podatkowa w zakresie opodatkowania przedsiębiorstw – przypadek akcesji do Unii Europejskiej*. Materials published on the website www.ekonom.univ.gda.pl.
- 2009 Index of Economic Freedom, The Heritage Foundation and „Wall Street Journal”, <http://www.heritage.org.aspx>.
- Kudert S., Jamroz M., *Optymalizacja opodatkowania dochodów przedsiębiorców*, ABC & Woltres Kluwer Business, Warszawa 2007.
- Paying Taxes 2009. *Global Picture*, The Word Bank and Pricewaterhouse Coopers 2008.
- Szczudrowski G., *Polski system podatkowy*, PWN, Warszawa 2007.
- Wach K., *Systemy podatkowe krajów UE*, Oficyna Ekonomiczna, Kraków, 2005.
- Ziółek Ł., *Międzynarodowe planowanie podatkowe*, Difin, Warszawa, 2007.

Streszczenie

KONKURENCJA PODATKOWA W OBSZARZE UNII EUROPEJSKIEJ SZANSĄ ROZWOJU REGIONÓW

Właściwymi zmiennymi, pozwalającymi na badanie konkurencji podatkowej pomiędzy państwami są stawki podatków dochodowych od osób prawnych oraz podatków od dochodów kapitałowych. Konkurencja przez podatki polega na stosowaniu obniżek stawek podatkowych w celu przyciągnięcia inwestycji zagranicznych. W takim przypadku liczy się nie tylko efekt zwiększenia podstawy opodatkowania, lecz również pozostałe konsekwencje napływu bezpośrednich inwestycji zagranicznych. Konkurencja o podatki to powiększanie własnej bazy podatkowej kosztem innych krajów. Tak rozumiana konkurencja podatkowa budzi najwięcej emocji w krajach Unii Europejskiej, ponieważ wyraża się ona wpływem stawek podatkowych na decyzje i wybory inwestycyjne przedsiębiorców. Stawka podatku CIT – podatku dochodowego od osób prawnych który płacą głównie przedsiębiorstwa jest silnie zróżnicowana w całej Europie. O ile w drugiej połowie lat dziewięćdziesiątych różnica w stawkach pomiędzy krajami „starej” i „nowej” Unii w zasadzie się nie powiększyła, to jej gwałtowny wzrost nastąpił w latach 2003-2004. Przed dokonaniem rozszerzenia Unii Europejskiej w większości nowych członków dokonano reform podatkowych, prowadzących w szczególności do wzrostu atrakcyjności tych krajów pod względem opodatkowania dochodów osób prawnych. Tendencja do większej redukcji stóp podatkowych była tym większa im wyższy był ich poziom wyjściowy oraz im dany kraj jest mniejszy. Obecnie różnica ta jest znacząca – nawet do kilkunastu punktów procentowych. Porównywanie samych stawek podatkowych jest jednym z parametrów oceny jak rzeczywiście wyglądają obciążenia podatkowe w poszczególnych państwach. Oprócz stopy nominalnej opodatkowania liczy się sposób opodatkowania. W praktyce oznacza to katalog wydatków, które nie są uznawane za koszty uzyskania przychodu. Liczy się system, w jakim się płaci podatek, który ma wpływ na wysokość obciążeń, jego rozłożenie w czasie, koszty obsługi podatku, koszty administracyjne, księgowości itp. W celu wyrównywania pozio-

mów rozwoju gospodarczego nowych i starych krajów członkowskich, Unia Europejska powinna stymulować konkurencję podatkową pomiędzy krajami członkowskimi. Każdy kraj powinien stosować indywidualne podejście za pomocą własnych rozwiązań, ponieważ nie istnieje jednolite oddziaływanie systemów podatkowych na gospodarkę.

VALUE ADDED TAX IN TURNOVER WITHIN THE EUROPEAN UNION (SELECTED ASPECTS)

Bożena SOWA

University of Rzeszów

Introduction

The value added tax on goods and services (VAT) is an indirect tax levied on goods suppliers and service renders to tax consumption, which – due to its ability to be „passed over” to next turnover phases – is to influence the least the final price of goods and services being taxed.

It was introduced to the Polish tax system under the statute of 8 January 1993 substituting the earlier operating turnover tax. Poland, on its accession to the European Union – under the Accession Treaty of 16 April 2003 – agreed to adapt the Polish tax law, and particularly the turnover tax called indirect, to the EU standards in the extent, which is necessary for free flow of goods and services on the EU market. As many solutions included in the statute of 8 January 1993 were inconsistent, or even against EU directives, it was necessary to draft a new law on VAT, which was passed on 11 March 2004¹, and has been amended several times.

The aim of the presented article is to draw attention to the fact that since 1 May 2004 the principles of levying taxes on goods exchanged between Poland and other EU countries have changed, as since that moment, Poland, as a fully entitled member of the EU, has also become a subject of the EU internal trade rules.

A particular attention has been drawn to the proper way of stating the term of creating the right to lower the due tax, which is sometimes connected with arising of the very duty to pay it to the tax office. According to the statute, there are such situations that do not give the right to lower the due tax by the calculated tax; they even forbid such reductions.

¹ Journal of Law - Dz. U. No. 54, item 535 with subsequent amendments.

Tax obligation in Intra-Community transactions

Since 1 May 2004, the day when Poland joined the European Union, there have been crucial changes to the way, in which taxes are imposed on trade between Poland and other EU members. Poland, on that day a fully entitled member of the EU customs union, became the subject to rules of Intra-Community trade, Intra-Community supply and Intra-Community purchase of goods, in cases when there is turnover between entities from two different EU countries.

According to the VAT Act, the Intra-Community purchase of goods² is understood as acquisition of the title to dispose of goods as an owner; the goods as the result of supply are shipped or transported to the member state territory different from the member state territory where the shipment or transport was started by the supplier, purchaser of goods or in his name.

In the Intra-Community purchase of goods, tax obligation³ arises on the 15th day of the month after the month of delivery of the goods, which are the object of the Intra-Community purchase. The regulation contains a general norm. If a VAT payer issued an invoice before the Intra-Community purchase of goods, the tax obligation starts on the date of the invoice issue. However, if the taxpayer has already received the goods from his Community contractor without an invoice, he is obliged, according to article 20 paragraph 5 of the VAT Act, to show the tax obligation on Intra-Community purchase of goods on the 15th day of the month following the month of delivery. Still, if he receives the invoice later and it appears to have been issued earlier than on the 15th day of the month following the month of delivery, then based on particular regulation of article 20 paragraph 6 of the VAT Act, he is obliged to make corrections in the earlier accounts.

We have to do with the Intra-Community supply of goods⁴ when the goods are transported from Poland to another member state, and the purchaser is a VAT payer identified for the purpose of the Intra-Community transaction on the territory of the member country other than the home country.

The tax obligation on the Intra-Community supply⁵ of goods arises on the 15th day of the month following the month of the supply. When the invoice is

² Art. 9 of the statute of 11 March 2004 on the value added tax on goods and services (Journal of Law - Dz. U. No. 54, item 535 with subsequent amendments), and *Zasady ogólne dotyczące transakcji wewnątrzwspólnotowych*, Appendix No. 14 to the Information Bulletin (Wydawnictwo podatkowe GOFIN) No. 12 from 2008, p. 3.

³ Art. 20 para 5-9 of the statute on the value added tax on goods and services.

⁴ Art. 13 para 1, 2 of the statute on the value added tax on goods and services, and *Zasady ogólne dotyczące transakcji wewnątrzwspólnotowych...*, op .cit., p. 4.

⁵ Art. 20 para 1-3 of the statute on the value added tax on goods and services, and *Obowiązek podatkowy w WDT*, Appendix No. 14 to the Information Bulletin (Wydawnictwo podatkowe GOFIN) No. 12 from 2008, p. 15.

issued before the expiry of the term, described in article 20 paragraph 1, the tax obligation arises on the date of the invoice issue. If the price or part of the price is received before the Intra-Community purchase of goods, the tax obligation arises on the date of issuing the invoice, which confirms the reception of the price or part of the price⁶.

When before the day of submitting declaration for the month in which tax obligation arises in the Intra-Community supply of goods, a taxpayer does not have legal documents certifying export and delivery of goods to the purchaser, then the taxpayer shows the purchase as a domestic supply. Only after getting proper documents, the taxpayer is entitled to make correction in the declaration for the month when the tax obligation arose⁷.

Rules of deducting the tax calculated by virtue of the Intra-Community purchase of goods

The Intra-Community purchase and supply of goods have to be confirmed by an inner invoice issued by the taxpayer himself. It should contain not only the very value of goods as a tax basis but also all other purchase costs paid to the supplier⁸. In case of the Intra-Community purchase and supply of goods, where the tax payer in the purchaser, the right to deduct the calculated tax arises at the same time as the due tax obligation, that is on the 15th day of the month following the month of delivery; unless the supplier issues the invoice before that date, then the tax obligation arises at the time of issuing the invoice⁹. In case of the Intra-Community purchase of new transport means the tax obligation arises on reception of the goods, but not later than at the time of issuing the invoice by the VAT payer.

To sum up, it should be added that an active VAT payer is granted the right to lower the due tax by the tax calculated by virtue of the Intra-Community purchase and supply of goods – where the tax payer is the purchaser – in accounts for the period in which such a due tax obligation arose¹⁰.

Such a solution allows in the same month for the payer purchaser to declare the tax, which is due by virtue of the Intra-Community purchase or supply of goods where the taxpayer is the purchaser, and to deduct the tax as calculated, lowering the due tax. Thus, the tax, which is due by virtue of the Intra-

⁶ Art. 20 para 3 of the statute on the value added tax on goods and services.

⁷ Art. 42 para 12-13 of the statute on the value added tax on goods and services.

⁸ J. Zubrzycki, *Leksykon VAT 2004* vol. 1, Oficyna Wydawnicza UNIMEX, Wrocław 2004, p. 490.

⁹ Art. 86 para 10 item 2 of the statute on the value added tax on goods and services.

¹⁰ Art. 86 para 10 item 2 of the statute on the value added tax on goods and services, and *Faktury wystawiane przez nabywcę*, Poradnik VAT No. 2 from 2009, p. 7.

-Community purchase or supply of goods, is neutral for the payer, as it is balanced by the corresponding calculated tax, deducted in accounts for the same period of accounts. In the mentioned above cases also article 86 paragraph 11 is applied, enabling accounts in one of the following accounting periods¹¹.

The payer has also the right to lower the tax due from the calculated tax if the imported or purchased goods and services concern supplying goods or rendering services by the tax payer abroad, on condition that such amounts could be deducted if such action were performed inside the country, and the taxpayer holds documents proving the relation of the deducted tax with such actions¹². In such a case the Polish taxpayer does not show at all any taxed sale by this virtue, but he will have the right to deduction of the tax calculated in relation with the above services by virtue of the regulation quoted above.

To sum up, it should be stated that the entities performing activities, which under the VAT Act are service imports, the Intra-Community purchase or supply of goods where the taxpayer is the buyer, are obliged to tax these activities, despite the fact that in these cases they are buyers. We can say that in such a case there arises a specific source of deducting. The taxpayer has neither VAT invoice nor a customs document; the calculated tax means self-calculation of his due tax. The statute gives such entities the right to treat the due tax as the calculated tax and undergoing deduction at the same time. Such a solution makes the taxpayer able to declare the due tax and deduct it as the calculated tax in the same month.

The term of deducting tax by virtue of Intra-Community transactions

Amendments made to paragraph 42 of the VAT Act aim to simplify accounting VAT on the Intra-Community goods supply. Taking into consideration exchange of information on the tax among member states and the necessity to make the data comparable, the simplification concerns those tax payers who account for the tax on goods and services monthly in relation to transactions made in the first or second month of a quarter. In the Intra-Community supply of goods, the right to apply VAT at the rate of 0% depends on proper documenting of the transactions¹³.

¹¹ Art. 86 para 11 of the statute on the value added tax on goods and services, and *Terminy odliczenia VAT naliczonego*, Appendix No. 32 to the Information Bulletin (Wydawnictwo podatkowe GOFIN) No. 32 from 2008, p. 9.

¹² Art. 86 para 8 of the statute on the value added tax on goods and services, and Bielęda T., Kończal H., Sieniecka M., *VAT w pytaniach i odpowiedziach. Poradnik na 2005 rok*, Wydawnictwo podatkowe GOFIN 2005, p.150.

¹³ Art. 42 para 1 of the statute on the value added tax on goods and services.

The Intra-Community commodity transactions are shown not only in domestic declarations for tax on goods and services but also in quarterly summary reports. The summary reports are a tool for international supervision of the Intra-Community transactions, which is performed within the system of exchanging information on VAT¹⁴.

In the situation, when the Polish taxpayer settles accounts monthly, some modification of the date of reporting the Intra-Community transactions is possible, if there is no interference in comparability of data from declarations and summary report information (the summary reports are submitted quarterly)¹⁵.

An example of simplification in accounting for the Intra-Community supply of goods arises when invoices confirming the supply are issued in one of the first two months in a given quarter and the taxpayer does not receive documents certifying the Intra-Community supply of goods transaction at the time allowing for taxing the supply according to 0% rate in accounting for the month of the invoice issuing¹⁶.

The simplification lies in the fact that in case when there are no documents confirming export from home and delivery of goods to a buyer in another member country within the Intra-Community supply, the taxpayer is not obliged to report it as domestic sale until he submits the accounts for the last month in a quarter. However, if he receives proper documents during this extended period, he will report the supply as Intra-Community one at the 0% rate. It will allow avoiding accounting for the tax at the domestic rate. The principle is applied to supplies in the first two months of a quarter¹⁷.

Here is the way in which the above is regulated by article 42 paragraph 12 item 2 of the VAT Act:

if the condition mentioned in paragraph 1 item 2 was not met before expiration of the deadline to submit tax declaration for:¹⁸ (...)

- a month period, if the month period is the first or the second in a quarter – the tax payer does not report the supply in the documents which are mentioned in article 109, paragraph 3 for this monthly period but for the monthly period for which he has documents (referred to in paragraph 1, clause 2), not later, though, than for the last month period in a quarter. If there are no documents received before the expiry date for submitting the tax report in the last month in a quarter, the supply is reported for the last month period at the rate proper for goods supply within the country.

¹⁴ Art. 100 para 1 of the statute on the value added tax on goods and services.

¹⁵ Art. 100 para 1 of the statute on the value added tax on goods and services.

¹⁶ Art. 42 para 12 of the statute on the value added tax on goods and services.

¹⁷ Art. 42 para 12 of the statute on the value added tax on goods and services.

¹⁸ Art. 42 para 12 of the statute on the value added tax on goods and services.

Reception by the taxpayer of documents mentioned in paragraph 1, item 2 later than before the deadline for submitting the tax declaration for the last month period in a quarter, referred to in paragraph 12, item 2, authorises the taxpayer to report the Intra-Community goods supply at the 0% rate for the last month period in a quarter and to make corrections in the tax declaration and respectively of the summary information, mentioned in paragraph 100, item 1¹⁹.

The changes to the regulations simplify also accounting for transactions made in the third month of a quarter. However, it is not possible to limit the number of corrections in order to maintain data comparison within the VIES system, as the taxpayer with a correction has „to go back” to the period he made the supply. „Postponing” of the obligation to report delivery at the home rate is also possible here, if the taxpayer does not receive the documents confirming the Intra-Community goods supply on time.

The following shows how the above-mentioned issue is regulated by article 42 paragraph 12 item 1 of the VAT Act:

If the condition stated in paragraph 1 item 2 was not met before the deadline for submitting the tax declaration²⁰ for: (...)

- a quarter or a month period, if the month period is the last one in the quarter period the taxpayer does not report the supply in the register mentioned in article 109, item 3 for the period; the taxpayer reports the supply in the register mentioned in article 109, item 3, for the next accounting period at the rate proper for the supply of goods at home, if before the expiry date for submitting the tax declaration for the next accounting period does not have evidence mentioned in paragraph 1 item 2.

In the case, referred to in paragraph 12 item 1, receiving of the documents, mentioned in paragraph 1, item 2, authorises the taxpayer to report the Intra-Community goods supply at the 0% rate in the register mentioned in article 109, item 3 for the accounting period in which the supply took place and to make corrections in tax declaration and the respective summary information, mentioned in article 100, paragraph 1²¹.

In case when the tax payer reports for quarter periods, then irrespective of the month of the Intra-Community goods supply, he follows the accounting method regulated in article 42 paragraph 12 item 1, and paragraph 12a. It means that if there are no documents confirming the Intra-Community goods supply before the deadline for reporting in the quarter in which the supply was done, the supply is reported as a domestic supply in the next quarter declaration. The later reception of documents allows for corrections of home supplies for the fol-

¹⁹ Art. 42 para 13 of the statute on the value added tax on goods and services.

²⁰ Art. 42 para 12 of the statute on the value added tax on goods and services.

²¹ Art. 42 para 12a of the statute on the value added tax on goods and services.

lowing quarter and reporting the Intra-Community goods supply in the corrected declaration for the quarter in which the supply was actually made²².

It should be also noticed that new regulations introduced single registration for both the Intra-Community supply and purchase of goods. The taxpayer who wants to make such supplies or purchases makes reports in VAT-R declaration part C3 point 58. This results from a new specimen of registration form VAT-R, which has been valid since 1 December 2008. However until 1 December 2009, the specimen of registration report on goods and service tax in the wording valid before 1 December 2008 can be used. It cannot be applied, however, to those taxpayers who are mentioned in article 43 paragraph 1 item 15, – performance concerning games of chance.

The new regulations cancelled also the duty to pay the guarantee deposit of 250,000 PLN when the taxpayers start their performance or perform for a shorter period than 12 months, being registered as EU VAT payers and wishing to get the VAT difference return within 60 days.

Summing-up

The fundamental legal acts in force in the EU, which are the basis in particular member states, while making regulations on turnover tax are Directives, particularly The Council's Directive 2006/112/WE of 28 November 2006 concerning the common VAT system. They point to the aims to be gained without limiting the methods and means by which they will be achieved.

While analysing the calculated tax, it can be noticed that the right to deduct was introduced to free an entrepreneur totally from VAT costs paid or to be paid. Thus, the common VAT systems assures in that way that every economic performance, whatever its goal or result, is taxed in a totally neutral way on condition that such a performance is subject to the tax.

The right to deduct the calculated tax, which reflects the principle of neutrality, should be put into life immediately as postponing the ability of deducting the tax would result in transferring financing of the tax upon the taxpayer for some time, which in the end would mean that this tax is not completely neutral. The right to deduct the calculated tax should be put life immediately in relation to the total tax sum calculated on purchase. Any limitation to the right of deducting affects the level of tax burden and must be applied in a similar way in all Member States. The exceptions from the general rule concerning the VAT neutrality are admissible only when they are directly provided for in the Directives.

²² Art. 42 para 13 of the statute on the value added tax on goods and services.

According to article 167 of the Directive, the right to deduct appears when the tax obligation in relation to the deducted tax arises. This means that the taxpayer-buyer can make a deduction only at the moment when the tax obligation arises at the payer-supplier. Only this correlation between the moments the due tax obligation arises at the supplier and the right to deduct this tax at the buyer assures proper implementation of the rule of neutrality and budget stabilization. Thus, the rule stating such a principle obliges the taxpayer to run the respective register of purchase and sale in order to establish the sale structure for the individual tax years, as well as records out of which purchases could be separated, which must be calculated gradually.

Under the principle, there will be often a complete symmetry between the time of appearance of the supplier's tax obligation and the date of receiving the invoice by the buyer as well as arising of the tax deduction right evidenced with the invoice. Of course, there will be discrepancy between these moments, especially when the supplier's invoice evidencing an event will cause his tax obligation in a given accounting period, but the buyer will receive it in the next accounting period. Some problems are expected with cases when the payers will declare deduction calculated according to invoices issued by suppliers in one month and received by the buyers in the following month, before the accounting declaration for the previous month is submitted. The taxpayers making the deduction for the month of the invoice issuing, and not receiving it, will act contrary to the VAT Act, article 86 paragraph 10, item 1, but their action will be according to the rules included in article 167 of the Directive, which are univocal and applicable directly in case of discrepancy between home regulations and the content of the Directive.

To sum up, the taxpayer is entitled to the VAT deduction only when the relation between the tax calculated on goods and service purchase and the due tax by virtue of his taxed activity is direct and unquestionable. The taxpayer is not entitled to the deduction when he uses it in a transaction exempt from tax.

Literature

- Traktat Akcesyjny z dnia 16 kwietnia 2003 roku (Journal of Law – Dz. U. 2004 No. 90, item 865).
- Ustawa z 8 stycznia 1993 r. o podatku od towarów i usług (Journal of Law – Dz. U. No. 11, item 50 with subsequent amendments).
- Ustawa z dnia 11 marca 2004 roku o podatku od towarów i usług (Journal of Law – Dz. U. No. 54, item 535 with subsequent amendments).
- Bielęda T., Kończal H., Sieniecka M., *VAT w pytaniach i odpowiedziach. Poradnik na 2005 rok*, Wydawnictwo podatkowe GOFIN 2005.

Dyrektywa 2006/112/WE Rady z dnia 28 listopada 2006 roku w sprawie wspólnego systemu podatku od wartości dodanej (Dz. Urz. UE L 347/1 z 2006 r.).

Faktury wystawiane przez nabywcę, Poradnik VAT No. 2 from 2009.

Obowiązek podatkowy w WDT, Appendix No. 14 to the Information Bulletin (Wydawnictwo podatkowe GOFIN) No. 12 from 2008.

Terminy odliczenia VAT naliczonego, Appendix No. 32 to the Information Bulletin (Wydawnictwo podatkowe GOFIN) No. 32 from 2008.

Zasady ogólne dotyczące transakcji wewnątrzspółnotowych, Appendix No. 14 to the Information Bulletin (Wydawnictwo podatkowe GOFIN) No. 12 from 2008.

Zubrzycki J., *Leksykon VAT 2004 tom I*, Oficyna Wydawnicza UNIMEX, Wrocław 2004 r.

Streszczenie

PODATEK OD TOWARÓW I USŁUG (VAT) W OBRODZIE WEWNĄTRZWPÓLNOTOWYM. WYBRANE ASPEKTY

Podatek od towarów i usług jest podatkiem pośrednim, nakładanym na dostawcę towaru i świadczącego usługę w celu opodatkowania konsumpcji, który – poprzez jego „przerzucalność” na kolejne fazy obrotu – ma w jak najmniejszy sposób oddziaływać na ostateczną cenę towaru i usługi podlegającej opodatkowaniu.

Do polskiego systemu podatkowego po raz pierwszy został wprowadzony przez ustawę z dnia 8 stycznia 1993 roku zastępując poprzednio funkcjonujący podatek obrotowy.

Polska przystępując do Wspólnoty Europejskiej – w oparciu o Traktat Akcesyjny z dnia 16 kwietnia 2003 roku – wyraziła zgodę na dostosowanie polskiego prawa podatkowego, a w szczególności podatku obrotowego zwanego pośrednim do wymogów unijnych w takim zakresie, jaki jest niezbędny do swobodnego przepływu towarów i usług na rynku pomiędzy państwami Wspólnoty. Ponieważ wiele rozwiązań zawartych w ustawie z 8 stycznia 1993 r. było niespójnych, a czasem wręcz sprzecznych z postanowieniami dyrektyw unijnych konieczne było opracowanie nowej ustawy o podatku od towarów i usług, która została uchwalona 11 marca 2004 roku i do dnia dzisiejszego kilkakrotnie nowelizowana.

Głównym celem niniejszego artykułu jest zwrócenie uwagi na fakt, że od dnia 1 maja 2004 roku w sposób bardzo istotny zmieniły się zasady opodatkowania handlu pomiędzy Polską, a innymi państwami członkami Wspólnoty, gdyż i w stosunku do Polski, która stała się od tego dnia pełnoprawnym członkiem Wspólnotowej unii celnej, zaczęły obowiązywać zasady handlu wewnątrzspółnotowego.

Szczególna uwaga została zwrócona na prawidłowe określenie terminu powstania prawa do pomniejszenia podatku należnego, który niekiedy ma związek z powstaniem

samego obowiązku jego zapłaty do urzędy skarbowego. Zgodnie z ustawą występują bowiem takie sytuacje, które nie dają prawa do obniżenia podatku należnego o podatek naliczony, a niekiedy wręcz zakazują takiego pomniejszenia.

SECTOR OF CO-OPERATIVE BANKS IN POLAND UNDER CRISIS CONDITIONS ON FINANCIAL MARKETS

Ryszard KATA

University of Rzeszów

Introduction

In the first half of 2009 aggravation of negative phenomena observed in the Polish economy in 2008 (especially in the fourth quarter) took place. In particular there was a very strong fall of economic activity, deterioration of the situation on the labour market and the situation of public finances. Adverse tendencies resulted from a crunch of the world economy, which following a financial crisis started in 2007 entered the state of the deepest recession since the end of the World War Two¹.

The basic source of threats for the banking sector in Poland is the external environment, and more strictly, threats resulting from a strong fall of economic activity (resulting in deterioration of financial condition of credit borrowers and limitation of possibilities of the deposit base growth), as well as an unsure situation on the financial market.

It should be stressed that as far as the original deterioration source of bank effects and their financial standing are external factors, bank sensitiveness to such factors depends on the way the operational activity and risk are managed. It is also a derivative of „an appetite” for risk in the previous periods featured by a dynamic economic development.

Most of the threats related to the crisis on the financial market result from events occurring outside Poland. In this way the banks that are stronger associated with the global financial market and active participants of the financial integration processes, being for example part of great international financial conglomerates, are more vulnerable to effects of the financial crisis.

In order to maintain stability of the banking sector in Poland, an important problem becomes the financial situation and stability of its individual segments. An important link of the system is the co-operative banking sector. This results

¹ Informacja o sytuacji banków w pierwszym kwartale 2009 roku, 2009: KNF, Warszawa, p. 6.

from both historical conditions and the place held by co-operative banks (CB) among credit institutions.

Co-operative banks mainly service retail customers (population), farmers, small and medium enterprises and local government units. They are featured by a local range of their activity².

Stability of co-operative banks, and also their role in supplying enterprises with means necessary for financing the current economic performance and development are especially important for local economic systems.

Purpose of research and material sources

The purpose of this paper is specifying the financial situation of co-operative banks, their position on the banking market, and opportunities and threats for their development under new conditions created by the crisis on the financial markets, and economic deceleration in Poland.

The Author in his paper has assumed a thesis that due to the activity model that is different from the model of commercial banks, weaker links with the global financial market and banking activity in local communities, problems and threats resulting from the economic crisis will affect the co-operative banking sector to a lesser extent than the sector of commercial banks. In the course of the analysis this thesis will be verified.

The reference point for evaluation of the financial situation of co-operative banks in Poland under the conditions of the crisis on the financial markets will be an analysis of the situation of the commercial banks. The comparative analysis will focus on the years 2007-2008, i.e. on the period when the first symptoms of the crisis on the financial markets appeared, through its intensification and appearance of the economic crisis. Nevertheless, to illustrate tendencies in development of the co-operative banking in Poland against the sector of commercial banks, a wider time horizon, covering the years 2001-2008, has been taken.

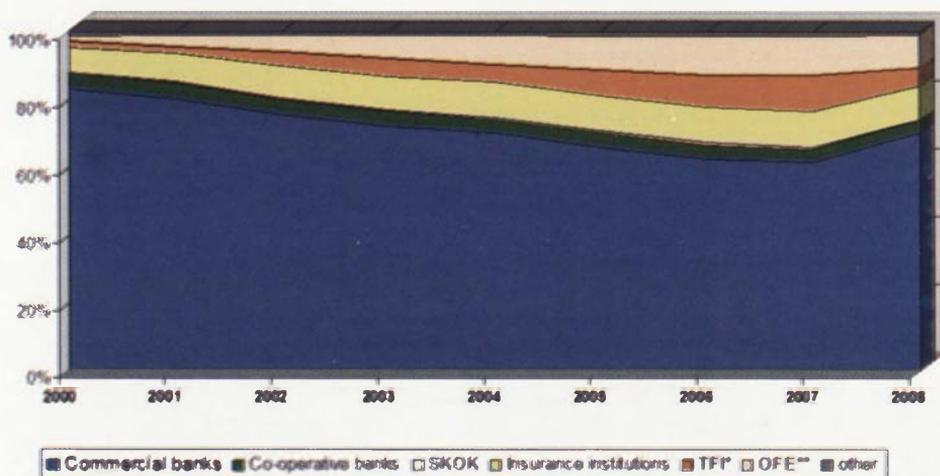
In the paper information and data coming from reports and studies by the Polish Financial Supervision Authority (PFSA) and the National Bank of Poland (NBP) have been used.

² Kata R., 2006: *Bankowość spółdzielcza na rynku usług finansowych w Polsce (na tle wybranych krajów Unii Europejskiej)*, *Gospodarka Narodowa*, No. 7-8: pp. 113-125.

Place of co-operative banks in financial system

Co-operative banks are a permanent element of the banking and financial systems in Poland, and their share in the assets of the financial systems is maintained at the level of ca. 4% (fig. 1). Their offer is addressed to the same groups of customers as the offer of the commercial banks and co-operative savings and credit banks (Spółdzielcze Kasy Oszczędnościowo-Kredytowe – SKOK).

Fig. 1. Assets structure of financial institutions in Poland in the years 2000-2008 (in %).



* TFI – Towarzystwa Funduszy Inwestycyjnych (Associations of Investment Funds – Translator's note);

** OFE – Otwarte Fundusze Emerytalne (Open Pension Funds) – Translator's note.

Source: Rozwój systemu finansowego w Polsce, NBP, Warszawa 2009.

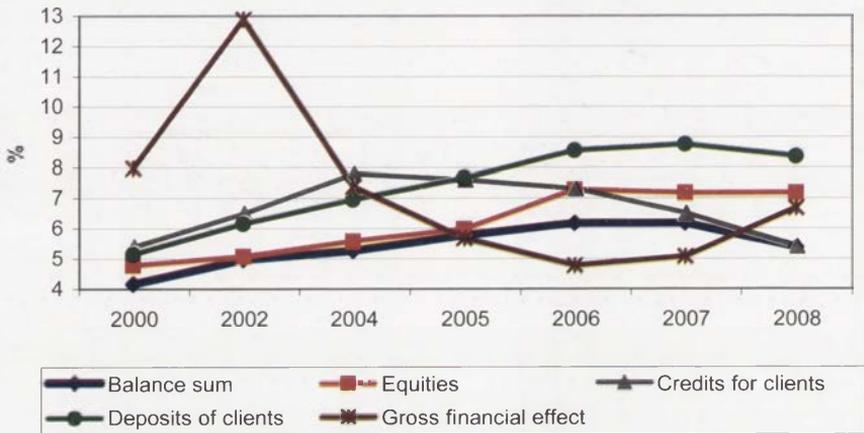
For some years there have been a discussion whether co-operative rules (e.g. self-help, self-administration, territoriality), observing the rule „one member – one vote”, and orientation at meeting the members' needs in the best way are adequate for the contemporary conditions for running banking business. While talking about conditions, I mean advancing integration and financial globalisation accompanied by a stormy development of new financial and communicational technologies, growth of competition on the financial market, proliferation of multi-channel sale of financial products and complicating precaution regulations³.

³ Schmukler L S., Vesperoni E., 2006: *Financial Globalization and Debt Maturity in Emerging Economies*, Journal of Development Economics, Vol. 79, No. 1.

The basic problem for co-operative banks is an answer to the question whether there is a possibility to link co-operative ideas with performance effectiveness that is necessary for surviving⁴. There are many arguments that this is to be achieved and this is indicated by very good economical effects of CB against the whole banking sector.

The share of co-operative banks in the banking system is relatively small – ca. 6-7% of the main balance values of the sector (fig. 2). The importance of these banks on the market of financial services is, however, much greater. It results from the fact that this sector has the largest network of banking outposts in the country, mostly located in the rural areas and in small and medium towns. This is decisive for the key importance of CB in the financial servicing of the population, farms and SMEs.

Fig. 2. Share of co-operative banks in Polish banking system (in %).



Source: Raport o sytuacji banków w 2008 roku oraz Informacja o sytuacji banków w pierwszym kwartale 2009 roku, KNF, Warszawa 2009.

The share of co-operative banks in crediting households reaches 10% as far as credit amounts are concerned, but it is estimated that concerning numbers, almost every fifth credit for the population (18%) is granted by a co-operative bank⁵. On the other hand the share of co-operative banks in crediting individual

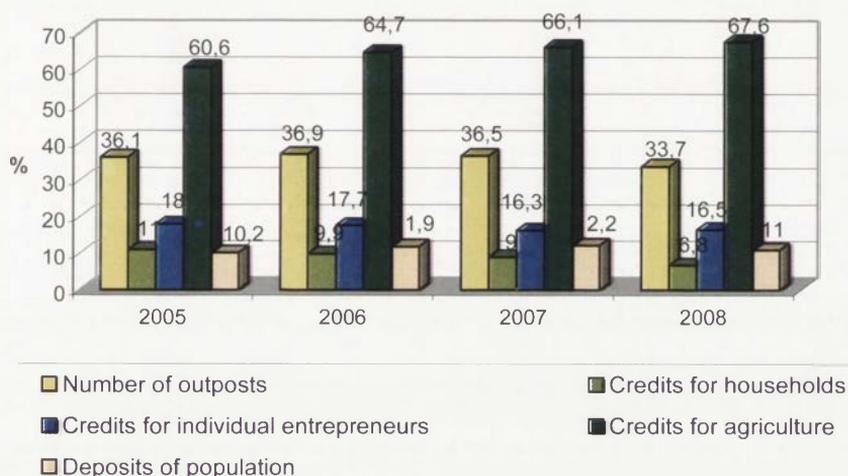
⁴ Jaworski W.L., 2005: *Rola lokalnych instytucji bankowych w obsłudze klienta detalicznego* [in:] Rytłewska G. (ed.), *Bankowość detaliczna. Potrzeby, szanse, zagrożenia*, PWE, Warszawa, p. 80.

⁵ Kata R., 2005: *Banki spółdzielcze jako lokalne instytucje finansowe na tle sektora bankowego w Polsce*. [in:] S. Urban (ed.), *Prace Naukowe Akademii Ekonomicznej we Wrocławiu*, No. 1070, Wrocław, p. 415.

entrepreneurs – and this legal form is held by most SMEs – reaches ca. 17%. A considerable role is played by co-operative banks in financing agriculture. Their share in the credit volume for that sector has been systematically growing in the recent years and is reaching almost 68%, and the share of CB in crediting individual farms is even some per cent higher (e.g. in 2007 it amounted to 72.5%). According to the National Union of Co-operative Banks, in 2005 co-operative banks serviced 70% of current accounts belonging to Polish communes. Finally, the share of co-operative banks in the volume of the population's deposits reaches 11-12% (fig. 3).

As the result of consolidation processes (determined mainly by necessity to achieve by the banks the minimal threshold of equity equalling €1m, until the end of 2007)⁶ the number of CB was reduced from over 1600 outposts (1996) to 579 outposts (2008). The consolidation process was accompanied by the network extension of bank outposts, whose number increased from 2023 outposts in 2000 to 3516 as of the end of 2008.

Fig. 3. Share of CB on market of retail banking in years 2005-2008.



Source: as in figure 2.

An analysis of the basic balance values and effects of co-operative banks shows that in the recent years they have been improving their financial condition. In the years 2001-2007 assets of co-operative banks were growing faster than assets of commercial banks (table 1).

⁶ This obligation results from the Accession Treaty – item 3 of the Annex XII (Journal of Law – Dz. U. from 2004, No. 90, item 864).

Table.1. Dynamism of selected balance values of co-operative banks and commercial banks.

(previous year = 100%)

| Years | Assets | | Credits for population | | Deposits of clients | | Equities | | Financial effect | |
|-------|--------|-------|------------------------|-------|---------------------|-------|----------|-------|------------------|-------|
| | CB | CMB | CB | CMB | CB | CMB | CB | CMB | CB | CMB |
| 2001 | 119.4 | 109.2 | 111.9 | 105.5 | 121.1 | 112.5 | 120.0 | 120.2 | 102.5 | 95.9 |
| 2002 | 108.8 | 98.9 | 111.5 | 101.2 | 108.1 | 96.3 | 116.7 | 110.2 | 101.2 | 62.8 |
| 2003 | 109.8 | 104.6 | 117.5 | 107.1 | 109.8 | 103.3 | 114.3 | 103.3 | 81.1 | 123.1 |
| 2004 | 111.7 | 110.0 | 112.8 | 103.6 | 111.0 | 104.4 | 112.5 | 106.2 | 144.9 | 178.8 |
| 2005 | 118.1 | 108.4 | 111.4 | 113.6 | 119.3 | 107.2 | 122.2 | 103.8 | 107.0 | 140.6 |
| 2006 | 124.2 | 115.8 | 122.0 | 122.6 | 127.3 | 111.6 | 115.2 | 107.4 | 100.2 | 121.5 |
| 2007 | 116.2 | 116.6 | 122.5 | 131.6 | 114.0 | 111.3 | 118.4 | 115.7 | 137.2 | 127.0 |
| 2008 | 115.5 | 132.1 | 115.5 | 138.4 | 113.1 | 117.3 | 115.6 | 120.6 | 134.0 | 99.2 |

CB = Co-operative Banks; CMB = Commercial Banks

Source: as in figure 2.

Almost in the whole analysed period – except in 2008 – co-operative banks increased their equities faster than commercial banks and they achieved higher growth dynamism of clients' deposits (table 1).

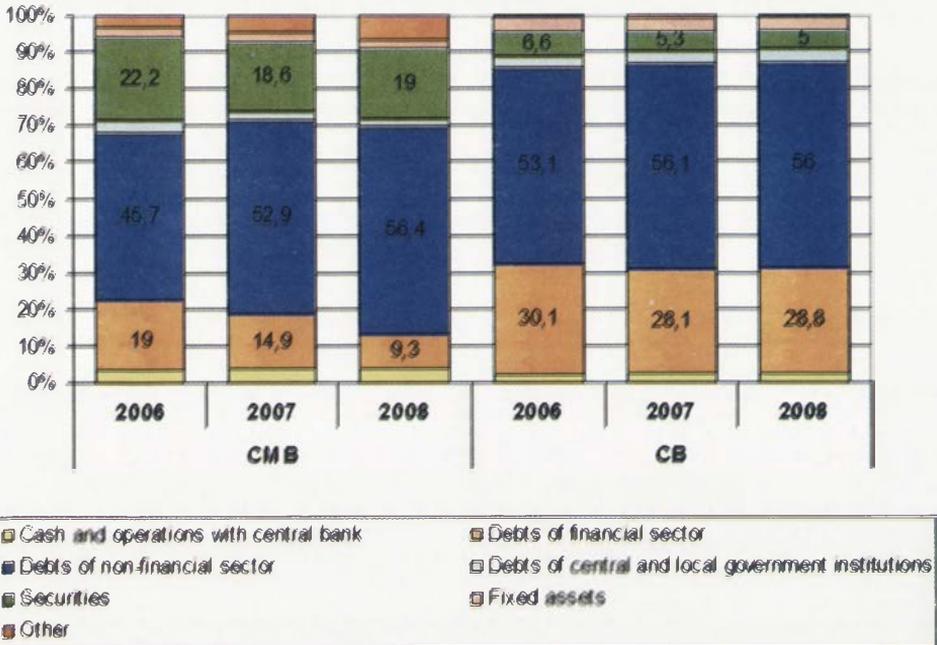
Concerning credit amounts for the non-financial sector, in the years 2000-2004 co-operative banks achieved higher growth dynamism than commercial banks, and in the years 2005-2006 the dynamism shaped at a similar level. Only in the years 2007-2008 the credit growth was some per cent lower, chiefly as the result of a dynamic growth of mortgages in commercial banks. In this segment of the credit market the share of CB, though growing, is still relatively small (in 2007 it amounted to 7.2%).

Economic situation of co-operative banks under financial crisis condition

The share of CB in the financial effect of the banking sector was 6.2% in 2008. In 2007 and 2008, similarly as earlier in the years 2001-2002, co-operative banks had a higher growth pace of the financial effect than commercial banks. In the whole analysed period co-operative banks as a sector generated profits, except in 2003, and each time they achieved a nominally higher financial effect than in the previous year. Generally, since the mid-1990s the CB sector has been continually achieving positive financial effects, which has allowed in the recent years to reinforce visibly the capitals of the banks (as profits have been appropriated almost in total to increasing of equities).

Assets of co-operative banks have been dominated by debts of non-financial sector (their share is usually slightly higher than in commercial banks). Debts of the financial sector are mainly deposits in associating banks. Investments on the market of securities are small part of CB assets (ca. 5%), whereas in commercial banks, securities constitute on average ca. 20% of assets (fig. 4).

Fig. 4. Structure of assets in co-operative banks and commercial banks in years 2006-2008 (in %).



Source: as in figure 2.

Practically, in the structure of CB assets there are no investments on the market of derivative instruments. On the other hand, debts in foreign currencies constitute in co-operative banks only 0.03% of the debt amounts of the non-financial sector (27.1% in commercial banks).

In co-operative banks the ratio of credits to deposits is much lower than in commercial banks (table 2). Co-operative banks can fully finance credit action with deposits of clients. On the other hand, commercial banks to cover credit actions must use to a greater extent the money market and the capital market.

In the years 2000-2004 co-operative banks achieved higher indexes of return on assets (ROA) and return on equity (ROE) than commercial banks (table 3). In the last analysed year of 2008 CB achieved a lower index of return

on equity (ROE) than commercial banks, but their index of return on assets (ROA) was a little higher.

Table 2. Ratio of credits to deposits of non-financial sector (in %).

| Specification | Index of covering credits with deposits of clients (in %) as of the end of year: | | | | | | | |
|--------------------|--|------|------|------|------|------|-------|-------|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Co-operative banks | 70.2 | 72.4 | 77.5 | 78.8 | 73.5 | 70.5 | 75.7 | 77.3 |
| Commercial banks | 68.9 | 72.3 | 74.9 | 74.4 | 78.8 | 86.7 | 102.5 | 121.0 |

Source: as in figure 2.

The relatively high financial effectiveness of co-operative banks – measured by the ratio of the financial effect to the value of assets and basic funds resulted from high dynamism of credits for the non-financial sector, which was recorded by co-operative banks in the analysed period. Moreover, it resulted from relatively lower costs of obtaining funds for the credit action and a higher interest margin of co-operative banks in comparison with commercial banks (table 3).

Table 3. Basic indexes of returns and effectiveness of co-operative banks and commercial banks (in %).

| Years | Co-operative banks | | | | Commercial banks | | | |
|-------|------------------------------------|---|------------------|------------------|-----------------------|----------------------------|-----|------|
| | interest margin (NIM) ¹ | ratio of operational costs (C/I) ² | ROA ³ | ROE ⁴ | interest margin (NIM) | ratio of operational costs | ROA | ROE |
| 2001 | 8.0 | 69.3 | 1.6 | 19.4 | 3.5 | 61.0 | 1.0 | 12.8 |
| 2002 | 6.7 | 70.6 | 1.6 | 18.2 | 3.3 | 63.4 | 0.5 | 5.2 |
| 2003 | 5.6 | 75.3 | 1.2 | 12.2 | 3.1 | 67.6 | 0.5 | 5.4 |
| 2004 | 5.9 | 71.6 | 1.8 | 18.3 | 3.1 | 64.6 | 1.4 | 17.1 |
| 2005 | 5.6 | 72.2 | 1.6 | 17.6 | 3.2 | 60.6 | 1.6 | 20.8 |
| 2006 | 4.8 | 72.9 | 1.4 | 14.5 | 3.3 | 57.4 | 1.8 | 23.1 |
| 2007 | 4.8 | 69.2 | 1.5 | 17.2 | 3.3 | 55.3 | 1.7 | 22.9 |
| 2008 | 5.0 | 65.7 | 1.6 | 19.6 | 3.4 | 52.6 | 1.7 | 22.7 |

¹ NIM – Net Interest Margin: ratio of difference between interest incomes and interest costs to average value of assets.

² C/I – Cost to Income: ratio of operational costs to banking activity effect corrected by effect of remaining incomes and operational costs.

³ ROA – Return on Assets: ratio of net financial effect to average value of assets.

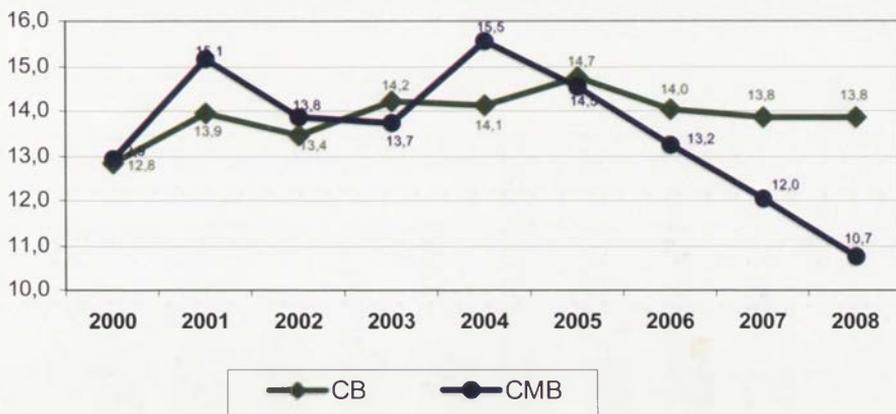
⁴ ROE – Return on Equity: ratio of net financial effect to average value of basic funds.

Source: as in figure 2.

Concerning basic effectiveness indexes, in recent years co-operative banks have been worse than commercial banks only by the index of operational costs C/I (*cost to income ratio*). The ratio grew in CB in the years 2000-2003 from 69% to 75.3%, but in the following years it was falling – to the level of 65.7% in 2008. Nevertheless during the whole analysed period it was maintained at a level higher by up to over a dozen per cent than in commercial banks (13.1% in 2008). Such a situation results from a small activity scale of an average co-operative bank with hardly flexible operational costs, due to much higher share of labour costs in operational costs of CB (72.3% in 2008) in comparison to commercial banks (54%).

It is solvency index that indicates a good and stable financial situation of co-operative banks. For many years in co-operative banks this index has been maintained at a high safe level of ca. 14%. Whereas in commercial banks in recent years (especially in 2008) an important fall of that index has been observed (fig. 5).

Fig. 5. Solvency index of co-operative banks and commercial banks.



Source: as in figure 2.

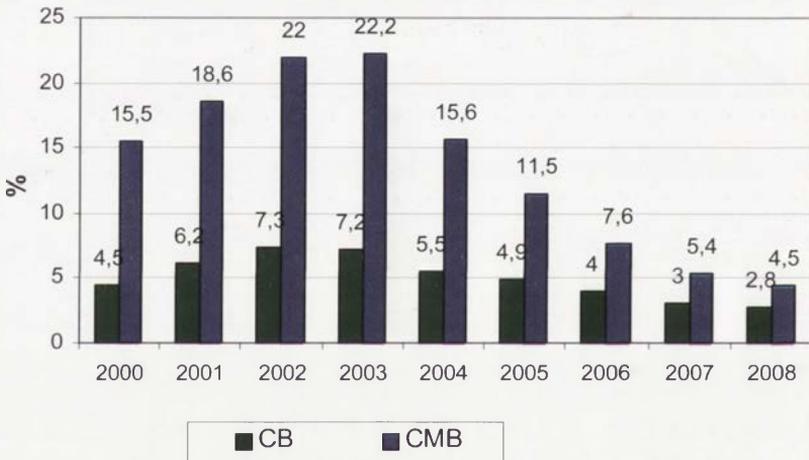
Operational specificity of co-operative banks consists in starting close contacts with local clients. Knowledge of their economic and financial situation, potential financial needs and abilities of repayments makes co-operative banking belong to the banking group of the lowest share of risky debts in the credit portfolio⁷.

In the CB structure of credit portfolio dominant are credits for individuals, farmers, and small and medium enterprises, acting in the close environment of

⁷ A. Alińska, 2008: *Instytucje mikrofinansowe w lokalnym rozwoju społeczno-gospodarczym*, Monografie i opracowania 558, SGH, Warszawa, pp. 260-261.

banks. However, contrary to commercial banks, small is the share of credits for big enterprises and companies, crediting of whom is connected with the greatest risk, especially in the situation of the economic crisis. Much smaller is as well the share of very „crisis sensitive” mortgages. It is also important that co-operative banks use the model of relationship *banking*. This model is based on good knowledge of the clients and the market, and building lasting relationships with clients. In credit decisions banks consider not only „hard” financial data concerning a potential borrower, but also „soft” characteristics of the clients (their reputation, education, family status), and previous experience of relationships with the clients. The opposite model is the model of *transactional banking* universally applied by big commercial banks. It is banking basing on transactions, featured by formalized credit procedures, based on processing „hard data”, coming from systematically updated business records, mainly by means of scoring methods. Usually, bank workers, applying this model, have also less freedom in taking credit decisions (centralized decision systems, unified methods of client assessment) than their counterparts in small local banks⁸.

Fig. 6. Share of risky debts in debt structure of non-financial sector in co-operative banks and commercial banks.



Source: as in figure 2.

Under the financial crisis and economic deceleration, co-operative banks maintain a stable financial situation, and their structures of assets and capitals

⁸ Kulawik J., 2007: *Globalizacja finansowa a funkcjonowanie i rozwój banków*, IERiGŻ-PIB, Warszawa, p. 57.

are more favourable (burdened with a smaller risk) in comparison with the balance structure of commercial banks. Considering also the local character of co-operative banks' operation, one may assume that under the crisis on financial markets, these banks gain some advantages in competition with commercial banks. This results for example from:

- potentially smaller problems with financing the credit procedure and their smaller costs (thanks to a surplus of deposits to credits CB need not limit credits and look for capital on the interbank market),
- a potential migration of some clients of commercial banks to CB due to sharpening of criteria for granting credits by commercial banks (e.g. clients from the SME sector),
- finally, deterioration of credit quality should affect CB to a much smaller extent than commercial banks due to a better and potentially less „risky” structure of the credit portfolio.

In face of the above one should suspect that co-operative banks, under the crisis conditions, may maintain a good financial condition, and even reinforce their competitive position and share on the financial market. Some of the advantages result paradoxically from some „retardation” of co-operative banks in relation to solutions used by commercial banks (e.g. concerning innovativeness of banking products), and also from their weaker links with the money and capital markets.

Among features that make co-operative banks less sensitive than commercial banks to „shocks” caused by the global financial crisis and the economic crisis are those that result from the scale and character of the banking activity of CB, the model of their activity and their good economic standing (table 4).

Table 4. Features of co-operative banks affecting their financial stability under the economic crisis conditions.

| Feature | Characteristics |
|--------------------------------|---|
| Polish capital | Owners of co-operative banks are shareholders (co-operative members), being at the same time clients of the banks. This structure ensures ownership stability. The capital collected in co-operative banks is Polish 100%. |
| Local area of activity | Activity on the local market allows on the one hand for a greater isolation from the main current of globalisation and financial integration processes. On the other hand it allows for a better comprehension of the economic realities of the environment where CB act. |
| Relationship model of activity | CB prefer the model of <i>relationship banking</i> based on direct knowledge of clients, a longstanding co-operation with them, building relationships based on trust, etc. |
| Financing of credits from | Crediting based on deposits of clients allows for making the bank independent of the interbank market and acquiring „cheaper |

| Feature | Characteristics |
|---|---|
| deposits of clients | money". The surplus of deposits to credits also gives security concerning bank liquidity. |
| Secure placing of liquidity surpluses | Placing collected surpluses of monetary means mainly on deposits in the associating bank or through it in safe securities issued by the State Treasury. |
| Conservatism in managing assets | No depositing means in foreign banks. No credits in foreign currencies granted by co-operative banks. No investments in derivative instruments. A conservative approach to taking risk. |
| Decision independence of units | Great independence of units in decision taking and smaller (in comparison to commercial banks) level of product unification, which allows for a better and more flexible adjustment to the client's situation and the situation on the market in crediting and financial agency. |
| Traditional organizational structure and banking activity | Most CB have the traditional organizational structure (credit division, deposit division, etc), a smaller pressure on sales in relation to workers. Traditional banking with relatively small engagement in financial agency and insurances. |
| Careful approach to innovations | Dominance of traditional products and traditional channels of their distribution. Careful introduction of innovations. |
| Weak links with the money market and the capital market | Links with the money market and the capital market through the associating bank – share in the market of securities and interbank loans. A relatively small share of securities in assets – 5% as of the end of 2008 (19% in commercial banks). |
| Secure credit portfolio | A growing, though still small, share of mortgages in the structure of credit debts (9.8% as of the end of 2008), no mortgages in foreign currencies (in commercial banks mortgages constitute 34% of all credits, including 24% in foreign currencies). A low index of risky credits. |

Source: own study.

The crisis on financial markets and effects of the economic crisis that are already felt bring specific threats also to co-operative banks and they are multiplied by some weaknesses of CB. They result, for example, from still small equities of co-operative banks (as of the end of 2008 an average CB disposed of equities at the level of 8.9m zł).

The most important threats to co-operative banks include:

- a limited scale of activity due to their low capital base and also by renewed problems with meeting the capital minimum by some CB (ca. 80 as of the end of 2008) due to substantial depreciation of the zloty,
- a fall in profitability of crediting the preferential agriculture, which is an important source of CB incomes, due to fall of interest rates,

- economic difficulties and deterioration of the financial situation of traditional clients of CB.

Conclusions

1. Co-operative banks to a greater extent than commercial banks play classical functions of the bank – collecting deposits and granting credits (they engage more rarely in financial agency). In comparison to commercial banks they are featured by a much greater „aversion” to taking risk and banking activity based on means of their depositaries – local citizens, local governments, entrepreneurs and farmers, often co-owners of the bank.
2. Forms of managing the collected means applied by co-operative banks and considered as conservative, turn out to be an advantage in the situation of the crisis on the financial markets. They result in weaker links of the banks with the market of securities, foreign currencies and derivative instruments, which makes them less susceptible to „shocks” caused by the global financial crisis.
3. Their advantage is a stable economic and financial situation, and especially a good quality and structure of the credit portfolio, and an advantageous ratio of deposits to credits, creating a potential for development of the credit action.
4. Using their advantages, e.g. a good knowledge of local markets and needs of clients, they can – in a difficult situation of the economic crisis – reinforce their position in the banking sector. The condition is to maintain the credit action at a high level and greater innovativeness concerning their product offer.

Literature

- Alińska A., 2008: *Instytucje mikrofinansowe w lokalnym rozwoju społeczno-gospodarczym*, Monografie i opracowania 558, SGH.
- Informacja o sytuacji banków w pierwszym kwartale 2009 roku, 2009: KNF, Warszawa.
- Jaworski W.L., 2005: *Rola lokalnych instytucji bankowych w obsłudze klienta detalicznego* [in:] Rytłewska G. (ed.), *Bankowość detaliczna. Potrzeby, szanse, zagrożenia*, PWE, Warszawa, pp. 76-109.
- Kata R., 2005: *Banki spółdzielcze jako lokalne instytucje finansowe na tle sektora bankowego w Polsce*. [in:] S. Urban (ed.), *Prace Naukowe Akademii Ekonomicznej we Wrocławiu*, No. 1070, Wrocław, pp. 412-419.

- Kata R., 2006: *Bankowość spółdzielcza na rynku usług finansowych w Polsce (na tle wybranych krajów Unii Europejskiej)*, Gospodarka Narodowa, No. 7-8: pp. 113-125.
- Kulawik J., 2007: *Globalizacja finansowa a funkcjonowanie i rozwój banków*, IERiGŻ-PIB, Warszawa.
- Raport o sytuacji banków w 2008 roku*, KNF, Warszawa 2009.
- Rozwój systemu finansowego w Polsce*, NBP, Warszawa 2009.
- Schmukler L S., Vesperoni E., 2006: *Financial Globalization and Debt Maturity in Emerging Economies*, Journal of Development Economics, Vol. 79, No. 1.

Streszczenie

SEKTOR BANKÓW SPÓŁDZIELCZYCH W POLSCE W WARUNKACH KRYZYSU NA RYNKACH FINANSOWYCH

Celem opracowania było określenie sytuacji finansowej banków spółdzielczych, ich pozycji na rynku bankowym oraz szans i zagrożeń dla ich rozwoju w nowych warunkach jakie tworzy kryzys na rynkach finansowych oraz spowolnienie gospodarcze w Polsce.

W opracowaniu poddano weryfikacji tezę, że ze względu na odmienny od banków komercyjnych model działania, słabsze powiązania z globalnym rynkiem finansowym oraz prowadzenie działalności bankowej w środowiskach lokalnych, problemy i zagrożenia wynikające z kryzysu gospodarczego w mniejszym stopniu dotkną sektor bankowości spółdzielczej niż sektor banków komercyjnych. Punktem odniesienia dla oceny sytuacji finansowej banków spółdzielczych w Polsce w warunkach kryzysu na rynkach finansowych, była analiza sytuacji banków komercyjnych. W opracowaniu wykorzystano informacje i dane pochodzące z raportów i opracowań Komisji Nadzoru Finansowego (KNF) oraz Narodowego Banku Polskiego (NBP).

BANKCARDS AS STIMULATING FACTORS OF ECONOMIC GROWTH

Paweł GANCARZ

In the era of the present technological progress and universal globalization, everything is affected by violent changes. The stormy environment enforces the need of meeting constantly its demands to avoid difficult, borderline, or even insoluble situations. All businesses, including banks, undergo such changes. Bank systems have been subjected to constant transformations recently. They originate from the fact that a huge number of commercial banks operating in a small or bigger range concentrate their activities on the market; nevertheless, they constitute potential competence for others. That is the reason why the common golden means is being searched which would assure not only competence advantage but would also attract numerous customers that are satisfied. A bankcard seems to be the ideal solution; on the one hand it is only a little piece of plastic, on the other hand – financial innovation on a huge scale.

Nowadays, bankcards are very popular means of payment in most developed countries. Millions of customers use them to make incredibly high price transactions. It is difficult to imagine operations of the market, but also life of common people, without the opportunity to use all the benefits that this small piece of plastic provides. Not long ago, the card revolution came to Poland and the distance between Poland and highly developed European countries has been caught up for the last several years¹.

At present, the Polish bankcard market is developing dynamically. The constant development has a positive aspect as bankcards influence the economic condition of a country. Statistic data collected by the National Bank of Poland (NBP) allow concluding that card owners' behaviour changes gradually; they more often use cards for non-cash payments². It is even more satisfying as the biggest challenge of the 21st century for people is to obtain the sustainable development all over the world. According to the report „*The Virtuous Circle: Electronic Payments and Economic Growth*”, completed by the VISA organisation, bankcard systems, and e-payments bring enormous advantages to many

¹ A. Borcuch, *Pieniądz elektroniczny, pieniądz przyszłości – analiza ekonomiczno-prawna*, CeDeWu Sp. z o.o., Warszawa 2007, pp. 111-116.

² NBP, Departament Systemu Płatniczego, *Ocena funkcjonowania polskiego systemu płatniczego na koniec 2006 roku*, March 2007, p. 14.

economies. The advantages are characteristic not only for highly developed countries but also for those with weaker, constantly developing economies. The above report shows in detail macroeconomic advantages for the public coming from bankcards. According to research results in economies of 50 different countries, a regularity can be observed that rising of the e-payment level by 10% causes the rise in consumer spending by 0.5%. Moreover, bankcard systems allow to lower economic performance costs. Thanks to the dynamic development of the bankcard market, the economy can save 1% of GDP annually. The analysis of the US economy, where the position of bankcards is high, showed that savings for the home economy coming from widening of the e-payment system are at least 60 billion USD a year. Between 1980 and 2002 dissemination of bank cards caused additional growth of individual consumption of 6.5 trillion USD (8% of the total individual consumption) causing in effect additional growth of GDP of 10 trillion, i.e. by 0.5% surplus. According to analysts' opinion, the cumulated GDP growth coming from dissemination of bankcard use is related to creating 1.3 mln jobs. This enables to limit the gray market and raise budget incomes from taxes, which is particularly important for countries under economic and political transformation as well as with accompanying numerous social needs. The analysis in Central and Eastern Europe also showed a positive relation between the growth of transactions made with bankcards and the growth of consumption. The research demonstrated the influence upon the level of the total consumption expenses caused by an increase by a specific percentage, e.g. by 10% and 50%, in the share of spending regulated with cards. In the countries under research (The Czech Republic, Poland, Russia, Romania, Slovakia, and Ukraine), the growth of the share in the bankcard payments could cause additional total short-term rise of consumption expenses by a sum between 1.5 billion USD and 5.5 billion USD. The additional consumption expenses would mean the growth of GDP in the region by an amount between 1.7 billion USD and 8.4 billion USD, i.e. between 0.5 % and 2.4%.

Bankcards also influence the microenvironment. In companies, profits from bankcard use are quite high. E-transactions cost on average from 50% to 70% less than transactions made with traditional banknotes. Thus, numerous firms save high sums of money a year, which can be exemplified by British companies where total savings brought by using bankcards are about 10 billion USD³.

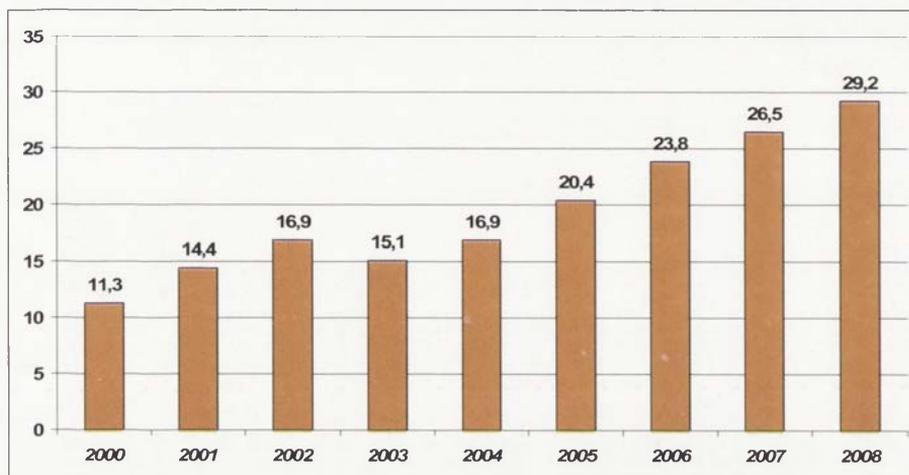
The key element to use the presented above dependence for economic growth is development of e-payment. That is why the Visa organization has set it as its strategic goal.

It is difficult to tell the exact number of bank cards currently used while comparing the above-mentioned conditions to the Polish ones. It comes from

³ VISA, *The Virtuous Circle: Electronic Payments and Economic Growth*, June 2003, pp. 10-11.

the fact that there are different ways of counting their number. Every card is valid for a specified period. When expired, a new card is issued on the client's demand. Banks treat such a card as a new one; however, the actual number of cards in the authorized system does not change⁴. Nevertheless, according to data supplied by the Payment System Department of the NBP, the number of bankcards being in use on the Polish market at the end of 2008 was 29.2 mln. It equalled at the same time the number growth of the issued bankcards by about 10% in comparison to the previous year. Analysing the dynamics of the issued bankcards between 2000 and 2008 it is easy to notice the rising trend. It is illustrated by the following graph.

Fig. 1. Number of bankcards (in millions) issued between 2000 and 2008.



Source: Own study based on information from the NBP.

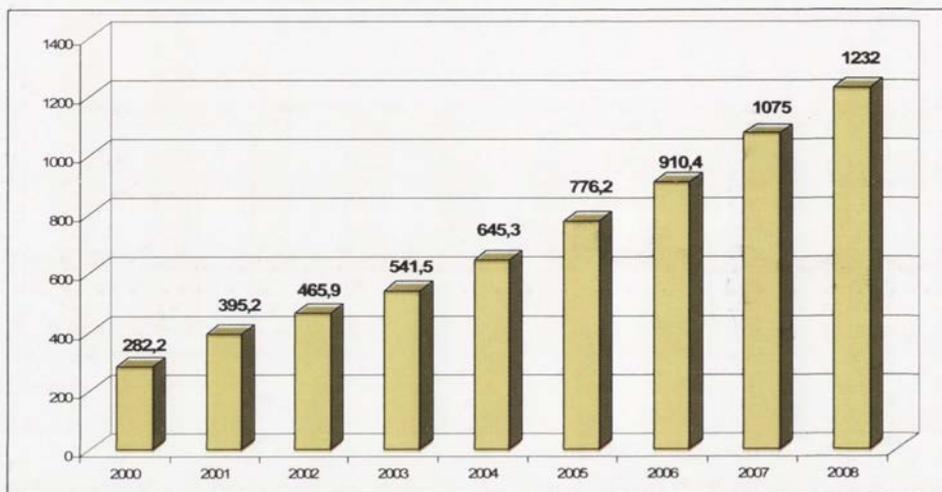
The number of bankcards in use grew 3 times between 2000 and 2008. The average yearly growth within the period was of about 14%. According to the attached graph, the growth did not take place in 2003, which results from the errors in reports from banks obliged to send data to the Payment System Department at the end of 2003⁵, as the NBP states. Thus, it can be presumed that on the turn of 2002 and 2003 there was a growth in the number of bankcards and the rising trend from 2002 was maintained – despite the situation shown in fig. 1.

⁴ *Rynek kart płatniczych*, NBP, Warszawa, 2003, pp. 7-9, www.nbp.pl/system_platniczy/karty_platnicze/karty_platnicze_w_Polsce.

⁵ www.nbp.pl/system_platniczy/karty_platnicze/dane_statystyczne.

Another important issue, as far as the bankcard market is concerned, is the number and value of transactions made with them. The transactions belong to the so-called e-business system. Therefore, they are transactions associated with commercial use of individual and institutional businesses basing on digital processing and emission of data⁶. Taking into consideration the situation on the Polish market of bank cards it can be easily stated that Poles are being persuaded more and more to use the „plastic” money; cash will soon go to history. Banks constantly promote non-cash payments and in majority of their promoting campaigns, they remind their customers about possibility to pay with a bankcard instead of cash. It is reflected not only in the above described dynamic growth of the number of bank cards in use, but also in the accompanying proportional growth of number and value of transactions made with them⁷.

Fig. 2. Number of transactions (in millions) made with bankcards between 2000 and 2008.

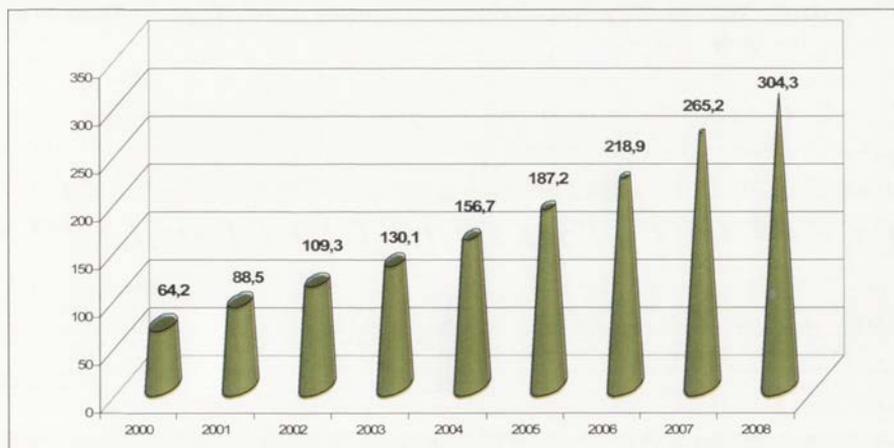


Source: Own study based on information from the NBP.

⁶ W. Chmielarz, *Systemy biznesu elektronicznego*, Difin, Warszawa 2007, pp. 16-17.

⁷ <http://www.gospodarkaslaska.pl/?ac=artykulKat&id=1467>.

Fig. 3. Value of transactions (in millions of zlotys) made with bankcards between 2000 and 2008.



Source: Own study based on information from the NBP.

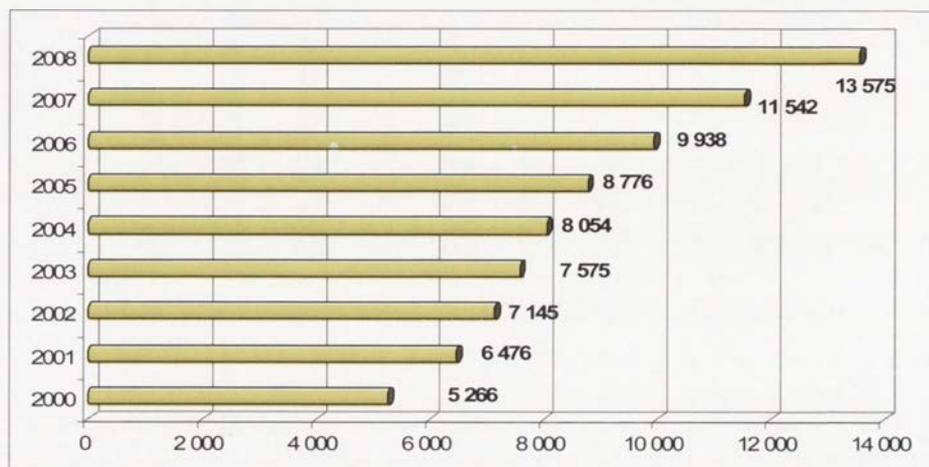
The above graphs show the constant development of the Polish market of bank cards, which seems to progress in the future. The extended development of such bank services is closely associated with such concepts as terminal banking and the network of bankcard acceptants. Terminal banking enables access to the bank account and making transactions with electronic devices, such as cash dispensers and card accepting terminals. Cash dispensers are self-service electronic devices equipped with a magnetic strip reader or a microprocessor. They are mainly used to take out money with the help of a bankcard (CD-Cash Dispenser). However, they enable making other transactions, such as paying money into accounts in any bank, transfer of money to another account, activation, and deactivation of standing orders, checking the account balance or charging mobile cards (ATM-Automated Teller Machine)⁸. First cash dispensers appeared in Poland in 1990, that is twenty years after their world premiere. Their number started to grow slowly in the following years. In addition, their functionality and accessibility grew, as particular banks made successive agreements to enable bankcards issued by a particular bank to be used in dispensers belonging to other banks. Dispenser technology has developed to such extent that most people cannot imagine living without them⁹. Nowadays, dispensers are complicated; they are more and more multifunctional machines with both active and

⁸ B. Świecka, *Detaliczna bankowość elektroniczna*, CeDeWu Sp. z o.o., Warszawa 2007, pp. 61-62.

⁹ A. Szafranski, *Pieniądze ze ściany*, Gazeta Bankowa, No. 34, 22-28 August 2005, pp. 8-9.

passive functions. Dispensers belonging to biggest banks are used by a huge number of customers that is why the machines in such banks are only used to take out cash. According to bank data, the number of cash dispensers in Poland is growing systematically.

Fig. 4. Number of cash dispensers opened in Poland between 2000 and 2008.



Source: Own study based on information from the NBP.

The above graph shows clearly the situation in the network development of cash dispensers. The development of bankcard technology, the growth of their number in circulation, and the amount and value of transactions made with them undoubtedly caused a dynamic expansion of the dispenser network. Thus, the number of cash dispensers almost tripled between 2000 and 2008; the average yearly growth was about 12%.

Banks, supervising cash dispensers, have at disposal the data concerning the number and value of transactions made with cash dispensers. There are the following transactions among those made with dispensers:

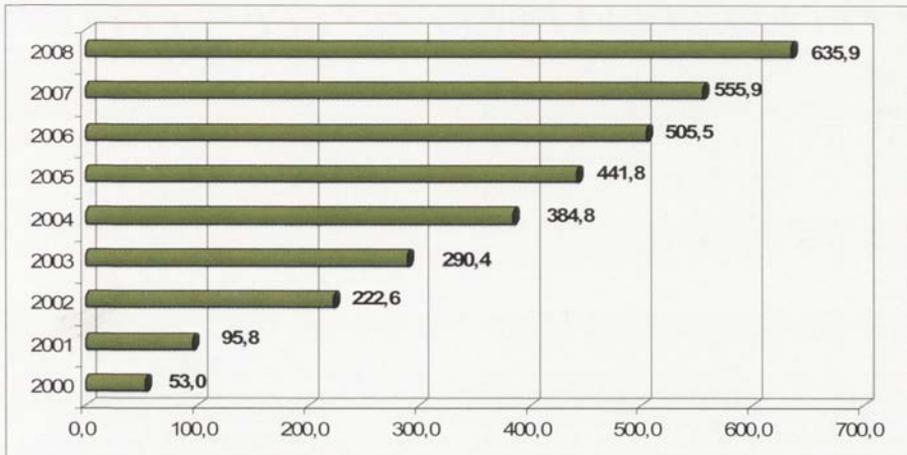
- paying out of money
- cash deposits
- money transfer and purchase of goods¹⁰.

The data describing cash turnover made in dispensers concern all transactions made by card owners whose cards are issued by Polish issuers, but also foreigners staying in our country. Thus, it should be taken into account that the number and value of paying out transactions made in cash dispensers vary from

¹⁰ NBP, Departament Systemu Płatniczego, *Informacja o kartach płatniczych IV kwartał 2006 r.*, March 2007.

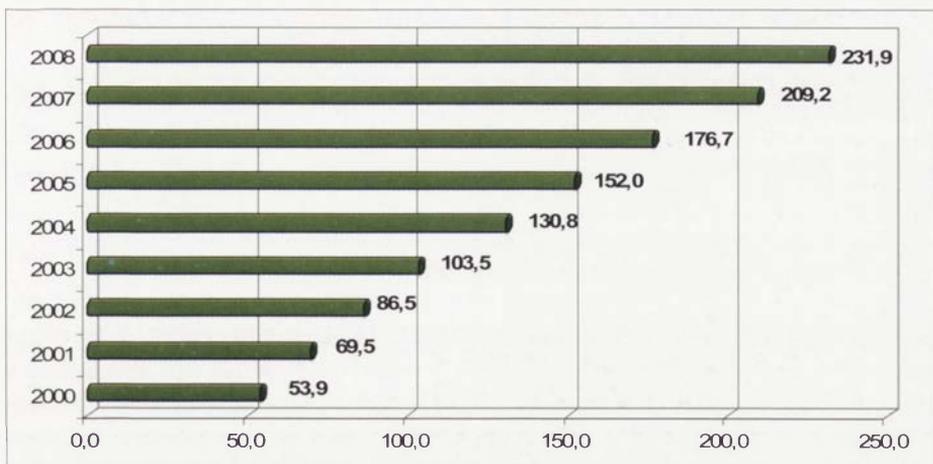
the number and value of cash transactions made with bankcards issued by Polish banks, which also cover transactions made with Polish cards abroad. Nevertheless, at the end of 2008, 635.9 million cash taking-out transactions from dispensers of the total amount of 231.9 billion PLN were registered. The graphs below show the situation throughout the examined period.

Fig. 5. Number of cash taking-out transactions (in millions) from dispensers between 2000 and 2006.



Source: Own study based on information from the NBP.

Fig. 6. Value of made cash taking-out transactions (in billions of zlotys) from dispensers between 2000 and 2008.



Source: Own study based on information from the NBP.

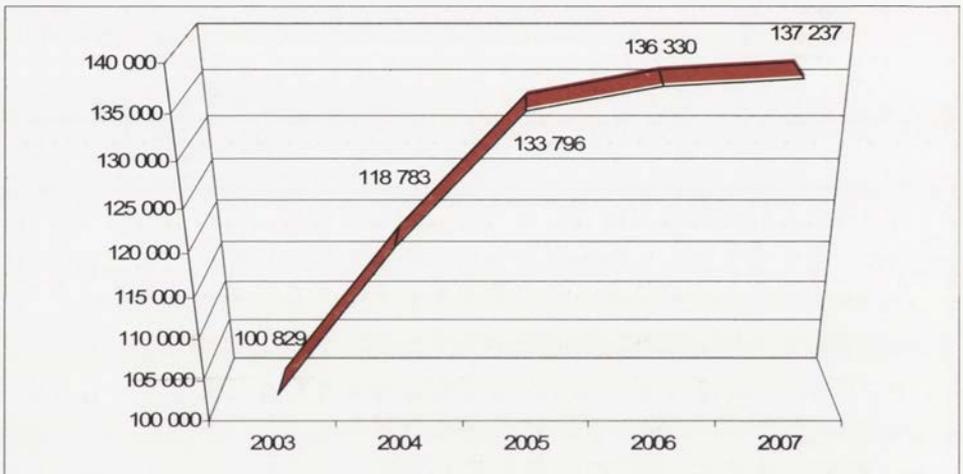
According to the above presented graph, in 2008 there could be noted the following phenomena in comparison to the previous year:

- growth of cash out-payments by approx. 4.1%, i.e. from 555.9 to 635.9 mln transactions,
- growth of value in money out-payments by approx. 10.9%, i.e. from 209.2 to 231.9 bn PLN.

It is worth noticing, that both the number and the value of paying out transactions tend to grow, which is surely justified due to the above-described figures, stimulating, and conditioning the very growth of the Polish dispenser network.

The last but not the least important element contained in the Polish bankcards system is acceptants. They are entities who have made earlier agreements with accounting agents on accepting payments via bankcards. The acceptant network develops by establishment of new sale points, which introduce devices accepting bankcards. The number of points accepting bankcard payments has been as follows in the recent years.

Fig. 7. Number of sale points accepting payments with bankcards between 2003 and 2007.



Source: Own study based on information from the NBP.

The development of sale points accepting bankcard payments as well as other elements constituting the bankcard system has rocketed for the last few years. To allow proper expansion of the Polish market, and the above-mentioned economic growth, customers should quit cash transactions and turn to non-cash payments in its real sense. Financial institutions are to play an important role here not only in offering new products but also in persuading their

clients and future clients to use bank services in a more wilful way. The institutions should undertake particular actions to enlarge the number of dispensers, to promote POS terminals in shopping malls situated in villages and suburbs and to open new bank branches there. It is worth noticing, that according to the research done by specialists from Pentor Research International, the increasing trend in bankcard issuing and development of the e-transaction system will persist in the future years, as there is still a lot to do in making non-cash payment more popular so as to meet European standards. One should hope that Poland will gain the satisfying level of growth and economic development thanks to non-cash payments, which is the most desired situation in the era of the global crisis.

Literature

Borcuch A., *Pieniądz elektroniczny, pieniądz przyszłości – analiza ekonomiczno-prawna*, CeDeWu Sp. z o.o., Warszawa 2007.

Chmielarz W., *Systemy biznesu elektronicznego*, Difin, Warszawa 2007.

Szafrański A., *Pieniądze ze ściany*, Gazeta Bankowa, No. 34.

Świecka B., *Detaliczna bankowość elektroniczna*, CeDeWu Sp. z o.o., Warszawa 2007.

NBP, Departament Systemu Płatniczego, *Ocena funkcjonowania polskiego systemu płatniczego na koniec 2006 roku*, March 2007.

VISA, *The Virtuous Circle: Electronic Payments and Economic Growth*, June 2003.

www.nbp.pl

www.gospodarkaslaska.pl

Streszczenie

KARTY PŁATNICZE JAKO CZYNNIK STYMULUJĄCY WZROST GOSPODARCZY

Jeszcze kilka lat temu rynek kart płatniczych w Polsce był bardzo słabo rozwinięty. Wraz z upływem czasu, co raz więcej banków zaczęło wprowadzać do swej oferty karty płatnicze i rewolucja kartowa zaczęła obejmować swym zasięgiem wszystkie aspekty naszego codziennego życia. Niniejszy artykuł dowodzi, iż rynek kart płatniczych w Polsce znajduje się w fazie ekspansywnego rozwoju, co potwierdzają liczne statystyki obrazujące skalę rozkwitu poszczególnych elementów go tworzących. Jak wynika z prognoz przeprowadzonych przez organizację MasterCard oraz Instytut Badań nad Gospo-

darką Rynkową, Polacy w 2010 roku będą sięgać po kartę płatniczą dwukrotnie częściej niż obecnie. Wiadomym jest także, że transakcje bezgotówkowe mają wpływ na przyrost PKB danego kraju. Dlatego w dobie globalnego kryzysu oraz faktu, iż Polska jest jedynym krajem w Europie z nieujemnym wzrostem gospodarczym, należy mieć nadzieję iż ten niewielki kawałek plastiku będzie miał wpływ na zahamowanie wszechobecnej zapaści gospodarczej, co będzie zjawiskiem jak najbardziej pożądanym.

CHANGES OF INDUSTRY IN THE COUNTRIES OF CENTRAL AND EASTERN EUROPE UNDER CONDITIONS OF ECONOMIC TRANSFORMATION AND EUROPEAN INTEGRATION

Tomasz RACHWAŁ

Department of Entrepreneurship and Spatial Management
Institute of Geography
Pedagogical University of Cracow

In the contemporary changes of world economy related to the transition from the industrial, through the post-industrial, to the information phase of civilisation development, the processes of adaptation of various economic structures to the changing conditions of economic development, mainly connected with the ever stronger globalisation and integration processes are becoming an important research problem. Their outcome is rebuilding the sector structure of economy, in which the industrial activity, being the fundamental economic basis of the industrial phase, is superseded by service activity, in particular, activity related to science and education. A consequence of this process is the change of the hitherto space and sector structures of industry, and its function in the economic development of spatial systems of different scale, from local systems, through national, to international ones. In this situation, the changing conditions of doing business are leading to increased differentiation in the level of development of particular countries and regional systems, including also Central Eastern Europe (CEE). A significant role in this respect, which is emphasized by many authors (among others Domański 1997; Rachwał 2008; Rydz, Szymańska 2006; Strykiewicz 1999; Tobolska 2004, 2006; Ziolo 2001, 2008), is played by large industrial enterprises fulfilling various functions in economic space, among which, new spatial-production relationships are formed in the economic transformation process. Furthermore, in most highly developed economic regions, industrial activity is reducing its labour activation function, which is a consequence of the increasing mechanisation and automation of production. From this point of view, questions about the role which industry is going to play in the new phase of civilisation development and multiplication effects it will be generating in the economic development (cf. Domański, Gwosdz,

ed., 2005; Rachwał, Wiedermann 2008; Wiedermann 2007, 2008), seem to be crucial.

CEE industry transformation process is conditioned by various international and national factors (Table 1).

Table 1. Conditions of industry transformations in CEE countries.

| Resulting from the international circumstances | Resulting from the national circumstances |
|---|---|
| <ul style="list-style-type: none"> - Capital concentration and corporation integration processes, - State and region integration processes, including the European integration, - Increasing significance of international corporations, - Increasing competition of the global market, - De-location and re-location processes, - Fast technological progress, particularly in the field of information technology, - Increasing role of knowledge in economy, leading to increasing significance of advanced R&D activities and innovation, - Outsourcing and spin-off processes in industry; - Reduction of product life cycle; - Gradual transition from „economies of scale” to „economies of variety”, - Changes of the consumption model and life style of the members of the „information society”, - Deepening of the world economic crisis. | <ul style="list-style-type: none"> - Introduction of legal and administrative regulations connected with the economic transformation and harmonisation of the business law related to integration with the EU, - New pro-ecological requirements from industry and the necessity to meet more stringent environmental norms; - The rate, the scope, and the ways (legal conditions) of privatisation of state enterprises, - Conditions resulting from internal structure of industrial enterprises and being a consequence of the nature of their relationships with the surroundings at the threshold of economic transformation - Opening of the market of CEE countries, including the capital market, to the influx of foreign firms, goods, and capital, - Scope and instruments of influence on economic policy, particularly industrial policy (including functioning of special economic zones, and programmes of restructuring specific branches), - Creating and implementing strategies of restructuring specific branches of industry, - State policy with regard to education, science, and innovation, particularly, with reference to exchange of academic research achievements. |

Source: own analysis based on Rachwał 2008.

Among those conditions, the main role is played by the impulses arising from the international surroundings related to the process of increasing globalisation of economic activity and the European integration, which is manifested, among other things, in the growing significance of direct foreign investments. In the case of CEE countries, national conditions are also very important, resulting from changes of the system of doing business, and the implemented economic policy of the state, demonstrated among other things, in the formulation of legal instruments, the industrial policy, including the privatisation process and creation and implementation of the strategy of restructuring particular branches of industry. Special attention has to be paid, in this respect, to the different strategies of introducing market economy rules that are adopted by the individual states at the social and economic transformation phase in Europe, which is emphasized by many authors (among others Albin, Kupczak, 2004; Bożyk 1999; Balcerowicz 1997; Jasiński 2001; Karpiński 2008; Kołodko 1999; Kornai 1997; Koźmiński 1998; Rosati 1998; Wojtyna 1994; van Zon 1996). At the threshold of the transformation process, serious dilemmas appeared whether to prefer the so-called „shock therapy” (applied in Poland by Leszek Balcerowicz), or evolutionary measures (Łukawer 1994a, 1994b; Ziło 1996a). This problem is broadly discussed in the subject literature. According to Koźmiński (1998), after the first years of economic transformation in CEE countries, it can be stated that to a different degree and in different scope, in different industries and countries, and in different periods, both those scenarios have been implemented and both those „recipes” could be considered justifiable. Differentiation of the policy realised with regard to different industries, or application of „tougher” or „more protective” rules of the game alternatively towards enterprises, turned out markedly beneficial. According to the author, such sequence was not so much a result of realisation of a well thought out programme, but of normal political fluctuation of the democratic system. Thus, the strategies of implementation of market principles were judged differently by the economists, and their opinions on the subject have been analysed by Łukawer (1994a, 1994b). The author comments that due to the fact that many indicators of the economic life were situated at low levels after the implementation of the programme of changes, even the advocates of the applied method of „shock therapy” pointed out the necessity to modify it and elaborate on it in consistence with the principal direction of the changes. The critics underlined some advantages of the implemented programme (such as stifling the hyperinflation, making the structure of prices realistic, introducing convertibility of money, holding the exchange rate of the currency, and approaching, on many markets, the balance of supply and demand), but they fiercely criticised it for the too deep recession, the fall of the real income of the society, and for the lack of positive structural changes. Therefore, even 20 years after the beginning of the transformation, it is difficult to unequivocally judge the implemented programmes of

economic changes, nevertheless, the influence of the realised economic policy on the speed and scope of the changes in industry in the particular countries is very big.

It should be emphasized that the changes in industry of CEE countries are largely related to the processes of adaptation of the industrial enterprises, treated as the basic components of the spatial structure of industry, to the new rules of doing business in the integrating Europe. That requires from them carrying out profound changes in their functioning, especially changes in the technology of production, and formation of new efficient systems of spatial relationships, leading to the improvement of their competitiveness (Rachwał 2006a, 2007). These changes are a prerequisite for the participation of the industrial enterprises of CEE countries in the global economic processes, and integration of the industries of these countries with the world industry, especially by way of organisational, capital, and technological connections, and by conducting advanced research and development works, and by entering the shaped market networks of international corporations. It is particularly important in the years of economic recession, the first symptoms of which could be noticed already at the beginning of 2008. Although according to the data of GUS (the Main Statistical Office), in the whole of 2008, growth of industrial production (by ca. 3.5%) was noted in Poland and in some other European countries, the data from the specific months of the first half of 2009 show a strong production decline tendency connected with the significant limitation of demand for industrial goods on world markets, which means that only a small number of the strongest enterprises are going to be able to maintain the growth dynamics during the years of the worldwide economic crisis. Capacity to maintain competitiveness in such conditions, or even using the period of recession to expand (among other things, through relatively less costly mergers and acquisitions of weaker competitors, thanks to the significant reduction of the prices of shares on the world markets), to a large extent depends on the financial standing (cf. Kitowski 1999, 2004), and the ability of those enterprises to shape new, more effective spatial connections, which will influence further intensive changes of the industrial potential and the structure of industry of those countries.

Considering the presented assumptions, the objective of the research was established to analyse the changes of industry in CEE countries, with a particular emphasis on Poland, in the aspect of:

- Changes of employment in industry of CEE countries, against the industrial potential measured by the level of employment and the gross value added;
- Changes of the role of industry in the economy of CEE countries within EU considering its share in the structure of employment and the gross value added;
- Differentiation of the characteristics of the highly qualified human resources connected mainly with industrial production, employed at the R&D projects,

and of the expenditures for those projects as a factor in the competitive advantage of countries and regions, influencing the technological and product innovativeness of industry; in the current phase of civilisation development, this capital constitutes one of the major elements of competitiveness of the national and regional spatial systems (cf. Jasiński 2001, Misala 2001);

- Changes of the structure of export of the CEE countries as an expression of the structural changes in industry related to the transformation processes;
- Influx of foreign capital and its role in the changes of industry;
- Change of the dynamics of the industrial production of the CEE countries taking into consideration the current impulses arising from the international surroundings, connected with the economic crisis and the changes of the competitive position vis a vis attracting investments in the conditions of integrating Europe;
- Determination of the changes of these indices will allow indicating the places of accumulation of the new development advantages, which is significant from the perspective of the development of the CEE countries, and improvement of their competitiveness in the world and in Europe with regard to attracting industrial investments and acceleration of the social and economic development.

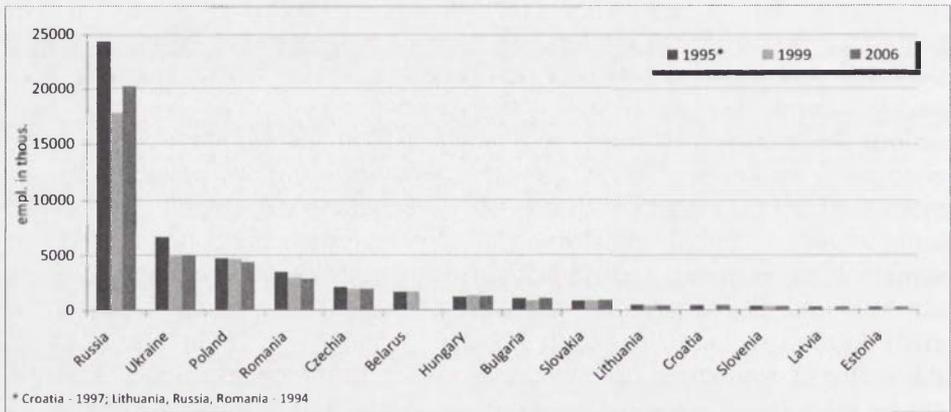
The analysis included 14 CEE countries (NUTS-0), and for the purpose of comparison, in the case of CEE countries belonging to the EU, also the division into regions NUTS-1, which are customarily called macro-regions in some countries, was also taken into consideration. The source of statistical data were the GUS year-books and the Eurostat database, however, some barriers in access to comparable data in some countries need to be stressed. The problem of serious difficulties with access to detailed data in specific time cross-sections concerning the development of industry was discussed more broadly in the previous work by the author (Rachwał 2008). The research utilized also the current information concerning the shaping of economic processes under the circumstances of the continuing world crisis. However, it needs to be emphasized that too little time has elapsed to make a complex evaluation of the impact of this crisis on the structural changes in industry, because, as it is universally known, this sector of economy is characterised by a certain structural „inertia” resulting, among other things, from the capital intensity and time consuming nature of the investment processes.

The results of the previous studies concerning the industry of EU regions (Rachwał, Wiedermann, Kilar 2008a, 2008b, 2009) were also taken into account, as well as the industry of Poland against the background of Central and Eastern Europe (i.a. Domański 2006), however, in this work, only the most important results of research have been presented.

Changes of the industrial potential

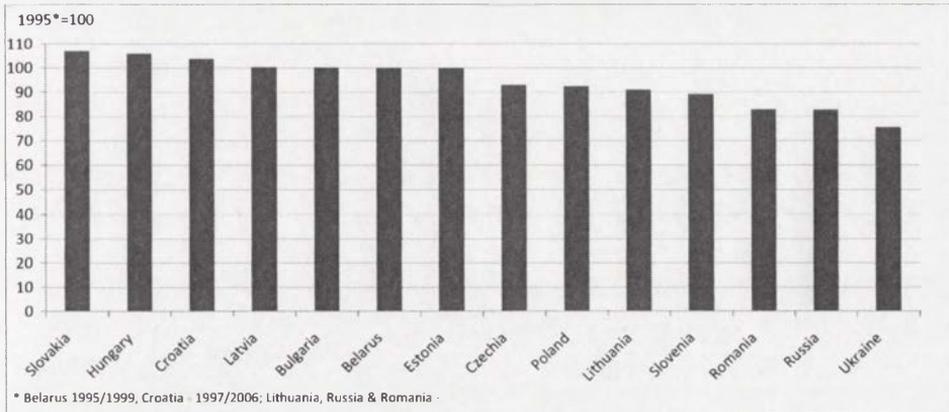
Analysis of the industrial potential of CEE countries in the light of the indicator of the employment in industry and construction (Figure 1) shows the highest potential in Russia, Ukraine, and Poland, which is obviously related to the large population potential of those countries. The industrial potential of the remaining countries is much lower. Analysis of the dynamics of employment in the industrial sector in the years 1995-2006 shows that in most CEE countries the number of the employed persons is falling – the dynamics index fluctuates from 75 in Ukraine, to 93 in Czechia, whereas in five countries (Slovakia, Hungary, Croatia, Latvia, Bulgaria) it grows (Figure 2). The deepest fall of employment occurs in the countries, which were the latest to enter the path of systemic transformation (the big countries which emerged after the former USSR and Romania), in which the phase of transformation shock lasted a little longer – until 1995, or even 1996, and not as in Poland – until 1992-1993. Additionally, a big role in the fall of the number of employed persons in the second half of the 1990s was played by the political factors, such as the military operations in the former Yugoslavia, or the process of breakup of the USSR.

Fig. 1. Employment in industry and construction in CEE countries in the years 1995-2006.



Source: own analysis based on GUS data.

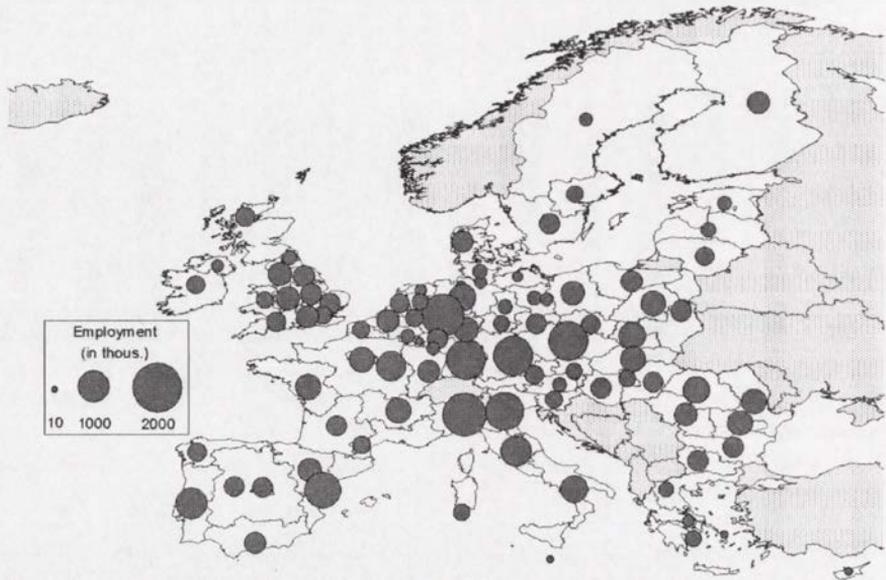
Fig. 2. Dynamics of employment in industry and construction in CEE countries in the years 1995-2006.



Source: own analysis based on GUS data.

It should be noted that the industrial potential measured by the number of employed persons in the regions of CEE countries belonging to the UE is relatively low, in spite of the fact that the more labour-intensive industries are located in our part of Europe because of the lower costs of labour (Figure 3). The earlier analysis of spatial differentiation of industrial potential in the particular regions of the EU (Kilar, Rachwał, Wiedermann 2008; Rachwał, Wiedermann, Kilar, 2008b, 2009), presented by means of a synthetic indicator including two component empirical indices, i.e. the number of employees and the gross value added, showed even greater disproportion between the industrial potential of the CEE regions and the regions of the so-called „old” EU-15. It should be emphasized that the situation did not change much during the analysed decade of 1996-2005.

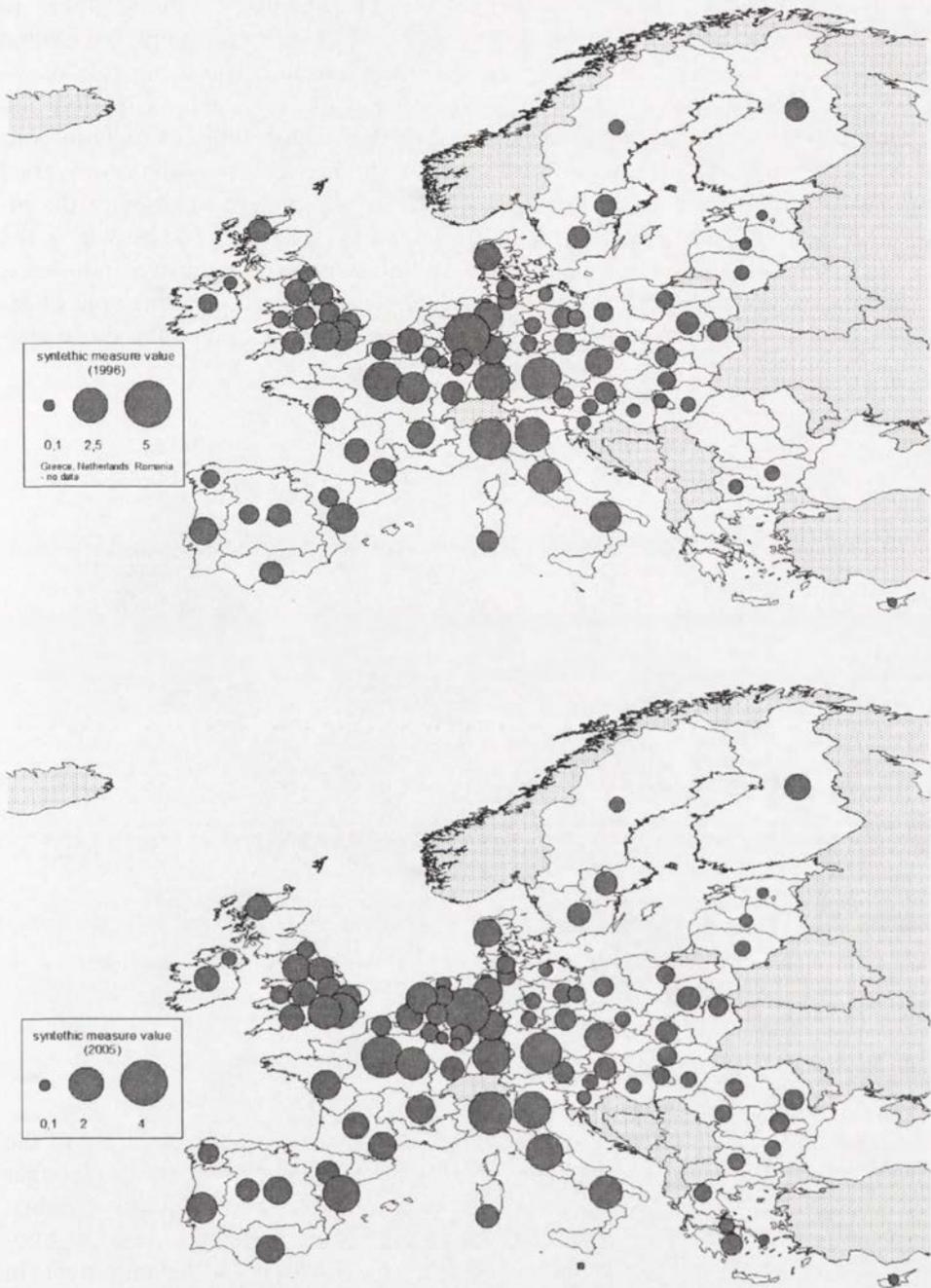
Fig. 3. The employed in the industry of the regions of EU in 2005.



Source: own analysis based on the data used in the study by Rachwał, Wiedermann, Kilar 2009.

The large areas of high industrial potential both in 1996 and 2005 included big regions characterised also by the highest level of economic development. They include southern and western regions of Germany, northern and central France, northern regions of Italy, and also some regions of the United Kingdom, Portugal, Catalonia, and the Czech Republic (Fig. 4 a, b). This potential refers to the central axis of strong social and economic development of Europe formed in the second half of the 20th century. It needs to be stressed here, however, that the potential of the Central and Eastern Europe regions, despite the quite high employment in industry, is relatively low (the Czech Republic is an exception here). The small changes demonstrate the stability of the formed industrial structures, which even during the period of fast changes occurring in the last dozen or so years, show little tendency to differentiate the spatial industrial potential.

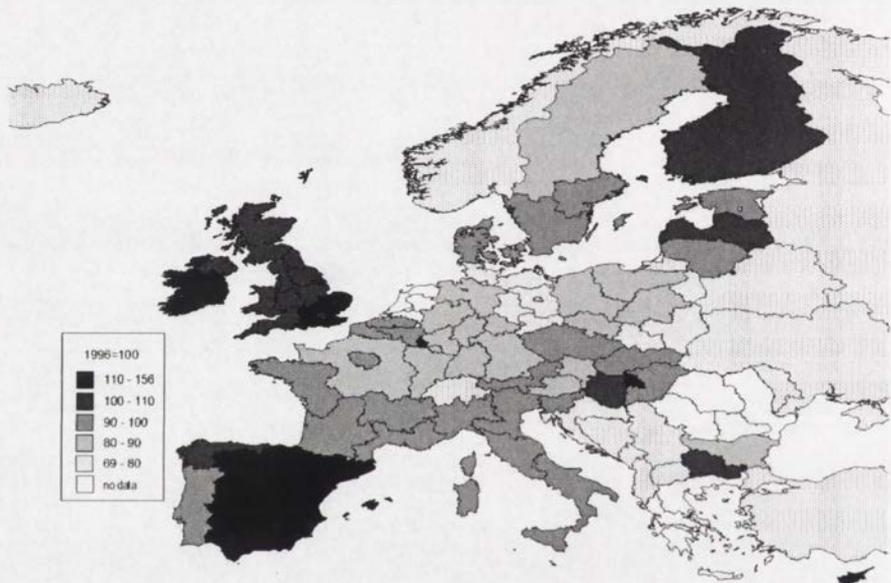
Fig. 4. Industrial potential of EU regions in 1996 (a) and 2005 (b).



Source: Rachwał, Wiedermann, Kilar 2009.

Analysing the dynamics of this phenomenon (Fig. 5) it should be stated that the industrial potential is growing in many regions of Europe, among others, in Ireland, Finland, Spain, Portugal, some regions of France, Germany, the United Kingdom and Hungary. Most regions with long tradition and a big role of industry, and regions of dynamically developing countries, such as Ireland and Spain, continue to strengthen the potential of this sector, which stands in contradiction to the hypothesis put by numerous studies with regards to universal processes of deindustrialisation of Europe. Thus, the transformations of the industrial potential are rather confirming reindustrialisation processes, where the labour-intensive industry is superseded by the know-how-intensive industries, characterised by a higher value added, which offsets the diminishing role of industry in the direct activation of human resources. This is a more and more visible feature of the industry of the so-called new economy.

Fig. 5. Dynamics of industrial potential of EU regions in 1996-2005.



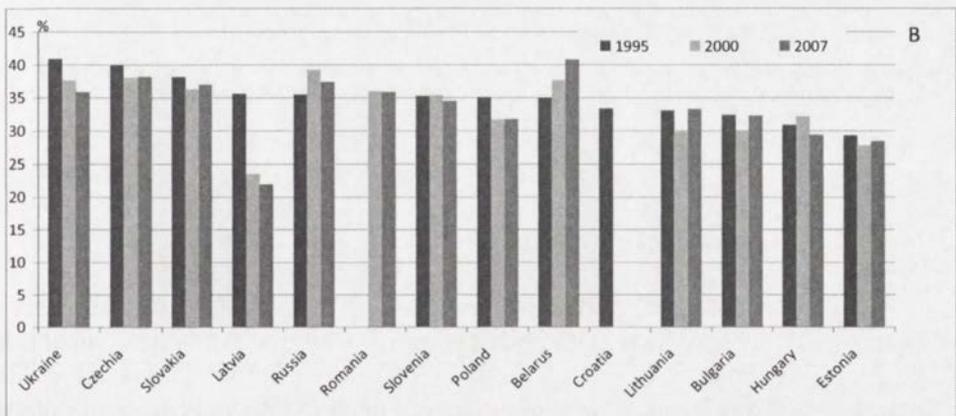
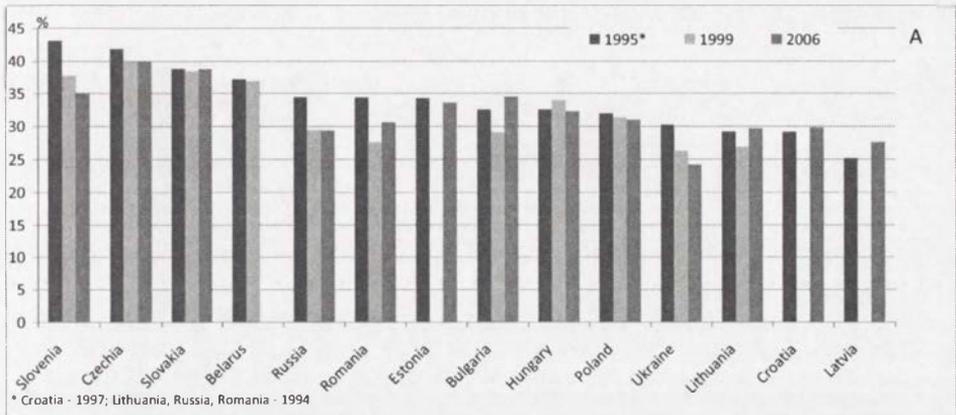
Source: Rachwał, Wiedermann, Kilar 2009.

It needs to be noted in passing that the potential analysis in the light of the synthetic indicator has the advantage of its being influenced by both the number of the employed, which is significant in the case of the labour-intensive industries; and by the gross value added, which represents better the more technologically advanced industries that spend more on research and development. In the situation in which industry ceases to play the leading role in activating labour resources, relying on only one universally used indicator of employment

seems purposeless, because such an approach would highlight regions in which the labour-intensive industry dominates. In this kind of approach, the significance of the more modern industries, with highly mechanised and automated production and characterised by high added value which is typical of the most developed UE regions, would be diminished (Rachwał, Wiedermann, Kilar 2008a).

Change of the significance of industry in the economy of the analysed countries is demonstrated by the share of this sector in the structure of employment and the gross value added (Fig. 6). Generally, this share is falling, though not in all the countries, which in the case of the indicator of employment – as was mentioned above – is related to the mechanisation of production and elimination of live labour in industry. It is still high in the Czech Republic and Slovakia, where it is close to 40%.

Fig. 6. Share of industry and construction in the structure of the employed (A) and the gross value added (B) in CEE countries in 1995-2006 (2007).



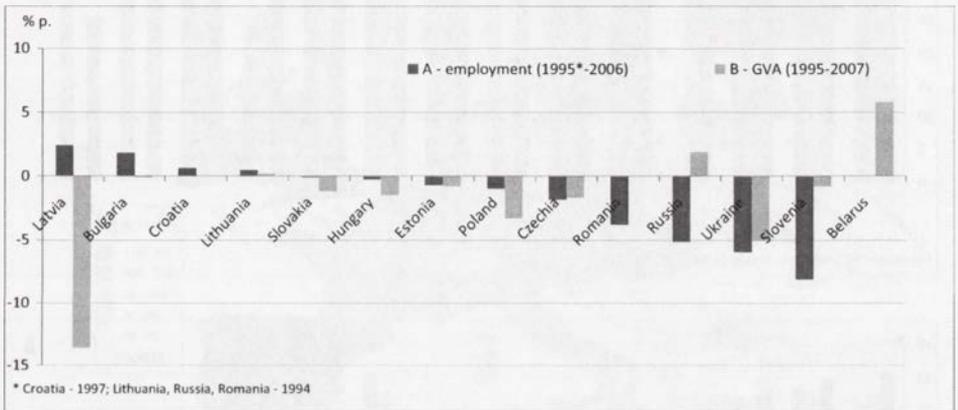
Source: own analysis based on GUS data.

The situation looks similar with the share of industry in the gross value added, though here generally the indicators are higher, and in 2006, they oscillate from 22% in Latvia to 41% in Belarus.

On the basis of earlier research (Rachwał, Wiedermann, Kilar 2008b, 2009), it should be noted that the share of employees in industry in CEE is one of the highest in comparison to other regions of EU, both in 1996 and in 2005. In the case of gross value added, differences between the eastern and the western regions of EU are much smaller.

The calculated differences of share of industry in the structure of employment and gross value added in the analysed time periods show that although this share is falling in most of the countries (even by 10-12 percentage points), in many countries it is changing only slightly or even growing (Fig. 7). It is consistent with the trend of changes which can be observed in whole Europe. However, it should be emphasized that despite the common opinions, the increase of the share of industry in employment and GVA is not such a rare phenomenon in the regions of EU as might be expected.

Fig. 7. Change of share of industry and construction in the structure of the employed (A) and gross value added (B) in CEE countries in 1995-2006 (2007).



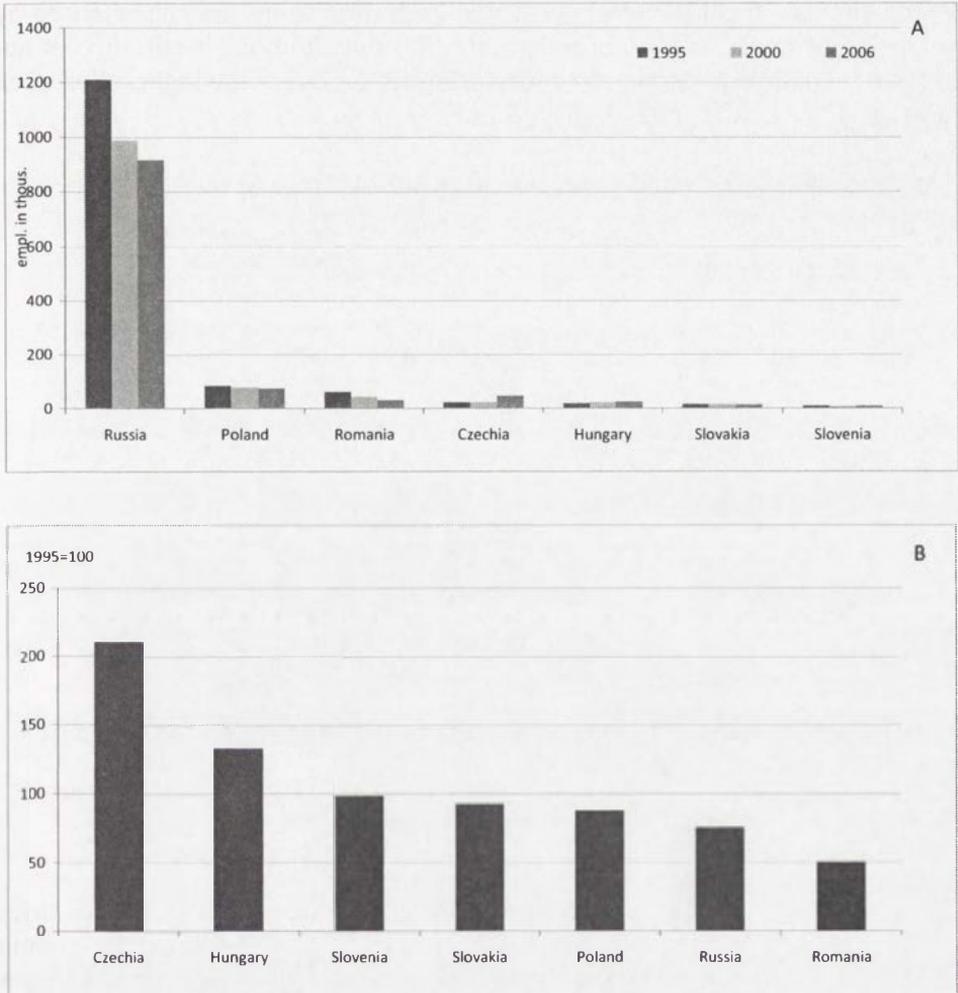
Source: own analysis based on GUS data.

Research and development (R&D) potential of CEE countries

Analysing the data concerning the potential of employment at R&D activities, it should be noted that, in quantitative terms, from the available comparable data for seven states, it is Russia which dominates before Poland (Fig. 8). Analysis of the dynamics, however, points to unfavourable tendencies in Poland and Russia, manifesting themselves in the fall of the number of employees in

the R&D sector. In this context, the high dynamics in the Czech Republic and Hungary deserves a particular attention.

Fig. 8. Potential (A) and dynamics (B) of employment at R&D activities in CEE countries in 1995-2006.

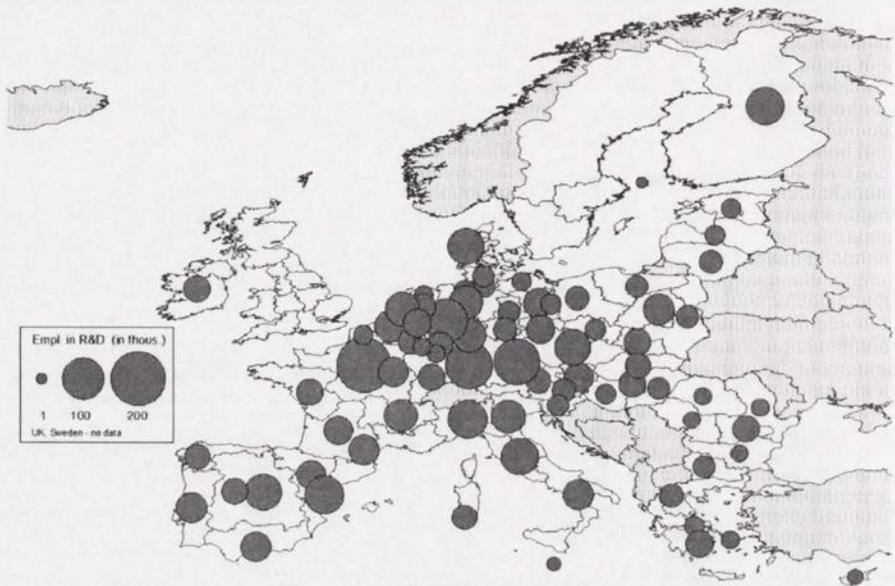


Source: own analysis based on GUS data.

Against the background of the remaining European Union countries, however, this potential is not significant (Fig. 9). A characteristic feature of the spatial distribution of employment at R&D in the European Union is that the regions with the traditionally high role of industry formed in the past maintain the leading positions with respect to the magnitude of the potential of employment

in the R&D sector. Development of industry is both the factor and the result of technological progress, which requires a great share of R&D work, particularly in the case of production with a high value added. Those activities are not only related to the development of industry products but also to modernisation and automation of production processes. Apart from the highly industrialised regions, the regions of the most developed central functions are characterised by a high value of this indicator. In that case, it results from the localisation of numerous and large academic and educational institutions in the biggest European cities.

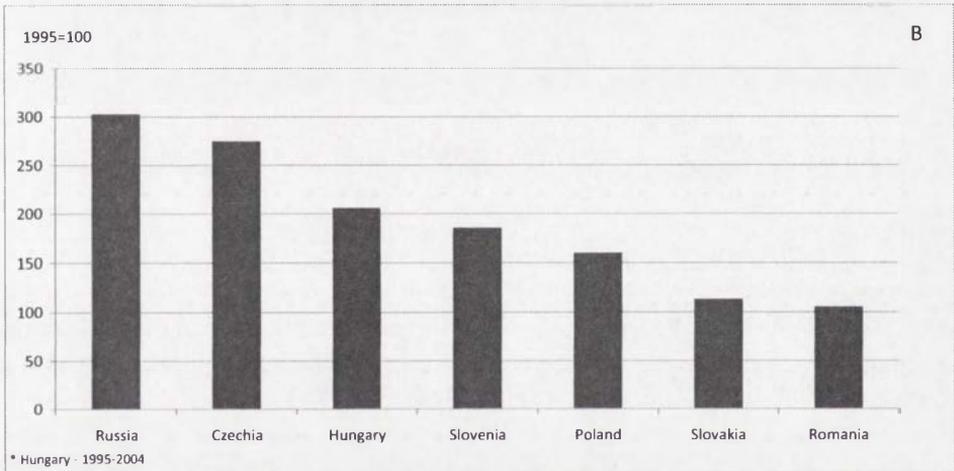
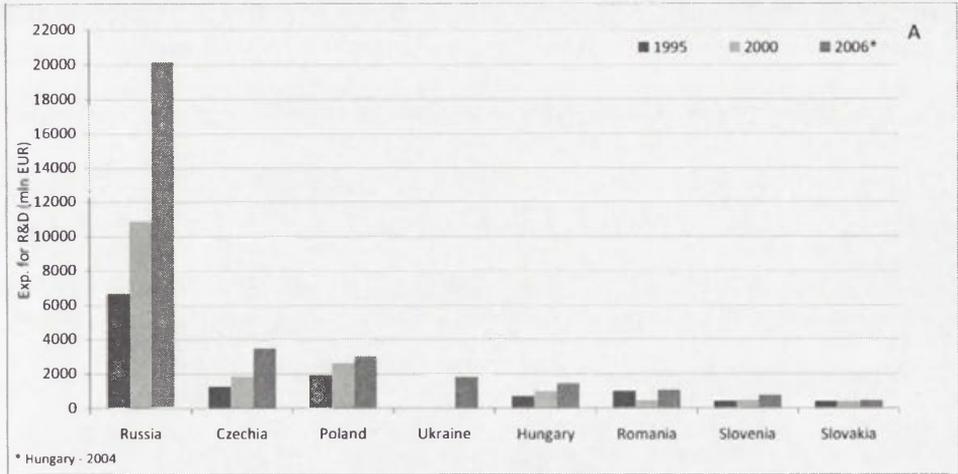
Fig. 9. Employment potential in R&D activities in the EU regions in 2005.



Source: Rachwał, Wiedermann, Kilar 2009.

The situation of Poland is equally unfavourable against other CEE countries with regard to expenditure on R&D activities (Fig. 10). Considering the amount of outlays, Czechia is second to Russia, but ahead of Poland that is much bigger with respect to population and economy. Expenditures of the remaining analysed states are very little, which is the outcome of the dynamic increase of expenditures in the years 1995-2006 in Russia and Czechia. In Poland, the index of dynamics of changes in the analysed years is merely 160%, which taking into account inflation means *de facto* stagnation of expenditures. Equally unfavourable changes that signify actual decrease of expenditures on R&D activities occurred in Slovakia and Romania.

Fig. 10. Expenditures (A) and dynamics of outlays (B) on R&D activities in CEE in 1995-2006.

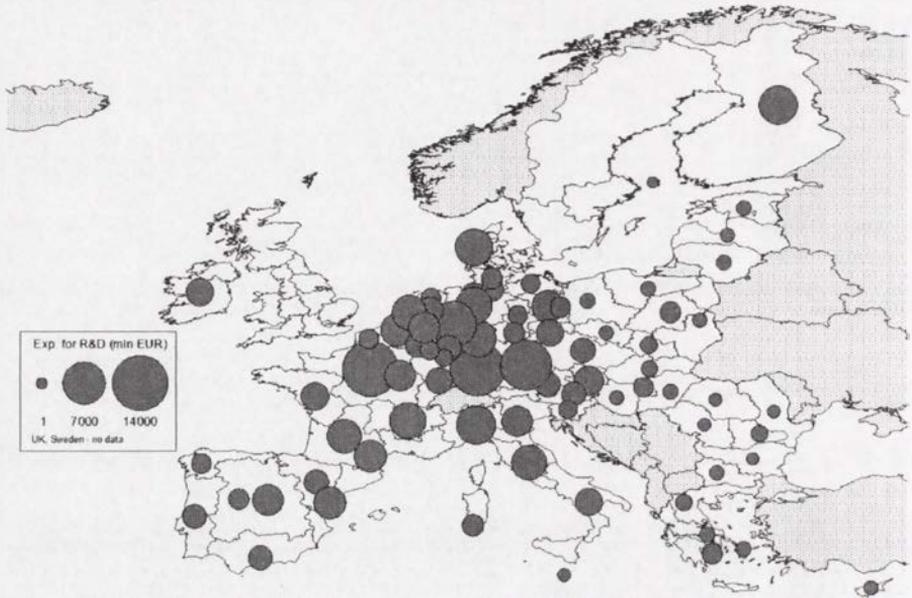


Source: own analysis based on GUS data.

Comparing the outlays for research and development activity in some regions of CEE to the remaining EU regions, an even greater contrast can be noticed than in the case of differences of employment in R&D activities (Fig. 11). It shows that more money is allocated to research by firms and institutions located on the territory of the most developed economically part of the EU. Central area of the Union is characterised by the greatest density of research and development centres and headquarters of international concerns and their expenditures on research and development products are included in those regions.

Very high expenditures there should also be noted: in the case of Ile-de-France, or the regions of southern Germany, they reach 15 billion euro, which significantly exceeds the sums of expenditures for those activities in entire countries located on the peripheries of the EU, including also CEE countries.

Fig. 11. Expenditures for R&D activities in EU regions in 2005.



Source: Rachwał, Wiedermann, Kilar 2009.

The comparison of entire Poland is unfavourable not only to other countries such as Ireland or Finland that are considered states of low potential, but also to single international corporations (Table 2).

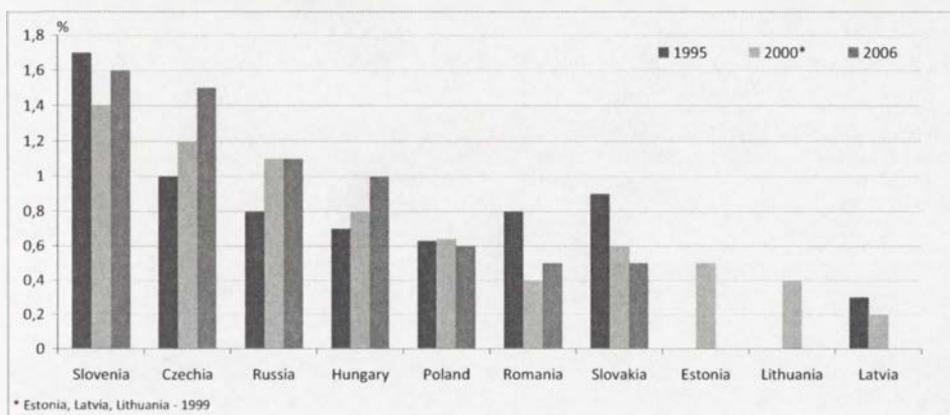
Table 2. Expenditures for R&D activities in selected countries and international corporations.

| State (2006, billion USD) | Corporation (2005, billion EUR) |
|---------------------------|---------------------------------|
| Poland – 3,0 | Pfizer (USA) – 5,8 |
| Ireland – 2,3 | Ford Motor (USA) – 5,5 |
| Finland – 5,9 | DaimlerChrysler (Germany) – 5,2 |
| Spain – 15,5 | GlaxoSmithKline (UK) – 5,1 |
| USA – 343,7 | Siemens (5,0) – 5,0 |

Source: own analysis based on GUS data.

Unfortunately, despite the slight nominal increase of expenditures on R&D activities in Poland, the share of expenditures for those activities in GDP is decreasing, whereas in the other countries in the region, particularly in Czechia and Hungary, a dynamic increase is observed (Fig. 12).

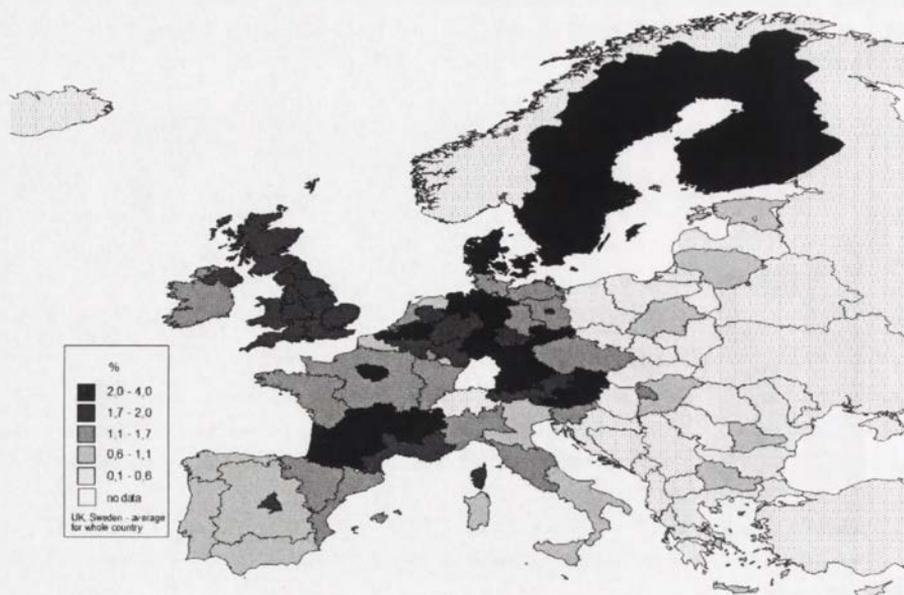
Fig. 12. Share of expenditures for R&D activities in the GDP in CEE countries in 1995-2006.



Source: own analysis based on GUS data.

In comparison with UE-15 regions, there is a noticeable gap (Fig. 13). Differentiation of the share of expenditures for R&D activities in GDP shows a clear discrepancy between countries of „old” and „new” Europe. The difference between extreme values is over ten times. The lowest shares of expenditures occur primarily in the regions where there is very little modern industry accompanied by the direct backup of R&D units. The analysis of the structure of expenditures on research and development in GDP demonstrates that the expenditures allocated to industrial enterprises are of the greatest significance. The little relocation of R&D departments within international concerns so far cause that the differences in outlays are still going to show discrepancies in the space of EU for a long time. It means that without a considerable increase of outlays from the public moneys dynamic changes in that respect in CEE countries should not be expected.

Fig. 13. Share of expenditures for R&D in GDP in the EU regions in 2005.



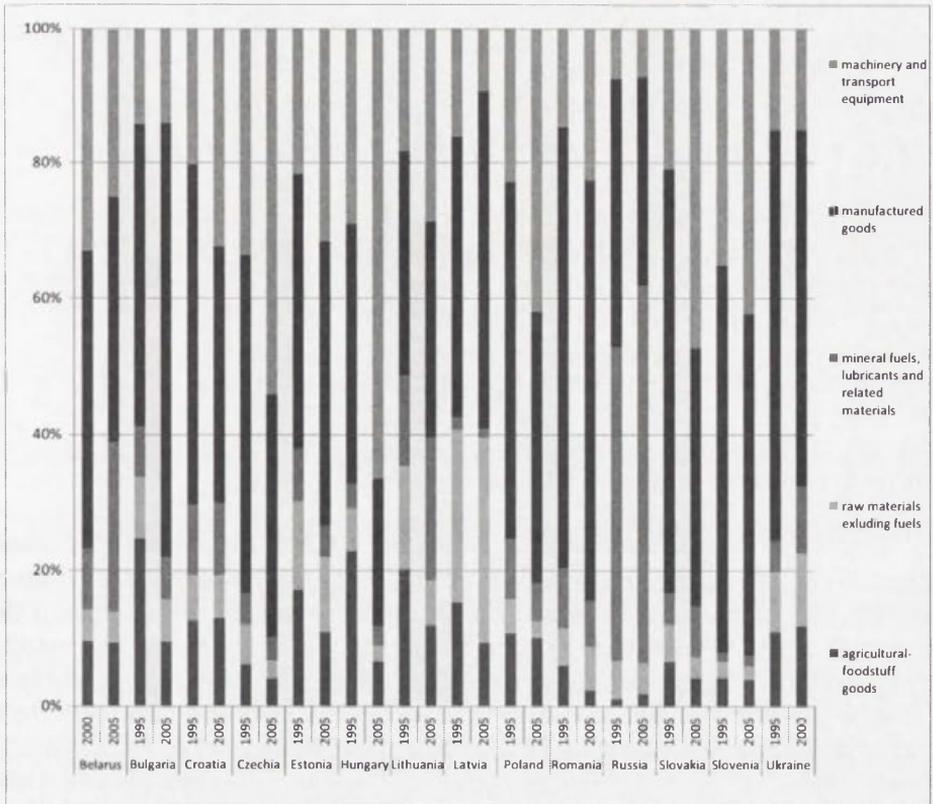
Source: Rachwał, Wiedermann, Kilar 2009.

Changes in the structure of export

The changes in the structure of export of the CEE countries (Fig. 14) are the expression of beneficial tendencies in the transformation of industry of those countries, particularly those that entered the EU. A dynamic increase of export to highly developed countries, and a noticeable increase of the share of more modern products, i.e. the group of machinery, equipment and transportation means and the remaining products of the processing industry are to be evaluated positively. Such changes are especially visible in Czechia and Hungary. That advantageous tendency in the structure of export has also been observed in the earlier research by Domański (2006); however, unfavourable changes in Russia and Belarus should be noted (increase of the share of fuels and natural resources in exports), although apparently, that situation was also influenced by the price increase of fuel in recent years (until the first symptoms of crisis in world economy). Taking advantage of prosperity on the world markets, those countries were increasing the output and export of natural resources, which considering their high sale prices had a great impact on their share in the structure of export. However, it may be expected that during the world economic crisis which is

related to the fall of prices of natural resources on the world markets this share will decrease again.

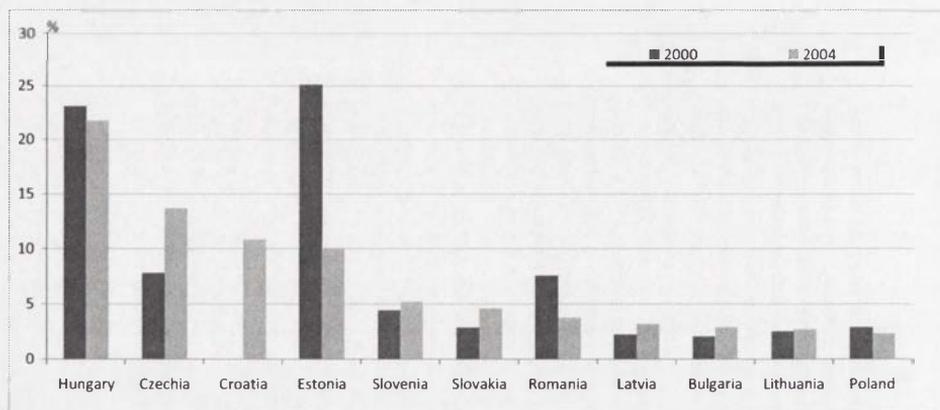
Fig. 14. Structure of export in CEE countries in 1995-2006.



Source: own analysis based on GUS data.

Unfortunately, most products included in the group of machinery and equipment and transportation means can be considered only medium advanced products (the so called „medium technology” according to OECD classification). More technologically advanced products of the so called „high technology” are more diversified in CEE countries, and Poland ranks last in the group of 11 countries for which the data were available (Fig. 15). High share in Hungary and considerable increase of the share in Czechia are to be noted.

Fig. 15. Share of high technology products in the exports of CEE countries in 2000 and 2004.



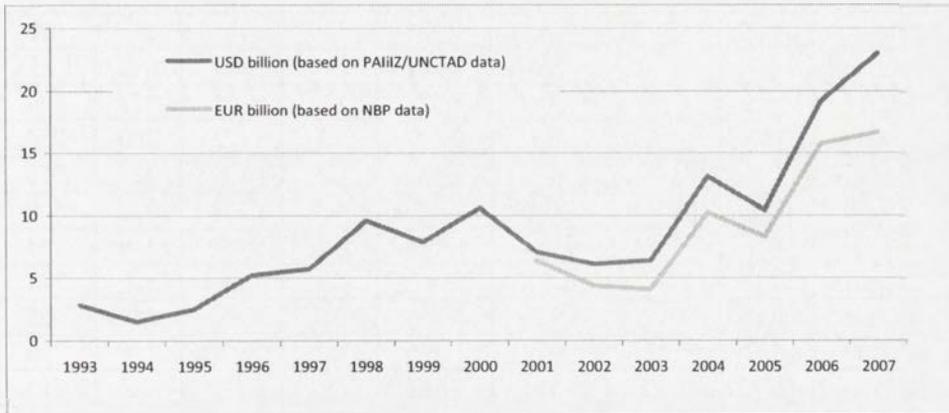
Source: own analysis based on GUS data.

Foreign investments in industry

The favourable changes of the structure of export of industry of CEE countries are possible thanks to the implemented changes in the technological process which enabled the production of more modern products. At the end of the period of centrally controlled economy, industrial enterprises in CEE countries had considerably worn out production assets, which did not make it possible to produce goods that would be competitive under the conditions of market economy. Introducing deep technological changes was possible only in the case of enterprises which had confirmed sources of financing modernisation of those assets. As it was shown by earlier research (among others Domański 2001, 2003, 2006; Rachwał 2006a, 2006b) a big role in that respect is played by foreign capital. Poland was the country which attracted absolutely the highest foreign capital among CEE countries in 1989-2001, however, when calculated per capita, greater investments took place in Czechia, Hungary, Slovenia, and Estonia (Domański 2006). In 2001-2003, decrease of the inflow of foreign investments is observed in Poland (Fig. 16), which started to lose its competitive position in the scope of attracting them more in comparison to other CEE countries, and in particular Czechia and Slovakia. Since Poland's entrance into the EU, another dynamic growth has been noticed. It should be noted, however, that in the last two years, and especially in 2006 a phenomenon called „the capital in transit” was observed. In practice, it consists in recording the inflow of foreign funds increasing the equity of the domestic companies in which they are invested in a given fiscal year. Subsequently, they are invested by the domestic

companies in the created departments, or companies whose headquarters are outside of Poland (*Information...* 2008). The capital although included in the total foreign investment, does not have an impact on the economic growth of a given country.

Fig. 16. Inflow of direct foreign investments to Poland in 1993-2007.



Source: own analysis based on the Polish Information and Foreign Investment Agency (PAIiZ) and National Bank of Poland (NBP) data.

Assuming the index of the value of investment per capita as the criterion, the situation of Poland does not look too good against the other CEE countries (Table 3). It shows unused opportunities to attract investments, despite the implementation of the „Strategy of increasing investments” prepared by the Ministry of Economy in 2001 (*Strategia...*, 2001), and the still existing financial and administrative and legal barriers (particularly with reference to tax law and social security) which discourage entrepreneurs from investing in Poland.

Although in the years of economic crisis decrease of foreign investments to CEE countries which are perceived as less stable economically and politically is to be expected, the situation of Poland in comparison to other countries is not bad. It is the outcome of the relatively good condition of the Polish economy against the remaining CEE countries in the times of the global economic recession.

The analysed data refer to the inflow of investments to all sectors of the economy, however, it should be emphasised that on average 30-50% of the capital is invested in industrial processing. Still a greater role is played by the industrial sector in creating new jobs by foreign capital. According to Ernst & Young report (*An open....* 2008) 87% of new jobs resulting from foreign investment in CEE were created in industry.

Table 3. Inflow of foreign capital to CEE countries in 1995-2007.

| Countries | in milion USD | | | | <i>per capita in USD</i> | | | |
|-----------|---------------|--------|--------|--------|--------------------------|------|------|-------|
| | 1995 | 2000 | 2004 | 2007 | 1995 | 2000 | 2004 | 2007 |
| Belarus | 15 | 90 | 169 | 1 772 | 1 | 9 | 16 | 183 |
| Bulgaria | 90 | 1 002 | 2 488 | 8 429 | 11 | 125 | 322 | 1 103 |
| Croatia | 114 | 899 | 1 076 | 4 925 | 24 | 200 | 239 | 1 109 |
| Czechia | 2 562 | 4 595 | 4 463 | 9 123 | 248 | 448 | 437 | 886 |
| Estonia | 202 | 398 | 926 | 2 482 | 140 | 291 | 690 | 1 855 |
| Hungary | 4 453 | 1 957 | 4 167 | 5 571 | 431 | 191 | 412 | 554 |
| Latvia | 180 | 407 | 647 | 2 173 | 72 | 172 | 280 | 956 |
| Lithuania | 73 | 379 | 773 | 1 934 | 20 | 108 | 225 | 570 |
| Poland | 3 659 | 10 000 | 12 890 | 22 959 | 96 | 261 | 338 | 602 |
| Romania | 420 | 998 | 5 174 | 9 774 | 19 | 45 | 240 | 454 |
| Russia | 2 016 | 2 704 | 11 672 | 52 475 | 14 | 18 | 81 | 371 |
| Slovakia | 195 | 2 075 | 1 122 | 3 265 | 36 | 384 | 208 | 605 |
| Slovenia | 176 | 181 | 516 | 1 426 | 90 | 92 | 258 | 709 |
| Ukraine | 267 | 595 | 1 715 | 9 891 | 5 | 12 | 36 | 213 |

Source: own analysis based on GUS and UNCTAD (after the Polish Information and Foreign Investment Agency – PAIIZ) data.

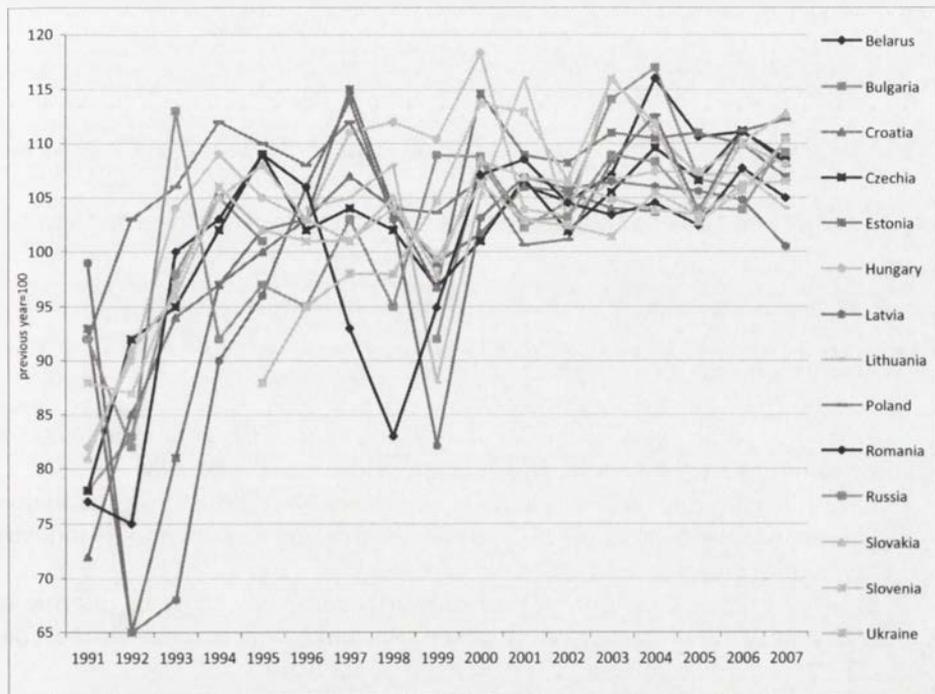
Tackling the problems of the role of foreign capital in industry changes, Domański's conclusions (2001) that, generally speaking, the balance of the results of inflow of foreign capital to industry of Poland and other CEE countries is positive, need to be acknowledged. Foreign investments increase competitiveness of companies and whole economies of CEE countries by means of introducing more modern technologies and production organisation which improves their effectiveness and structural changes. Higher quality of products causes that export of industry products, particularly to the countries of the so called „old” European Union (EU-15) is growing. What also needs to be emphasized is upgrading of technological lines that enables modernisation and improvement of product quality and that reduces environmental damage. Investors have a positive impact on competitiveness of local companies and better professional qualifications of the staff, and hence they create comparative advantage of some cities and regions. Generating the additional benefits connected with cooperation with the local suppliers of goods and services has crucial significance, which increases employment in cooperating companies. It is referred to as the so called „multiplication effects” of industry development. Such effects were observed in many industrial districts in CEE, including Silesian Voivodeship (Poland) characterised by a large inflow of foreign capital to car industry (Rachwał, Wiedermann 2008). It should be noted that the labour market transformations influenced by foreign capital are conducted to a lesser degree

through quantitative rather than through qualitative changes. New jobs are, in fact, the result of Greenfield investments, whereas in enterprises purchased by the investors in the first stage usually a reduction of employment takes place. However, taking into account the increase of employment at the cooperating companies, the balance of newly created and liquidated jobs may be positive, which is indicated, among others, in the studies conducted by the team of Stryjakiewicz (2004) concerning the influence of GlaxoSmithKline Pharmaceuticals S.A. in Poznań on the regional and local development.

Dynamics of industrial changes

To conclude, the changes of the dynamics of industrial production are worth noting. There are two phases in the analysis of those changes in the years 1991-2007: first until 1999 – big fluctuation and a significant fall of the dynamics in connection with the so called „transformation shock” (1990-1993) and „crisis on the eastern markets” (1998-1999); and since 1999 – stabilisation of that dynamics at the level of several to more than a dozen per cent (Fig. 17).

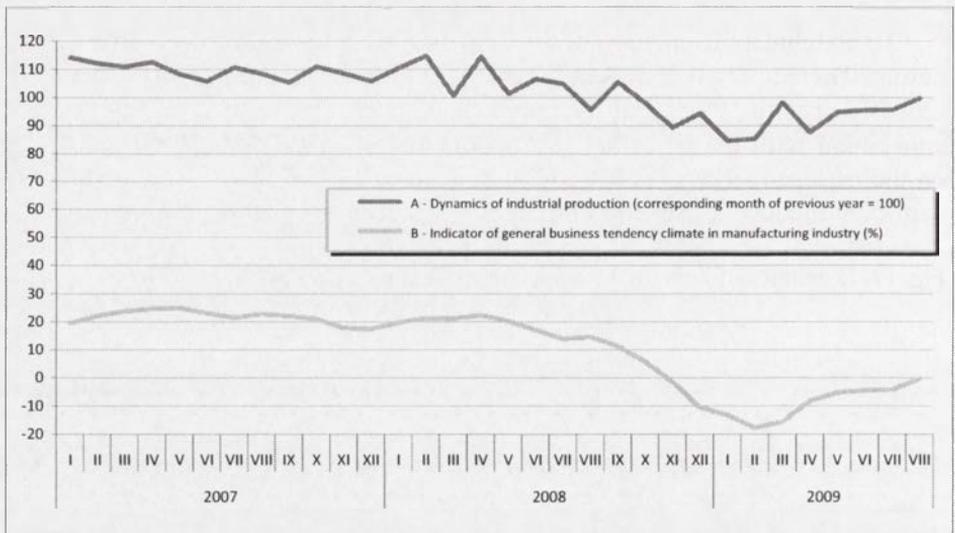
Fig. 17. Dynamics of industrial production in CEE countries in 1991-2007.



Source: own analysis based on GUS data.

As observed during the period of crisis (years 1997-1998), fluctuations of the volume of production are quite substantial, so one should carefully approach current data concerning the present dynamics of industrial production (Fig. 18). The observed tendencies of the decrease of the value of industrial production in particular months of 2008 and at the beginning of 2009 are not so strong in comparison to previous periods of recession of world economy, and may be reversed very quickly. This is indicated by GUS data concerning the reversal of the decrease tendency of business prosperity in industry in 2009.

Fig. 18. Changes of industrial production (A) and general business tendency climate in industry (B) in Poland in 2007-2009.



Source: own analysis based on GUS data.

Conclusions

The presented analysis of the industry changes of CEE countries makes it possible to formulate the following diagnostic and cognitive conclusions:

- There is a marked tendency to reduce employment in industry in the majority of analysed countries, which signifies decreasing importance of industry in activating labour resources.
- Decrease of employment does not necessarily mean lessening of the role of industry in economy assessed by other measures, which seems to be confirmed by the gross value added generated by industry.

- Industrial potential that is measured by the number of employees and gross value added in CEE countries is relatively low; still the central European regions of strong social and economic development are characterised by the greatest economic potential.
- Participation of industry in the structure of the employed and GVA demonstrates a decreasing tendency although in some countries a certain increase is observed.
- Employment potential in R&D in CEE countries, except Russia, is very low.
- Some unfavourable tendencies of changes in that area in Poland are observed against other CEE countries which expand their R&D potential and allocate more and more funds to these activities, which is particularly noticeable in Czechia.
- There is a considerably lower, in comparison with other EU countries and regions, share of expenses for R&D activities in GDP of the CEE countries (except Slovenia and Czechia).
- Apparently, it seems necessary to undertake strategic actions by national authorities (especially of Poland) in order to increase financing of R&D activities related to implementing technological (process) and product innovations in industry, following the example of the Czech Republic. On the one hand, it can be done through increasing the share in financing those activities by means of EU funds, which may appear impossible due to the complicated budget situation of the country and local government units in the context of economic crisis, which is, however, feasible thanks to the possibility of using EU funds. On the other hand, this can be achieved through intensive actions to attract more knowledge – than labour-intensive investment and location of R&D centres of international corporations. Under the circumstances of the financial crisis and abrupt changes in the economic relationships that are related to it (such as disruption of the hitherto cooperative links, including also R&D activities), and seeking savings by companies (implementing outsourcing or offshoring mechanisms, among others), there occurs a great chance to attract such centres to Poland where there is a particularly propitious ratio between the quality of scientific and research human potential and the cost of its hiring. These actions, in consequence should lead to the increase of the private capital in financing R&D work, and thus to the growth of industrial activities of greater added value. It should eventually enhance the Polish industry changes towards increasing its potential measured by gross added value and improving its competitiveness on the world markets.
- Beneficial changes occur in the export structure of CEE countries (except Russia and Belarus), which signals progress of the industry modernisation processes and the increase of competitiveness of its products (technological and product innovations).

- CEE is considered one of the most attractive regions of the world drawing foreign investment. Although the inflow of those investments to Poland is the greatest in the region (second to Russia), the index of value of investment per capita is relatively low in comparison to other CEE countries. It may imply unutilised possibilities of attracting investments and still existing financial and administrative and legal barriers (particularly with reference to tax law and social security) which deter investors from Poland.
- After accession of some CEE countries to EU, there was an increase of investments in those countries. Generally speaking, the inflow of foreign capital has a beneficial influence on restructuring the industry of those countries and enhancing its competitiveness, especially on foreign markets.
- The fall of the dynamics of industrial production is smaller in Poland than in other CEE countries and the EU.
- Indicators of production dynamics and economic prosperity show that the present crisis has not affected (yet) deeply that sector in Poland.

The conducted analysis of indicators demonstrating changes of the potential and structure of industry and also employment and expenditures for R&D activities in Poland does not justify optimistic conclusions concerning the resilience of Polish economy (including the „strength” of industry) to recession phenomena. However, it should be emphasised that the situation of Poland as compared to other CEE countries in that respect is advantageous.

Literature

- An Open World*. Ernst & Young’s 2008 European Attractiveness Survey, 2008, Ernst & Young.
- Albin B. J., Kupczak J. M. (eds), 2004, *Kraje Europy Środkowej i Wschodniej na drodze przemian* [Central and Eastern Europe Countries on the Way to Changes], „Arboretum”, Wydział Nauk Społecznych Uniwersytetu Wrocławskiego, Wrocław.
- Balcerowicz L., 1997, *Socjalizm – kapitalizm – transformacja. Szkice z przelomu epok* [Socialism – Capitalism – Transformation. Sketches from the Turn of Epochs], WN PWN, Warsaw.
- Bożyk P., 1999, *24 kraje Europy Środkowej i Wschodniej. Transformacja* [24 Countries of the Central and Eastern Europe. Transformation], SGH, Warsaw.
- Domański B., 1997, *Geografia przedsiębiorstw – niedoceniany nurt badań w polskiej geografii ekonomicznej* [Geography of Enterprises – The Under-rated Stream of Research of Polish Economic Geography] [in:] Domański B. (ed.), *Geografia – Człowiek – Gospodarka*, Instytut Geografii i Gospodarki Przestrzennej UJ, Kraków, p. 101-112.

- Domański B., Gwosdz K. (eds), 2005, *Dziesięć lat doświadczeń pierwszej polskiej specjalnej strefy ekonomicznej. Mielec 1995-2005* [Ten Years of Experience of the First Polish Special Economic Zone: Mielec 1995-2005], Uniwersytet Jagielloński, Instytut Geografii i Gospodarki Przestrzennej, ARP o. Mielec, Kraków.
- Domański B., 2001, *Kapitał zagraniczny w przemyśle Polski* [Foreign Capital in Polish Industry], Instytut Geografii i Gospodarki Przestrzennej UJ, Kraków.
- Domański B., 2003, *Industrial Change and Foreign Direct Investment in the Postsocialist Economy: the Case of Poland*, *European and Regional Studies*, 10 (2), p. 99-118.
- Domański B., 2006, *Polski przemysł na tle przemysłu Europy Środkowej i Wschodniej* [Polish Industry in Comparison with the Industries of the Central and Eastern Europe] [in:] Ziolo Z., Rachwał T. (eds), *Międzynarodowe uwarunkowania rozwoju przemysłu*, Prace Komisji Geografii Przemysłu PTG nr 8, Wydawnictwo Naukowe AP, Warsaw-Kraków, p. 27-36.
- Jasiński L. J., 2001, *Konkurencyjność gospodarek krajów Unii Europejskiej a ewolucja prowadzonych przez nią polityk* [Competitiveness of the Economies of European Union Countries and the Evolution of its Policies] [in:] Bossak J., Bieńkowski W. (eds), *Konkurencyjność gospodarki Polski w dobie integracji z Unią Europejską i globalizacji*, tom I, SGH, Warsaw, p. 227-236.
- Karpiński A., 2008, *Przemiany strukturalne w procesie transformacji Polski 1989-2003-2025* [Structural Changes in the Process of Transformation of Poland], SGH, Warsaw.
- Informacja o zagranicznych inwestycjach bezpośrednich w Polsce w 2006 r.* [Information about Foreign Direct Investments in Poland in 2006], 2008, Narodowy Bank Polski, Warsaw.
- Kilar W., Rachwał T., Wiedermann K., 2008, *Changes in Differentiation of Polish Regions' Industrial Potential within the European Union* [in:] *New Functions of Rural and Industrial Space in Central and Eastern Europe*, Czapiewski K., Komornicki T. (ed.), *Europa XXI*, vol. 17, Institute of Geography and Spatial Organization – Polish Academy of Sciences, Academic Division – Polish Geographical Society, Warsaw, p. 145-158.
- Kitowski J., 1999, *Międzynarodowe implikacje kondycji finansowej spółek giełdowych regionu trans granicznego – na przykładzie województwa podkarpackiego* [International Implications of the Financial Condition of the Publicly Traded Companies from the Trans-Border Region – Example of Podkarpackie Province] [in:] Kitowski J. (ed.), *Problematyka geopolityczna Europy Środkowej i Wschodniej*, Rzeszów, p. 475-499.
- Kitowski J., 2004, *Appraisal of Financial Condition of Businesses in the Podkarpackie Province at the Threshold of Poland's Integration with the European Union* [in:] *Central and Eastern Europe at the European Union – an*

- Opening Balance, Geopolitical Studies vol. 12, Polish Academy of Sciences, Institute of Geography and Spatial Organization, Warsaw, p. 427-439.
- Kołodko G., 1999, *Od szoku do terapii. Ekonomia i polityka transformacji* [From Shock to Therapy. Economy and Politics of Transformation], Poltext, Warsaw.
- Kornai J., 1997, *Struggle and Hope: Essays on Stabilization and Reform in a Postsocialist Economy*, Edward Elgar, Cheltenham.
- Koźmiński A.K., 1998, *Odrabianie zaległości. Zmiany w organizacji i zarządzania w byłym bloku socjalistycznym* [Catching up. Changes of Organisation and Management in the Former Socialist Bloc], WN PWN, Warsaw.
- Lukawer E., 1994a, *Transformacja systemowa w Polsce w oczach ekonomistów*, cz. I, [Systemic Transformation in Poland – Economists' Perspective, Part I], *Gospodarka Narodowa*, nr 1(48), p. 18-23.
- Lukawer E., 1994b, *Transformacja systemowa w Polsce w oczach ekonomistów*, cz. II, [Systemic Transformation in Poland – Economists' Perspective, Part II], *Gospodarka Narodowa*, nr 2(49), p. 17-21.
- Misala J., 2001, *Istota i mierniki międzynarodowej konkurencyjności gospodarki w świetle teorii wymiany międzynarodowej* [The Essence and the Indicators of International Competitiveness of Economy in the Light of the Theory of International Exchange] [in:] Bossak J., Bieńkowski W. (eds), *Konkurencyjność gospodarki Polski w dobie integracji z Unią Europejską i globalizacji*, tom I, SGH, Warsaw, p.103-125.
- Rachwał T., 2006a, *Efekty restrukturyzacji wybranych przedsiębiorstw przemysłowych Polski Południowo-Wschodniej* [Effects of Restructurings of Industrial Enterprises in South-Eastern Poland] [in:] Ziolo Z., Rachwał T. (eds), *Efekty restrukturyzacji polskiej przestrzeni przemysłowej*, red., *Prace Komisji Geografii Przemysłu PTG nr 9*, Wydawnictwo Naukowe AP, Warsaw – Kraków, p. 98-115.
- Rachwał T., 2006b, *Restrukturyzacja technologiczna przedsiębiorstw przemysłowych Polski Południowo-Wschodniej jako czynnik podnoszenia ich konkurencyjności na rynku międzynarodowym* [Technological Restructuring of Industrial Enterprises in South-Eastern Poland as a Factor Improving Their Competitiveness on the International Market] [in:] Ziolo Z., Rachwał T. (eds), *Międzynarodowe uwarunkowania rozwoju przemysłu*, *Prace Komisji Geografii Przemysłu PTG nr 8*, Wydawnictwo Naukowe AP, Warsaw – Kraków, p. 192-203.
- Rachwał T., 2007, *Zmiany powiązań przestrzennych przedsiębiorstw przemysłowych Polski Południowo-Wschodniej w latach transformacji systemu gospodarowania* [Changes in the Spatial Links of Industrial Enterprises of South-Eastern Poland in the Period of Economic Transformation] [in:] Lach L., Borowiec M., Rachwał T. (eds), *Procesy transformacji społeczno-ekonomicznych i przyrodniczych struktur przestrzennych*. Księga Jubile-

- uszowa dedykowana Prof. Z. Ziolo, Wydawnictwo Naukowe AP, Kraków, p. 325-351.
- Rachwał T., 2008, *Problematyka badawcza funkcjonowania przedsiębiorstw przemysłowych* [Research Problems Concerning the Functioning of Industrial Enterprises] [in:] Ziolo Z., Rachwał T. (eds), *Problematyka badawcza geografii przemysłu*, Prace Komisji Geografii Przemysłu PTG nr 11, Wydawnictwo Naukowe AP, Warsaw – Kraków, p. 53-85.
- Rachwał T., Wiedermann K., 2008, *Multiplier Effects in Regional Development: The Case of the Motor Vehicle Industry in Silesian Voivodeship* (Poland), *Quaestiones Geographicae*, Series B, Human Geography and Spatial Management, 27B/1, Wydawnictwo Naukowe Uniwersytetu im. Adama Mickiewicza, Poznań, p. 67-80.
- Rachwał T., Wiedermann K., Kilar W., 2008a, *Wydajność i koszty pracy jako czynniki konkurencyjności przemysłu regionów Polski w Unii Europejskiej w ujęciu regionalnym* [Productivity and Labour Costs as Factors of Competitiveness of Polish Industry in Comparison to European Union – the Regional Perspective], [in:] Ilnicki D., Janc K. (eds), *Przekształcenia regionalnych struktur funkcjonalno-przestrzennych „Europa bez granic – nowe wyzwania”*, Rozprawy Naukowe Instytutu Geografii i Rozwoju Regionalnego Uniwersytetu Wrocławskiego 3, Instytut Geografii i Rozwoju Regionalnego, Wrocław, 2008, p. 79-89.
- Rachwał T., Wiedermann K., Kilar W., 2008b, *Zmiany potencjału przemysłowego województw Polski wschodniej na tle regionów Unii Europejskiej* [Changes in Industrial Potential of Eastern Poland Voivodeships within the European Union Regions], [in:] *Przyrodniczo-ekonomiczny potencjał regionów na pograniczu polsko-ukraińskim*, ed. Fedan R., Makiela Z., PWSZ w Jarosławiu, Stowarzyszenie Instytut Polsko-Ukraiński, Jarosław, 2008, p. 287-306.
- Rachwał T., Wiedermann K., Kilar W., 2009, *Rola przemysłu w gospodarce układów regionalnych Unii Europejskiej* [The Role of Industry in the Economy of Regional Systems of the European Union], [w:] *Problemy kształtowania się przestrzennych struktur przemysłowych i ich otoczenia*, red. Ziolo Z., Rachwał T., Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego, nr 14, Wydawnictwo Naukowe UP, Warsaw – Kraków (w druku).
- Rosati D. K., 1998, *Polska droga do rynku* [Polish Way to the Market], PWE, Warsaw.
- Rydz E., Szymańska W., 2006, *Efekty restrukturyzacji słupskiego ośrodka przemysłowego w okresie wdrażania gospodarki rynkowej – na wybranych przykładach* [The effects of Slupsk Industrial Centre’s Restructurisation during the Period of Introducing the Market Economy – on Selected Examples] [in:] Ziolo Z., Rachwał T. (eds), *Efekty restrukturyzacji polskiej prze-*

- strzeni przemysłowej, Prace Komisji Geografii Przemysłu PTG nr 9, Wydawnictwo Naukowe AP, Warsaw – Kraków, p. 40-51.
- Strategia zwiększania inwestycji* [Strategy of Increasing Investments], 2001, Dokument rządowy z dn. 13.03.2001, Departament Strategii Gospodarczej Ministerstwa Gospodarki, Warsaw.
- Stryjakiewicz T. (ed.), 2004, *Wpływ inwestorów zagranicznych na rozwój regionalny i lokalny na przykładzie GlaxoSmithKline Pharmaceuticals S.A. w Poznaniu* [Impact of Foreign Investors on Regional and Local Development: The Case of GlaxoSmithKline Pharmaceuticals S.A. in Poznań], Bogucki Wydawnictwo Naukowe, Poznań.
- Stryjakiewicz T., 1999, *Adaptacja przestrzenna przemysłu w Polsce w warunkach transformacji* [Spatial Adaptation of Industry in Poland under the Conditions of Transformation], Wydawnictwo Naukowe UAM, Poznań.
- Szlachta J., 1993, *Poland's Regional Development under Economic Transformation*, Friedrich Ebert Stiftung, Warsaw.
- Tobolska A., 2004, *Zmiany własnościowe i organizacyjno-ekonomiczne w wybranych dużych przedsiębiorstwach przemysłowych Poznania w okresie transformacji* [Ownership and Organisation and Economic Changes in Selected Big Industrial Enterprises of Poznań during the Period of Transformation], Bogucki Wydawnictwo Naukowe, Poznań.
- Tobolska A., 2006, *Nowy model organizacji i funkcjonowania starych przedsiębiorstw przemysłowych* [A New Model of the Organisation and Operations of Old Industrial Enterprises] [in:] Ziolo Z., Rachwał T. (eds), *Efekty restrukturyzacji polskiej przestrzeni przemysłowej*, Prace Komisji Geografii Przemysłu PTG nr 9, Wydawnictwo Naukowe AP, Warsaw – Kraków, p. 81-97.
- Wiedermann K., 2007, *Regionalne efekty mnożnikowe rozwoju przemysłu motoryzacyjnego w aktywizacji gospodarczej województwa śląskiego* [Regional Factor Effects of the Growth in Auto Industry as the Economic Activators in Silesian Province] [in:] Ziolo Z., Rachwał T., (eds), *Rola przedsiębiorczości w aktywizacji gospodarczej*, *Przedsiębiorczość – Edukacja* nr 3, red., Zakład Przedsiębiorczości i Gospodarki Przestrzennej IG AP, Wydawnictwo „Nowa Era”, Warsaw – Kraków, p. 24-34.
- Wiedermann K., 2008, *Koncepcja efektów mnożnikowych w wyznaczaniu wpływu przedsiębiorstw na otoczenie społeczno-gospodarcze* [The Concept of Multiplier Effect in Determining the Influence of Enterprises on Their Socio-Economic Environment] [in:] Ziolo Z., Rachwał T. (eds), *Problematyka badawcza geografii przemysłu*, Prace Komisji Geografii Przemysłu PTG nr 11, Wydawnictwo Naukowe AP, Warsaw – Kraków, p. 98-106.
- Wojtyła A., 1994, *Polityka przemysłowa a instytucjonalne ramy restrukturyzacji w Polsce* [Industrial Policy and the Institutional Framework of Restructuring], *Gospodarka Narodowa*, nr 12 (56), p. 6-14.

- Van Zon H., 1996, *The Future of Industry in Central and Eastern Europe*, Avebury, Aldershot.
- Zioło Z., 1996, *Oddziaływanie procesów transformacji gospodarki narodowej na funkcjonowanie jednostek gospodarczych* [Influence of National Economy Transformation Processes on the Functioning of Business Entities and Spatial Systems] [in:] Zioło Z. (ed.), *Wpływ procesów transformacji gospodarki narodowej na funkcjonowanie jednostek gospodarczych i układów przestrzennych*, Komisja Geografii Przemysłu PTG, Instytut Geografii WSP w Krakowie, Warsaw – Kraków, p.146-151.
- Zioło Z., 2008, *Procesy transformacji przemysłowych układów przestrzennych na tle zmieniającego się otoczenia* [Transformational Processes in Industrial Spatial Structures in Relation to Changing Surroundings] [in:] Zioło Z., Rachwał T. (eds), *Procesy transformacji układów przestrzennych przemysłu na tle zmieniającego się otoczenia*, Prace Komisji Geografii Przemysłu PTG nr 10, Wydawnictwo Naukowe AP, Warsaw – Kraków, p. 11-22
- Zioło, Z., 2001, *Współczesne tendencje rozwoju przemysłu i ich problematyka badawcza* [Modern Tendencies of Industry Development and Their Research Problems], [in:] Zioło Z. (ed.), *Problemy przemian struktur przestrzennych przemysłu*, Prace Komisji Geografii Przemysłu PTG nr 2, Wydawnictwo Naukowe AP, Warsaw – Kraków, p. 9-20.

Streszczenie

PRZEMIANY PRZEMYSŁU KRAJÓW EUROPY ŚRODKOWEJ I WSCHODNIEJ W WARUNKACH TRANSFORMACJI GOSPODARCZEJ I INTEGRACJI EUROPEJSKIEJ

Przedmiotem pracy jest analiza przemian przemysłu krajów Europy Środkowej i Wschodniej (ze szczególnym uwzględnieniem Polski), zachodzących pod wpływem różnorodnych uwarunkowań zewnętrznych (międzynarodowych) i wewnętrznych, w świetle: zmian zatrudnienia w przemyśle krajów EŚW na tle potencjału przemysłowego regionów UE (mierzonego liczbą zatrudnionych i wartością dodaną brutto); zmian roli przemysłu w gospodarce krajów EŚW w oparciu o jego udział w strukturze pracujących i wartości dodanej brutto; zróżnicowania cech zasobów wysokokwalifikowanego kapitału ludzkiego związanego głównie z produkcją przemysłową, zatrudnionego w pracach B+R oraz wysokości nakładów na te prace jako czynnika przewagi konkurencyjnej krajów i regionów oraz wpływającego na innowacyjność technologiczną i produktową przemysłu; zmian struktury eksportu krajów EŚW jako wyrazu przemian strukturalnych w przemyśle związanych z procesami transformacji; napływu kapitału zagranicznego i jego roli w przemianach przemysłu, zmian dynamiki produkcji przemysłowej krajów EŚW z uwzględnieniem aktualnych impulsów płynących z otoczenia międzynarodowe-

go, związanych z kryzysem gospodarczym oraz zmianami pozycji konkurencyjnej w zakresie przyciągania inwestycji w warunkach integrującej się Europy. W analizie uwzględniono także wyniki wcześniejszych badań dotyczących przemysłu regionów UE oraz przemysłu Polski na tle Europy Środkowej i Wschodniej, przy czym w pracy ograniczono się do zaprezentowania najważniejszych wyników prowadzonych badań i wniosków o charakterze diagnostyczno-poznawczym.

ASSESSMENT OF REGIONAL ECONOMIC HAZARD BASED ON EXPORT STATISTICS

Tomasz KOMORNICKI

Institute of Geography and Spatial Organization
Polish Academy of Sciences
Warsaw
e-mail:t.komorn@twarda.pan.pl

Introduction

The economic crisis phenomena, having global dimension, which appeared in 2008, became an impulse for undertaking new research directions in domains of economics, management sciences, sociology, and even psychology. The objective of these investigations is to answer the questions of the reasons, forecasted scale and duration, as well as multidimensional consequences of the current crisis (and, potentially, the successive ones). Geographical sciences seem to remain outside of the mainstream of these investigations, although many issues, associated with the economic breakdown are of strictly spatial character. An exception is constituted by the studies, undertaken in the USA at the state level¹. The majority of such studies, however, concentrate on the geographical effects of the crisis (increase of joblessness), and not on the assessment of hazard from disadvantageous economic phenomena.

The primary goal of the present report is to attempt answering the following question: which regions of Poland may potentially bear the most acute negative consequences of the current (2008-2009) economic crisis? An auxiliary objective is constituted by the assessment of the use of foreign trade statistics as the source of measure of hazard, brought about by the import of crisis-related phenomena at subregional level. The results obtained could contribute to a more general discussion on the level of resilience of local economies (which of the spatial units – the economically strong or weak – are more resilient to global economic turbulences?). These results may also be helpful in consideration of the prerequisites to the regional economic policies, supporting either specialisa-

¹ One of technical sessions at the annual meeting of the Association of American Geographers, which took place in Las Vegas in March 2009, was devoted to geography of crisis.

tion or diversification of production directions and the sales markets in small and medium sized centres² (*Espon 1.4.1 Final Report 2006*).

The only, as of now, report concerning the issue of regional differentiation of the hazard from economic crisis within the Polish territory, is the one entitled „*Geography of Polish crisis – crisis of peripheries or peripheries of crisis*”, elaborated by the Euroreg team at the University of Warsaw under the editorship of G. Gorzelak (2009). This report confirms the general conviction that crisis affects various economies to a different degree. The authors of the report, referred to demonstrate, as well, that Poland, as a country, is an importer (and not a generator nor exporter) of crisis. They note that potential advantages, in terms of export, from the weakening position of Polish zloty, are counter-weighted by the fact that a large portion of turnover takes place within the framework of supranational corporations and is directed towards the markets, which are affected by economic perturbations. The situation is alleviated by the fact that Polish economy as a whole is less dependent upon exports, than, for instance, the Czech or Hungarian economies. The report concentrates on the analysis of situation in particular production branches, taking as the initial standpoint their orientation at the domestic or foreign market. It is emphasised that entirely export-oriented (i.e. with more than 75% of sales value for export) are in Poland such branches as automotive, electrical appliances (including household equipment), electronic and furniture branches. Against this background, as in a way a secondary issue, the report asks the question: in which provinces the branches most threatened by crisis play the most pronounced role? Such analysis enables the authors of the report referred to formulate the conclusion that most resilient to crisis situations are the metropolitan areas, especially of Warsaw, Poznań and Gdańsk. The situation with this respect is, however, much worse for Wrocław, Łódź and the Upper Silesian conurbation. Besides, the report quoted mentions as threatened the province of Lubuskie, some areas in the province of Wielkopolska and Lower Silesia, and in northern Poland – the centres of furniture industry. Hazards are considered lesser in eastern Poland, except for some definite centres (e.g. Biłgoraj – furniture). Conclusions from the report, although not formulated unequivocally, indicate a higher resilience of both the multifunctional metropolitan areas and the peripheral regions. A complementary purpose of the present paper is to verify this proposition using a different study procedure.

² With this respect, the present paper makes use of fragments of the expert assessment, entitled „*Evaluation of the character, structure and intensity of Polish exports in the context of objectives of regional policy, at the level of provinces, in a dynamic perspective*” (in Polish), elaborated upon the commission from the Ministry of Regional Development (Komornicki, 2009).

In the present paper, similarly as in the report, referred to above, the assumption was adopted that the degree of branch and geographical diversification in foreign trade constitutes a factor of regional and local economic safety. The starting point for further analysis, though, was not constituted by the branch structure, but by the directional (geographical) structure of exports. This approach has the quality of accounting for the economic situation of the receiving countries, and not only for the character of domestic production. Besides, the directional approach is easier to quantify at the regional level. The calculations conducted base uniquely on the original source material, collected at the borders or within the framework of the EU reporting systems. The data were made available by the Customs Department of the Ministry of Finance, and originate from two sources:

- SAD forms, for the trade with countries outside of the Union, and
- INTRASTAT forms (enterprise reporting), for the intra-Union trade.

The analysis of value of foreign trade turnover was in its entirety carried out in US dollars (USD). In comparisons with the value of sales, the annual averages of exchange rates, quoted by the Polish central bank, the National Bank of Poland, were used.

Prerequisites of the analysis

It was assumed at the outset of the study that in Polish conditions the reasons for the current economic crisis are mainly external, and that its consequences are delayed in time with respect to the economies of Western Europe. Hence, the slowing down of Polish economy is largely due to the downturn in exports (at least in the initial phase). It was then assumed that the hazard from the effects of crisis on the regional and local scale is proportional to the potential drop in the value of exports. Finally, it was assumed that exports to individual countries shall decrease in proportion to the drop in GDP values for these countries.

In order to carry out further analysis it was necessary to adopt definite percentage values for changes of the Gross Domestic Product in particular countries, to which Polish export is directed (Table 1). For the majority of cases (most of the countries of the European Union, Norway, Switzerland and USA) the Eurostat data for the first quarter of 2009 were used (year-to-year change; publication of 03.06.2009). For some remaining countries of the European Union analogous data for the 4th quarter of 2008 were used. In case of yet other countries, accounted for in the analysis (Canada, Belarus, Russia, Ukraine, China, India) the OECD data and those from the national statistical services were used. These latter data were, as a rule, not older than the 4th quarter of 2008. Then, for all the remaining countries calculations were made jointly, as-

suming that the drop of GDP shall be conform there to the forecast of the World Bank for the global economy from the beginning of 2009 and shall amount to – 1.7% (year-to-year).

The assumptions, listed above, constitute, of course, a definite simplification. That is why the output from the calculations, here presented, cannot be treated as true indicator measures. The purpose of these calculations was only to provide an interregional comparison of the risk levels, and not to establish the absolute scale of problems in particular spatial units.

Table 1. The GDP decrease values adopted in the study.

| Country | GDP decrease | Country | GDP decrease |
|---------------|--------------|-------------------|--------------|
| Australia | 0,4 | Italy | -5,9 |
| Austria | -2,9 | Kazakhstan | -2,0 |
| Belarus | 2,0 | Latvia | -18,6 |
| Belgium | -3,0 | Lithuania | -11,8 |
| Bulgaria | -3,5 | Luxemburg | -5,4 |
| Canada | -0,7 | Malta | 1,4 |
| Czech Rep. | -3,4 | Norway | -0,3 |
| China | 6,1 | Portugal | -3,7 |
| Cyprus | 1,6 | Romania | -6,4 |
| Denmark | -3,6 | Russia | -9,8 |
| Estonia | -15,6 | Slovakia | -5,4 |
| Finland | -1,8 | Slovenia | -0,9 |
| France | -3,2 | Spain | -3,0 |
| Germany | -6,9 | Sweden | -6,4 |
| Great Britain | -4,1 | Switzerland | -1,6 |
| Greece | 2,4 | The Netherlands | -4,5 |
| Hungary | -4,7 | Ukraine | -20,0 |
| India | 5,8 | USA | -2,5 |
| Ireland | -7,4 | Rest of the World | -1,7 |

Sources: Eurostat, OECD, Polish Central Statistical Office (GUS), National Bank of Poland (NBP).

Exports in 2007 in the regional setting

Polish exports are rarely analysed in the regional setting. The few publications, which take this perspective, include those of Rogacki (2001), Komornicki (2003, 2004, 2009), Maćkowiak (2008) and Gawlikowska-Hueckel et al.(2008). The most of recent of these publications indicate the advantageous processes in

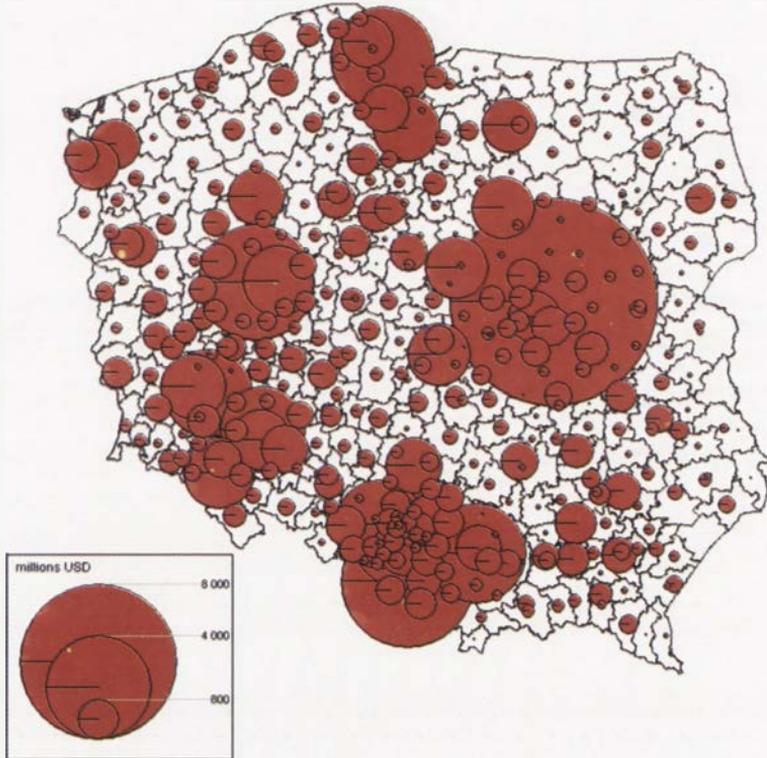
the domain of geographical structure of exports, which took place after the accession to the European Union. These processes are the gradual de-concentration of export activities and the increase of directional diversification (especially in Western Poland, Fig. 1). Earlier (according to the studies from the year 2000) Poland featured very uneven internal distribution of exports, with strong concentration in Warsaw, Upper Silesia, and in some other regional centres, as well as towns, being locations of foreign investments. In the setting of provinces this meant domination of five provinces: Masovia (Mazowieckie; with Warsaw as capital), Silesia (Śląskie), Wielkopolska (Wielkopolskie), Lower Silesia (Dolnośląskie) and Pomerania (Pomorskie). At the same time, significant areas in eastern and central Poland did practically not participate in the official foreign trade. The changes, which took place in the years 2000-2005 and in 2005-2007, had two basic dimensions:

- general fast increase of exports following the accession to the European Union,
- de-concentration of export-oriented activities at the subregional level.

Among units with the highest significance in export, the shares of Lower Silesian (Dolnośląskie) and Silesian (Śląskie) provinces increased (the latter having become already in 2005 the biggest exporter-province in Poland). The shares of Małopolskie and – characteristically – Świętokrzyskie have been increasing, while those of Lublin, Lodz, Podlasie (Podlaskie) and Warmia-Masuria (Warmińsko-Mazurskie) have been decreasing. At the same time, there has been a distinct increase in the share of exports for many counties in western Poland, but also in the central and south-eastern parts of the country. The de-concentration process affected to the lowest degree the broadly understood north-eastern Poland.

After the accession to the European Union there has been, as well, a change in the structure of exports from regions (provinces) and counties. The role of geographic distance, previously significant, as one of factors decisive for the intensity of trade with the neighbouring country, has decreased. In western Poland, side by side with Germany, more trade partners appeared from the farther countries of the Union, as well as from other recent accession countries, and even from the third countries (including Ukraine). On the other hand, the role of Germany as the sales market increased in central and eastern Poland, partly at the expense of the shares of Ukraine, Belarus and Russia. The territorial reach of trade with Czechia and Slovakia expanded very significantly.

Fig. 1. Distribution of exports in 2007 according to counties.



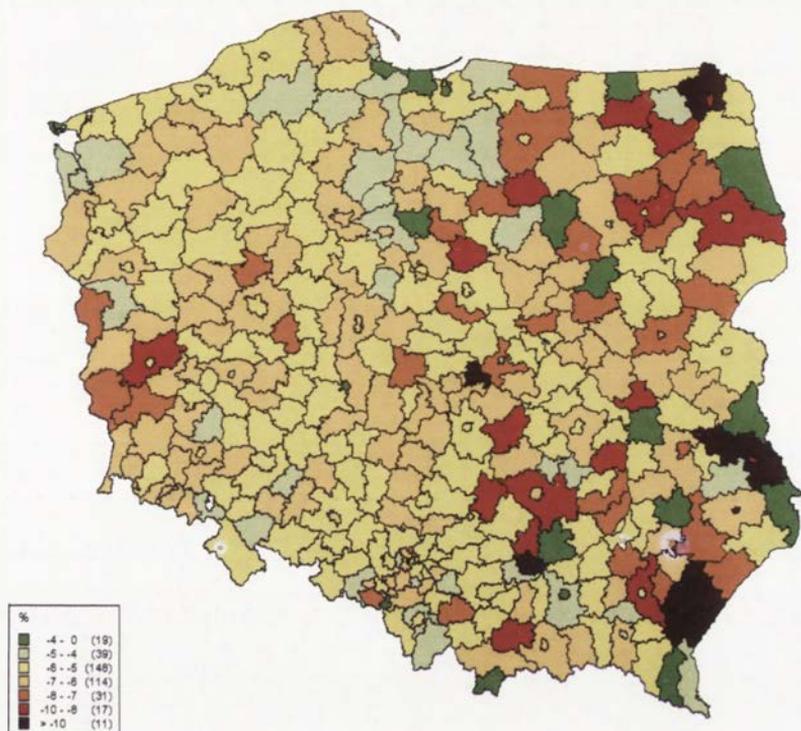
Source: own elaboration on the basis of materials from the Customs Department of the Ministry of Finance.

The forecasted decrease of exports

The forecasted decrease of the value of exports has been calculated as the sum of potential decrements in outward trade from particular spatial units (counties) to definite countries. As mentioned before, it was assumed that this decrement (expressed in percent) is taken as analogous to the decrease in the GDP in the respective periods, preceding the study. In absolute terms, the potential drop of exports would be the biggest in these towns and counties, which feature the highest concentration of exports (like Warsaw, Bielsko-Biała, Poznań, Katowice and Cracow). It is, of course, more telling to determine the envisaged percentage decreases (Figure 2). They will be distinctly higher in eastern Poland, this being the effect, in particular, of the concentration on this area of exports to the neighbouring countries (including the Baltic countries), where the GDP drop is especially acute. The decrease of export value exceeding

10% may occur in the regions of Przemyśl, Zamość-Hrubieszów and Suwałki. Drop by close to 10% might occur in the surroundings of Białystok, Rzeszów and Kielce, as well as, for instance, in the western county of Zielona Góra. The concrete counties, with the biggest envisaged drop of export value (caused by the economic downturn in the receiving countries) are (see Table 2) the ones of Przemyśl and Jarosław, and the towns of Przemyśl and Zamość.

Fig. 2. Forecasted decrease of exports.



Source: own elaboration on the basis of materials from the Customs Department of the Ministry of Finance.

Table 2. Counties with the biggest relative forecasted decrease of exports.

| Rank | Powiat (County) | Voivodship | Forecasted decrease of exports (%) |
|------|-------------------|---------------------|------------------------------------|
| 1. | PRZEMYSKI | podkarpackie | -19,4 |
| 2. | JAROSŁAWSKI | podkarpackie | -17,4 |
| 3. | m. ZAMOŚĆ | lubelskie | -17,0 |
| 4. | m. PRZEMYŚL | podkarpackie | -12,3 |
| 5. | KAZIMIERSKI | świętokrzyskie | -11,9 |
| 6. | PRZEWORSKI | podkarpackie | -11,3 |
| 7. | BRZEZIŃSKI | łódzkie | -11,2 |
| 8. | CHEŁMSKI | lubelskie | -10,7 |
| 9. | m. ŚWIĘTOCHŁOWICE | śląskie | -10,3 |
| 10. | ŁĘCZYŃSKI | lubelskie | -10,3 |
| 11. | SUWALSKI | podlaskie | -10,1 |
| 12. | EŁCKI | warmińsko-mazurskie | -9,8 |

Source: own elaboration on the basis of materials from the Customs Department of the Ministry of Finance.

Assessment of the crisis-related hazard

The actual scale of hazard from the importation of the crisis situation depends not only upon the potential drop in exports, but also upon the role of exports in local economy. This role is illustrated by the share of exports in the value of industry sold production, originating from the counties (Figure 3). The spatial distribution of this indicator only partly confirms the previously presented observations, concerning the de-concentration of exports. The image obtained is especially highly mosaic-like in eastern and central Poland. Some counties, which are characterised by low absolute export levels, feature high indicators of internationalisation of local production. This allows for an indirect distinction of the units and regions, in which low export levels result from:

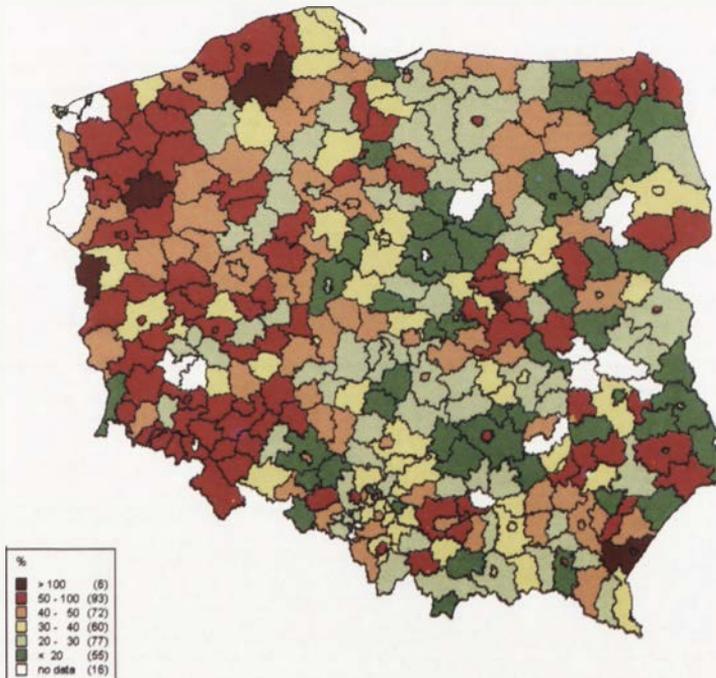
- (a) low economic potential;
- (b) low degree of economic opening to foreign markets, or
- (c) both of the above factors.

The first group includes, for instance, some spatial units from southern and eastern parts of the province of Masovia (Mazowieckie), where shares of export are quite high (beyond 40%), while economic potential is low. An instance of the still low degree of opening to the foreign markets is provided by Świętokrzyskie province. Existence of the growth potential for exports has appeared

there already now in the form of significant absolute increases of export values after 2004. The third group (low potential along with low degree of opening) includes the counties of northern Masovia (Mazowieckie) and eastern part of the Lublin (Lubelskie) province (Komornicki, 2009).

A compact area, where the export value exceeds 50% of industry sales, encompasses the provinces of Western Pomerania (Zachodniopomorskie), Lubuskie, Lower Silesia (Dolnośląskie), as well as major parts of the provinces of Wielkopolskie, Kujawsko-Pomorskie and Pomerania (Pomorskie). There are some counties, where export values are higher than production, which results from location of intermediating companies in these counties (given, simultaneously, a limited production potential). This group is led by the county of Przemysł (153%, Table 3), where, traditionally, re-exporting activity towards Ukraine is concentrated. In the group of large towns with highly international economies one should mention first of all Szczecin and Wrocław, followed by Poznań and Gdańsk. Cities, in which production is to the highest degree oriented only at the domestic market, are Warsaw, Lublin, Bydgoszcz and Katowice (Komornicki, 2009).

Fig. 3. Exports in 2007 as % share of industry sold production.



Source: own elaboration on the basis of materials from the Customs Department of the Ministry of Finance and the Central Statistical Office (GUS).

For purposes of analysing the potential hazards, the forecasted decrease of exports was related to the value of production sold (Figure 4). Consequently, the least resistant to the current economic turbulence turned out both some regions of eastern Poland and spatially compact groups of counties in the West of Poland. In the former case this is the effect of concentration on risky sales markets, while in the latter case – of the general dependence of economy on exports. Characteristic is the disadvantageous situation of the border-adjacent units, located both along the eastern and western boundaries of Poland. The counties with the highest indicator of decrease of exports with respect to production (Table 4) are the town and the county of Przemyśl, as well as the counties of Słubice and Suwałki. The potential consequences of the crisis would also be disadvantageous for the economies of the counties of Western Pomerania (Zachodniopomorskie), the entire province of Lubuskie and the Sudety Mts.

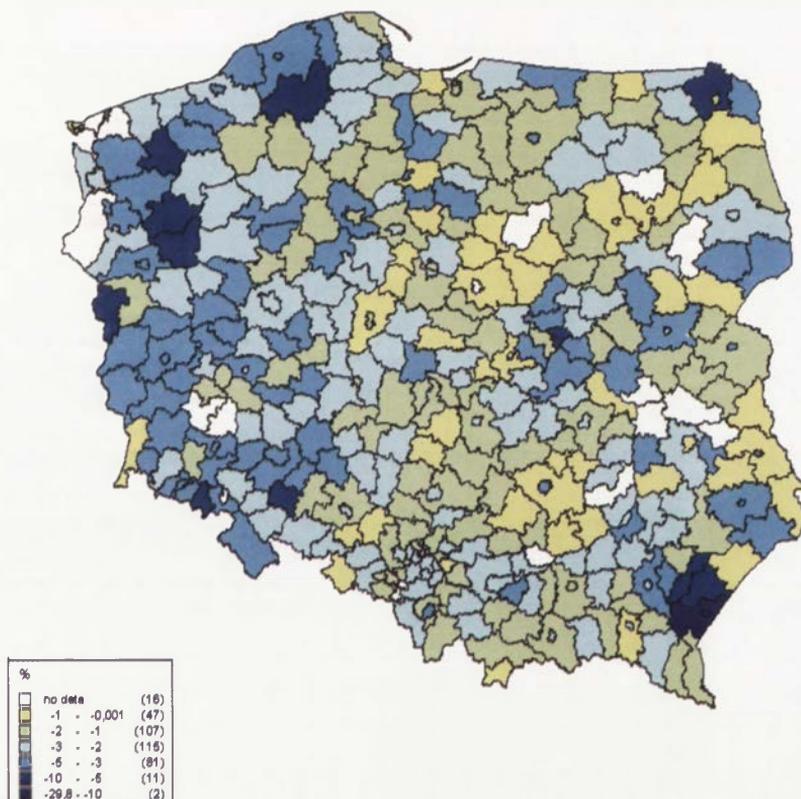
Table 3. The most and the least export-oriented local economies in 2007.

| Rank | Powiat (county) | Voivodeship (region) | Exports as % share of industry sold production |
|------|------------------------|----------------------|--|
| 1 | PRZEMYSKI | Podkarpackie | 153,4 |
| 2 | CHOSZCZEŃSKI | Zachodniopomorskie | 152,2 |
| 3 | BYTOWSKI | Pomorskie | 132,4 |
| 4 | SŁUBICKI | Lubuskie | 119,5 |
| 5 | M. PRZEMYŚL | Podkarpackie | 116,1 |
| 6 | PRUSZKOWSKI | Mazowieckie | 112,3 |
| 7 | STRZELECKO-DREZDENECKI | Lubuskie | 94,3 |
| 8 | M. GDYNIA | Pomorskie | 92,5 |
| 55 | M. SZCZECIN | Zachodniopomorskie | 61,4 |
| 70 | M. WROCŁAW | Dolnośląskie | 56,3 |
| 107 | M. POZNAŃ | Wielkopolskie | 49,0 |
| 110 | M. GDAŃSK | Pomorskie | 48,5 |
| 128 | M. KRAKÓW | Małopolskie | 45,8 |
| 162 | M. ŁÓDŹ | Łódzkie | 41,3 |
| 164 | M. ST. WARSZAWA | Mazowieckie | 41,2 |
| 190 | M. KATOWICE | Śląskie | 37,4 |
| 279 | M. BYDGOSZCZ | Kujawsko-pomorskie | 24,1 |
| 335 | M. LUBLIN | Lubelskie | 12,2 |
| 356 | CHEŁMSKI | Lubelskie | 5,7 |
| 357 | HRUBIESZOWSKI | Lubelskie | 5,3 |
| 358 | BRZEZIŃSKI | Łódzkie | 5,2 |

| Rank | Powiat (county) | Voivodeship (region) | Exports as % share of industry sold production |
|------|-----------------|----------------------|--|
| 359 | KIELECKI | Świętokrzyskie | 4,9 |
| 360 | LUBACZOWSKI | Podkarpackie | 3,4 |
| 361 | OSTROŁĘCKI | Mazowieckie | 1,7 |
| 362 | WŁODAWSKI | Lubelskie | 1,4 |
| 363 | WĘGORZEWSKI | Warmińsko-mazurskie | 1,2 |

Source: own elaboration on the basis of materials from the Customs Department of the Ministry of Finance and GUS.

Fig. 4. Forecasted decrease of exports as % of sold production value of 2007.



Source: own elaboration on the basis of materials from the Customs Department of the Ministry of Finance and GUS.

Table 4. Forecasted decrease of exports as % of sold production value of 2007 – the most threatened counties.

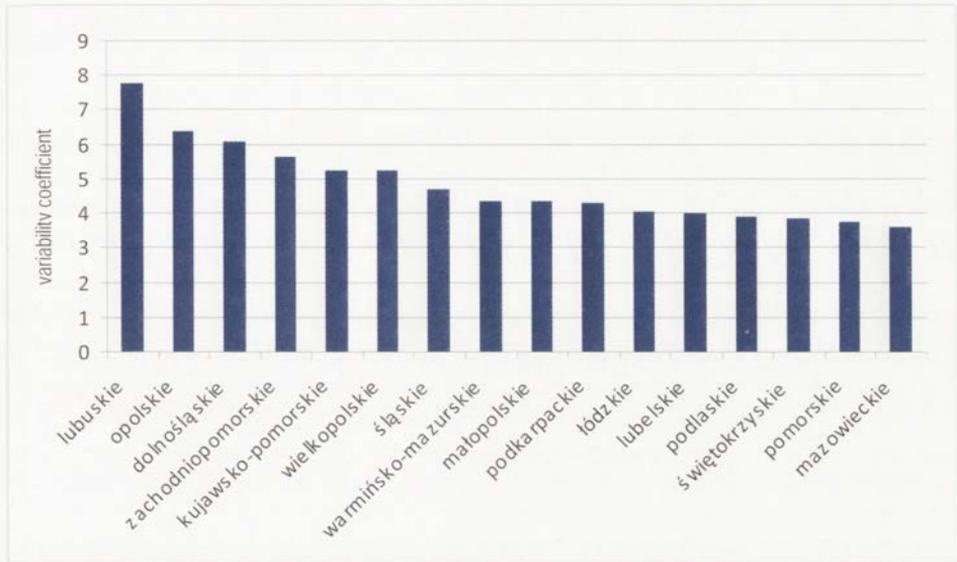
| Rank | Powiat (County) | Voivodship | Forecasted decrease of export as (%) of sold industry production |
|------|-----------------|--------------------|--|
| 1. | PRZEMYSKI | podkarpackie | – 29,8 |
| 2. | m. PRZEMYŚL | podkarpackie | – 14,3 |
| 3. | SŁUBICKI | lubuskie | – 8,7 |
| 4. | CHOSZCZEŃSKI | zachodniopomorskie | – 8,6 |
| 5. | JAROSŁAWSKI | podkarpackie | – 8,4 |
| 6. | SUWALSKI | podlaskie | – 7,1 |
| 7. | PRUSZKOWSKI | mazowieckie | – 6,6 |
| 8. | ŁOBESKI | zachodniopomorskie | – 6,1 |
| 9. | PRZEWORSKI | podkarpackie | – 6,0 |
| 10. | BYTOWSKI | pomorskie | – 5,9 |

Source: own elaboration on the basis of materials from the Customs Department of the Ministry of Finance and GUS.

The degree of diversification of the export partners

Safety in geographical sense could be measured by calculation of a simple coefficient of the directional diversification of exports (variability coefficient for the set of values, corresponding to the export to all countries of the world, obtained as the quotient of standard deviation and arithmetic mean). Lower values of this coefficient correspond to a more uniform distribution of exports among the partner countries, and hence, purportedly, to a higher resilience of the regional economy with respect to external stimuli. In 2007 this diversification coefficient for Poland was at 4.45 (Komornicki, 2009).

Fig. 5. Degree of diversification of export partners of provinces in 2007.



Source: own elaboration on the basis of materials from the Customs Department of the Ministry of Finance; Komornicki (2009).

The obtained regional pattern confirms the existence of higher level of hazard from the consequences of the global economic recession in the well developed and strongly economically internationalised regions of western Poland (Lower Silesia – Dolnośląskie, Lubuskie and Opolskie provinces, followed by Wielkopolskie, Kujawsko-Pomorskie and Western Pomerania – Zachodniopomorskie). Such a situation persists despite the previously mentioned decrease of the dominating role of Germany in the exports from these areas. On the other hand, the areas featuring the highest geographical diversification of the export partners are the provinces of Masovia (Mazowieckie) and Pomerania (Pomorskie). The diversification turns also out to be surprisingly high in eastern Poland (especially in provinces of Podlaskie, Lubelskie and Świętokrzyskie).

Conclusions

Summing up, one should state that the areas of the highest expected relative decrease of exports concentrate in eastern Poland. Yet, in spite of this, the general economic hazard, associated with the current crisis, appears to be higher in the West of the country. Given high degree of internationalisation, decrease of exports may bring about there the most significant change in production levels

and hence the impact on the state of the local economy (including employment). Besides, the degree of diversification of trade partners in the western provinces is the lowest, which gives rise to additional hazards, proportional, first of all, to the condition of the German economy.

In the East, the serious threats, related to the current crisis, have spatially selective character. There are areas in this part of Poland, where, along with a relatively high degree of internationalisation of the economy, a very important role is played by the concrete export partners from the countries now in a particularly difficult economic situation (Lithuania, Latvia, Ukraine). It can be concluded that the zones of particular hazard are in this context formed by the areas of Przemyśl, Suwałki, and, to a somewhat lesser degree, Biała Podlaska and Zamość. On the other hand, the border-adjacent counties, situated between those zones, as well as units located farther away from the boundary (including those in the provinces of Mazowieckie and Świętokrzyskie) are characterised by higher resilience, resulting from the low degree of internationalisation of the economy, with simultaneous relatively high degree of diversification of trade partners.

The units, which feature the highest degree of resilience to global economic problems, are constituted by some of the large centres, including, first of all, Warsaw, Cracow, Lodz, and, in view of the high degree of diversification of trade partners, also the Tri-City (Gdańsk, Gdynia, Sopot). Resilient are also these counties, in which large enterprises are located, producing mainly for the domestic market, notably those from the energy sector (like Bełchatów or Zgorzelec).

The results obtained partly confirm the conclusions forwarded in the Euroreg report (Gorzelać, 2009). The analysis conducted demonstrated that the least economically developed peripheral areas are, in fact, less vulnerable to the global economic turbulences. This, however, does not apply to the spatial units that have been capable in the past to take advantage of the location rent (like, e.g., Przemyśl), which may lead to a more general question, concerning the true-to-life balance of benefits from the border-adjacent prosperity of the transformation period. The benefits realised were based on the short-lived opportunities, associated with the shortcomings of the markets across the border. In a longer perspective, excess concentration on the cross-border economic cooperation had a disadvantageous impact on production restructuring and diversification of the sales markets. Similarly, the proposition forwarded in the report initially quoted, of the strong position of the metropolises, did not find a complete confirmation, as demonstrated by the relatively high degree of dependence of the strongly internationalised economies of Wrocław and Szczecin upon a narrow cluster of trade partners.

In the methodological sense the analysis of hazards from crisis, based on export statistics, did its preliminary job, allowing for the development of the

spatially quantifiable image of the situation. Its full evaluation, though, shall be possible after the future reference to the data concerning the consequences of the economic crisis (e.g. with respect to the actual drop in exports in the years 2007-2009, and the increase of unemployment in 2009) will have been made. In the potential future studies of the regionally defined hazards from the global economic problems it seems to be purposeful to use in parallel the source data concerning the branch structure of the economy and the geographical differentiation of exports.

Literature

ESPON 1.4.1. *Final Report*, 2006, www.espon.eu

Gawlikowska-Hueckel, Szydarowski W., Umiński S., 2007, *Uwarunkowania rozwoju przestrzennego Polski wynikające z położenia w regionie Morza bałtyckiego (Conditioning of the spatial development of Poland resulting from the location in the region of the Baltic Sea; in Polish)*; expert report elaborated upon the commission from the Ministry of Regional Development, www.mrr.gov.pl

Gorzela G. (ed.), 2009, *Geografia polskiego kryzysu – kryzys peryferii, czy peryferia kryzysu (Geography of Polish crisis – crisis of the peripheries or the peripheries of crisis; in Polish)*, Euroreg, Warszawa

Komornicki T., 2003, *Przestrzenne zróżnicowanie międzynarodowych powiązań społeczno-gospodarczych w Polsce (Spatial differentiation of the international socio-economic connections in Poland; in Polish)* Prace Geograficzne, 190, IGiPZ PAN, Warszawa, 255 pp.

Komornicki T., 2004, *Obszary koncentracji eksportu w przestrzeni przemysłowej Polski (Areas of export concentrations in the industrial space of Poland; in Polish)*, Przegląd Geograficzny, Vol. 76, issue 4, pp. 473-491, Warszawa.

Komornicki T., 2009, *Ocena charakteru, struktury, i intensywności polskiego eksportu w kontekście celów polityki regionalnej, na poziomie województw w ujęciu dynamicznym (Assessment of the character, structure and intensity of Polish exports in the context of the objectives of regional policies, at the province level, in a dynamic perspective; in Polish)*; expert report elaborated upon the commission from the Ministry of Regional Development, Warszawa.

Maćkowiak H., 2008, *Struktura towarowa wymiany handlowej polskich regionów z Unią Europejską (Commodity structure of trade between Polish regions and the European Union; in Polish)*. [In:] Europa bez granic – nowe wyzwania, Rozprawy Naukowe Instytutu geografii i Rozwoju Regionalnego Uniwersytetu Wrocławskiego, 3, pp. 143-154, Wrocław.

- Rogacki H., 2001, *Zróźnicowanie aktywności eksportowej i importowej województw Polski (Differentiation of the export and import activity of Polish provinces; in Polish)* [In:] Problemy przemian struktur przemysłowych w procesie wdrażania reguł gospodarki rynkowej (Z. Zioło, ed.), Prace Komisji Geografii Przemysłu PTG, 3, Warszawa-Kraków-Rzeszów, pp. 43-50.
- Węclawowicz G., Bański J., Degórski M., Komornicki T., Korcelli P., Śleszyński P., 2006, *Przestrzenne Zagospodarowanie Polski na początku XXI wieku (Spatial Organisation of Poland at the Beginning of the 21st Century; in Polish)* IGiPZ PAN, Warszawa, 212 pp.

Streszczenie

OCENA REGIONALNEGO ZAGROŻENIA KRYZYSEM GOSPODARCZYM NA PODSTAWIE STATYSTYK EKSPORTOWYCH

Głównym celem opracowania jest próba odpowiedzi na pytanie jakie regiony Polski mogą potencjalnie najbardziej ucierpieć na obecnym (2008-2009) kryzysie gospodarczym? Cel dodatkowy stanowi ocena wykorzystania statystyk handlu zagranicznego jako miernika zagrożenia ze strony importu zjawisk kryzysowych na szczeblu subregionalnym. Otrzymane rezultaty mogą być przyczynkiem do ogólnej dyskusji o poziomie odporności gospodarek lokalnych (które jednostki przestrzenne – mocne czy słabe gospodarczo – są odporniejsze na globalne zawirowania ekonomiczne?). Mogą także stać się pomocne podczas rozważań odnośnie założeń regionalnej polityki gospodarczej wspierającej, bądź to specjalizację, bądź też dywersyfikację kierunków produkcji oraz rynków zbytu w małych i średnich ośrodkach.

W opracowaniu przyjęto założenie, że poziom dywersyfikacji branżowej i geograficznej w handlu zagranicznym jest czynnikiem regionalnego i lokalnego bezpieczeństwa ekonomicznego. Punktem wyjścia do dalszej analizy nie była jednak struktura branżowa, lecz kierunkowa (geograficzna) eksportu. Przeprowadzone obliczenia bazują wyłącznie na materiałach pierwotnych gromadzonych na granicach lub w ramach sprawozdawczości unijnej. Dane zostały udostępnione przez Departament Celny Ministerstwa Finansów.

Stwierdzono, że obszary największego przewidywanego relatywnego spadku eksportu koncentrują się w Polsce Wschodniej. Mimo to, ogólne, związane z obecnym kryzysem, zagrożenia gospodarcze są większe na zachodzie kraju. Z uwagi na silne umiędzynarodowienie, spadek eksportu w największym stopniu może przełożyć się tam na poziom produkcji i tym samym stan gospodarki lokalnej (w tym zatrudnienie). Ponadto poziom dywersyfikacji partnerów handlowych w województwach zachodnich jest najmniejszy, co stwarza dodatkowe zagrożenia, proporcjonalne przede wszystkim do kondycji gospodarki niemieckiej.

Na Wschodzie poważne zagrożenia związane z kryzysem mają charakter selektywny przestrzennie. Znajdują się tam obszary, gdzie przy relatywnie znacznym poziomie umiędzynarodowienia gospodarki, bardzo duża jest rola konkretnych odbiorców z krajów o wyjątkowo trudnej obecnie sytuacji gospodarczej (Litwa, Łotwa, Ukraina). Można przyjąć, że strefami szczególnego zagrożenia są w tym kontekście regiony: Przemysła, Suwałk oraz w drugiej kolejności Białej Podlaskiej oraz Zamościa. Z drugiej strony powiaty przygraniczne znajdujące się pomiędzy tymi strefami, a także jednostki położone w bardziej w głębi kraju (w tym w województwach świętokrzyskim i mazowieckim) charakteryzują się wysoką odpornością będącą wynikiem niskiego poziomu umiędzynarodowienia gospodarki, przy jednocześnie relatywnie wysokim poziomie dywersyfikacji partnerów.

Jednostkami o największym poziomie odporności na globalne problemy ekonomiczne są niektóre duże ośrodki, w tym przede wszystkim Warszawa, Kraków, Łódź, a z uwagi na wysoki poziom dywersyfikacji partnerów także Trójmiasto. Odporne są również powiaty, w których znajdują się duże przedsiębiorstwa produkujące przede wszystkim na rynek krajowy, w tym w pierwszej kolejności w sektorze energetycznym (np. Bełchatów, Zgorzelec).

THE PROSPECTS OF ENSURING SECURITY OF NATURAL GAS DELIVERIES TO POLAND

Paweł FRĄCZEK

University of Rzeszów
Unit of Economics of Investment and Strategic Management

Introduction

For several years now Poland has no longer been under political and economic influence of Russia, however, it is still much dependent on this country in terms of gas and oil supply as well as some other natural resources. This is because none of the Polish governments succeeded in suggesting an effective policy of diversifying the energy sources. Competition in the energy sector has not been achieved either, otherwise the free market would force the gas companies to shape the contracts for supply of energy sources (including the supply of natural gas to Poland) in such a way that competitive companies, and not state institutions, would be responsible for the delivery of energy sources to the domestic recipients. As a result, the security of delivery of energy sources like natural gas to domestic recipients has not been achieved.

One dominant company delivering gas to domestic recipients and accounting for 98% of the market is Polskie Górnictwo Naftowe i Gazownictwo SA (PGNiG SA). The basic source of gas delivery for domestic demand is its import amounting in 2008 to 71.3% of all deliveries.

Table 1. The structure of natural gas supplies in Poland in 2007 and 2008.

| Item | Specification | 2007 | | 2008 | |
|-------|----------------------|---------------------------------------|-------------------|---------------------------------------|-------------------|
| | | Quantity [million m ³] | Percentage [%] | Quantity [million m ³] | Percentage [%] |
| 1 | Domestic extraction* | 4 325.0 | 31.1 | 4 282.7 | 28.7 |
| 2 | Total import | 9 598.3 | 68.9 | 10 618.7 | 71.3 |
| 2.1 | Import from the east | 8 781.0 | 63.1 | 9759.8 | 65.5 |
| 2.1.1 | Import from Russia | 6 497.0 | 46.7 | 7 377.8 | 49.5 |
| 2.1.2 | Import from Ukraine | 5.0 | 0.0 | 4.8 | 0.0 |

| Item | Specification | 2007 | | 2008 | |
|-------|---|---------------------------------------|-------------------|---------------------------------------|-------------------|
| | | Quantity [million m ³] | Percentage [%] | Quantity [million m ³] | Percentage [%] |
| 2.1.3 | Import from Turkmenistan | 2 279.0 | 16.4 | 2 377.2 | 16.0 |
| 2.2 | Import from other countries | 817.3 | 5.9 | 858.9 | 5.8 |
| 2.2.1 | Import from the Federal Republic of Germany | 817.0 | 5.9 | 858.7 | 5.8 |
| 2.2.2 | Import from the Czech Republic | 0.3 | 0.0 | 0.3 | 0.0 |
| A | The balance of gas deliveries to Poland | 13 923.3 | 100.0 | 14901.4 | 100.0 |

* high-metane gas, including gas obtained from demethanising the mines.

Source: *Sprawozdanie z wyników nadzoru nad bezpieczeństwem zaopatrzenia w gaz ziemny za okres od dnia 1 kwietnia 2007 r. do dnia 31 grudnia 2008 r.* (2009) Biuletyn URE, no 4, p. 31.

The contracts for importing gas to Poland involve:

1. A long-term contract introduced by the Russian Gazprom (the so-called Jamal contract), connected with the inter-governmental agreement of 25.08.1993 regarding building a system of gas pipelines for transporting gas through Poland's territory. As a result of this agreement, a company called EuRoPol Gaz was set up, which was to construct two lines of the Jamal gas pipeline. They were planned to transmit 66 billion m³ of gas per year. The agreement of 1993 became a basis for the Jamal contract in 1996. The latter suggested that in the years 1997-2020 Poland will buy 242 billion m³ of gas from Russia. In practice this meant buying 218 billion m³ in the period between 2003 and 2020. PGNiG SA was supposed to receive this gas by means of the two lines of the Jamal gas pipeline. The quantity of gas received via the first line was to be approximately 3 billion m³ a year, with remaining supply to be received via the planned second line.
2. A contract for gas deliveries from Germany; in the period between 1.10.2008 and 1.10.2016 the deliveries will amount to 0.4 billion m³ per year. It is assumed that by the end of 2011 a gas pipeline transmitting gas to Germany will have been developed (the transmission capacity will increase from 1 billion m³ to 1.5 billion m³).
3. The so-called Norwegian contract; approximately 0.5 billion m³ of gas delivered yearly from Germany.
4. Contracts for delivering gas from Turkmenistan; these deliveries were provided by RosUkrEnergo (earlier by Eural Trans Gaz) according to the

agreement binding until 1.01.2010 with the possibility of its prolongation until 1.01.2012, and the quantity of deliveries was negotiated according to the domestic demand (the so-called spot deliveries).

The rest of the domestic demand for gas is met by its extraction from the domestic deposits. Thanks to having its own deposits, Poland's share of gas from domestic sources in the overall gas consumption is one of the highest in Central and Eastern Europe.

Table 2. Natural Gas Supplies in 2007 [PJ].

| | Indigenous Production | Total Net import UE | Total Net import non-UE | Changes in stock | Other balances | Total |
|----------------|-----------------------|---------------------|-------------------------|------------------|----------------|---------|
| Austria | 74 | -74 | 349 | -12 | -20 | 317 |
| Belgium | 0 | 300.8 | 390.9 | -3.43 | -6.77 | 681.4 |
| Bulgaria | 10.7 | 0 | 126.9 | -12.25 | -0.67 | 124.7 |
| Czech Republic | 3.7 | 0 | 318 | 8.51 | -1.77 | 328.4 |
| Denmark | 346.1 | -169.5 | 0 | -6.55 | -27.27 | 142.8 |
| Estonia | 0 | 0 | 39 | 0 | 0 | 39 |
| Finland | 0 | 0 | 173.4 | -0.05 | 0.12 | 173.5 |
| France | 43 | 288.7 | 1438 | 20.29 | 0 | 1790 |
| Germany | 599 | 212 | 2527 | 102 | -85 | 3355 |
| Greece | 0 | 0 | 155.1 | -2.17 | 0.54 | 153.5 |
| Hungary | 83.9 | 23.4 | 338.1 | 6 | 46 | 497.4 |
| Ireland | 17.2 | 180.9 | 0 | 0 | 0 | 198.1 |
| Italy | 370.1 | 303,6 | 2511.2 | 49.87 | 0 | 3234.9 |
| Latvia | 0 | 0 | 62 | 0 | 0 | 62 |
| Lithuania | 0 | 0 | 133.8 | 0 | 0 | 133.8 |
| Luxembourg | 0 | 58 | 0 | 0 | 0 | 58 |
| Netherlands | 2546.3 | -1653.1 | 657.5 | 0 | 0 | 1551 |
| Poland | 169.9 | 31.1 | 335.9 | 10.47 | -6.12 | 541.2 |
| Portugal | 0 | 0 | 165.9 | 1.79 | -1.17 | 166.5 |
| Romania | 439.7 | 0 | 178.9 | -14.9 | 14.91 | 618.6 |
| Slovakia | 2.7 | -3.8 | 213 | 2.42 | -1.21 | 213.2 |
| Slovenia | 0 | -1.8 | 43.1 | -0.6 | 0.5 | 42.4 |
| Spain | 2.9 | -4.3 | 1472.5 | 13.1 | -14.6 | 1469.6 |
| Sweden | 0 | 41.8 | 0 | 0 | 0.88 | 42.6 |
| United Kingdom | 3017 | -181 | 954 | 20 | -6 | 3804 |
| EU-27 | 7726.3 | -647.2 | 12583.2 | 182.5 | -107.67 | 19737.2 |

Source: *Eurogas Annual Report 2007 2008*, (2008), p. 30.

In the years 2003-2008 extraction of gas from domestic sources was quite similar to the level presented above¹. Despite the fact that between 2002 and 2006 the natural gas consumption in Poland increased significantly (by almost 30%), the level of gas extraction is largely stable. Even though Poland has got large deposits of natural gas in comparison with other countries of Central and Eastern Europe (at the end of 2008 its gas deposits amounted to approximately 110 billion m³), the extraction can still be called stable. Assuming that the stabilization of gas extraction is similar to the one in 2008, these resources are sufficient to maintain the level of deliveries for 27.1 years². In order to meet the domestic demand, enhance the reliability of deliveries and strengthen its competitive position, PGNiG SA is planning to increase the domestic extraction from the current 4.3 billion m³ to 6 billion m³ per year in 2008. This requires development of the extracting infrastructure as well as search for other gas deposits. Assuming an extraction increase of 6 billion m³ a year, the current gas resources will allow for maintaining the level of deliveries for almost 15 years. Any investments in natural gas search and extraction will naturally affect the period of availability of domestic deposits.

The necessity to make investments aimed at increasing natural gas extraction in Poland was one of the reasons why PGNiG SA decided to issue shares to public in 2005. It was planned then that until the year 2008 the domestic extraction of natural gas and oil by PGNiG SA will reach 5.5 billion m³ and 1.4 million tonnes per year respectively. It needs to be emphasised that delays in the company's investment programme made it impossible to achieve the planned level of extraction of natural gas and oil in Poland in 2008³.

Initiatives aimed at diversifying natural gas deliveries to Poland

In order to streamline gas consumption in Poland, it is necessary to increase the reliability of its deliveries. Insecurity of these deliveries impedes the construction of new gas installations because in order to assess the attractiveness of such investments, the cost of possible delivery stoppage needs to be taken into consideration. This entails that in order to enhance Poland's energy security, the energy policy regarding natural gas delivery needs to be changed. An optimal policy aimed at improving reliability of gas deliveries should involve⁴:

¹ Domestic extraction of gas amounted to 4.1 billion m³ in 2003, and to 4,3 billion m³ per year between 2004 and 2008.

² *BP Statistical Review of World Energy 2009*.

³ *PGNiG w liczbach 2008*, (2009). PGNiG. Retrieved from www.pgnig.pl.

⁴ Astramowicz J. (2001), *Liczy się pewność dostaw i bezpieczeństwo*, „Rzeczpospolita”, 14.04.2001 and *Sprawozdanie z wyników nadzoru nad bezpieczeństwem zaopatrzenia*

- a guaranteed supplies of gas from various countries and minimising the cost of its delivery,
- the influence of gas delivery costs on the competitiveness of the domestic industry and the economy,
- making constant analyses and on their basis drafting multifaceted forecasts concerning demand for gas,
- the consequences of following the contracts for gas delivery based on the principle „take or pay” and the possibility of changing such contracts⁵,
- ensuring the conditions for flexible deliveries (quantities) in short and long term in order to adjust the quantity of gas purchased to a changing demand,
- introducing some legal regulations regarding the way in which the whole gas sector operates, placing a special emphasis on the requirements of the EU directive 2003/55/EC concerning for instance market liberalisation and access to the gas transmission and distribution systems (TPA principle⁶),
- constructing the underground gas storages for natural gas (PMG) which would ensure gas delivery during the stoppage of supplies,
- investing in modernisation and development of gas systems, developing the distribution systems as well as natural gas transmission systems,
- increasing the extraction of natural gas in Poland,
- enhancing the effectiveness of state control over the crucial infrastructure of the gas system, paying special attention to its influence on PGNiG SA and the Transmission System Operator,
- improving the quality of legal regulations concerning the energy security, including the anti-crisis mechanisms and procedures,
- taking necessary measures aimed at enhancing the country’s energy security.

In order to meet the domestic demand, steps are being taken to improve the reliability of gas deliveries to Poland. The analysed possibilities of delivery involve:

- deliveries from Norway and Denmark on long-term contracts,
- renegotiating the Jamal contract for gas deliveries from Russia,
- short-term contracts for delivering gas from Ukraine and Turkmenistan,
- deliveries from the Caspian Sea region.

w gaz ziemny za okres od dnia 1 kwietnia 2007 r. do dnia 31 grudnia 2008 r. (2009) Biuletyn URE, no 4.

⁵ *Take or pay* – a type of contract involving the necessity to systematically receive and pay for some specified quantities of gas, even if it is not delivered. This contract does not provide any opportunity to use the possible gas excess (for instance in the case of a sudden drop in demand) through its later reception, re-export or resale.

⁶ TPA – third party access – principle on the competitive market of energy carriers which ensures the provision of an energy carrier to a legitimate recipient or a chosen supplier (producer).

In order to receive deliveries, long-term contracts were signed in 2001 between PGNiG SA, the Norwegian Statoil and Danish DONG. It was presumed then, according to the available forecasts included in *Założenia polityki energetycznej Polski do 2020 r. (Premises of Poland's energy policy until 2020)*, that gas consumption in Poland will increase rapidly. Although diversification of gas deliveries is of great importance for Poland's energy security, the Norwegian contract has not been implemented. The chances for diversification have been lost because Poland has failed to create the conditions for a rapid development of the natural gas market, which would increase the demand for natural gas. In the face of lack of perspectives for the increase in gas consumption, and in order to protect the coal mining industry, the government decided to forego the implementation of the Norwegian contract.

A disadvantage of the Danish and Norwegian contracts was that they were, just like the Jamal contract, based on the „take or pay” principle. Without increasing gas consumption and without negotiating a reduction in delivery levels suggested by the Jamal contract, signing these agreements could lead to⁷:

- supply outstripping the domestic demand for gas,
- the significant increase in prices for domestic gas recipients due to the „take or pay” principle,
- reduction in flexibility in terms of directions and quantities of deliveries,
- precluding the chances of introducing competition in the gas market in Poland,
- a huge source of stranded costs due to the commitments resulting from the „take or pay” principle.

With a view to diversifying gas deliveries to Poland, the Polish government has taken steps to renegotiate the conditions of the Jamal contract, trying to reduce the assumed quantity of gas delivered in the years 2003-2020 from 228 billion m³ to approximately 125 billion m³. In January 2003 the negotiated agreement between the Polish and the Russian governments assumed a reduction in the anticipated deliveries by 35% (to 161,4 billion m³ of gas). Additionally, the contract period has been prolonged until 2022.

Changing the long-term contract helps to avoid potential payments which Poland would have to make for deliveries through the second line of the Jamal gas pipeline, while not having the consent for reducing the gas quantity included in the contract. The current gas infrastructure does not allow for transmitting gas in the quantities exceeding the domestic demand. Only after constructing the second line of the Jamal gas pipeline or building some other connection, can the quantity of the gas transported exceed the domestic demand for this resource.

⁷ Astramowicz J. (2001), *Liczy się pewnośc dostaw i bezpieczeństwo*, „Rzeczpospolita”, 14.04.2001.

Table 3. The planned annual gas import from Russia according to the Jamal contract (billion m³).

| Specification | 2004-2005 | 2006-2007 | 2008-2009 | 2010-2014 | 2015-2022 |
|--|-----------|-----------|-----------|-----------|-----------|
| The planned quantity of the imported gas | 7.0 | 7.1 | 7.3 | 8.0 | 9.0 |

Source: *Prospekt emisyjny PGNiG SA*, (2005), Warszawa, p. 149.

It needs to be emphasised that the consequence of a renegotiated Jamal contract (without taking into account the forecasts suggesting that the demand for gas will rise in Poland) is the necessity to contract some additional deliveries of natural gas to our country. Those deliveries would meet the domestic needs and are supposed to create a possibility to receive gas from the suppliers independent from Russia. Although the planned quantities of gas delivered from Russia were agreed to be reduced, there were no other contracts signed for delivering gas to Poland. This results from the government policy in the past years, which assumed that the agreed reduction in the gas quantities purchased according to the Russian contract was insufficient to make it viable to import gas from Denmark or Norway on the basis of long-term contracts. The consequence is the lack of diversification of gas deliveries to Poland. At the same time, a reduction in deliveries coupled with no chances of arranging deliveries from countries other than Russia, threatens the country's energy security.

Taking into account the recorded increase in natural gas consumption in Poland, the level of gas deliveries suggested by the Polish-Russian agreement of 2003, coupled with the domestic extraction and gas received on the basis of the signed short-term contracts, still do not guarantee the satisfaction of the domestic demand. Reducing the amount of deliveries deriving from the long-term contracts and the lack of any realistic estimation of the future demand, proves that the country's energy policy is unreasonable. This also means that Gazprom will have a monopoly on gas deliveries to Poland until 2022, since only this company is able to supply the necessary quantities of this resource. In order to overcome this problem it is necessary to create good technical conditions for natural gas delivery from other suppliers. Particularly important is connecting Poland's gas pipeline system with the one in EU countries. Constructing such a connection and signing a contract for natural gas delivery will help develop the natural gas market in Poland.

PGNiG SA used short-term contracts to obtain gas for domestic demand. This gas was extracted in Turkmenistan and, according to the board of directors in PGNiG SA, this meant a partial diversification of gas deliveries to Poland. In fact, it was Russian Gazprom which made it possible to deliver gas from Ukraine to Poland, because it gave a loan to the company Eural. Gazprom has

also got shares in RosUkrEnergo, which in March 2005 replaced Eural in terms of implementing the contract. In the case of these contracts however, PGNiG SA was unable to find a supplier independent of Russia which could secure delivery of sufficient gas quantities.

In 2009 the Ukrainian and the Russian governments came to an agreement as a result of which RosUkr Energo could no longer supply gas to Ukraine and Poland. As a consequence, sufficient quantities of gas have not been contracted for delivery to Poland. Currently, only Gazprom, through increasing deliveries, is able to ensure the sufficient quantity of gas for domestic demand. Having a strong tendering position, Gazprom is taking steps aimed at boosting its influence on the domestic gas companies.

The development of the infrastructure connecting Poland's gas pipeline system with the systems of other countries, as well as the increase in gas transit from Russia to EU countries via Poland's territory will help improve the security of gas deliveries to Poland. Nowadays, there are some technical possibilities of receiving additional gas supplies, but only from the countries of the former USSR. Therefore, Eural (and then RosUkrEnergo) was chosen as Poland's gas supplier. Table 4 presents the description of the analysed options for the infrastructure development.

Given the lack of diversification of deliveries, our country is exposed to a political risk connected with Russian energy policy. It manifested itself in interrupted gas supplies to Poland and other EU countries in the years 2004-2009, which were related to gas crises resulting from conflicts between Russia, Belarus and Ukraine. This year Gazprom has announced that people may expect halted supplies through the Ukrainian territory. By doing this, Gazprom aims at boosting the gas prices for the recipients from these two countries as well as at seizing their infrastructure by transmitting gas to the EU countries.

Problems with gas deliveries experienced in the past years proved that there are some flaws in Poland's strategy of building and using the underground gas storages (PMG). Having one's own PMG allows for storing gas extracted in summer. This gas is used then in winter when its consumption rises because of heating necessity. However, gas reserves available in Poland at the time of stopped supply were too small comparing with the demand.

In comparison with the EU countries, the current size of underground gas storages in Poland is too small and they cannot ensure the security of gas deliveries (table 5). Therefore, PGNiG SA has to use the underground gas storages located in Belarus and Ukraine.

In order to enhance the country's energy security, it is indispensable to increase the capacities of the domestic underground gas storages⁸. Improving the

⁸ The report of the Supreme Chamber of Control suggests it is necessary for the government to support the initiatives of PGNiG SA aimed at developing the underground

possibilities of storing gas is one of the conditions necessary for increasing gas consumption in Poland. PGNiG SA is taking some steps aimed at raising the capacity of domestic gas storages (table 6). However, it needs to be emphasised that this is a very slow process. An additional obstacle is created by the low level of development of gas infrastructure, which makes it difficult to transmit gas from underground storages to the recipients in the regions affected by interrupted supply.

Table 4. Description of options for the development of the infrastructure transmitting gas to Poland.

| Option | Factors influencing the construction and development of the connection |
|--|--|
| BalticPipe gas pipeline with a terminal in Niechorze | <ul style="list-style-type: none"> ▪ it would connect the coasts of Denmark and Poland; the planned cost of its construction amounts to approximately 350 million dollars ▪ its construction was connected with the implementation of the Norwegian contract for delivering gas to Poland; it was planned that in the years 2003-2010 this gas pipeline will transmit 16 billion m³ of gas, and in the years 2009-2024 this quantity will reach 74 billion m³ thanks to the connection with the Norwegian system of gas pipelines ▪ when L. Miller's government decided not to sign the Danish and Norwegian contracts, it was assumed that this particular gas pipeline will not be constructed ▪ thanks to some steps taken by the government and PGNiG SA aimed at diversifying the gas deliveries to Poland, the construction of this gas pipeline is still being analysed (currently the project is being negotiated and the levels and costs of delivery are still unknown) ▪ its construction would allow for diversification thanks to deliveries from Norwegian deposits |
| The second line of the Jamal gas pipeline | <ul style="list-style-type: none"> ▪ its construction would enhance the security of gas deliveries to Poland; in this case our country would not be the final recipient but would receive some of the gas transmitted to Germany ▪ its construction would cost approximately 1.5 billion dollars ▪ the Polish-Russian agreement of January 2003 stated that: <ul style="list-style-type: none"> ✓ in 2004 the decision will be made about the construction of the second line of the Jamal gas pipeline (however, this decision has still not been made); agreeing to postpone the construction of the second line of the Jamal gas pipeline weakened Poland's negotiating position in relation to Gazprom and facilitated the construction of the Nord Stream gas pipeline |

gas storages. Cf. *Informacja o wynikach kontroli funkcjonowania systemu tworzenia systemu zapasów obowiązkowych paliw w Polsce w latach 1998-2002 i jego modyfikacji*. Retrieved from www.nik.gov.pl

| Option | Factors influencing the construction and development of the connection |
|--------------------------------|---|
| | <ul style="list-style-type: none"> ✓ gas that was supposed to be transmitted to Poland via the second line of the Jamal gas pipeline will be received from the first line and from three places on the Poland's border with Belarus and Ukraine ▪ so far, Russia has not been willing to construct this gas pipeline |
| Amber gas pipeline | <ul style="list-style-type: none"> ▪ it would be used for gas transit from Russia through Latvia, Lithuania, Kaliningrad Oblast and Poland to the countries of the western Europe ▪ apart from the second line of the Jamal gas pipeline, Amber gas pipeline is another land alternative to the construction of the Nord Stream ▪ it would be several times cheaper than the construction of the Nord Stream and would ensure the participation of Poland and the neighbouring countries in the transit of Russian gas |
| Nord Stream pipeline | <ul style="list-style-type: none"> ▪ Sankt Petersburg region connected with the German coast via the Baltic Sea ▪ currently this gas pipeline is being constructed in the Sankt Petersburg region which in the future will constitute a part of the land section of the Nord Stream ▪ the costs of its construction is estimated at approximately 5 billion dollars; the capital-intensive nature of this project suggests that, from the economic point of view, it is not worth making such an investment ▪ if it is built, its planned transmission capacity (55 billion m³ of gas per year) will make Poland the final gas recipient with not much influence on gas transit to the European countries (this would make it easier for Russia to enforce changes of trading conditions for delivering gas to Poland), ▪ this option enables Russia to avoid payments for gas transmission in the future |
| Bernau – Szczecin gas pipeline | <ul style="list-style-type: none"> ▪ construction of this gas pipeline will be made jointly by PGNiG SA and Verbundnetz Gas AG and will allow for reducing the cost of gas delivery from Germany to Poland ▪ will allow for reducing the price for delivery of Norwegian gas to Poland and will help diversify gas deliveries ▪ this particular gas pipeline could transmit to Poland the Russian gas transported to Germany via the Jamal gas pipeline or the Nord Stream; Germany buys gas from Gazprom cheaper than PGNiG SA (deliveries to Poland will let them resale gas at a profit) ▪ delivery from Germany should be coupled with signing some contracts according to which the German companies would guarantee deliveries of gas to Poland in the case of stoppage of supplies from Russia (such a solution is used by Hungarian gas companies) |

| Option | Factors influencing the construction and development of the connection |
|---|---|
| Terminal allowing for delivery of liquefied gas (LNG) | <ul style="list-style-type: none"> ▪ deliveries of LNG by sea are the alternative to developing the land gas pipelines ▪ in order to assess whether it is reasonable to use this technology, a competitive tender was announced by PGNiG SA to draft a feasibility study on LNG import ▪ the possible construction of LNG reloading terminal requires an investment of approximately 1-2 billion dollars, ▪ however, the sufficient quantities of gas failed to be contracted, therefore the construction of this terminal is not viable ▪ gas import might help diversify gas deliveries to Poland ▪ the estimated LNG deliveries will amount to 3-5 billion m³ of gas per year |
| Nabucco gas pipeline | <ul style="list-style-type: none"> ▪ it is supposed to connect Turkey with Austria through the territories of Bulgaria, Romania and Hungary ▪ it could be filled with gas extracted in the Caspian Sea area and Central Asia ▪ currently, there are no reliable long-term contracts for receiving gas to fill the Nabucco gas pipeline, ▪ if its construction is started, it will be dependent on the European Commission which supports it by means of political initiatives and financial resources ▪ currently, there are no technical possibilities to transmit gas to Poland via the Nabucco gas pipeline |
| Moravia gas pipeline | <ul style="list-style-type: none"> ▪ will connect the gas pipeline systems of Poland and the Czech Republic, ▪ starting from 1.01.2011 this gas pipeline is to transmit 0.5 billion m³ of gas per year ▪ after a possible extension and development, dependent on finding the gas supplier, the transmission capacity will amount to 2-3 billion m³ of gas per year in 2015 |

Source: private analysis.

Table 5. Natural Gas Storages at 1 January 2008.

| | Number of storage facilities | Maximum working volume [million m ³] | Maximum withdrawal capacity [million m ³ /day] | The capacity of underground gas storages in relation to gas consumption |
|----------------|------------------------------|--|---|---|
| Austria | 5 | 4100 | 48 | 50.43% |
| Belgium | 2 | 680 | 24 | 3.90% |
| Bulgaria | 1 | 1000 | 8 | 31.39% |
| Czech Republic | 8 | 3376 | 55 | 2031.97% |
| Denmark | 2 | 881 | 22 | 75.25% |
| Estonia | 0 | 0 | 0 | 0.00% |
| Finland | 0 | 0 | 0 | 0.00% |
| France | 15 | 11700 | 200 | 25.53% |
| Germany | 46 | 19918 | 470 | 23.19% |
| Greece | 1 | 75 | 5 | 1.91% |
| Hungary | 5 | 3720 | 51 | 29.18% |
| Ireland | 1 | 198 | 3 | 3.90% |
| Italy | 10 | 13400 | 152 | 16.18% |
| Latvia | 1 | 2325 | 25 | 146.48% |
| Lithuania | 0 | 0 | 0 | 0.00% |
| Luxembourg | 0 | 0 | 0 | 0.00% |
| Netherlands | 3 | 3000 | 140 | 7.56% |
| Poland | 7 | 1660 | 34 | 12.02% |
| Portugal | 1 | 90 | 7 | 2.11% |
| Romania | 6 | 2850 | 40 | 18.00% |
| Slovakia | 3 | 1300 | 22 | 23.82% |
| Slovenia | 0 | 0 | 0 | 0.00% |
| Spain | 2 | 1659 | 13 | 4.41% |
| Sweden | 1 | 10 | 1 | 0.92% |
| United Kingdom | 9 | 4364 | 127 | 55.53% |
| EU 27 | 129 | 76306 | 1446 | 15.10% |

Source: *Eurogas Annual Report 2007 2008*, (2008). Retrieved from www.eurogas.org.

Table 6. The capacity of the domestic underground gas storages.

| Name of storage | Active capacity [billion m ³] | Target capacity [billion m ³] | The investment deadline |
|-----------------|--|--|----------------------------|
| Bonikowo | | 0.2 | 2010 |
| Brzeźnica | 0.07 | 0.07 | |
| Daszewo | | 0.03 | 2010 |
| Husów | 0.4 | 0.5 | 2011 |
| Kosakowo | | 0.13 | 2015 |
| Mogilno | 0.37 | 0.62 | 2015 |
| Strachocina | 0.15 | 0.33 | 2011 |
| Swarzędów | | 0.09 | |
| Wierzchowice* | 0.58 | 2 | 2015 |
| Total | 1.66 | 3.96 | |

**In 2012 the stage of extending the capacity to 1.20 billion m³ will be completed.

Source: *Raport roczny PGNiG SA za 2008 r.* (2009).

One of the consequences of „gas crisis” was an increased interest of the European Commission and gas companies from western Europe in the construction of the Nord Stream. Omitting Belarus and Ukraine, which could be problematic for Gazprom, will help to enhance the security of gas deliveries to western Europe and guarantee the future supplies of the energy carriers.

Conclusions

Despite the multifaceted nature of the analysed initiatives aimed at diversifying gas deliveries to Poland, the security of deliveries has not been increased. This in turn limits the chances of creating a competitive gas market in our country because it prevents the suppliers and the legitimate recipients from having access to transmission services (TPA principle). It should be noted that the current restrictions in receiving additional quantities of gas in Poland protect the position of PGNiG SA on the domestic gas market. The lack of technical possibilities of transmitting gas prevents new suppliers from offering gas deliveries to industrial recipients according to TPA principle.

It also needs to be stressed that:

1. There is a risk that the gas quantities delivered to Poland by Gazprom will not meet the domestic demand, even taking into consideration the domestic extraction and gas delivered according to the current short-term contracts;

2. There are no technical conditions in Poland to obtain additional quantities of gas from countries other than Russia. At the same time, Poland's weak bargaining position in relation to Russian supplier may make our country vulnerable to the dictate of Gazprom and the Russian government; higher risk of interrupted supply and an increase in prices will certainly be limiting gas consumption in Poland;
3. There are no contracts signed for gas deliveries between PGNiG SA and other suppliers, which would allow for delivering gas in the case of halted supply from Gazprom.

According to the author of this paper, the most important steps that need to be taken in order to enhance security of gas deliveries to Poland are:

- creating technical conditions for delivering large quantities of gas from directions other than Russia; they would improve security of gas deliveries to Poland and help to develop competition on the gas market;
- signing contracts for delivering gas to Poland, which would guarantee deliveries in the case of problems with gas supply from Russia;
- verifying the internal demand for gas, which should constitute a basis for specifying the economic effectiveness of the planned new deliveries to Poland;
- changing the attitude of Polish decision makers towards the relations with Russia – during the next years this country will be Poland's fundamental supplier of natural gas and oil;
- increasing gas transmission from Russia to EU countries through Poland's territory and ensuring that some of this gas may be used to meet domestic demand;
- ensuring that natural gas extraction is developed by both PGNiG SA and new market entrants;
- boosting the capacity of the domestic underground gas storages which would be of particular importance in the case of interrupted gas supply.

Literature

- Astramowicz J. (2001), *Liczy się pewność dostaw i bezpieczeństwo*, „Rzeczpospolita”, 14.04.2001. Retrieved from www.rzeczpospolita.pl z 14.04.2001.
- BP Statistical Review of World Energy 2009*.
- Dyrektywa 2003/55/EC Parlamentu Europejskiego i Rady z 26.06.2003 dotycząca ogólnych zasad wewnętrznego rynku gazu ziemnego.
- Eurogas Annual Report 2007 2008, (2008)*. Retrieved from www.eurogas.org.
- Informacja o wynikach kontroli funkcjonowania systemu tworzenia systemu zapasów obowiązkowych paliw w Polsce w latach 1998-2002 i jego modyfikacji*. Retrieved from www.nik.gov.pl
- PGNiG w liczbach 2008, (2009)*. PGNiG. Retrieved from www.pgnig.pl.

Prospekt emisyjny PGNiG SA, (2005), Warszawa.

Raport roczny PGNiG SA za 2008 r. (2009), Retrieved from www.pgnig.pl

Sprawozdanie z wyników nadzoru nad bezpieczeństwem zaopatrzenia w gaz ziemny za okres od dnia 1 kwietnia 2007 r. do dnia 31 grudnia 2008 r. (2009) Biuletyn URE, nr 4.

Ustawa Prawo energetyczne (DzU 1997.54.348) ze zm. (zmiana z 3.05.2005).

Założenia polityki energetycznej Polski do 2020 r., przyjęte przez Radę Ministrów 22.02.2000.

Streszczenie

UWARUNKOWANIA IMPORTU GAZU ZIEMNEGO DO POLSKI

Zapewnienie bezpieczeństwa dostaw gazu ziemnego to jedno z głównych wyzwań stojących przed branżą gazowniczą w Polsce. Realizacja tego celu pozwoli na zwiększenie znaczenia tej branży w krajowym sektorze energii oraz doprowadzi do podjęcia działań służących dywersyfikacji dostaw gazu ziemnego do Polski.

Jak dotąd jednak nie udało się doprowadzić do dywersyfikacji dostaw gazu ziemnego do Polski. Wiąże się to zarówno z błędami w polityce energetycznej kraju jak i z zaniedbaniami ze strony dominującego przedsiębiorstwa branży (PGNiG S.A.), które chroniąc swą pozycję nie podejmowało działań na rzecz zwiększenia możliwości dostaw gazu z kierunków innych niż rosyjski. Konsekwencją tego jest brak bezpieczeństwa dostaw gazu do kraju oraz znaczące problemy z zabezpieczeniem dostaw gazu na potrzeby krajowych odbiorców.

STRUCTURAL FUNDS – ENTERPRISE – CRISIS

Wanda KARPIŃSKA-MIZIELIŃSKA
Tadeusz SMUGA

Institute for Market, Consumption
and Business Cycles Research
in Warsaw

Initial remarks

Performance of economic entities is featured by high uncertainty, affected both by internal factors – dependent on the enterprise (resulting from its resources and behaviour on the market), and external factors – independent on it (related, e.g. to the situation in the environment, including changes in the economic policy)¹. The level of uncertainty under the conditions of the economic crisis is growing much. The present crisis, being the consequence of the deterioration on the global markets has primarily an inter-system character, which means that its sources are located outside the enterprise – in its environment.

In fight with crisis phenomena, especially in mitigation of their effects, a specific role is played by the economic policy. One of its elements is increasing accessibility of economic entities to financial funds, including structural funds. Such a character has *The European Economic Recovery Plan [Europejski plan naprawy gospodarczej]*² agreed in the European Union (in relation to the economic situation deteriorating on the turn of 2008 and 2009). Facilitations for

¹ Por. J. Czekaj, Z. Dreszer, *Zarządzanie finansami przedsiębiorstw. Podstawy teorii*, Wydawnictwo Naukowe PWN, Warszawa 2001, M. Gorynia, T. Kowalski, *Globalne i krajowe uwarunkowania funkcjonowania polskich przedsiębiorstw*, „Ekonomista” 2008, No. 1.

² *European Economic Recovery Plan*, The communiqué by the Commission to the European Council, Brussels, 26 Nov. 2008, COM(2008) 800 final version. It covers favourable changes to rules concerning granting public aid and assigning funds from structural funds. Based on it some EU countries – Germany, France, and Portugal have adopted, approved by the European Commission, aid programmes enabling granting entrepreneurs subsidies up to €500,000. Moreover, the programmes have increased the aid ceiling *de minimis* up to €500,000, and extended the SME group (by increasing the employment ceiling from 250 to 500 persons).

entrepreneurs aiming at increasing their accesses to financial funds are also included in the assumptions for the Polish *Plan Stabilności i Rozwoju [Plan for Stability and Development]*³.

Under the crisis conditions, one of the basic questions concerns the role of money from structural funds in neutralization of negative consequences of crisis phenomena in enterprises. One should expect that limitation of access by economic entities to bank credits might contribute to an increase of the role of the EU funds in financing their investments. The paper will attempt to assess the influence of projects carried out within the National Plan of Development 2004-2006 [Narodowy Plan Rozwoju (NPR)]⁴ and the National Strategic Reference Framework 2007-2013 [Narodowe Strategiczne Ramy Odniesienia 2007-2013 (NSRO)]⁵ on performance of enterprises. The object of the analysis are two financial perspectives of differentiated role of structural funds – the period of the dynamic economic growth (from 2004 to 2007), and the period of growing crisis phenomena (the second half of 2008 and the first quarter of 2009).

Aid for enterprises in operational programmes

Actions of operational programmes supporting enterprises

In the years 2004-2006 (NPR), it was primarily the Sector Operational Programme – Improvement of Competitiveness in Enterprises [Sektorowy Program Operacyjny Wzrost Konkurencyjności Przedsiębiorstw (SPO WKP)] that was directed to support enterprises; its purpose was to improve competitiveness of the Polish economy. Aid within that programme was addressed both to institutions of business environment, and to entrepreneurs, in some cases exclusively small and medium ones. Moreover, SMEs could use funds from the Integrated Operational

³ *Plan Stabilności i Rozwoju – Wzmocnienie gospodarki Polski wobec światowego kryzysu finansowego*, The Council of Ministers, Warsaw, 27 November 2008. They concern securities for inter-bank credits, increasing of the limit for guarantees and credit securities for enterprises, increasing investment allowance for newly formed firms, inclusion of expenditures on research works into revenue costs, abolishment of barriers for infrastructural investments and simplification of procedures in case of applying for money from EU funds, and of procedures concerning prepayment of such money.

⁴ *Statute of 20 April 2004 on the National Plan of Development* [Ustawa z dnia 20 kwietnia 2004 r. o Narodowym Planie Rozwoju], Journal of Law - Dz. U., No. 116, item 1206. Cf. J.Szlachta, *Narodowy Plan Rozwoju Polski na lata 2004-2006 - wybory strategiczne*, „Gospodarka Narodowa” 2003, No. 7-8.

⁵ *Narodowe Strategiczne Ramy Odniesienia 2007-2013 wspierające wzrost gospodarczy i zatrudnienie. Narodowa Strategia Spójności*, The document approved by the Decision of the European Commission of 7 May 2007, Ministry of Regional Development, Warsaw 2007.

Programme of Regional Development [Zintegrowany Program Operacyjnego Rozwoju Regionalnego (ZPORR)] and the Sector Operational Programme of Human Resources Development [Sektorowy Program Operacyjnego Rozwój Zasobów Ludzkich (SPO RZL)]⁶.

Within the financial perspective of 2007-2013 implementation of one of the basic targets of the NSRO *Improvement of Competitiveness and Innovativeness of Enterprises, Including Specifically Manufacturing Sector of High Value Added and Development of Services Sector* takes place first of all with the aid of the Operational Programme – Innovative Economy [Program Operacyjny Innowacyjna Gospodarka (PO IG)]. Support for enterprises is also available within other operational programmes: the Operational Programme – Development of Eastern Poland [Program Operacyjny Rozwój Polski Wschodniej (PO RPW)], the Operational Programme – Human Capital [Program Operacyjny Kapitał Ludzki (PO KL)] and regional operational programmes (16). In each regional programme there were actions whose purpose was aid (concerning investments, counselling, and economic promotion) for entrepreneurs and entities of the business environment (i.e. the actions that within the NPR were granted aid by means of the SPO WKP).

Actions, planned in operational programmes, may affect in different ways operation of enterprises. This results from their character (object, range), amounts appropriated to their implementation, as well as features of beneficiaries themselves. This influence may be indirect (e.g. initiatives concerning creation of friendly conditions for economic performance), as well as direct (counselling and investment support), including aid obtained by concrete entrepreneurs.

Scale of support

In the years 2004-2008 (NPR) the value of the projects (including domestic financing) implemented within the operational programmes (SPO WKP, ZPORR i SPO RZL), which were connected to the greatest extent with supporting of enterprises, amounted to over 8.7 billion zł.⁷ The greatest amounts of the funds were appropriated to the SPO WKP, where they constituted ca. 87% of the value of the signed contracts and over 86% of all the programme funds. The

⁶ In the ZPORR, an important meaning had actions: *Promotion of Entrepreneurship, Regional Innovative Strategies and Transfer of Knowledge*, and *Microenterprises*, and in the SPO RZL – *Development of Personnel for Modern Economy*.

⁷ The number of projects connected with direct granting of aid to enterprises amounted to over 15,500 (18.5% of all the projects). Their value exceeded 15 billion zł (16% of the total value of the projects). It covered only ca. 0.4% of all entities of the national economy registered in the REGON system. Cf. *Ocena postępów Polski w konwergencji z krajami UE oraz wpływ funduszy unijnych na gospodarkę w latach 2004-2007...*, op. cit.

value of the contracts within the SPO RZL and the ZPORR was much smaller (respectively: 16.1 and 11.0%). The greatest number of contracts for implementation of projects of the decisive influence on operation of enterprises was signed within the SPO WKP (over 76%).

For implementation of the NSRO 2007-2013, €67.3 billion was appropriated, out of which €66.7 billion (€85.6 billion jointly with the domestic contribution) to co-financing of operational programmes of the „Convergence” Target⁸. For the Operational Programme – Innovative Economy €8.3 billion were appropriated – 12.4% of all the funds for that Target.

While formulating assessment of the present influence of the EU funds on enterprises we must remember that despite the fact that over 2.5 years have passed since launching of NSRO 2007-13, management of the funds is still very small, and implementation of individual operational programmes is at their initial stages. It is a consequence of the situation that in the years 2007-2008 there was concentration first of all on preparation of the legal frameworks for that strategy, procedures and documents that are indispensable for implementation of individual operational programmes (e.g.: *specific descriptions of priority axes*)⁹. Thus, no wonder that the first contracts with entrepreneurs were signed only in the last two months of 2008.

Until the end of July 2009, within the NSRO, over 75,000 applications were filed for the total amount of financing of almost 160 billion zł.; over 16,000 contracts at the bailout amount of over 35 billion zł, which constituted ca. 13% of allocations scheduled for the years 2007-2013¹⁰. The highest number of contracts was signed within the PO KL¹¹. Whereas, the level of using that allocation was the highest in two operational programmes: Technical Assistance and Human Capital (respectively 23.1% and 18.0%). In the Operational Programme – Innovative Economy the value of the contracts concluded until the end of May

⁸ Due to implementation of the NSRO ca. €9.5 billion yearly on average was to be spent up to 2015. Over €555.5 million were appropriated for programmes of the „European Territorial Co-operation” Target, and over €173.3 million – for programmes of cross-border co-operation within the European Instrument of Neighbourhood and Partnership with participation of Poland. Cf. *Narodowe Strategiczne Ramy Odniesienia 2007-2013 wspierające wzrost gospodarczy i zatrudnienie...*, op. cit.

⁹ *Sprawozdanie z realizacji Narodowych Strategicznych Ram Odniesienia na lata 2007-2013. Przebieg realizacji w I półroczu 2008 r.*, Ministry of Regional Development, Warsaw 2008.

¹⁰ Cf. *Poziom realizacji programów – stan na 2 sierpnia 2009 r.*, Ministry of Regional Development, Warsaw 2009.

¹¹ Cf. *Wykorzystanie środków z funduszy strukturalnych i funduszu spójności w ramach Narodowego Planu Rozwoju 2004-2006 oraz Narodowych Strategicznych Ram Odniesienia 2007-2013*, Ministry of Regional Development, Warsaw, June 2009.

2009 amounted to ca. 5.5 billion zł (14.9% of the EU commitments for the years 2007-2013).

A critical remark is deserved for substantial delays in implementation of regional operational programmes, out of which most SME projects are to be financed. This concerns especially the following provinces: the Mazowieckie Province, the Zachodniopomorskie Province, and the Lubelskie Province. Until the end of May 2009, 1.5%, 3.1% and 3.8% of allocations for the years 2007-2013 were respectively used¹².

Effects of structural funds in enterprises

Due to the initial stage of the NSRO implementation, there is no information yet that would allow assessing the influence of such funds on operation of enterprises. In this situation, we have to rely on results of evaluation research referring to the NPR 2004-2006 and based on them we can formulate hypotheses on behaviour of entrepreneurs within a new financial perspective, including the one under the crisis conditions.

Support for business environment

Problems occurring in performance of SMEs required undertaking some actions directed to reinforcement of business environment institutions [instytucje otoczenia biznesu (IOB)]. Those issues were undertaken within the SPO WKP¹³. The results of the evaluation research identify the effects of this intervention and indicate differentiation of its influence on operation of the IOB¹⁴. The surveyed representatives of those entities, and also entrepreneurs were convinced that the actions undertaken in this programme – by means of the increased accessibility of the rendered services and their quality –

¹² The highest progress in using the EU funds was in the following provinces: the Opolskie Province, the Małopolskie Province, and the Podlaskie Province (respectively: 21.4%, 14.8%, and 14.5% of the allocations for the years 2007-2013).

¹³ First of all, the following entities solicited for SPO WKP funds: Research and Development Units (R&DU) – 17%, then agencies for regional development (15%), industrial parks, technological parks, and incubators of entrepreneurship (15%) and higher schools (14%). The highest effectiveness showed agencies for regional development – 59% of the applications received financing; the smallest effectiveness – R&DU (32%). In the NSRO, similar tasks were scheduled in the PO IG and in the regional operational programmes.

¹⁴ *Ocena uzupełniająca. Instytucje otoczenia biznesu wspierane w ramach Sektorowego Programu Operacyjnego Wzrost Konkurencyjności Przedsiębiorstw, lata 2004-2006: określenie wpływu programu na ofertę usługową oraz poziom jakości świadczonych usług*, PSDB Sp. z o.o. and WYG International Sp. z o.o., Warszawa 2007.

contributed to reinforcement of the competitive potential of enterprises. It was expressed by a higher number of institutions rendering services for entrepreneurs, enlargement and improvement of their offer and reduction of costs (prices) of services.

Based on the evaluation results one can formulate a thesis that the main effect of that intervention was reinforcement of the institutions facilitating enterprises their access to external sources of financing (recapitalization of security funds for credits and microloans) and building of the technical infrastructure potential supporting realization of investment processes (industrial and technological parks, technological incubators). Moreover, meaningful effects were noted in case of services concerning implementation of new technologies and promotion of technologies and new organizational solutions; whereas it was insignificant in the area of training and pro-export activities connected with matching economic partners and consisting in facilitation of contacts between entrepreneurs and scientific and research units.

Acquisition of EU bailout for most of the IOB contributed substantially to stabilization of financial foundations for their operation. The evaluation results have showed, however, that changes to the material potential and in the offer of those entities, which did not receive any aid, were similar as in the institutions that received it. Against this background, there arises a question about the need and effectiveness of such an intervention. For there are no grounds to formulate a thesis that participation in the programme has provided advantage of the beneficiaries over the institutions that did not use such funds. What is interesting the latter declared more often than the participants of the programme that they had made accessible to entrepreneurs the specialist infrastructure and that they had in their offer pro-innovation services. This indicates that the IOB that did not receive support had to strive more for maintaining their position on the market (e.g. by improvement of their offer attractiveness) to cope with competition of other entities and they were successful.

Accordingly, there arises a question whether reinforcement of the IOB position through transfer of money from EU funds to them will be still justified economically. In connection with the fact that under the crisis conditions entrepreneurs will probably expect from those entities mainly assistance in their access to the capital, the potential consolidation of those institutions by means of support from structural funds may be purposeful. In light of the experience from implementation of the NPR it is, however, required to have a more selective (both in case of criteria for application assessment and measurement of final effects) approach to financing of the IOB in that form and directing the aid primarily at development of the institutions that will financially support SMEs.

Effects of the Sector Operational Programme – Improvement of Competitiveness in Enterprises and the Integrated Operational Programme of Regional Development

The evaluation research shows a strong relation between effectiveness of applying for the money from the structural funds and the size of the company. And, e.g. in the action of the SPO WKP *The Increase of Competitiveness of Small and Medium Enterprises by Means of Investments*, every 20th micro-firm that has filed an application received support, and every third among medium firms¹⁵. The research has also confirmed the positive direction of the changes occurring in various fields of the enterprise operation as the result of implementation of projects financed from EU funds, including funds for innovativeness and competitiveness¹⁶. A greater scale of them has been observed in investment projects, which was connected for example with a much higher level of the granted subsidies (on average 25 times higher). Moreover, most entrepreneurs were convinced that effects of the obtained support were worth expenditures that they had borne.

A similar direction of influencing enterprises by the structural funds has been observed in evaluation of the action of the ZPORR – *Microenterprises*. It was used by entities that only started economic performance, which means that in case of them possibilities to use other external financial supplies were much limited¹⁷. In that situation, using of such funds was optimal for them, and sometimes the only way to implement pro-development aims. Positive changes to operation of the firms as the result of realization of the projects in this action concerned especially employment and amounts of investment outlays. More-

¹⁵ *Wpływ realizacji Sektorowego Programu Operacyjnego Wzrost Konkurencyjności Przedsiębiorstw lata 2004-2006 na poziom innowacyjności polskich przedsiębiorstw*, PAG Uniconsult, Warszawa 2008.

¹⁶ Cf. *Wpływ realizacji Sektorowego Programu Operacyjnego Wzrost Konkurencyjności Przedsiębiorstw lata 2004-2006 na poziom innowacyjności polskich przedsiębiorstw*, ..., op. cit., J. Pokorski, K. Zielińska, *Ocena rezultatów działania 2.1. i 2.3 SPO WKP po 18 miesiącach. Wyniki po trzech rundach badania*, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2008.

¹⁷ In the ZPORR, the aid covered 2,722 microenterprises, including 1,739 on the areas of industry restructuring, 683 on rural areas, and 401 on degraded areas that underwent revitalization. The beneficiaries were the firms that had started their economic performance not earlier than 36 months before filing the application, employing during the last 2 years at least 10 employees, and obtaining the yearly net turnover from sales of goods, products and services of up to €2 million. Cf. *ZPORR 2004-2006 informacja o realizacji programu (na dzień 31 sierpnia 2008 r.)*, Ministry of Regional Development, Warsaw 2008; *Analiza wpływu wsparcia udzielonego w ramach działania 3.4 Zintegrowanego Programu Operacyjnego Rozwoju Regionalnego na wzrost konkurencyjności mikroprzedsiębiorstw*, Pracownia Badań i Doradztwa „Re-Source”, Poznań 2007.

over, the beneficiaries have shown such profits like an increase in the number of clients, purchasing of new equipment indispensable to carry out their performance, acquisition of new customers, improvement of the financial standing, or enlargement of their performance extent.

Yet, the research carried out during various evaluations signals a relatively low effectiveness of interventions measured by assessment of *deadweight effect*¹⁸. They have shown that the share of enterprises that without the subsidies would not have carried out their projects was at a very low level (in counselling actions – 11%, and in investments – 7%), which means that even without such funds such ventures would have been implemented¹⁹. They would have been carried out, however, either to a narrower extent or later. Such a structure of opinions results primarily from characteristics of the enterprises using the EU aid – they were mainly entities with a relative high potential, a good economic and financial condition, and also a crystallized development strategy. Against this background, there arises a question how the *deadweight effect* will be formed under the crisis conditions. Generally, in such a situation there is an inclination of enterprises to restrain investments and to postpone them for *better times*. In face of limiting possibilities of obtaining external financing of investments and lack of own funds we may expect an increasing interest of enterprises in these funds, i.e. an increase in their importance in animating investments and in the same way in improvement of the *deadweight effect*.

Ways of reacting to crisis in field of employment

One of the effects of the crisis at the microeconomic level is limits to the number of employees, which can lead directly to an increase of unemployment. Accordingly, there arises a question whether the use of the money from the structural funds may contribute to mitigation of stresses in the field of employment. Based on the experience from the use of the funds within the NPR 2004-2006 one may be tempted to assess their influence on shaping of the range of employment in enterprises. We have here to do with two areas of such an influence: a) on creation of new jobs, and b) on maintaining of the existing jobs. Thanks to the support of the EU funds in that period, enterprises created 319,000 jobs, which constituted 28.2% of the created jobs in total. Almost all of them were permanent (98%), which means that they were not liquidated at least

¹⁸ It allows giving an answer to a question whether the financed projects would have been carried out if a given entity had not received the support. In this way, we receive information whether the project was indispensable to achieve specific, planned effects.

¹⁹ Assessments of the *deadweight effect* by the beneficiaries of the ZPORR action *Microenterprises* were similar to those obtained in the research concerning SPO WKP.

within two years after conclusion of the project²⁰. The remaining ones (2%) are temporary jobs, created exclusively for the time of the project realization. The maintained jobs were only in ca. 7% of the firms and most of them (60%), contrary to the newly created jobs, were temporary²¹.

The NSRO projections concerning the influence of the structural funds on employment (using the HERMIN model) are very positive²². Under the crisis conditions it should be expected, however, a very different direction of the influence of the structural funds on employment. As it can be suspected, firstly – in a short time – the target of this aid beneficiaries will be maintaining of the existing jobs, and only in the background (in a medium and long time) creation of new jobs, which means a periodic slowdown (and in some cases a decrease) of the employment growth in enterprises.

Access to EU funds and reactions of enterprises to crisis

A crisis in the enterprise means a situation when – as the result of piling-up of various difficulties – realization of its basic functions, production and sales, is threatened – and at the same time there are limited abilities to liquidate such a situation. The feature of the crisis situation is uncertainty, which in many cases causes passiveness of entrepreneurs instead of an increased activity. Thus, a typical behaviour under such conditions is aiming at the risk decreasing by a reduction of the uncertainty.

The research has shown that in September 2008 no crisis situation was noticed in enterprises of the SME sector²³. Entrepreneurs even expected that in 2009 there would be an improvement of the economic and financial situation, which was expressed by planning of new investments, innovations, or increasing export. A conviction that impairment of the economic prosperity does not

²⁰ Cf. *Wpływ interwencji z funduszy strukturalnych UE na zatrudnienie*, PAG Uniconsult and Pentor Research International, the evaluation carried out on demand of the Ministry of Regional Development, Warsaw 2007.

²¹ One should remember that for the entities realizing financial projects from the money of the structural funds the increase of the job numbers was an important criterion of evaluation and selection of the applications.

²² It has been forecast that on average in the years 2007-2020 the number of working people will increase by 397,300 persons yearly. *Narodowe Strategiczne Ramy Odniesienia 2007-2013 wspierające wzrost gospodarczy i zatrudnienie...*, op. cit. and own calculations.

²³ Cf. *Konkurencyjność sektora MSP 2008*, PKPP Lewiatan, November 2008. The research carried out for 8 years whose purpose is a complex analysis of the SME sector situation, its competitiveness, and development barriers.

concern them, and omission of crisis phenomena in their plan may constitute a symptom of „expulsion” of the crisis from the enterprise.

However, some entrepreneurs changed their opinions at the beginning of 2009, when also in the Polish economy some symptoms of the crisis began to appear to a greater extent²⁴. Their effect was taking decisions that primarily aimed at surviving and – to the greatest extent – limitation of the crisis influence on the operation of the enterprise. Such decisions included activities aiming at reduction of the operational costs and savings of spending in various fields (e.g. energy, telephone bills). An important role was also played by limitation of employment, and even – in some cases – liquidation of the least profitable areas of the enterprise’s performance. Investments and innovations were postponed for *better times* (a more stable situation on the market). A greater attention was also turned to a possibility of obtaining money from structural funds. They were not treated, however, as ways of animating their development, but rather of stabilizing the operational conditions of the enterprise, including lowering of costs, which earlier they had tried to bear from their own funds. In case of some entities such actions were undertaken in advance, i.e. in a situation when the crisis symptoms were not felt directly yet. In that way, they tried to minimize their future negative consequences (recession expectations).

The extent of the entrepreneurs’ interest in using money from the EU funds in the years 2004-2008 was at a low level, and the beneficiaries of such funds were a small percentage of all the enterprises performing in the Polish economy. It has been documented in the research that there was a discrepancy (a loop) between expectations of enterprises concerning their use of such funds, and their realization in practice – almost 10 times more entrepreneurs declared that they were interested in such an aid than they applied for it²⁵. As the reason for non-applying for public funds it was mainly indicated that the conditions of their obtaining were unfavourable, and then the related too high expenditures borne by the enterprises²⁶.

²⁴ The Authors of the paper have interviewed representatives of several SMEs on their perception of the crisis and their way of reacting to it.

²⁵ Cf. *Konkurencyjność sektora MSP 2008...*, op. cit.

²⁶ *Kierunki inwestowania w nowoczesne technologie w przedsiębiorstwach MSP*. The research carried out for the Polish Agency for Enterprise Development by Pentor Research International and the Gdańsk Institute for Market Economics, Warsaw, November 2007. The size of the population of enterprises financing investments from public funds, including EU funds, was estimated at 2% of the surveyed entities. Cf. *Identyfikacja i ocena barier w wykorzystywaniu środków strukturalnych*, PSDB Sp. z o.o., the work made on demand of the Ministry of Regional Development, Warsaw 2007, *Adaptacja polskich przedsiębiorstw do rynku Unii Europejskiej*, ed. J. Kotwicz-Jawor, INE PAN, Warszawa 2008.

fective way and will appropriate them to introduction of the most modern technological and organizational solutions. Within the NPR 2004-2006, the greatest problems encountered achievement of the targets concerning improvement of innovativeness, which had been assumed in the operational programmes. In relation to the direct orientation of spending the NSRO money on innovative ventures one should fear whether, as it was the case in the NPR, the number of projects meeting the criteria of innovativeness will be sufficient. Lack of supply for such projects will really affect the limitation of entrepreneurs' access to the funds. Enlargement of that access, by means of mitigation of the established criteria for application selection does not seem required, however, as this will cause that they will be „consumed” instead of building permanent foundations for competing on the market in the future. It is not justified either in a perspective of attaining the basic targets of the NSRO, especially that the crisis phenomena in the Polish economy will surely last much shorter than the present financial perspective.

Streszczenie

FUNDUSZE STRUKTURALNE – PRZEDSIĘBIORSTWO – KRYZYS

Celem referatu jest ocena znaczenia środków z funduszy strukturalnych w neutralizowaniu negatywnych konsekwencji zjawisk kryzysowych w przedsiębiorstwach. Przejęto założenie, że wobec braku środków własnych i ograniczonego dostępu do kredytu bankowego należy spodziewać się wzrostu zainteresowania przedsiębiorstw środkami z funduszy unijnych. Mogą one stać się podstawą finansowania przedsięwzięć o charakterze bieżącym jak i rozwojowym. Podstawą analizy były przede wszystkim efekty projektów realizowanych w ramach perspektywy finansowej 2004-2006 (Narodowy Plan Rozwoju). Dokonane oceny odnoszono do działań adresowanych do przedsiębiorstw w ramach perspektywy finansowej 2007-2013 (Narodowe Strategiczne Ramy Odniesienia – Narodowa Strategia Spójności). Pozytywne oddziaływanie funduszy strukturalnych odnotowano przede wszystkim w działalności inwestycyjnej i zatrudnieniu. Nie osiągnięto natomiast zakładanych celów w dziedzinie wzrostu innowacyjności działalności przedsiębiorstw. Efektywność interwencji mierzona ocenami efektu *deadweight* była niska, co oznacza, że większość projektów została by wykonana przez przedsiębiorstwa również bez tych środków. W opracowaniu wskazano, że w warunkach kryzysu pierwszoplanowym działaniem ze strony beneficjentów funduszy strukturalnych będzie obrona istniejącej pozycji na rynku, oraz utrzymanie istniejących miejsc pracy. Inwestycje i innowacje mogą być odkładane na *lepsze czasy*, chociaż środki z funduszy strukturalnych mogą pełnić stymulującą rolę w tym względzie. Warunki kryzysowe nie pozostały bez wpływu na stosunek przedsiębiorców do funduszy strukturalnych – są oni coraz bardziej zainteresowani tymi środkami. Napotykają oni jednak nadal na szereg barier o charakterze systemowym i biurokratycznym.

STATE AND MARKET AS THE INSTITUTIONS COOPERATING DURING A RECESSION

Marian ZALESKO

University in Bialystok
Faculty of Economics and Management

Introduction

The cyclicity of economic development, manifested by the times of booms and recessions, constitutes the essence of capitalist economy. The four – phase business cycle is the most popular pattern of business cycle in economics – this is the periodic pattern of succeeding development phases (recession – depression – recovery – boom). Most controversies among the researchers exploring business sentiment is caused by recession which has plagued capitalism for ages.

Issues concerning economic turbulences are broadly discussed in literature. there are often two completely different opinions concerning the reason for the outbreak of a crisis. On the one hand, this is the government that is blamed for such economic conditions – the government mismanage economic policy which disturbs a self-regulating activity of a free market (L. W. Reed¹). On the other hand, a recession is associated solely with inefficiency of the capitalist free-market economy (N. Klein²). Both statements, which is stressed among others by D. Rosati³, should be deemed unilateral and not explaining the core of the economic problem – what are the conditions accompanying the outbreak of a crisis?

In this paper, it has been attempted to introduce the role of an institutions in economy, taking into consideration its cyclical development. Special attention has been devoted to the cooperation of market and state – crucial institutions influencing economic processes.

¹ L. W. Reed, *Wielkie mity wielkiego kryzysu*. Wydawnictwo PROHIBITA, Warszawa 2009.

² N. Klein, *Doktryna szoku*. Warszawskie Wydawnictwo Literackie MUZA SA, Warszawa 2009.

³ D. Rosati, *Przyczyny i mechanizmy kryzysu finansowego w USA*. *Ekonomista* No 3, 2009, p. 316.

Institutional Fundaments of Economy

The immense role of institutions in shaping the economic order has been stressed by economists in Poland and abroad⁴. Their reflections amount to the statement that „institutions matter”. Then, what are the institutions?

One of the more popular definitions is the concept introduced by D. C. North, who defines institutions as rules of behaviour constituting basic structures which allowed people, during the whole course of human history, to develop the order enabling the decrease of instability connected with the management process. Institutions form human interactions of political, social and economic nature⁵.

A market and a state should be regarded as the most important economic institutions. They have a profound influence on the functioning of economy, both during the prosperity and recessions. Then, it may be assumed (according to North's concept) that in the institutional dimension the market and government draw the rules of behaviour for themselves, as well as for the society which is present in the institutions' area.

A market constitutes an economic category which is permanently bound to production and trade. It has instrumental layers (mechanisms and instruments regulating the relations among market participants) and institutional layers (market institutions). In market economy, the scope of market relations and connections is very broad, even dominating. They have influence on the most of relations among the participants of economic traffic. Beside a market, there are legal-administrative and other norms which regulate socio-political life.

The concept of a market has been defined in literature in many ways. Its synthetic definition has been introduced by C. Menard who claimed that the „market is a specific institutional arrangement consisting of rules and conventions that make possible a large number of voluntary transfer of property rights on a regular basis, these reversible transfers being implemented and enforced through a specific mechanism of regulation, the competitive price system”⁶. According to P.A. Samuelson and W. D. Nordhaus, it may be assumed that the „market is an arrangement by which buyers and sellers of a commodity interact

⁴ It is discussed by among others D. C. North, D. Rodrik, J. E. Stiglitz, E. G. Furubotn i R. Richter, M. Rutherford, O. E. Williamson, M. Iwanek and J. Wilkin, A. Wojtyna, W. Stankiewicz, M. Lissowska.

⁵ D. C. North, *Institutions Institutional Change and Economic Performance*. Cambridge University Press, Cambridge 2002, p. 3.

⁶ C. Menard, *Markets as Institutions versus Organizations as Markets? Disentangling Some Fundamental Concepts*. Journal of Economic Behavior and Organization, Vol. 28, 1995, p. 170.

to determine its price and quantity”⁷. As a result, a market is, what is stressed by W. Stankiewicz, a specific scenery of the traffic process, in which this activity takes place. Suppliers and buyers become here actors⁸.

The considerations, concerning the concept of a market, mentioned above prove that a market is an institution creating conditions for broadly understood relations between producers and consumers. Its fundamental function relates to the regulation of supply and demand. However, it happens that a market fails as a result of its tendency to create unfavourable phenomena in economy which are often not accepted by a society. Market imperfections have been explicitly shown by Samuelson and Nordhaus (table 1) who mention about three spheres of market failures: inefficiency, inequality, instability⁹. When the market failure occurs, the governmental intervention is necessary.

Table 1. Government can sometimes remedy shortcomings of the market.

| Failure of invisible hand | Government intervention | Current examples of government policy |
|--|---|---|
| Inefficiency Monopoly Externalities Public goods | Intervene in markets Intervene in markets Subsidize worthwhile activities | Antitrust laws Antipollution regulations, speed limits National defense, lighthouses |
| Inequality Unacceptable inequalities of income and wealth | Redistribute incomes | Progressive taxation of income and wealth Income-support programs (e.g., food stamps) |
| Instability Inflation, low growth | Stabilize through macroeconomic policies | Monetary policies (e.g., changes in money supply and interest rates) Fiscal policies (e.g., taxes and spending programs) |

Source: P. A. Samuelson, W. D. Nordhaus, *Microeconomics*, Thirteenth edition, McGraw-Hill Book Company, New York 1989, p. 47.

⁷ P. A. Samuelson, W. D. Nordhaus, *Microeconomics*, Thirteenth edition, McGraw-Hill Book Company, New York 1989, p. 39.

⁸ W. Stankiewicz, *Ekonomika instytucjonalna. Zarys wykładu*, Wydawnictwo Prywatnej Wyższej Szkoły Businessu, Administracji i Technik Komputerowych w Warszawie, Warszawa 2007, p. 98-99.

⁹ P. A. Samuelson, W. D. Nordhaus, *op.cit.*, p. 43-48.

The state, as defines it J. Wilkin, is an institution (a set of institutions) that task is to regulate the way in which all other subjects function. The state itself, as the biggest collective economic subject, creates institutional frameworks of activity for other subjects, influencing their current behavior¹⁰. J. Maritain stresses that „the state is an entity created to take care of the interest of the whole. It is neither a human being nor a group of people; it is a set of institutions that together constitute a machinery of considerable importance; a masterpiece which has been created by a man and which benefits from human brains, as well as from human energy, which without a man is nothing, but which renders a higher embodiment of the reason, impersonal and permanent structure whose way of functioning may be regarded to as a second-rate rationality, as the reason tied up by law and the system of generally binding rules, acts in a more abstract manner, draining incidental experiences more carefully, being also more uncompromising that it usually is in an individual life”¹¹.

A vast number of economists, what is indicated by E. Domańska¹², believe that the state intervention into economy is one of the most important factors shaping economic situations in countries with market economy. An equally large number think, what is stressed by W. Morawski¹³, that only the free market may guarantee the regularity of the development of capitalist economy, and that recessions play in economy an arranging and purifying role. For they reveal the redundancy of some economic enterprises and products, perforate „speculative bubbles”, verifying achievements of the previous periods of boom.

Economists are still plagued by the issue: how much of the market and how much of the state in the economy? It is difficult to answer this question, and the answer is ambiguous. The matter is still under discussion.

Market-state relations in the circumstances of economic fluctuations

P. A. Samuelson and W. D. Nordhaus stress that the task of a market mechanism – an economic organization in which individual consumers and enterprises cooperate through the medium of markets – is solving three basic economic problems: What should be produced and in what quantity? How should goods be produced? For whom should they be produced? The realization of the functions mentioned for each kind of economy ought to render the crucial issue.

¹⁰ J. Wilkin, *Jaki kapitalizm, jaka Polska?* Wydawnictwo Naukowe PWN, Warszawa 1995, p. 121-122.

¹¹ J. Maritain, *Człowiek i państwo*, Wydawnictwo Znak, Kraków 1993, p. 19.

¹² E. Domańska, *Wokół interwencji państwa w gospodarkę*. Wydawnictwo Naukowe PWN, Warszawa 1992, p. 116.

¹³ W. Morawski, *Kronika kryzysów gospodarczych*, Wydawnictwo TRIO, Warszawa 2003, p. 14.

Also worth mentioning is the fact that in XXI century there is no one hundred per cent market economy¹⁴ and society functions in a mixed system, together with specific elements of market, command and tradition¹⁵.

Market economy favours unrealized coordination of activities of people and enterprises through the medium of the prize and market system. It is a mechanism of communication, enabling to gather into a certain entirety knowledge and activities of millions of various human units. Without any superior intelligence it solves problems, in which millions unknown variables and dependencies are taken into consideration. Market economy was established as a result of evolution and it still undergoes changes. Principles of its functioning constitute the effect of the struggle undertaken by the „invisible hand”, according to A. Smith. Smith's discovery of the market mechanism controlling economy became an inspiration for the development of economic thought, both for supporters and critics of capitalism. After more than two centuries of gaining experience in the topic, economists have realized what the scope of activity and realistic restrictions of the market mechanism are. Most of them support the thesis of the market failure and do not doubt that the countries with market economy are plagued by the imperfect market outcomes. As a result, they are exposed to the cyclically repeating explosions of inflation and unemployment, and the division of income that is observed in these economies does not always gain the acceptance of society. In accordance with the imperfect market outcomes of the „invisible hand”, the contemporary economies constitute the mixture of cooperation of markets and the state¹⁶.

The market mechanism provides an adorable method of manufacturing and allocation of goods, and still is exposed to many persistent imperfections, especially to inefficiency, inequality and instability. The government should employ itself with the improvement of imperfect market outcomes mentioned. While considering state's function, it is usually assumed that it establishes the rules of the game. Government's activities concerning the improvement of the market mechanism efficiency amount to the restriction of monopolistic practices. Governmental programmes serving to eliminate inequalities aim at prevention of society's impoverishment (redistribution of income in concern for the poor or disabled). The task of stabilization policy is to reduce 'ups' and 'downs' of the business cycle through the reduction of unemployment and inflation, as well as promotion of economic increase – the state acts here as the guard of economic stability, serving macroeconomic function. The market and government are of considerable importance as far as the struggle with economic fluctuations is concerned, and econom-

¹⁴ The economy of XIX century England was the most similar to the pure form of the market economy.

¹⁵ P. A. Samuelson, W. D. Nordhaus, *op.cit.* p. 40-43.

¹⁶ P. A. Samuelson, W. D. Nordhaus, *op.cit.* p. 39-43.

ic development without the simultaneous influence of the state and market „becomes similar to the attempts of clapping with only one hand”¹⁷.

The issues concerning the influence of the market and state on the economic sphere are also broadly discussed by many economists. The considerations of among others P. Krugman, E. S. Phelps or R. J. Shiller may be quoted here.

Krugman, in one of his papers, analyzing economy from historical point of view, proves that the coexistence of the market and state is necessary for the proper functioning of economy. Thinking about regulation and deregulation he concluded that both actions are needed. In his opinion the level of regulation or deregulation should be dependent on economic situation in a specific time¹⁸.

Phelps tries to persuade that dynamically developing economy must experience business cycles. A recession is a part of the cycle, and its character depends on the number of mistakes made in the previous periods. Phelps thinks the governmental intervention is necessary, explaining that a market left without an intervention generates phenomena that after some time might cause the outbreak of a crisis. He highlights, however, that it is difficult to build such tools of state intervention that improve a market, strengthen it and do not destroy it. In his opinion, one should search for such solutions which decrease the effects of mistakes and at the same time remove their cause¹⁹. This creates new possibilities for the development of economic policy based on reasonable scientific foundations²⁰.

Shiller stresses that the economic failure should be amounted to human psychology or dozing in a man an animal nature. He explains that the imperfect market outcomes are to the great extend a sing of the psychological factors' interactions which induce people to behave irrationally and to make irrational market decisions. Too much trust put in a market and unlimited faith in the rationality of the behaviour of other society members constitute the foundations of the herding phenomenon creating the financial bubbles (especially stock market bubbles, on real estate market, raw material or foreign exchange markets). Most of them appear and burst before they gain considerable importance. The real problem is caused by the bubbles that do not vanish unaided. Then, excessive trust put in a market retreats to give place to the trust deficit. It turns out that the

¹⁷ P. A. Samuelson, W. D. Nordhaus, op.cit. p. 37-42.

¹⁸ P. Krugman, *Platki owsiane Friedmana*, Gazeta Wyborcza with 18-19.10.2008 and 25-26.10.2008.

¹⁹ E.S. Phelps, *Rynek w cuglach* (a conversation with J. Zakowski), „Niezbędnik inteligenta”, a supplement to a magazine „Polityka”, Issue 16, 18.10.2008.

²⁰ A good example of the new economic view at the changes that are taking place is the issue of R. Frydman i M.D. Goldberg *Imperfect Knowledge Economics*, in which the authors prove that there is no possibility of building a universal economic model which could predict how economy would change in future [R. Frydman, M.D. Goldberg, *Imperfect Knowledge Economics: Exchange Rates and Risk*, Princeton University Press, Princeton 2007].

dominant position of the free market system may be reintroduced by the state whose influence on economy has an immense effect on the improvement of the market mechanism functioning²¹.

In capitalist economy whose pillars are constituted by the private property and the free market, the existence of the state and the need to fulfill many important functions by this institution is necessary. It is needed due to:

1. The necessity of providing a fundamental institutional order for the functioning of society and economy;
2. So called inefficiency of the market and the need of its reduction²².

Because of that the future of capitalism is secured.

In addition to that, it is important to eliminate from the system opportunistic behavioral patterns and various forms of the temptation to abuse, manifesting itself by the lust for possession of goods. A greedy person, what is stressed by D. Levine²³, is aware of the danger of loss all the time and that is why they attempt to take away from the others before they lose everything.

It often occurs that greed brings considerable individual and group benefits, and the whole society pays for the mistakes. As a result, the defining of the degree of responsibility for the misconducted activities becomes the crucial issue of the restriction of negative effects caused by economic fluctuations.

J. Kornai, exploring history, stresses that during the initial phase of capitalism the business failure had not only serious tangible consequences, but also ruined bankrupt's reputation. The view of destructive effects caused by managerial incompetence made entrepreneurs act more cautiously. Early capitalism highly prized people who achieved success, however it severely punished for failures. After some time had passed, the system of awards much has been developed (the principle of limited liability was sanctioned), and the system of penalties became less severe. The circumstances mentioned weaken the motivation of entrepreneurs to act effectively, at the same time they encourage to make irresponsible decisions as far as the loans, investment and expansion of a company are concerned²⁴. Such behaviour winds up the spiral of the crisis.

It is worth mentioning that irresponsibility of capital bearers causes hatred against capitalist system to grow among the social groups of a lower status. The loss of security and faith in equality violates the foundations of capitalism and creates the threat of the fall of capitalism.

²¹ R. J. Shiller, *Zwierzęca natura rynku* (a conversation with J. Zakowski), „Niezbędnik inteligenta”, a supplement to a magazine „Polityka”, Issue 18, 11.07.2009.

²² J. Wilkin, *Sfera publiczna i sfera prywatna: co je dzieli i łączy? – ujęcie instytucjonalne*. „Optimum Studia Ekonomiczne”, No. 4, 2008, p. 6.

²³ D. Levine, *The Attachment of Greed to Self-Interest*. „Psychoanalytic Studies”, Vol. 2, No. 2, 2000, pp.131-140.

²⁴ J. Kornai, *Widmo socjalizmu krąży nad światem?* „Gazeta Wyborcza” with 11-12.07.2009.

B. Barber indicates that disciplining economic market by democratic institutions is necessary to facilitate its functioning. He stresses that current capitalism is self-destructive. The improvement of the system may be achieved as a result of transparent activities of government and visibility of activities concerning regulation of market mechanism²⁵.

Despite the clear imperfections of the market economy, currently there is no alternative to capitalism. Nowadays, there are no economic systems that would be competitive as far as capitalism is concerned. It turns out that capitalism is still the most favourable for the economic development – as it is an economic system with the greatest flexibility.

The crucial feature which distinguishes capitalism from other economic systems is the ability to permanent creation and fast spread of changes concerning all spheres of socio-economic life: technology, economy and politics. The wonder, beauty and strength of the capitalist system lies in the creation of space where new forces may be revealed, develop, and push the world forward. They constitute the source of development, and that is why their activity ought to be allowed²⁶.

The place of the market and state in economy accurately defined by J. Wilkin's words: „State-market relations may be compared to the relations among three sorts of power in democracy, these are legislative, executive and judicial powers. (...) The fundamental condition to maintain democratic reigns is a specific balance among those three branches of power. If the status of one of them is excessive, the other two may submit to it, then the foundations of democracy is violated. In democracy three sorts of power complement and check one another. Equally important role for the proper functioning of democratic capitalism has the proper relations between the market and state. No one has ever been successful in building a democratic country without market economy, but one should remember that market economy does not by itself guarantee democracy. Thus, there remain a difficult task of establishing the appropriate balance between the state and market, based on the check and balance system”.

Conclusions

Although market mechanism should constitute a regulator of most economic processes, there are disturbances in its functioning, making the government actively take part in improving and complementing this mechanism. Market stimulation gains a specific meaning when unfavourable economic circum-

²⁵ B. Barber, *Współczesny kapitalizm jest jak rozpuszczone dziecko* [w:] *Kryzys. Przewodnik krytyki politycznej*, Wydawnictwo Krytyki Politycznej, Warszawa 2009, p. 97-107.

²⁶ E. S. Phelps, op.cit.

tances are stratifying and when they cannot be defeated by the activity of the 'invisible hand'. It seems that the conditions necessary to secure the sustainable growth of welfare is the existence of both economic freedom which may be guaranteed by the market and the obligation of the law-abiding state.

How much of the market and how much of the state? This is a key question taking into consideration of development of capitalism: It is still unanswered and it is not easy to find the answer. However, it is important that market-state relations do not create pathology, manifested for example by excessive submitting of one institution to another. Activities of market mechanism and the state in economy should be complimentary, and the institutional solutions binding in a country should guard the capitalist development. Then, economy should be more resistant to the crisis.

Literature

- Barber B., *Współczesny kapitalizm jest jak rozpuszczone dziecko*. [w:] Kryzys. Przewodnik krytyki Politycznej, Wydawnictwo Krytyki politycznej, Warszawa 2009.
- Domańska E., *Wokół interwencji państwa w gospodarkę*. Wydawnictwo Naukowe PWN, Warszawa 1992.
- Frydman R., Goldberg M.D., *Imperfect Knowledge Economics: Exchange Rates and Risk*, Princeton University Press, Princeton 2007.
- Klein N., *Doktryna szoku*. Warszawskie Wydawnictwo Literackie MUZA SA, Warszawa 2009.
- Kornai J., *Widmo socjalizmu krąży nad światem?* „Gazeta Wyborcza” with 11-12.07.2009.
- Krugman P., *Płatki owsiane Friedmana*, Gazeta Wyborcza with 18-19.10.2008 and 25-26.10.2008.
- Levine D., *The Attachment of Greed to Self-Interest*. „Psychoanalytic Studies”, Vol. 2, No. 2, 2000.
- Maritain J., *Człowiek i państwo*, Wydawnictwo Znak, Kraków 1993.
- Menard C., *Markets as Institutions versus Organizations as Markets? Disentangling Some Fundamental Concepts*. Journal of Economic Behavior and Organization, Vol. 28, 1995.
- Morawski W., *Kronika kryzysów gospodarczych*. Wydawnictwo TRIO, Warszawa 2003.
- North D. C., *Institutions Institutional Change and Economic Performance*. Cambridge University Press, Cambridge 2002.
- Phelps E.S., *Rynek w cuglach* (a conversation with J. Zakowski), „Niezbędnik inteligenta”, a supplement to a magazine „Polityka”, Issue 16, 18.10.2008.

- Reed L. W., *Wielkie mity wielkiego kryzysu*. Wydawnictwo PROHIBITA, Warszawa 2009.
- Rosati D., *Przyczyny i mechanizmy kryzysu finansowego w USA*. Ekonomista No 3, 2009.
- Samuelson P. A., Nordhaus W. D., *Microeconomics*, Thirteenth edition, McGraw-Hill Book Company, New York 1989.
- Shiller R.J., *Zwierzęca natura rynku* (a conversation with J. Zakowski), „Niezbędnik inteligenta”, a supplement to a magazine „Polityka”, Issue 18, 11.07.2009
- Stankiewicz W., *Ekonomika instytucjonalna. Zarys wykładu*, Wydawnictwo Prywatnej Wyższej Szkoły Businessu, Administracji i Technik Komputerowych w Warszawie, Warszawa 2007.
- Wilkin J., *Jaki kapitalizm, jaka Polska?* Wydawnictwo Naukowe PWN, Warszawa 1995.
- Wilkin J., *Sfera publiczna i sfera prywatna: co je dzieli i łączy? – ujęcie instytucjonalne*. „Optimum Studia Ekonomiczne”, No 4, 2008.

Streszczenie

PAŃSTWO I RYNEK JAKO INSTYTUCJE WSPÓLDZIAŁAJĄCE W WARUNKACH KRYZYSU GOSPODARCZEGO

W opracowaniu podjęto próbę przedstawienia roli instytucji w gospodarce w warunkach cykliczności jej rozwoju. Szczególną uwagę poświęcono współdziałaniu rynku i państwa – najważniejszym instytucjom mającym wpływ na zachodzące w gospodarce procesy ekonomiczne.

Problematyka zawirowań gospodarczych jest szeroko dyskutowana w literaturze. Często mamy do czynienia z dwiema skrajnymi opiniami dotyczącymi odpowiedzialności za wybuch kryzysu. Z jednej strony za taki stan gospodarki obarcza się państwo – błędnie prowadzące politykę gospodarczą, która zaburza samoregulacyjne działanie wolnego rynku. Z drugiej strony kryzys kojarzony jest wyłącznie z niesprawnością wolnorynkowej gospodarki kapitalistycznej (zawodnością rynku). Obie opinie należy uznać za jednostronne i nie wyjaśniające sedna ekonomicznego problemu – w jakich okolicznościach pojawia się kryzys?

Z punktu widzenia dynamiki rozwoju kapitalizmu, podstawowe pytanie: ile rynku, ile państwa? pozostaje wciąż aktualne. Odpowiedź nie jest prosta. Istotne jest jednak aby relacja rynek – państwo nie stwarzała patologii, której przejawem może być nadmierne podporządkowanie jednej instytucji drugiej. Działania mechanizmu rynkowego i państwa w gospodarce powinny się wzajemnie uzupełniać, a przyjęte w danym kraju rozwiązania instytucjonalne stać na straży jej rozwoju. Wówczas gospodarka będzie bardziej odporna na zjawiska kryzysowe.

ECONOMIC SITUATION OF COMPANIES DURING THE CRISIS 2008-2009

Łukasz FURMAN, Witold FURMAN

Higher Business College in Kielce, the Branch in Tarnobrzeg

Introduction

The economic situation in the end of year 2008 and at the beginning of 2009 has deteriorated as the result of crisis in global economy. It has reached all sectors of domestic economy of not only economically well developed countries but those in worse condition as well. It is quite obvious that in the contemporary world the economy of countries of north American continent has great significance, because wields enormous influence on the existence of other economies in the world.

According to economic sources, the crisis has started since the too loose banks' credit policy in the USA. In many cases, loan applications for economic units and people had no credible guarantee. This situation not only influenced the slump in the economy of the United States but also had a negative effect on increasing economic crisis. Economic experience has shown, that practically everybody, regardless of his credibility, could get a mortgage. The only criteria taken into consideration was the price. If the borrower was not creditworthy, the bank gave him the loan anyway, but it was a high-interest loan.

It was believed, that the prices of properties would rise. This mentality was not proved by appropriate and solid analysis, which would take into consideration the phenomenon of economic cycle. In economics literature concerning market economy the phenomenon of cyclical fluctuations, forming economic cycle, has been observed. These cyclical fluctuations, with reference to property market, last few years. It appears that every several years, the recession, appearing with the prices' decrease, takes place¹.

From the author's observation appears that the prices of properties at that time have fallen at about 30%. As one can notice, it is a gradual jump in the worth of particular property, and this directly has an effect on the bank's policy

¹ K. Piech, *Amerykański kryzys*, Gazeta Bankowa nr 35 (983) 27th August – 2nd September 2007

concerning loans. How does it look like with the reference to our country? Polish bank system has not been downgraded under the power of the world's crisis. It is true that banks' requirements have become stricter, but this is due to the clients' protection.

The aim of this article is the attempt to point out, that current economic crisis has not pushed the majority of entrepreneurs in Poland to limit their business activity, as it emerges from the theory of economy and economic reports. Some percent of economic units have made a considerable profit on the crisis, among others, by legalizing higher incomes and taking control of new markets. In Poland, we do not have much experience with the functioning of market economy. 20 years period in Poland, contrary to well developed economy of other countries, seems to be time, in which too less time was spent on the study, especially, when it comes to terms of developing the crisis in economy. Besides that, much information, especially numerical data shows the real data, which may shock, when they refer to entrepreneurs' positive reaction.

The global crisis has impressed on many international corporations and other companies, which participate in the trade. This article also presents the overall economic situation in the time of the crisis. In the time of globalization foreign companies often take advantage of cheaper resources located in countries with poorly developed economies. If such economic links take place, the results of the crisis will also be noticeable in the countries which lend resources, e.g. work. On account of unfavourable economic situation, increasing unemployment may cause negative social and economic effects.

Deliberation with reference to Polish economic realities and the effects of crisis, which undoubtedly have significance for Poland, will be based on available statistic materials, information and articles concerning this matter. Poland has a great economic potential and foreign investments are seen all over our country.

Crisis in the world

One of the manufacturing factors is the capital, which is perceived as the price, which brings new prices as the result of management process. It is also indispensable while establishing and running a business activity. During the crisis, the access to the capital is limited, especially to the foreign one. The cyclical nature of economy causes that crisis is indispensable part of consecutive, following in succession stages of economy's functioning. Disrupted access to financing sources causes slower economic development. It happens very often that in such situations negative effects are increased, such as: unemployment, reduced pace of growth and the economic development. The lack of capital, which is observed in the economy makes that the economy does not develop. In order to

stimulate economic activity special aid programmes are formulated, so as the economic exchange would have the growth tendency.

In the times of present crisis, until February 2009, governments of countries belonging to the group the richest and the most influential countries, have initiated rescue packages, worth over 3 billion dollars². The world economic tycoons such as the USA or France have been accused of applying protectionist practices (e.g. American programme „Buy American” and declaration of French car producers to retain jobs in France, promised in the government’s rescue package).

Inherent action, leaning towards declining of the crisis, was a reduction in interest rates. One can say that it was a record decrease, because it has reached the smallest level. It can be observed on the example of Japan, where after many decisions, interest rate has reached the level of 0,1%. Following the developed countries have positioned themselves on further places: the USA – 0,25%, 0,5% in the UK, Switzerland and Canada. In April 2009, the summit of group of countries G20 took place. It was established that financial markets cannot function without proper regulations and supervision. Despite of the fact, the struggle with so called tax haven was planned. It was decided that they would be excluded from the economic life. Within the worldwide economic assistance it was decided to create the support fund for international trade, which is supposed to be funded with the means coming from International Monetary Fund.

Crisis in Poland

In the initial phase, the crisis has missed Polish economy. Risks started to appear later, and they were identified with negative occurrences such as: dangerous dependence of price of zloty on speculated short-term investments, high part of importation in production and high debt-laden of the country. Then the factors characterizing moving the crisis to Poland have occurred, such as: credit shares limited by banks, profiteering attack on Polish currency and at the same time considerable reduction in price of zloty. Significant problem in corporations were monetary options, which confronted with real shaping of currency rates have plunged financially some economic institutions. Despite the difficulties, economic situation of Poland, against a background of other European economies, was assessed very positively.

Since November 2008 until March 2009 Monetary Policy Council reduced deposit interest rate from 4,50 to 2,25%. With reference to economic situation of Poland in the time of crisis and the feelings of society one can find professional knowledge in many different publications which appeared at that time.

² Rzeczpospolita, *Ekonomia & rynek*, 16.02.2009, *G7 bez nowych pomysłów*, p. B3.

The first one worth mentioning is studying Poles' views, what they think about current economic crisis, which was carried out by Synovate Agency³. The first stage of the research was carried out in August 2008, which was a month before a bankruptcy of Lehman Brothers Bank in the USA. The final stage of the research was carried out in December 2008. The findings show that the crisis does not have much influence on Poles' anxiety and fear connected with their situation on the job market. However, nowadays many people pay attention to economic situation and Stock Exchange quotations.

These are the answers to following questions:

| What is your opinion about economic situation in Poland? | |
|--|---------------------|
| Economy is in hard position but it soon get better | 38% – August 2008 |
| | 33% – December 2008 |
| Economy goes in wrong direction and it will get worse before it improves | 21% – August 2008 |
| | 31% – December 2008 |
| Economy is in bad condition and this situation will remain | 21% – August 2008 |
| | 25% – December 2008 |
| Economy is strong | 16% – August 2008 |
| | 8% – December 2008 |
| I do not know | 5% – August 2008 |
| | 3% – December 2008 |

| Thinking about present economic situation, what are you the most afraid of? | |
|--|---------------------|
| Losing my job, losing a job by breadwinner | 32% – August 2008 |
| | 31% – December 2008 |
| Nothing. I'm not afraid of | 14% – August 2008 |
| | 15% – December 2008 |
| Paying the costs connected with treatment | 13% – August 2008 |
| | 13% – December 2008 |
| Impossibility of paying the mortgage or paying the rent | 12% – August 2008 |
| | 10% – December 2008 |
| Resignation from a luxury, e.g. holiday | 11% – August 2008 |
| | 15% – December 2008 |
| Impossibility of buying enough amount of food for my family | 8% – August 2008 |
| | 8% – December 2008 |

³ The research carried out on respondents 18-64 years old. Their amount was N=1000 (August 2008), N=979 (December 2008). The research was carried out on the phone and it was computer-aided. (CATI – Computer Assisted Telephone Interview) 11-27 August 2008 and 1-17 December 2008

All the research was published on www.egospodarka.pl – „Economic crisis in the opinion of Poles”

| | |
|--|--------------------|
| The lost of costs connected with the investments | 5% – August 2008 |
| | 4% – December 2008 |
| Impossibility of paying the a pension contribution | 3% – August 2008 |
| | 3% – December 2008 |

| | |
|--|---------------------|
| Do you agree with following statement: Economic matters are not interesting for me and I do not pay attention to them | |
| I agree | 43% – August 2008 |
| | 37% – December 2008 |
| I don't agree | 51% – August 2008 |
| | 61% – December 2008 |
| I don't know | 6% – August 2008 |
| | 2% – December 2008 |

| | |
|---|---------------------|
| I regularly follow the situation on the Stock Exchange | |
| I agree | 12% – August 2008 |
| | 17% – December 2008 |
| I don't agree | 85% – August 2008 |
| | 82% – December 2008 |
| I don't know | 3% – August 2008 |
| | 1% – December 2008 |

Source: the research published on www.gospodarka.pl in the article: „Economic crisis in the eyes of Poles”.

The findings show that in August 2008 42% of respondents thought that economy is not in the best condition and its functioning goes in the wrong direction. December 2008 brought growth in negative feelings with reference to economy up to 56%. The society he had negative attitudes and didn't believe in an upturn in the economy. The research show that percentage of respondents fell in that time by 8 percentage points.

Poles perceive economic matters with big involvement. Respondents point to the fact that much more attention is paid to economic matters (rise by 10% between studied months – August 51%, December 61%) and they also pay more attention to Stock Exchange quotations (12% in August and 17% in December).

In the time of crisis, the society did not limit spending on shopping. One may observe higher percentage of people who always find a way to buy things, which make them feel better (from 36% in August to 42% in December).

Presented research has shown that the crisis did not cause new fear among respondents. In both studied months in August 2008 and December 2008, $\frac{1}{3}$ was afraid of losing job by the only breadwinner. Respondents were anxious about impossibility of covering costs connected with treatment or paying in-

stalment of mortgage. Other people – in August 15% and in December 14% were of the opinion that they have no fear connected with economic situation. Polish citizens did not start to control price of food. December 2008 brought a change in saving. This is a tendency towards limiting the savings. People save less and seldom invest money.

The influence of crisis on business activity

In Polish economic situation appear many different research concerning not only the situation of the sectors of the economy in the time the crisis but also the efficiency of management in difficult conditions. Special attention is paid to the research carried by Deloitte Poland, concerning economical situation in big enterprise in 2009⁴.

According to the information included in this research, in Poland there are 3,400 big enterprises. Worth mentioning is the fact that, in accordance with the act 106 about the liberties of business activity, to this category belong companies, which in at least one of two of tax years⁵:

- Hired less than 250 employees
- Has attained the net sum in income from the sell of goods, products and services and financial operations not bigger than 50 billion Euro

With reference to the category of these companies, it is obvious that possessed economic reserves make it easier to prevent from the crisis. However, each business activity is connected with risk and uncertainty. In the time of the crisis, the success of intended venture seems to acquire significance.

The research shows that over 75% of big companies thinks that the crisis will have a negative influence on their business activity. As can be seen, the spectra of the crisis makes directors think creatively⁶. Their decisions must be

⁴ The article: *Kondycja dużych firm w Polsce w czasie kryzysu* published on: www.deloitte.com 03.04.2009 containing the research: „Monitoring kondycji sektora dużych przedsiębiorstw 2009”, Autor E. Rzeczowska Deloitte Polska is one of the leading advisory companies in country, serving professional service in 5 sectors: z wiodących firm doradczych w kraju, świadcząca usługi profesjonalne w pięciu głównych obszarach: audit, tax consultancy, consulting, market management and financial consultancy.

⁵ A bill about economic freedom from 2nd July 2004. (Dz.U. nr 173, poz.1807).

⁶ The research „Monitoring kondycji sektora dużych przedsiębiorstw 2009” was carried out by Polish Confederation of Private Employers Lewiatan in cooperation with Deloitte and carried out by CBOS. A random sample of 251 private and civil companies were interviewed from 20.01 to 6.03.2009 r. The sample is representative also because of the sector (private-civil firm) and because of the section PKD in main 7 sectors of

carefully weighed and accurate in order not to cause big harm to economic unit. Over $\frac{1}{3}$ of studied units suppose that in the time of the crisis will have to reduce production and sale in Poland. Others think that it is possible also on foreign markets. When it comes to employment, this is connected with uncertainty. 28% of big companies have decided about dismissals, and following 27% is ready to take this decision any minute, if things go wrong.

In the given information one can see also positive things. Economic situation does not incline entrepreneurs to pessimism. The units try to identify risk correctly and nowadays have taken many solution which would help to survive in the time of the crisis. Some try to see something positive in the crisis, which is strengthening their position in the market. $\frac{1}{4}$ of all respondents try not to see the crisis as the phenomenon, which would have negative effects on their business activity. $\frac{3}{4}$ of businessmen think opposite.

Studied companies assume, that they will have to limit production and sale on Polish market, and over 20 of business units will be made to limit production and sale on foreign markets. In the company policy, there are plans to enfeeble a negative influence of the crisis. This may be done through the restriction of spending on promotion and advertisement. Later, it is planned to restrict employment and investment. Although the crisis 60% of big companies plan investments in the years 2009-2010. The investment process will create favourable conditions for creating economic situation considered with new jobs, production growth and consumption. Some firms connected with industrial processing are worried about the problems that may occur as the result of insufficient demand. Other firms, which represent transport sector, stock economy and communications point their action to restricting the investment. It is worth mentioning that private companies are more worried about the crisis than civil companies. This is the result of the fact that civil companies, in case of any problems, may count on help and support from public money.

The crisis has shown that respondents are of the opinion that higher risk is the oscillation of rate of zloty towards euro, lack of payment and enfeebling of demand on Polish market. More companies point to this risk now than in it he time of „normal” business activity.

21,2% of the companies are afraid of limitation to the access to outer fund sources, because this reduces the feeling of financial stability. Companies are of the opinion that the most dangerous may be the lack of payment. Firms taking actions in south-west and north-east region show their fear, which is connected with disturbance in finance flow.

According to big companies, the monetary risk has grown. The amplitude of oscillation of the rate of zloty towards euro is substantial and companies con-

economy. This is the first such a huge - because containing 605 variables – research of the sec tors of bog companies in Poland.

nected with trade activity and energy production are worried of this unprofitable tendency. The cause of this fact is the uncertainty which is the result of the contracts concerning monetary options. These tools, in the case of appearance of depreciation of currency and appreciation of currency may cause financial loss for companies.

The answers given in this research show that the problem connected with the enfeebling of the demand. When it comes to terms of access to foreign finance, trade and energy companies are afraid of the loss of this source of gaining money. In trade, this is consequence of huge demand for working capital and permanent access to short-term credits. Power industry connects these fears with previously intended investments, which are very capital-intensive. Companies acting in east region are mostly afraid of restrictions in the access to credits.

In this hard economic time, 90% of companies have invested with the future though about the growth of sale. These actions were to improve the quality of products and services and to reduce costs. Through these solutions, an economic advantage on the market was to grow.

A notable problem in big companies is keeping the current level of employment. 27% studied units do not know if they will manage to keep employment. About 30% of companies have already decided about dismissals. The others think that will not dismiss current employees.

This research show the risk of the crisis in big companies, but they are not afraid of their own position on the market. Those, who in the crisis find a chance for development, mostly have plans and occasion for merger and to taking over.

According to this research, the situation of big companies is not as hard as they would expect. In this situation it is noticeable that the units try to be cautious in taking decisions and trust their experience. Possessed reserves let them feel safe. This attitude may lead to limiting a negative influence of the crisis on most of Polish economy.

In the present crisis and its connection with business activity, it is worth mentioning about some press reports. First of them is presented in the article „Asseco Poland – great results”⁷. The scope of the activity of this company is creating software for financial institutions. With complete certainty one can say that it is a „computer giant” in Central-East Europe. It did not sense the economic slowing down which can be observed in the financial results gained by this company. Market analysts have predicted that in the first quarter of 2009, the profit will shape at the level of 63,5 billion zlotys. Meanwhile, the profit have exceeded this level and attained about 75 billion zloty. Similar growth tendencies are presented in the company „Makarony Polskie”. Period from January

⁷ The article published on: www.strefabiznesu.pl.

to March 2009 and brought 0,52 billions of profit, towards almost 1,5 billion of the loss for the previous year.

Despite profitable data, with the reference to some companies, there still are symptoms about a negative influence of the crisis. The analysis of Polish bank sector in the first quarter of 2009 has shown that the profit of banks was at about half higher than in the same period in 2008⁸.

It might be useful to mention that this result is the consequence of two occurrences:

- Higher finance costs
- Higher reserves emerging from worse financial condition of bank clients

Above situation may soon change for better, because, as says a last year's Nobel prize winner prof. Paul Krugman, recession in economy may end in the summer. However, for higher growth one has to ways even longer⁹.

Central Statistical Office has published in second half of May 2009 data about remunerations and employment. According to the given information employees earn nominally more than they did a year ago. Average remuneration in the sector of companies in April 2009 amounted to 3.294,76 zlotys and was at 4,8% higher than a year ago. However, the employment rate in companies noticeably falls¹⁰.

From economic point of view, a good barometer of economic situation are income taxes. This subject matter should be examined from the side of indirect taxes and direct taxes. Below, there will be presented incomes from:

- Person Income Tax
- Corporate Income Tax
- Goods and Services Tax

which have been shaping in Podkarpacie since 01.01.2008 to 30.03.2009. This data in some way presents situation in economy at this time. It is worth mentioning, that the situation is quite specific, because the turn of 2008 and 2009 has brought noticeable growth in incomes to the Budget.

⁸ E. Więclaw, *Banki liczą na większe zyski*, Rzeczpospolita z 20.05.2009 r., „Ekonomia & rynek”, p. B9.

⁹ A. Pandrejewska, *Place rosną coraz wolniej*, Rzeczpospolita z 20.05.2009 r., „Ekonomia & rynek”, p. B2.

¹⁰ A. Pandrejewska, *Place rosną coraz wolniej*, Rzeczpospolita z 20.05.2009 r., „Ekonomia & rynek”, p. B2.

Table 1. Incomes from Corporate Income Tax (CIT) in the region of Podkarpacie since January 2008 to March 2009.

| Period | Incomes from tax in PLN |
|-------------|-------------------------|
| I.2008 | 3.769.458,31 |
| I-II.2008 | 40.315.041,50 |
| I-III.2008 | 118.709.179,38 |
| I-IV.2008 | 194.831.379,15 |
| I-V.2008 | 224.530.996,29 |
| I-VI.2008 | 247.401.455,62 |
| I-VII.2008 | 285.251.526,62 |
| I-VIII.2008 | 326.586.057,20 |
| I-IX.2008 | 367.244.301,54 |
| I-X.2008 | 405.872.125,71 |
| I-XI.2008 | 449.318.380,81 |
| I-XII.2008 | 500.038.149,26 |
| I.2009 | 3.151.551,60 |
| I-II.2009 | 28.341.083,50 |
| I-III.2009 | 179.168.994,81 |

Source: Data given by Director of Treasury Office in Rzeszów.

Table 2. Incomes from Person Income Tax (PIT) in the region of Podkarpacie Since January 2008 to March 2009.

| Period | Incomes from tax in PLN |
|-------------|-------------------------|
| I.2008 | 129.307.594,03 |
| I-II.2008 | 228.956.305,88 |
| I-III.2008 | 311.255.307,79 |
| I-IV.2008 | 501.008.464,67 |
| I-V.2008 | 641.312.072,30 |
| I-VI.2008 | 734.209.756,60 |
| I-VII.2008 | 872.653.892,01 |
| I-VIII.2008 | 1.062.019.483,57 |
| I-IX.2008 | 1.255.794.992,50 |
| I-X.2008 | 1.451.921.499,80 |
| I-XI.2008 | 1.661.103.065,43 |
| I-XII.2008 | 1.892.412.132,61 |
| I.2009 | 160.783.956,82 |
| I-II.2009 | 268.906.028,20 |
| I-III.2009 | 350.356.177,58 |

Source: Data given by Director of Treasury Office in Rzeszów.

Table 3. Incomes from Goods and Service Tax (VAT) in the region of Podkarpacie since January 2008 to March 2009.

| Period | Incomes from tax in PLN |
|-------------|-------------------------|
| I.2008 | 169.899.474,63 |
| I-II.2008 | 301.984.224,03 |
| I-III.2008 | 372.346.253,19 |
| I-IV.2008 | 464.711.987,11 |
| I-V.2008 | 530.454.348,52 |
| I-VI.2008 | 587.911.510,54 |
| I-VII.2008 | 716.052.925,76 |
| I-VIII.2008 | 811.799.945,86 |
| I-IX.2008 | 896.494.289,40 |
| I-X.2008 | 1.007.213.554,75 |
| I-XI.2008 | 1.143.514.755,54 |
| I-XII.2008 | 1.227.109.788,93 |
| I.2009 | 225.750.034,73 |
| I-II.2009 | 313.814.517,20 |
| I-III.2009 | 359.204.248,81 |

Source: Data given by Director of Treasury Office in Rzeszów.

Table 4. Accumulated worth of tax Incomem in the region of Podkarpacie since September 2008 to March 2009.

| Period | Total Incomem from tax in PLN |
|----------|-------------------------------|
| IX.2008 | 319.128.096,81 |
| X.2008 | 345.473.596,82 |
| XI.2008 | 388.928.991,52 |
| XII.2008 | 365.623.869,02 |
| I.2009 | 389.685.543,15 |
| II.2009 | 221.466.085,75 |
| III.2009 | 278.267.792,30 |

Source: Self calculation on the basis of data from the Treasury Office in Rzeszów.

According to given data, the dynamics of tax incomes has been growing although a huge intensity of the crisis since September 2008. This kind of event should be attributed to good macroeconomic situation in the region of Podkarpacie. The incomes of business units as well as private persons has not been restricted by the crisis. It is interesting why this happened, since the economy, also in Poland did not show revival. Incomes from income taxes according to the fixed rate may also be higher, because low percentage of fiscal charge will induce tax units not to hide their income. In the process, shadow economy will not enlarge.

The previous research has shown that society has not limited spending in the time of the crisis. If the level of their shopping has been kept, so the incomes to the Budget from the indirect taxes will not get worse. The data about the incomes from the Goods and Service Tax shows, that the best time was January, February, October and November 2008 and January 2009, where the sum of incomes exceeded 100 billion zlotys and has reached in last month 136 billion zlotys. Other periods characterized in incomes from 57 billion to 95 billion.

Summing up, tax data in some way help to understand an economic situation. In presented period it can be observed that there is no dramatic reduction in income taxes, which proves good economic situation. Weaken companies in the face of crisis will have problems for sure. There will be problems with financial flow and sometimes management will have to introduce new restructuring programme so as to lead out the company of the woods. It is worth pointing out that Polish companies, which are mostly endangered by the crisis and connected with it negative effects, are the companies connected with abroad financially and by trade exchange. The chain joining these units with other countries sometimes causes "a domino effect". If anything bad happens within foreign entrepreneurs there is an instant reaction within domestic companies.

Conclusions

The whole of present economic situation should be deemed as good compared to other countries. This emerges among others from the data provided by specialized research units. Polish companies have suffered the crisis but in some units it was almost or unnoticeable at all. It should be underlined that economy of our country has observed economic growth and it was surprising for such a young market economy. Arising in economy problem in the time of the crisis was deepening deficit in the in the area of the rate, which says that financial deficit cannot be higher than 0,3% PKB. In June 2009 the media has reported that according to the calculation of Central Statistical Office it has reached the level of 0,6% PKB. This unfortunately worsens Polish situation among other European countries. When it concerns entrepreneurs, most of them have defended against the crisis and, according to the height of tax incomes, it should be concluded that the situation will not get worse.

Literature

Pandrejewska A., *Place rosna coraz wolniej*, Rzeczpospolita z 20.05.2009 r.

Piech K., *Amerykański kryzys*, Gazeta Bankowa nr 35 (983) 27th August – 2nd September 2007,

Więclaw E., *Banki liczą na większe zyski*, Rzeczpospolita z 20.05.2009 r.

Internet pages:

www.gospodarka.pl in the article: „Economic crisis in the eyes of Poles”

www.strefabiznesu.pl in the article: „Asseco Poland – great results”

www.deloitte.com in the article: *Kondycja dużych firm w Polsce w czasie kryzysu* containing the research: „Monitoring kondycji sektora dużych przedsiębiorstw 2009”, E. Rzczkowska.

G7 bez nowych pomysłów, Rzeczpospolita, 16.02.2009.

A bill about economic freedom from 2nd July 2004. (Dz.U. nr 173, poz.1807).

Streszczenie

SYTUACJA GOSPODARCZA PRZEDSIĘBIORSTW PODCZAS KRYZYSU 2008-2009

Artykuł został poświęcony sytuacji przedsiębiorstw, które zetknęły się z kryzysem gospodarczym na przełomie 2008/2009 roku. Dla jednych czas ten stworzył możliwości dla umocnienia swojej pozycji na rynku, dla innych zaś stał się sytuacją nie do wyjścia. Kryzys spowodował przede wszystkim zatory płatnicze i inne kłopoty z płatnościami. Przeprowadzone badania uwidaczniają, iż firmy ratując się przed kryzysem ograniczają produkcję, a także zwalniają pracowników. Jednakże realia kryzysu nie skłaniają przedsiębiorców tylko do pesymizmu. Jednostki starają się właściwie identyfikować ryzyko i podejmować konkretne działania w celu utrzymania się na rynku. Dobrymi informacjami w dobie kryzysu są stale powiększające się wpływy podatkowe, które zostały zaobserwowane w województwie podkarpackim szczególnie na przełomie roku 2008/2009. Ogół sytuacji gospodarczej w Polsce w dobie kryzysu należy uznać za dobry na tle innych krajów europejskich. Przemawia również za tym osiągnięte dodatnie tempo wzrostu gospodarczego.

INFLUENCE OF GLOBAL ECONOMIC CRISIS ON OPERATION OF SPECIAL ECONOMIC ZONES IN POLAND

Jerzy KITOWSKI

University of Rzeszów

The balance of achievements in the special economic zones

The global economic crisis has influenced in a visible way on the dynamism of the number of granted licences for economic performance in the special zones, and on the amounts of investment expenditures. It is also possible to observe an alarming dynamism of bankruptcies among companies manufacturing for car industry, cases of several-week-lasting halting of production belts in car assembling plants, redundancy dismissals, and substantial reduction of production in companies of this branch.

Until 30 May 2004 the total area of the special economic zones could not exceed the area specified as of 31 December 2000, i.e. **6,325 ha**, since 31 May 2004 there was a possibility to increase the total area of the zones up to **8,000 ha**, with a reservation that such an increase could be appropriated exclusively for realization of large investments, with expenditures of at least €40m, or creating at least 500 new jobs, whereas since 30 September 2006 the area of the special economic zones could be increased up to **12,000 ha**. The statute of 30 May 2008 on amendment to the statute on special economic zones¹, in force since 4 August, increased the maximum area of the zones in Poland up to **20,000 ha**.

A potential **barrier for investment influx** to the special economic zones was an erroneous specification of **the time-limit for their operation**. Initially the zones were established for **20 years** (hence, for example, the Mielecka Zone until 2015), and the Krakowska Zone, as a technological park, for **12 years** (until 2009). At present the time-limits have been corrected, the special economic zones are to operate until **31 December 2020**.

As of 31 December 2008 **56.7b zł** were invested in the special economic zones (constituting an almost 2.9-time increase in relation to 2004), and 210,500 jobs were created (or maintained) (constituting respectively a 2.7-time increase). At present (as of 31 May 2009) the zones occupy the area of **12,428.41 ha**.

¹ Journal of Law – U., No. 118, item 746.

In individual zones, the **multiplier effect of employment** occurs, consisting in generating, as a result of primary employment in the zone, a growth of secondary employment in regional entities, connected by co-operation links with the companies operating in the zone.

An important **barrier** to investment attractiveness of the special economic zones in Poland is a low level of **expenditures on infrastructure**. Such expenditures, calculated per 1 ha of the zone area, amount only to less than **0.2m zł**. The binding criteria for operation assessment of companies managing the zones (the level of gained profit) **do not encourage** these companies to invest in infrastructure.

Spatial structure of special economic zones

A **spontaneous process** of shaping the boundaries of the special economic zones has led to many paradoxical situations, constituting an important **barrier** for management efficiency. As of the end of June 2009 subzones of the special economic zones were located in 128 towns and 162 communes.

Within the boundaries of two provinces there are subzones belonging to **five economic zones**: within the **Mazowieckie Province** (in total 411.65 ha): to the Łódzka Zone, the Starachowicka Zone, the Suwalska Zone, the Tarnobrzaska Zone, and the Warmińsko-Mazurska Zone, and within the **Wielkopolskie Province** (438.57 ha): to the Kamiennogórska Zone, the Kostrzyńsko-Słubicka Zone, the Łódzka Zone, the Słupska Zone, and the Wałbrzyska Zone.

Another province has subzones belonging to **four** special economic zones: the **Dolnośląskie Province** (to the Kamiennogórska Zone, the Legnicka Zone, the Tarnobrzaska Zone, and the Wałbrzyska Zone). To compare, the total area of subzones in the Opolskie Province (508.57 ha) is greater than the area of four special economic zones: the Kamiennogórska Zone (338.7 ha), the Suwalska Zone (342.77 ha), the Słupska Zone (401.09 ha) and the Legnicka Zone (457.49 ha).

- Since 2001 in Gorlice there has been located a subzone of the Mielecka Zone (21.1 ha), and since 2009 also a subzone of the Krakowska special economic zone (12.8 ha).
- There have also been two subzones in the commune of Kobierzyce (of the Tarnobrzaska Zone, since 2005, 410.69 ha and of the Wałbrzyska Zone, since 2008, 196.48 ha).
- In ordinances by the Ministers' Council (and drafts of them) there are, unfortunately, quite often some **substantive errors** concerning **the areas of individual economic zones** (and their subzones respectively), as well as **spelling mistakes in names of administrative units**, where such zones were located.

- The ordinance of the Ministers' Council of 9 September 1997 concerning establishing the special economic zone in Kamienna Góra [Rozporządzenie Rady Ministrów z dnia 9 września 1997 r. w sprawie ustanowienia specjalnej strefy ekonomicznej w Kamiennej Górze] (Journal of Law – Dz. U., No. 135, item 903) gives the area of the zone **234** ha (§ 1.1, sec. 2), whereas in the annex to the said ordinance The specific description of the boundaries and the area of the Kamiennogórska Special Economic Zone [Szczegółowy opis granic i terenu Kamiennogórskiej Specjalnej Strefy Ekonomicznej] the area of the zone was stated as **274.67** ha (the difference is as big as **40.67** ha).
- In the years 2006-2009, as the result of new geodesic measurements, **the areas of eight special economic zones were corrected (twice in case of the Krakowska Zone).**
- In 2006, due to the said reason, the area of the Łódzka Zone was reduced by **0.0054** ha, whereas the area of the Słupska Zone (the area of Redzikowo) was increased by **0.54** ha.
- In the following year two corrections were made: the area of the Starachowicka Zone was increased by **0.0116** ha and the area of the Katowicka Zone was reduced by **3.2791** ha.
- In 2008 the areas of six subzones of the Krakowska Zone were corrected (*in plus*) by **0.3307** ha, whereas due to a correction of the subzone in Legnica the area of the Legnicka Zone was reduced by **0.3109** ha.
- In 2009 new geodesic measurements showed that the real areas of the Kamiennogórska Zone and the Mielecka Zone are larger by **1.1388** ha and **0.1527** ha respectively. It was also found out that the area of the Krakowska Zone is smaller by **0.5032** ha. To compare, at present **22 complexes** of the special economic zones have areas not exceeding **0.5** ha.
- Another mistake, of the described type, can be noticed in the current drafts of ordinances by the Ministers' Council concerning the Kamiennogórska Special Economic Zone and the Mielecka Special Economic Zone. In both documents the area of the Starachowicka Zone was stated erroneously (**580.4091** ha, instead of **580.4477** ha).
- It is a blameworthy manner to pass legal acts containing contents that are already outdated at the moment when such acts come into force (as a rule after 14 days since their promulgation). For example, the development plan for the Kostrzyńsko-Słubicka Zone from 23 August 2005 was already **outdated** exactly a week later.
- We should appreciate, however, the successful **attempt to unify the terminology** of the subzones and complexes of the special economic zones, introduced in December 2008, as in this respect there had been a very rare lack of consequences in terminology. For example, in the Katowicka Zone and the Wałbrzyska Zone the **subzones** were divided into **areas (obszary)**, whereas in the Łódzka Zone the **subzones** were divided into **complexes**

(*kompleksy*), the Legnicka Zone, the Mazowiecka Zone, the Starachowicka Zone and the Suwalska Zone were divided into **areas** (*obszary*), and the Zone of Tczew and the Mielecka Zone – into **terrains** (*tereny*). The Słupska Zone was divided into **complexes** (*kompleksy*), and in the Warmińsko-Mazurska Zone the **subzones** (without the formal use of that category) **were only called localities** (*miejsowości*).

In the examined period of time 93 corrections to the boundaries and areas of the special zones were made, including **16** cases of corrections not exceeding +/- **1 ha**. The greatest (over 200 ha) increases in areas took place in: the Wałbrzyska Zone (483.34 ha in 2007), the Pomorska Zone (377.39 ha in 2007), the Tarnobrzaska Zone (282 ha in 2005), the Łódzka Zone (254.11 ha in 2009 and 249.35 ha in 2007), and the Starachowicka Zone (236.58 ha in 2007).

There were also 20 other changes to the areas of the special economic zones, exceeding **100 ha**.

In the Kostrzyńsko-Słubicka Zone within one year (2005) there were as many as 4 changes to the areas, including one in October only after two weeks.

In 2008 there were 12 changes (in 11 zones, except the Kamiennogórska Zone, the Mielecka Zone, and the Warmińsko-Mazurska Zone) to the areas of the special economic zones, including two changes in the Katowicka Zone (in total an increase by 244.54 ha).

Until the end of May 2009 there were next changes to the areas of 6 zones (in total an increase by 583.30 ha): the Łódzka Zone (+ 254.11 ha), the Krakowska Zone (+ 112.16 ha), the Wałbrzyska Zone (+ 106.84 ha), the Kostrzyńsko-Słubicka Zone (+ 71.95 ha), the Warmińsko-Mazurska Zone (+ 38.56 ha), and the Starachowicka Zone (– 0.31 ha).

The research leads to a paradoxical conclusion that it is **not the special economic zones that attract foreign investments**, but on the contrary – it is **foreign investments that determine location of economic zones**. This is evidenced by a tendency, observed for three years, to establish subzones of the special economic zones in cities of the **lowest maximal intensity of public aid** in Poland: in Warsaw and Poznań, as well as in Krakow, Wrocław, and Gdańsk.

As examples of **missed locations** (quite apart from liquidation in 2001 of the Częstochowska Zone and Mazowiecka Zone) of subzones of the special economic zones may serve, unattractive for investors, areas belonging to:

- the town of Chełm (31.99 ha), which was abandoned by the Mielecka Zone in 2004,
- the commune of Brody, which was left by the Starachowicka Zone in 2005. A similar fate befell in 2006 to the areas offered by the communes:
 - Of Polkowice (the Legnicka Zone),
 - Of Stąporków (9.89 ha in the Starachowicka Zone, which after a one-year break started to operate once again on the area already increased up to 34.14 ha),

- Of Baranów Sandomierski, of Grębów and of Majdan Królewski (the Tarnobrzaska Zone). In 2008 the same zone abandoned the subzone in Wojnicz (11.9 ha).
- A specific example of competition between individual economic zones is the case of the Special Economic Zone in Częstochowa (of the area of 144 ha), which was liquidated in 2001, while some areas of the city were included into the Katowicka Special Economic Zone in mid – 2000.
- In 2009 (until 30 April, or according to the planned assumptions) 6 complexes, which had not found investors) were excluded from the areas of the special economic zones. In the Kamiennogórska Zone that happened to 3 complexes of the total area of 30.1 ha (the subzones of Jawor, Nowogrodziec and Prusice), in the Starachowicka Zone – to one complex of the subzone of Ostrowiec Świętokrzyski (13.91 ha), and in the Wałbrzyska Zone – to 2 complexes of the total area of 44.6 ha (the subzones of Wałbrzych and Żarów).

An attempt to assess the influence of crisis conditions on operation of special economic zones

Table 1. Number of valid licences in the special economic zones in 2008 and in the first quarter of 2009.

| Item | Zones | As of | | | | | |
|------|----------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| | | 1.01 | 31.03 | 30.06 | 30.09 | 31.12 | 31.03 |
| | | 2008 | | | | | 2009 |
| 1. | Kamiennogórska | 39 | 41 | 41 | 42 | 44 | 41 |
| 2 | Katowicka | 170 | 174 | 178 | 185 | 186 | 186 |
| 3 | Kostrzyńsko-Słubicka | 101 | 104 | 107 | 109 | 110 | 105 |
| 4 | Krakowska | 38 | 39 | 44 | 45 | 47 | 47 |
| 5 | Legnicka | 53 | 56 | 56 | 56 | 54 | 55 |
| 6 | Łódzka | 91 | 96 | 98 | 105 | 109 | 110 |
| 7 | Mielecka | 88 | 92 | 96 | 102 | 106 | 109 |
| 8 | Pomorska | 65 | 65 | 63 | 58 | 62 | 64 |
| 9 | Słupska | 41 | 42 | 42 | 45 | 51 | 49 |
| 10 | Starachowicka | 67 | 71 | 77 | 78 | 77 | 76 |
| 11 | Suwalska | 52 | 53 | 54 | 52 | 52 | 50 |
| 12 | Tarnobrzaska | 102 | 107 | 109 | 112 | 112 | 113 |
| 13 | Wałbrzyska | 100 | 104 | 116 | 129 | 131 | 133 |
| 14 | Warmińsko-Mazurska | 52 | 52 | 51 | 55 | 55 | 56 |
| | IN TOTAL | 1059 | 1 096 | 1 132 | 1 173 | 1 196 | 1 194 |

a) Increasingly.

Source: own study.

Table 2. Changes to numbers of valid licences in the special economic zones in the fourth quarter of 2008 and in the first quarter of 2009.

| Item | Zones | Change in: | | In total |
|------|----------------------|-------------|-------------|-------------|
| | | 4th quarter | 1st quarter | |
| | | 2008 | 2009 | |
| 1. | Mielecka | + 4 | + 3 | + 7 |
| 2. | Pomorska | + 4 | + 2 | + 6 |
| 3. | Łódzka | + 4 | + 1 | + 5 |
| 4. | Słupska | + 6 | - 2 | + 4 |
| 5. | Wałbrzyska | + 2 | + 2 | + 4 |
| 6. | Krakowska | + 2 | 0 | + 2 |
| 7. | Katowicka | + 1 | 0 | + 1 |
| 8. | Tarnobrzaska | 0 | + 1 | + 1 |
| 9. | Warmińsko-Mazurska | 0 | + 1 | + 1 |
| 10. | Kamiennogórska | + 2 | - 3 | - 1 |
| 11. | Legnicka | - 2 | + 1 | - 1 |
| 12. | Starachowicka | - 1 | - 1 | - 2 |
| 13. | Suwalska | 0 | - 2 | - 2 |
| 14. | Kostrzyńsko-Słubicka | + 1 | - 5 | - 4 |
| | IN TOTAL | + 23 | - 2 | + 21 |

Source: own study.

During the analysis we can notice that the influence of crisis conditions on the number of valid licences for economic performance in the special zones is featured by a specific „moment of inertia”. In the last quarter of 2008 the number still increased by 23, whereas in the next quarter it fell by 2 (cf. table 1 and 2). In the first examined period the said number fell only in two zones: the Legnicka Zone (by 2) and the Starachowicka Zone (by 1), whereas in the next period such a fall was already noted in five zones: the Kostrzyńsko-Słubicka Zone (by 5), the Kamiennogórska Zone (by 3), the Słupska Zone and the Suwalska Zone (by 2) and in the Starachowicka Zone (by 1).

Table 3. Change to numbers of valid licences in the special economic zones in the first quarter of the years 2007-2009.

| Item | Zones | As of | | |
|------|----------------------|-------------|-------------|------------|
| | | 2007 | 2008 | 2009 |
| | | 31 March | | |
| 1. | Kamiennogórska | + 2 | + 2 | - 3 |
| 2 | Katowicka | 0 | + 4 | 0 |
| 3 | Kostrzyńsko-Słubicka | - 3 | + 3 | - 5 |
| 4 | Krakowska | - 2 | + 1 | 0 |
| 5 | Legnicka | + 1 | + 3 | + 1 |
| 6 | Łódzka | 0 | + 5 | + 1 |
| 7 | Mielecka | + 1 | + 4 | + 3 |
| 8 | Pomorska | + 5 | 0 | + 2 |
| 9 | Słupska | - 1 | + 1 | - 2 |
| 10 | Starachowicka | + 1 | + 4 | - 1 |
| 11 | Suwalska | - 3 | + 1 | - 2 |
| 12 | Tarnobrzaska | + 2 | + 5 | + 1 |
| 13 | Wałbrzyska | + 7 | + 4 | + 2 |
| 14 | Warmińsko-Mazurska | 0 | 0 | + 1 |
| | IN TOTAL | + 10 | + 37 | - 2 |

a) Increasingly.

Source: own study.

In the first quarter of 2009 the number of granted licences fell by 2, whereas in the comparable period of the previous year the said number grew by 37, and by 10 respectively in 2007 (table 3).

Table 4. Investment expenditures borne in the special economic zones in 2008 and in the first quarter of 2009 in millions of zlotys.

| Item | Zones | As of | | | | | |
|------|----------------------|----------|----------|----------|----------|----------|----------|
| | | 1.01 | 31.03 | 30.06 | 30.09 | 31.12 | 31.03 |
| | | 2008 | | | | | 2009 |
| 1. | Kamiennogórska | 1 216.0 | 1 236.9 | 1 279.6 | 1 308.8 | 1 332.9 | 1 359.6 |
| 2 | Katowicka | 11 760.1 | 12 381.8 | 12 806.3 | 13 311.3 | 13 843.7 | 14 526.4 |
| 3 | Kostrzyńsko-Słubicka | 2 450.4 | 2 700.4 | 2 953.1 | 2 961.3 | 3 125.1 | 2 986.5 |
| 4 | Krakowska | 1 025.7 | 1 032.7 | 1 075.7 | 1 166.8 | 1 243.1 | 1 298.3 |
| 5 | Legnicka | 3 625.7 | 3 689.2 | 3 781.2 | 3 862.2 | 4 024.0 | 4 096.4 |

| Item | Zones | As of | | | | | |
|------|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | 1.01 | 31.03 | 30.06 | 30.09 | 31.12 | 31.03 |
| | | 2008 | | | | | 2009 |
| 6 | Łódzka | 3 896.0 | 4 190.7 | 4 655.2 | 5 192.0 | 5 801.1 | 6 159.5 |
| 7 | Mielecka | 3 113.6 | 3 161.5 | 3 242.0 | 3 332.5 | 3 781.9 | 3 917.3 |
| 8 | Pomorska | 2 648.7 | 3 059.3 | 3 307.6 | 3 420.1 | 3 701.8 | 4 023.6 |
| 9 | Słupska | 615.8 | 617.3 | 639.5 | 689.0 | 728.3 | 727.0 |
| 10 | Starachowicka | 740.0 | 814.0 | 851.3 | 859.0 | 980.2 | 1 022.4 |
| 11 | Suwalska | 1 001.1 | 1 099.0 | 1 236.8 | 1 262.1 | 1 341.4 | 1 323.7 |
| 12 | Tarnobrzaska | 4 129.4 | 4 355.1 | 4 526.4 | 4 480.9 | 4 733.0 | 4 993.5 |
| 13 | Wałbrzyska | 7 855.2 | 8 346.6 | 8 692.0 | 8 999.3 | 9 626.7 | 9 901.7 |
| 14 | Warmińsko- -Mazurska | 2 007.6 | 2 122.8 | 2 159.6 | 2 340.8 | 2 442.5 | 2 532.8 |
| | IN TOTAL | 46 085.2 | 48 807.4 | 51 206.2 | 53 186.1 | 56 705.9 | 58 868.7 |

a) Increasingly.

Source: own study.

Table 5. Changes to investment expenditures borne in the special economic zones in the fourth quarter of 2008 and in the first quarter of 2009 in millions of zlotys.

| Item | Zones | Change in: | | In total |
|------|----------------------|------------------|------------------|------------------|
| | | 4th quarter | 1st quarter | |
| | | 2008 | 2009 | |
| 1. | Katowicka | + 532.4 | + 682.7 | + 1 215.1 |
| 2. | Łódzka | + 609.1 | + 358.4 | + 967.5 |
| 3. | Wałbrzyska | + 627.4 | + 27.5 | + 654.9 |
| 4. | Pomorska | + 281.7 | + 321.8 | + 603.5 |
| 5. | Mielecka | + 449.4 | + 135.4 | + 584.8 |
| 6. | Tarnobrzaska | + 252.1 | + 260.5 | + 512.6 |
| 7. | Legnicka | + 161.8 | + 72.4 | + 234.2 |
| 8. | Warmińsko-Mazurska | + 101.7 | + 90.3 | + 192.0 |
| 9. | Starachowicka | + 121.2 | + 42.2 | + 163.4 |
| 10. | Krakowska | + 76.3 | + 55.2 | + 131.5 |
| 11. | Suwalska | + 79.3 | - 17.7 | + 61.6 |
| 12. | Kamiennogórska | + 24.1 | + 26.7 | + 50.8 |
| 13. | Słupska | + 39.3 | - 1.3 | + 38.0 |
| 14. | Kostrzyńsko-Słubicka | +163.8 | - 138.6 | + 25.2 |
| | IN TOTAL | + 3 519.8 | + 2 162.8 | + 5 682.6 |

Source: own study.

In the first quarter of 2009 we can observe a much lower increase in investment expenditures in relation to the previous quarter, as lower as by 38.5%, and for the first time, a fall in investment expenditures in three zones: the Kostrzyńsko-Słubicka Zone, the Suwalska Zone and the Słupska Zone (in total by 157.6m zł – cf. table 4 and 5). Only in four zones expenditures grew in the described period: in the Katowicka Zone (by 150.3m zł), in the Pomorska Zone (by 40.1m zł), in the Tarnobrzaska Zone (by 8.4m zł), and in the Kamiennogórska (by 2.6m zł).

Table 6. Number of new jobs in the special economic zones in 2008 and in the first quarter of 2009.

| Item | Zones | As of | | | | | |
|------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | 1.01 | 31.03 | 30.06 | 30.09 | 31.12 | 31.03 |
| | | 2008 | | | | | 2009 |
| 1. | Kamiennogórska | 4 768 | 5 744 | 4 486 | 4 493 | 4 204 | 3 736 |
| 2 | Katowicka | 30 522 | 8 417 | 34 560 | 35 871 | 34 611 | 32 181 |
| 3 | Kostrzyńsko-Słubicka | 7 532 | 13 062 | 9 759 | 10 628 | 11 157 | 9 555 |
| 4 | Krakowska | 3 733 | 12 321 | 4 040 | 4 867 | 5 744 | 5 828 |
| 5 | Legnicka | 7 823 | 12 213 | 8 418 | 8 480 | 8 417 | 8 082 |
| 6 | Łódzka | 10 111 | 1 975 | 12 087 | 13 184 | 13 062 | 13 175 |
| 7 | Mielecka | 12 222 | 4 555 | 11 951 | 12 116 | 12 321 | 11 457 |
| 8 | Pomorska | 10 913 | 4 999 | 11 113 | 12 150 | 12 213 | 11 215 |
| 9 | Słupska | 1 987 | 16 039 | 2 025 | 2 039 | 1 975 | 1 827 |
| 10 | Starachowicka | 4 904 | 21 638 | 5 176 | 4 781 | 4 555 | 3 426 |
| 11 | Suwalska | 4 963 | 5 100 | 5 051 | 5 131 | 4 999 | 4 772 |
| 12 | Tarnobrzaska | 15 697 | 156 036 | 16 295 | 15 722 | 16 039 | 15 912 |
| 13 | Wałbrzyska | 20 164 | 20 960 | 22 036 | 22 454 | 21 638 | 19 392 |
| 14 | Warmińsko-Mazurska | 4 582 | 4 800 | 4 846 | 5 202 | 5 100 | 4 816 |
| | IN TOTAL | 139 921 | 147 097 | 151 843 | 157 118 | 156 036 | 145 374 |

Source: own study.

The number of new jobs increased in the special economic zones in 2008 by 11.5%, whereas one year before the increase was over 2.5 times higher and amounted to 29.2%. On the other hand in the first quarter of 2009 the number fell by 6.8% (table 6), which was influenced mainly by the situation in the Starachowicka Zone (a fall as high as by 24.8%), in the Kostrzyńsko-Słubicka Zone (by 14.4%), in the Wałbrzyska Zone (by 10.4%), and in the Katowicka Zone (by 7%).

Table 7. Changes to number of new jobs in the special economic zones in the fourth quarter of 2008 and in the first quarter of 2009.

| Item | Zones | Change in: | | In total |
|------|----------------------|----------------|-----------------|-----------------|
| | | 4th quarter | 1st quarter | |
| | | 2008 | 2009 | |
| 1. | Krakowska | 877 | + 84 | + 961 |
| 2. | Tarnobrzaska | 317 | - 127 | + 190 |
| 3. | Łódzka | - 122 | + 113 | - 9 |
| 4. | Słupska | - 64 | - 148 | - 212 |
| 5. | Suwalska | - 132 | - 227 | - 359 |
| 6. | Warmińsko-Mazurska | - 102 | - 284 | - 386 |
| 7. | Legnicka | - 63 | - 335 | - 398 |
| 8. | Mielecka | 205 | - 864 | - 659 |
| 9. | Kamiennogórska | - 289 | - 468 | - 757 |
| 10. | Pomorska | 63 | - 998 | - 935 |
| 11. | Kostrzyńsko-Słubicka | 529 | - 1 602 | - 1 073 |
| 12. | Starachowicka | - 226 | - 1 129 | - 1 355 |
| 13. | Wałbrzyska | - 816 | - 2 246 | - 3 062 |
| 14. | Katowicka | - 1 260 | - 2 430 | - 3 690 |
| | IN TOTAL | - 1 082 | - 10 662 | - 11 744 |

Source: own study.

In the fourth quarter of 2008 a fall in the number of created jobs was noted in 9 zones (including by 1260 in the Katowicka Zone), whereas in the next quarter in as many as in 12 zones (except the Krakowska Zone and the Łódzka Zone – table 7). In two special zones the fall exceeded 2000 (in the Katowicka Zone by 2 430 and in the Wałbrzyska Zone by 2 246), and in the next two it exceeded 1000 jobs (in the Kostrzyńsko-Słubicka Zone – 1602 and in the Starachowicka Zone – 1 129). During the 6 analysed months the numbers of new jobs in the Katowicka Zone and in the Wałbrzyska Zone were reduced by over 3000. To compare, the fall in the Katowicka Zone – 3690 is greater than the number of the created jobs in the Starachowicka Zone since the beginning of its existence (3426) and over twice greater than the number of the created jobs in the Słupska Zone (1 827), and similar to the number of new jobs in the Kamiennogórska Zone (3 736). Again, the fall by 10 662 is over twice higher than the number of new jobs in the Warmińsko-Mazurska Zone as of the end of 2008 (5 100), and the noted fall in the two analysed quarters by 11 744 is greater than the number of new jobs in the Mielecka Zone (as of March 2009 – 11 457).

Table 8. Number of maintained jobs in the special economic zones in 2008 and in the first quarter of 2009.

| Item | Zones | As of | | | | | |
|------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | 1.01 | 31.03 | 30.06 | 30.09 | 31.12 | 31.03 |
| | | 2008 | | | | | 2009 |
| 1. | Kamiennogórska | 265 | 265 | 265 | 265 | 265 | 266 |
| 2. | Katowicka | 4 763 | 6 506 | 6 506 | 6 506 | 7 981 | 8 105 |
| 3. | Kostrzyńsko-Słubicka | 5 359 | 5 349 | 5 340 | 5 282 | 5 289 | 5 288 |
| 4. | Krakowska | 1 833 | 1 856 | 1 837 | 1 955 | 1 955 | 1 955 |
| 5. | Legnicka | 281 | 281 | 295 | 283 | 281 | 281 |
| 6. | Łódzka | 4 645 | 6 117 | 5 924 | 6 172 | 5 921 | 5 802 |
| 7. | Mielecka | 882 | 880 | 876 | 3 503 | 3 503 | 3 503 |
| 8. | Pomorska | 6 580 | 5 438 | 6 213 | 6 154 | 5 332 | 5 293 |
| 9. | Słupska | 193 | 193 | 559 | 753 | 753 | 753 |
| 10. | Starachowicka | 2 066 | 2 096 | 2 124 | 2 088 | 3 475 | 3 376 |
| 11. | Suwalska | 133 | 133 | 133 | 133 | 133 | 133 |
| 12. | Tarnobrzeska | 3 102 | 4 122 | 4 149 | 6 506 | 6 499 | 6 383 |
| 13. | Wałbrzyska | 8 509 | 8 530 | 8 516 | 8 840 | 9 286 | 8 993 |
| 14. | Warmińsko-Mazurska | 3 833 | 3 833 | 4 846 | 3 833 | 3 833 | 4 818 |
| | IN TOTAL | 42 444 | 45 149 | 46 121 | 52 274 | 54 507 | 54 949 |

Source: own study.

The falling tendency in new jobs in the first quarter of 2009 is unexpectedly accompanied by a slightly growing tendency in the number of the maintained jobs (only by 0.8% – table 8).

Table 9. Changes to number of maintained jobs in the special economic zones in the fourth quarter of 2008 and in the first quarter of 2009.

| Item | Zones | Change in: | | In total |
|------|----------------------|-------------|-------------|----------|
| | | 4th quarter | 1st quarter | |
| | | 2008 | 2009 | |
| 1. | Katowicka | + 1 475 | + 124 | + 1 599 |
| 2. | Starachowicka | + 1 387 | - 99 | + 1 288 |
| 3. | Warmińsko-Mazurska | 0 | + 985 | + 985 |
| 4. | Wałbrzyska | + 446 | - 293 | + 153 |
| 5. | Kostrzyńsko-Słubicka | + 7 | - 1 | + 6 |
| 6. | Kamiennogórska | 0 | + 1 | + 1 |
| 7. | Krakowska | 0 | 0 | 0 |
| 8. | Mielecka | 0 | 0 | 0 |
| 9. | Słupska | 0 | 0 | 0 |
| 10. | Suwalska | 0 | 0 | 0 |
| 11. | Legnicka | - 2 | 0 | - 2 |

| Item | Zones | Change in: | | In total |
|------|-----------------|----------------|--------------|----------------|
| | | 4th quarter | 1st quarter | |
| | | 2008 | 2009 | |
| 12. | Tarnobrzaska | - 7 | - 116 | - 123 |
| 13. | Łódzka | - 251 | - 119 | - 370 |
| 14. | Pomorska | - 822 | - 39 | - 861 |
| | IN TOTAL | + 2 233 | + 442 | + 2 675 |

Source: own study.

In the last quarter of 2008 (table 9) the number of the maintained jobs fell in four zones: in the Pomorska Zone (by 822), in the Łódzka Zone (by 251) in the Tarnobrzaska Zone (by 7) and in the Legnicka Zone (only by 2). In six zones the number did not change. Whereas in the first quarter of 2009 the said number of the maintained jobs was reduced in six zones: in the Wałbrzyska Zone (by 293), in the Łódzka Zone (by 119), in the Tarnobrzaska Zone (by 116), in the Starachowicka Zone (by 99), in the Pomorska Zone (by 39), and in the Kostrzyńsko-Słubicka Zone (by 1). The increase in the number of the maintained jobs in the first quarter of 2009 is five times lower in comparison with the last quarter of 2008. In three zones the fall in the maintained jobs takes place in the two analysed quarters: in the Pomorska Zone (by 861), in the Łódzka Zone (by 370), and in the Tarnobrzaska Zone (by 123).

Planned changes to legal, economic and spatial conditions of operations of the special economic zones

It is forecast (table 10) that as the result of changes to the areas of the special economic zones, made in 2009 (and planned in case of the Pomorska Zone, as of 30 June), the number of jobs will grow by 22 651 (including by 7 487 in the Łódzka Zone), investment expenditures will amount to over 6b zł (including 22.1m zł in the Łódzka Zone), forecast public aid will amount to 3.2b zł (including 1.2b zł in the Łódzka Zone), and revenues to the State budget and to budgets of local government units will amount to 11.8b zł (including over 3.9b zł in the Łódzka Zone).

Table 10. Forecast results of changes to areas of the special economic zones, executed and planned until 30 June 2009.

| Zones | Employees | Investment expenditures | Forecast public aid | Forecast revenues to budgets ^a |
|-----------------------|---------------|-------------------------|---------------------|---|
| | | | | |
| Kamiennogórska | 569 | 182.93 | 85.31 | 294.35 |
| Kostryńsko-Słubicka | 1 875 | 352.00 | 180.2 | 999.92 |
| Krakowska | 3 245 | 494.55 | 302.12 | 1 557.35 |
| Łódzka | 7 487 | 2 062.00 | 1 192.04 | 3 940.68 |
| Mielecka | 2 470 | 661.09 | 369.95 | 1 466.51 |
| Pomorska ^b | 1 730 | 417.78 | 232.73 | 1 208.03 |
| Starachowicka | 20 | 100.00 | 50.00 | 317.03 |
| Wałbrzyska | 4 955 | 1 557.30 | 768.68 | 1 899.02 |
| Warmińsko-Mazurska | 300 | 180.88 | 41.84 | 86.88 |
| In total | 22 651 | 6 008.53 | 3 222.87 | 11 769.77 |

a) to the State budget and to budgets of local government units.

b) amounts planned in the draft of an ordinance by the Ministers' Council have been marked in italics.

Source: own study.

The Ministers' Council, having analysed **the results of the financial crisis** that also affected entrepreneurs performing in the special economic zones, prepared *The Bill on changes to statute on the special economic zones [Projekt ustawy o zmianie ustawy o specjalnych strefach ekonomicznych]* (version 3.1. of 8 June 2009). Important is the amendment to Art. 1 sec. 1 (Art. 5 sec. 1 of the statute on the special economic zones) that allows inclusion into the area of a zone of lands being the **property or perpetual usufruct of a capital company**, where up to 15% votes that can be cast during the general meeting or the meeting of shareholders are held by entities other than: the managing entity, the State Treasury, units of local government or communal union, without assessment whether such an area has met the criteria specified in the *Ordinance by the Ministers' Council of 10 December 2008 changing the ordinance on criteria whose meeting allows inclusion of some lands into a special economic zone [Rozporządzenie Rady Ministrów z dnia 10 grudnia 2008 r. zmieniające rozporządzenie w sprawie kryteriów, których spełnienie umożliwia objęcie niektórych gruntów specjalną strefą ekonomiczną]*. Reasons for purposefulness of the proposed changes seem convincing, as local government units and entities managing the zones establish purpose companies, e.g. agencies of regional development, clusters or industrial parks, where as a rule small shares are held by private legal persons or individuals. Thus such lands can be treated as **public lands**, as the overwhelming number of votes at the general meeting or the meeting of shareholders ensures that the managing entities of the special economic

zones or communes can control companies and foundations. The amending bill of the statute on special economic zones of 26 March 2009 (version 2.1) provided for a much higher – of 25% – majority of votes belonging to private legal persons or individuals.

The legislator is going to introduce an especially important change to Art. 12 of the statute on special economic zones. The purpose of the proposed amendment is to specify unequivocally that while calculating the amounts of public aid an entrepreneur may deduct a loss sustained during performance in the zone in the previous years, which should ensure obtaining true amounts of the aid. It should be noticed with surprise that so far Polish revenue offices have excluded such a possibility in their decisions, recognizing, quite unjustly, that settlement of losses by entrepreneurs performing in the zones constitutes an additional form of public aid for them. This controversial practice by tax agencies used to be conflicting with the regulations of the EC law, as a possibility to settle losses is not a specific privilege of an entrepreneur, but one of general elements of the tax system and it does not constitute a specific form of public aid². It should be added that an analogous solution was introduced in the statute of 2 October 2003 on amendments to the statute on special economic zones and some other statutes³, in relation to big entrepreneurs, holding licences issued until the end of 2000. The erroneous standpoint of tax institutions led to a paradoxical situation that entrepreneurs running performance in the special zones were, in respect to the said matter, in a less favourable situation than their competitors performing outside the zones, which was of course conflicting with the main assumptions of establishing the special economic zones.

On the other hand the proposed amendment to Art. 1 item 3 (Art. 16 of the statute on special economic zones) allows issuing a licence also in a situation when realization of a new investment by an entrepreneur operating in the zone **does not affect an employment increase**, but it allows for **maintaining** a specific number of the existing **jobs** and it repeals the requirement to consult the entity managing the zone in case of a change to, a withdrawal of or stating termination of the **licence** (since the necessity to consult the entity managing the zone much prolonged the time for application processing). This proposal concerns, however, only those entrepreneurs who on the date of the licence granting employed at least 150 employees (version 2.1. of 26 March 2009 of the amending bill of the statute on special economic zones did not provide for such a discipline). This solution concerns both the entrepreneurs who are already performing in the areas of the special zones, and those ones who seek such a li-

² Cf. item 13 of the Commission's announcement on application of public aid rules to means related to direct taxation of economic performance (Official Journal of EU of 10 Dec. 1998 No. c 384).

³ Journal of Law - Dz.U. No. 188, item 1840.

cence. The introduction of the employment level of 150 persons has been justified by the fact that hypothetical dismissal of such a number of employees may substantially affect the local labour market⁴.

Another proposed amendment to Art. 1 item 5 (Art. 19 of the statute on special economic zones), in connection with the crisis conditions of the economy, allows **reducing the employment level** by up to 25% of the base number in all licences, irrespective of the date of their issuance (so far reduction by 20% has been allowed, but only in relation to those entrepreneurs who obtained their licence after entering into force of the *Statute of 30 May 2008 on amendment to the statute on special economic zones [ustawa z dnia 30 maja 2008 r. o zmianie ustawy o specjalnych strefach ekonomicznych]*, not requiring to show circumstances independent of the entrepreneur. To compare, version 2.1. of 26 March 2009 of the said amending bill of the statute on special economic zones allowed reducing the employment level by up to 40%.

One should include to right (although assessed as very late) proposals of changes to the rules of operation of the special economic zones the draft of regulations included in Art. 4 of the described idea of amendments to the statute concerning a specific form of public aid in shape of the reduced price of land. This is the most favourable form of support for the budget, and in many cases the only relief that is allowed by law, that can be used by an investor while realizing a given enterprise. Pursuant to Art. 4 of the statute of 27 March 2003 on planning and spatial development⁵, in case of lack of local plan of spatial development specification of development ways and conditions of building-up the area takes place following a decision on conditions of the area building-up and development. The Agricultural Property Agency [Agencja Nieruchomości Rolnych] does not give permissions for free-of-charge transfer of land if there is no local plan of spatial development, and we should add that at present only over a dozen per cent of communes has such plans. In case when a strategic investor for a region is interested in a given area, and he conditions his investment on the land price, under the present legal conditions such investment cannot be realized, as the land price below the price level specified in the land official assessment and lack of possibility to transfer such lands to the zone manager practically block realization of the given investment.

In *The Development Concept of the Special Economic Zones [Koncepcja rozwoju specjalnych stref ekonomicznych]* prepared in the Ministry of Economy

⁴ Granting of public aid due to a new investment not generating new jobs complies with the Commission Regulation (EC) No 800/2008 of 6 August 2008 declaring certain categories of aid compatible with the common market in application of Articles 87 and 88 of the Treaty (General block exemption Regulation) – Official Journal of EU L 214 of 9 Aug. 2008, p. 3). In the described situation the entrepreneur may take advantage only due to qualified costs of the new investment.

⁵ Journal of Law – Dz.U. No. 80, item 717 with subsequent amendments.

it was assumed that on areas included to the special economic zones after 4 August 2008 issued licences for performance in the zone may concern investments meeting at least **one** of the five criteria:

- innovativeness,
- priority sectors,
- development support of clusters, industrial and technological parks,
- industrialization level,
- unemployment rate.

The innovativeness criterion, understood as application of new technological solutions, ensuring development and launching to the market of a new or basically improved product, should provide an increase in competitiveness of the Polish economy.

Investments included to the following sectors have been recognized as the **supraregional priority**: motor industry, electronic industry, aircraft industry, biotechnology (including microscale chemistry), industry manufacturing equipment serving for production of fuels and energy from renewable resources, production of fuels and energy from renewable resources, conventional production of energy with use of best available environment-friendly technologies, and modern services.

The industrialization level criterion is considered to be met if on areas included to the special economic zones investments meeting the following conditions are located:

- in a district (*powiat*), where the sold industrial production per capita (SIP) is smaller than **0.8** of the sold industrial production per capita in Poland (SIPP) but not greater than **0.6** of SIPP, an entrepreneur will take obligation to bear costs of qualified investments in the amount of at least **20m zł**.
- in a district, where SIP is smaller than **0.6** of SIPP but not greater than **0.3** of SIPP, an entrepreneur will take obligation to bear costs of qualified investments in the amount of at least **10m zł**.
- in a district, where SIP is smaller than **0.3** of SIPP, an entrepreneur will take obligation to bear costs of qualified investments in the amount of at least **5m zł**.

In case of private lands the above criterion is not applicable.

The unemployment rate criterion formulated in the described *Concept* was unfortunately modified (toughened) in the *ordinance by the Ministers' Council of 10 December 2008 on criteria whose meeting enables including some lands to the special economic zone [rozporządzenie Rady Ministrów z dnia 10 grudnia 2008 r. w sprawie kryteriów, których spełnienie umożliwia objęcie niektórych gruntów specjalną strefą ekonomiczną]*⁶, and then, almost directly after entering into force of those regulations, a new draft was prepared,

⁶ Journal of Law - Dz. U. No. 224, item 1477.

aiming at the radical appeasement of the discussed criterion. This is a reaction of the Ministers' Council to the observed deepening of the **economic recession**. In the **draft version of 11 February 2009 of the ordinance by the Ministers' Council changing the ordinance on criteria whose meeting allows inclusion of some lands into a special economic zone** (in relation to the above-quoted ordinance by the Ministers' Council of 10 December 2008 it is proposed to introduce the following changes:

It is considered that the condition referred to in Art. 5 sec. 3 item 1 of the statute on special economic zones has been **met**, if:

- in a district, where the **unemployment rate** equals or is smaller than **60%** of the national average rate, an entrepreneur will be obliged to create at least **250** jobs (previously it was **500**), or to bear costs of qualified investments in the amount of at least **170m zł** (previously **350m zł**).
- in a district, where the unemployment rate is higher than **60%** of the national average rate, but not higher than the national average rate, an entrepreneur will be obliged to create at least **130 (250)** jobs, or to bear costs of qualified investments in the amount of at least **80 (155)** m zł.
- in a district, where the unemployment rate is higher than the national average rate, but not higher than **130%**, an entrepreneur will be obliged to create at least **100 (200)** jobs, or to bear costs of qualified investments in the amount of at least **70 (138)** m zł.
- in a district, where the unemployment rate is higher than **130%** of the national average rate, but not higher than **160%**, an entrepreneur will be obliged to create at least **80 (170)** jobs, or to bear costs of qualified investments in the amount of at least **60 (120)** m zł.
- in a district, where the unemployment rate is higher than **160%** of the national average rate, but not higher than **200%**, an entrepreneur will be obliged to create at least **60 (150)** jobs, or to bear costs of qualified investments in the amount of at least **40 (100)** m zł.
- in a district, where the unemployment rate is higher than **200%** of the national average rate, but not higher than **250%**, an entrepreneur will be obliged to create at least **50 (100)** jobs, or to bear costs of qualified investments in the amount of at least **35 (70)** m zł.
- in a district, where the unemployment rate is higher than **250%** of the national average rate, an entrepreneur will be obliged to create at least **20 (50)** jobs, or to bear costs of qualified investments in the amount of at least **10 (17)** m zł.

To compare, in *The development concept of special economic zones* the following criteria were assumed in the discussed respect:

- in a district, where the unemployment rate is higher than the national average rate, but not higher than **130%**, an entrepreneur will be obliged to cre-

ate at least **100** jobs, or to bear costs of qualified investments in the amount of at least **40m zł**.

- in a district, where the unemployment rate is higher than **130%** of the national average rate, but not higher than **160%**, an entrepreneur will be obliged to create at least **70** jobs, or to bear costs of qualified investments in the amount of at least **25m zł**.
- in a district, where the unemployment rate is higher than **160%** of the national average rate, but not higher than **200%**, an entrepreneur will be obliged to create at least **50** jobs, or to bear costs of qualified investments in the amount of at least **5m zł**.
- in a district, where the unemployment rate is higher than **200%** of the national average rate, an entrepreneur will be obliged to create at least **25** jobs, or to bear costs of qualified investments in the amount of at least **1m zł**.

Accordingly, (both in *The development concept*, the ordinance and its new draft) there is a **30%** reduction of detailed conditions concerning employment rate and costs of qualified investments in the Lubelskie Province, the Podkarpackie Province, the Podlaskie Province, the Świętokrzyskie Province, and the Warmińsko-Mazurskie Province.

Final conclusions

The research has **proved the thesis** that the special economic zones in Poland **have not been**, so far, **a successful instrument for attracting foreign investors to the selected regions of the country**.

It has been proved that a hypothesis that **the special economic zones in Poland are more an instrument for restructuring of industry in regions affected by unemployment than an instrument of regional policy** is correct.

It is worth stressing that the Ministers' Council, in order to create new jobs, have taken a decision **to extend the catalogue of performance**, which needs licencing, by **the sector of modern services** *Business Process Offshoring* (BPO), which includes services in finances, accounting, human resources management, administration, teleinformation technologies (*shared services centres*), and connected directly with servicing external customers (*call centres. contact centres*). It is assumed that the discussed support should contribute to fall of unemployment among graduates of higher schools.

Quite independent of those results of foreign investment influx that are **favourable** for the national economy, one should also notice **negative** (or at least controversial) results of the process. They include the value of **dividends** paid abroad by foreign companies registered in Poland. Moreover, a specific dividend is also paying direct investors **interests from credits** granted by them to

their Polish subsidiaries. It is one of typical ways of money **transfer** abroad, allowing to avoid taxing of them.

The **error** catalogue made in the discussed field includes:

- lack of a consequent strategy for shaping the special economic zones,
- their snappy growth (especially including frequency of made corrections of the zone boundaries and areas⁷),
- changeability (and in extreme cases clumsiness) of legal regulations⁸, including especially **the system of reliefs and preferences** for entrepreneurs performing in the zones⁹.
- wrong establishment of **the zone area limit** (within less than 15 years it has grown three times) and **the horizon of their operation**.
- numerous cases of missed **localization** of subzones resulting from the excessive belief in illusory and potential attractiveness values of such areas.
- persistent preference for development of **car industry**, which has turned out to be the most sensitive to the crisis conditions of the world economy¹⁰.

⁷ Only since Poland's accession to the European Union 93 corrections of the boundaries and areas of the special zones have been made, including in 16 cases such corrections not exceeding +/- 1 ha. Moreover in the years 2006-2009, as the result of new geodesic measurements the areas of eight zones were corrected (in case of the Krakowska zone twice). New geodesic measurements showed in 2009 that the real areas of the Kamiennogórska Zone and the Mielecka Zone are larger by 1.1388 ha and 0.1527 ha respectively. It was also found out that the area of the Krakowska Zone is smaller by 0.5032 ha. To compare, at present 22 complexes of the special economic zones have the area not exceeding 0.5 ha. In the Kostrzyńsko-Słubicka Zone as many as 4 changes to the area were made during one year (2005), in case of October only within two weeks.

⁸ For example in the ordinance by the Minister's Council of 14 April 2009 changing the ordinance on the Krakowska Special Economic Zone, Journal of Law – Dz.U., No. 64, item 537, the area of the zone is smaller by 6.0630 ha than in reality. In reference to the operational rules of the special economic zones in Poland almost 400 legal acts have already been passed.

⁹ In case of gaining net loss, public aid in the special zones becomes illusory, and maintenance costs of fixed assets and jobs may exceed the amounts of unpaid taxes (income tax and real property tax).

¹⁰ Almost 49% of the borne investment expenditures fall to this branch and branches cooperating with the car industry (for example manufacturing of tyres). We observe with anxiety numerous bankruptcies of foundries of the so-called aluminum rims in the Tarnobrzaska Zone, several-week-lasting halting of the production belt in the Opel assembling plant in Gliwice (and its unsure future), redundancy dismissals in the MAN factory in Niepołomice, and the Sanok Factory of Buses, substantial reduction of production in the Toyota factory in Jelcz-Laskowice, the Volkswagen factory in Poznań, the Michelin factory in Olsztyn, the Tyre Company Dębica S.A., etc.

The fact that companies performing in the special economic zones have not published their financial reports for 2008 yet does not allow for a detailed assessment of their financial condition.

Although the special economic zones have **a meaningful balance of achievements**, but so far they have not become **a successful instrument of regional policy**.

Literature

- Adamczuk F., *Specjalne strefy ekonomiczne w Polsce – na przykładzie legnickiej specjalnej strefy ekonomicznej*. „Prace Naukowe, No. 843, Akademia Ekonomiczna we Wrocławiu”, Wrocław 2000.
- Ambroziak A., *Wpływ nowych wytycznych w sprawie krajowej pomocy regionalnej na funkcjonowanie specjalnych stref ekonomicznych w Polsce*. „Wspólnoty Europejskie” 2006, No. 3, pp. 18-33.
- Ambroziak A., *Funkcjonowanie specjalnych stref ekonomicznych po akcesji Polski do UE*. „Wspólnoty Europejskie” 2004, No. 4/5, pp. 43-51.
- Ambroziak A., *Rozwiązanie kwestii udzielania pomocy publicznej w specjalnych strefach ekonomicznych w Polsce. Part 1*. „Wspólnoty Europejskie” 2003, No. 2, pp. 16-26.
- Ambroziak A., *Rozwiązanie kwestii udzielania pomocy publicznej w specjalnych strefach ekonomicznych w Polsce. Part 2*. „Wspólnoty Europejskie” 2003, No. 3, pp. 37-47.
- Bazydło A., Smętkowski M., Wieloński A., *Inwestycje w specjalnych strefach ekonomicznych a przekształcenia strukturalne w przemyśle Polski* [in:] *Problemy przemian struktur przemysłowych w procesie wdrażania reguł gospodarki rynkowej* (ed. Z. Ziolo). „Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego” No 3, Warszawa-Kraków-Rzeszów 2001, pp. 135-148.
- Biernat B., *Krajowe i międzynarodowe uwarunkowania prawne udzielania pomocy publicznej w Polsce – przypadek specjalnych stref ekonomicznych* [in:] *Ekonomiczne i organizacyjne instrumenty wspierania rozwoju lokalnego i regionalnego* (ed. B. Filipiak). Vol. 1 (Seria Zeszyty Naukowe No. 471; Ekonomiczne Problemy Usług No. 11), Wydawnictwo Uniwersytetu Szczecińskiego, Szczecin 2007, pp. 109-118.
- Bortlik K., Sienkiewicz M., *Sposób ustalenia wartości zwolnienia podatkowego w SSE*. „Przegląd Podatkowy” 2009, No. 3, pp. 16-22.
- Brdulak J., Niedziółka D., *Specjalne strefy ekonomiczne i wolne obszary celne jako czynnik kształtowania innowacyjnej struktury przedsiębiorstw* [in:] *Przedsiębiorstwo w regionalnym środowisku innowacyjnym XXI wieku* (ed. J. Brdulak). PTE, Warszawa 2000.

- Brezdeń P., Spallek W., *Specjalne strefy ekonomiczne w przestrzeni gospodarczej województwa dolnośląskiego* [in:] *Procesy transformacji układów przestrzennych przemysłu na tle zmieniającego się otoczenia* (ed. Z. Ziolo and T. Rachwał). „Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego” No. 10, Warszawa-Kraków 2007, pp. 217-229.
- Buckley A., *Inwestycje zagraniczne. Składniki wartości i ocena*. Wydawnictwo Naukowe PWN, Warszawa 2002.
- Budzowski K., Światowiec J., *Przesłanki tworzenia i warunki funkcjonowania stref uprzywilejowanych*. „Zeszyty Naukowe No. 501, Akademia Ekonomiczna w Krakowie”, Kraków 1997.
- Cieślik A., *Geografia inwestycji zagranicznych. Przyczyny i skutki lokalizacji spółek z udziałem kapitału zagranicznego w Polsce*. Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2005.
- Cieślik A., *Kryteria przestrzennej alokacji pomocy publicznej dla przedsiębiorców: przypadek specjalnych stref ekonomicznych w Polsce*. „Gospodarka Narodowa”, 2003, No. 10, pp. 63-80.
- Cieślik A., *Działalność przedsiębiorstw międzynarodowych a regionalna dyfuzja kapitału intelektualnego w Polsce: Czy specjalne strefy ekonomiczne zostały właściwie zlokalizowane?* „Ekonomia” 2001, No. 2, pp. 99-114.
- Durski A., *Strefy uprzywilejowane w gospodarce światowej*. „Sprawy Międzynarodowe” 1988, No. 10, pp. 93-103.
- Dziemianowicz W., Hausner J., Szlachta J., *Restrukturyzacja ośrodków monokulturowych na przykładzie Mielca*. Polska Regionów 23, Instytut Badań nad Gospodarką Rynkową, Warszawa 2000.
- Dziesięć lat funkcjonowania pierwszej polskiej specjalnej strefy ekonomicznej. Mielec 1995-2005* (ed. B. Domański and K. Gwosdz). IGiGP UJ, Kraków 2005.
- Gibuła R., Naglik K., *Polskie specjalne strefy ekonomiczne a Unia Europejska* [in:] *Regionalizacja i globalizacja w gospodarce światowej* (ed. J. Rymarczyk) „Prace Naukowe Akademii Ekonomicznej we Wrocławiu” No. 976, Wrocław 2003, pp. 160-173.
- Grzebyk M., Kaliszczak L., *Znaczenie specjalnych stref ekonomicznych w restrukturyzacji regionu (na przykładzie subregionu tarnobrzeskiego)* [in:] *Restrukturyzacja w okresie transformacji gospodarki. Instrumenty – przebieg – efekty* (ed. R. Borowiecki and A. Jaki). Warszawa – Kraków 2005, pp. 227-234.
- Gwiazda A., *Kontrowersje wokół specjalnych stref ekonomicznych w Polsce*. „Samorząd Terytorialny” 2002, No. 12, pp. 44-58.
- Gwizdała J., Susmarski S., *Rola specjalnych stref ekonomicznych we wspieraniu rozwoju regionalnego na przykładzie Pomorskiej Specjalnej Strefy Ekonomicznej* [in:] *Ekonomiczne i organizacyjne instrumenty wspierania rozwoju lokalnego i regionalnego* (ed. B. Filipiak), Vol. 2 (Seria Zeszyty Na-

- ukowe No. 471; Ekonomiczne Problemy Usług No. 11), Wydawnictwo Uniwersytetu Szczecińskiego, Szczecin 2007, pp. 107-115.
- Hajduga P., *Efekty funkcjonowania specjalnych stref ekonomicznych na Dolnym Śląsku w latach 1997-2005* [in:] *Ekonomiczne i organizacyjne instrumenty wspierania rozwoju lokalnego i regionalnego* (ed. B. Filipiak), Vol. 2 (Seria „Zeszyty Naukowe No. 471; Ekonomiczne Problemy Usług” No. 11), pp. 115-125.
- Hasińska Z., Sipurzyńska-Rudnicka K., *Zapotrzebowanie na pracowników produkcyjnych w Wałbrzyskiej Specjalnej Strefie Ekonomicznej. „Zarządzanie Zasobami Ludzkimi”* 2007, No. 3/4, pp. 9-21.
- Hnatyszyn-Dzikowska A., *Specjalne strefy ekonomiczne w Polsce. „Fundusze Europejskie”* 2005, No. 5, pp. 33-36.
- Informacja o realizacji ustawy o specjalnych strefach ekonomicznych. Stan na 31 grudnia 2008 r.*, Ministerstwo Gospodarki, Warszawa 2009.
- Jarczewski W., *Specjalne strefy ekonomiczne w gminach. „Samorząd Terytorialny”* 2007, No. 7-8, pp. 89-97.
- Jędrzejewska M., *Strefy uprzywilejowane jako element polskiej polityki proinwestycyjnej. Stanowisko Unii Europejskiej. Prace Naukowe, No. 836, Akademia Ekonomiczna we Wrocławiu, Wrocław 1999.*
- Jurczyk Z., *Specjalne strefy ekonomiczne w świetle kontroli pomocy publicznej sprawowanej przez Komisję Europejską. „Prawo Unii Europejskiej”* 2004, No. 9, pp. 7-15.
- Kitowski J., *Current Operational Problems of Special Economic Zones in Poland* [in:] *Regional Transborder Co-operation in Countries of Central and Eastern Europe – a Balance of Achievements. „Geopolitical Studies”* Vol. 14. Polish Academy of Sciences, Institute of Geography and Spatial Organization, Warsaw 2006, pp. 299-317.
- Kitowski J., *Operation of Special Economic Zones in Poland – an Account of Achievements, Opportunities and Threats* [in:] *Spatial Dimension of Socio-Economic Transformation Processes in Central and Eastern Europe on the Turn of the 20th Century*, „Papers and Monographs of the Department of Economy” No. 22. Rzeszów 2001, pp. 179-217.
- Kitowski J., *Przemiany struktury przestrzennej specjalnych stref ekonomicznych w Polsce* [in:] *Idee i praktyczny uniwersalizm geografii. Geografia społeczno-ekonomiczna* (ed. T. Komornicki and Z. Podgórski). „Dokumentacja Geograficzna” No. 33, IGiPZ PAN, Warszawa 2006, pp. 117-123.
- Kitowski J., *Przemiany struktury przestrzennej specjalnych stref ekonomicznych w Polsce* [in:] *Procesy transformacji społeczno-ekonomicznych i przyrodniczych struktur przestrzennych* (ed. J. Lach, M. Borowiec and T. Rachwał), Wydawnictwo Naukowe Akademii Pedagogicznej, Kraków 2007, pp. 257-276.

- Kitowski J., *Special Economic Zones in Poland – Opportunities and Threats*. Chosen Problems of Political Geography in Central Europe. (Ed. by J. Wendt and A. Ilieş). Gdańsk 2001, pp. 61-72.
- Kitowski J., *Specjalne strefy ekonomiczne w Polsce – dokonania, szanse i zagrożenia* [in:] *Czynniki i bariery regionalnej współpracy transgranicznej*. 50 Zjazd Polskiego Towarzystwa Geograficznego. Wyd. Uniwersytetu Rzeszowskiego, Rzeszów 2002, pp. 325-346.
- Kitowski J., *Threats for Operation of Special Economic Zones in Poland Versus Controversy with European Union* [in:] *New Arrangements of Socio-Economic Links in Central and Eastern Europe*. Rzeszów 2002, pp. 167-180.
- Kitowski J., *Zagrożenia dla funkcjonowania specjalnych stref ekonomicznych w Polsce wobec sporu z Unią Europejską*. Sprawozdania z Posiedzeń Komisji Naukowych PAN, Oddział w Krakowie. Vol. XLVI/1. Wyd. „Secesja”, Kraków 2003, pp. 39-40.
- Korenik S., *Uwarunkowania ekonomiczne tworzenia specjalnych stref ekonomicznych* [in:] Obrębalski M., *Gospodarka lokalna w teorii i praktyce*. Wydawnictwo Akademii Ekonomicznej im. Oskara Langego, Wrocław 1998.
- Korycińska T., *Koncepcja rozwoju specjalnych stref ekonomicznych*. Ministerstwo Gospodarki, Warszawa 2008 (draft of 14 August 2008 r., version 3.1).
- Kosakowski E., *Opodatkowanie dochodów firm działających w specjalnej strefie ekonomicznej*. „Rachunkowość” 2006, No. 8, pp. 16-23.
- Kozaczka M., *Tarnobrzaska Specjalna Strefa Ekonomiczna Euro-Park Wisłosan w latach 1997-2005*, „Ekonomika i Organizacja Przedsiębiorstwa”, 2007, No. 11, pp. 35-43.
- Kozarowicz H., *Strategia konwersji programu specjalnej strefy ekonomicznej w warunkach zmiany polityki przemysłowej wobec specjalnych stref ekonomicznych*. „Prace Naukowe, No. 870, Akademia Ekonomiczna we Wrocławiu”, Wrocław 2000.
- Kozarowicz H., Panasiewicz Z., Sztando A., *Koncepcja współdziałania strategicznego specjalnej strefy ekonomicznej i lokalnych instytucji jej otoczenia społeczno-gospodarczego*. „Samorząd Terytorialny” 1998, No. 7/8, pp. 32-47.
- Kudęłko J., *Efekty funkcjonowania specjalnych stref ekonomicznych w Polsce jako instrument polityki regionalnej* [in:] „Zeszyty Naukowe Akademii Ekonomicznej w Krakowie” No. 709. Kraków 2006, pp. 39-57.
- Kuśnierz L., *Sposób ustalania i tryb przekazywania gminom części rekompensującej subwencji ogólnej na wyrównanie ubytku dochodów w specjalnych strefach ekonomicznych*. „Finanse Komunalne” 2004, No. 9, pp. 39-40.
- Ładysz J., *Specjalne strefy ekonomiczne w negocjacjach akcesyjnych z Unią Europejską* [in:] ed. S. Korenik: *Współzależność celów sektora bankowego*

- z funkcjami samorządów terytorialnych*, „Prace Naukowe AE we Wrocławiu” No. 883, Wydawnictwo AE we Wrocławiu, Wrocław 2000.
- Lizińska W., Kisiel R., *Specjalne strefy ekonomiczne jako instrument polityki regionalnej na przykładzie Warmińsko-Mazurskiej Specjalnej Strefy Ekonomicznej*. Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego, Olsztyn 2008.
- Małachowski K., *Polish Special Economic Zones in Context of Integration with European Union* [in:] *Eastern Dimension of European Union*. „Geopolitical Studies” Vol. 11. Polish Academy of Sciences, Institute of Geography and Spatial Organization, Warsaw 2003, pp. 527-533.
- Małaszewicz D., *SSE jako instrument pomocy publicznej dla przedsiębiorców*. „Zeszyty Naukowe Uniwersytetu Szczecińskiego No. 418, Prace Katedry Makroekonomii No. 11”. Szczecin 2006, pp. 35-64.
- Mazur K., *Specjalne strefy ekonomiczne jako nowe obszary przemysłowe*. Wyd. Politechniki Gliwickiej, Gliwice 2004.
- Mokrzyć M., *Funkcjonowanie specjalnych stref ekonomicznych w Polsce*. „Gospodarka Narodowa” 1998, No. 8-9, pp. 19-30.
- Ocipka J. K., *Specjalne strefy ekonomiczne w Polsce*. „Ekonomika i Organizacja Przedsiębiorstwa” 1999, No. 2, pp. 18-20.
- Ofiarska M., *Specjalne strefy ekonomiczne w Polsce. Zagadnienia publiczno-prawne*. Rozprawy i Studia, Wyd. Uniwersytetu Szczecińskiego, Szczecin 2000.
- Olszewski J., *Export Processing Zones jako nowa forma obszaru specjalnego*. „Przegląd Ustawodawstwa Gospodarczego” 1995, No. 11, pp. 12-17.
- Ostoj J., *Specjalne strefy ekonomiczne – narzędzie wspomagające restrukturyzację polskiej gospodarki*. „Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie”. Gliwice 1999, z. 5, pp. 167-175.
- Pastusiak R., *Zakłócenia w gospodarce wywołane funkcjonowaniem specjalnych stref ekonomicznych: Polska a inne kraje* [in:] *Polityka wzrostu gospodarczego w Polsce i Unii Europejskiej: polityka ekonomiczna a wzrost gospodarczy* (ed. J. L. Bednarczyk, S. I. Bukowski, W. Przybylska-Kapuścińska). CeDeWu, Warszawa 2008, pp. 281-293.
- Pęcherz E., *Korzyści inwestowania w parki przemysłowe i technologiczne oraz specjalne strefy ekonomiczne*. „Prawo Przedsiębiorcy” 2007, No. 25, pp. 32-38.
- Piąkowski W., *Łódzka Specjalna Strefa Ekonomiczna – wpływ na lokalny rynek pracy* [in:] *Transformacja systemowa w Polsce: oceny i perspektywy* (ed. Z. Szymła). Wyd. Akademii Ekonomicznej. Kraków 2002, pp. 179-188.
- Pieta-Mintus R., Truskolawski A., *Specjalne Strefy Ekonomiczne – instrument promowania inwestycji poprzez zwolnienia podatkowe*. „Przegląd Podatkowy” 2009, No. 1, pp. 20-27.
- Pietrykowska A., Walczyk K., *Specjalne strefy ekonomiczne w Polsce w świetle wyników badań empirycznych*. „Przegląd Organizacji” 1997, No. 7, pp. 22-27.

- Pilarska Cz., *Efekty funkcjonowania specjalnych stref ekonomicznych w Polsce* [in:] *Polityka ekonomiczna państwa we współczesnych systemach gospodarczych* (ed. D. Kopycińska). Katedra Mikroekonomii, Uniwersytet Szczeciński, Szczecin 2008, pp. 140-154.
- Pilarska Cz., *Funkcjonowanie stref ekonomicznie uprzywilejowanych w Polsce i ich rola w przyciąganiu kapitału zagranicznego* [in:] *Gospodarka Polski na przełomie wieków* (ed. Z. Dach). Polskie Towarzystwo Ekonomiczne, Kraków 2002, pp. 191-207.
- Policha B., *Polityka regionalna przez pryzmat specjalnych stref ekonomicznych* [in:] *Atrakcyjność inwestycyjna regionu* (ed. A. Kopcuk and M. Proniewski). Wyd. Wyższej Szkoły Finansów i Zarządzania, Białystok 2005, pp. 105-115.
- Polskie specjalne strefy ekonomiczne – zamierzenia i efekty* (ed. E. Kryńska). Wyd. „Scholar”, Warszawa 2000, p. 186.
- Raport na temat wspierania inwestycji zagranicznych w Polsce*. Departament Inwestycji Zagranicznych i Promocji Eksportu MGiPS, Polska Agencja Informacji i Inwestycji Zagranicznych S.A., Warszawa, marzec 2004.
- Ryszkiewicz A., *Dostosowanie regulacji w zakresie SSE w Polsce do standardów UE*. „Zeszyty Naukowe 7, Kolegium Gospodarki Światowej”. Szkoła Główna Handlowa, Warszawa 1999.
- Sajdlowska-Martini E., Calak R., *Specjalne strefy ekonomiczne w wybranych krajach i Polsce*. „Wspólnoty Europejskie” 2002, No. 5, pp. 14-22.
- Siudak P., *Wpływ pierwotnych procedur tworzenia specjalnych stref ekonomicznych w Polsce na efekty funkcjonowania tych stref*. „Prace Naukowe Akademii Ekonomicznej im. Oskara Langego we Wrocławiu. Zarządzanie finansami firm – teoria i praktyka” (ed. B. Bernas and W. Pluta). Wrocław 2007, No. 1159, pp. 376-386.
- Smętkowski M., *Rola specjalnych stref ekonomicznych w kształtowaniu struktury przestrzennej przemysłu w Polsce* [in:] *Procesy transformacji układów przestrzennych przemysłu na tle zmieniającego się otoczenia* (ed. Z. Ziolo and T. Rachwał). „Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego” No. 10, Warszawa-Kraków 2007, pp. 204-216.
- Sołoma A., *Specjalne strefy ekonomiczne – sukcesy i porażki (na przykładzie województwa warmińsko-mazurskiego)*. „Ekonomika i Organizacja Przedsiębiorstwa” 2003, No. 11, pp. 22-29.
- Stacherczyk M., *Strata w działalności zwolnionej przedsiębiorców strefowych*. „Przegląd Podatkowy” 2005, No. 11, pp. 17-24.
- Susmarski S., *Wpływy do budżetu a pomoc publiczna na przykładzie inwestorów Pomorskiej Specjalnej Strefy Ekonomicznej* [in:] *Rynek finansowy. Inspiracje z integracji europejskiej* (ed. P. Karpuś and J. Węclawski). Wyd. UMCS, Lublin 2008, pp. 432-439.
- Szkudlarek P., *Specjalne strefy ekonomiczne jako narzędzie pomocy publicznej państwa* [in:] *Polityka ekonomiczna państwa we współczesnych systemach*

- gospodarczych* (ed. D.Kopycińska). Katedra Mikroekonomii, Uniwersytet Szczeciński, Szczecin 2008, pp. 129-139.
- Sztando A., *Problemy badawcze Specjalnej Strefy Ekonomicznej w regionie przygranicznym* [in:] „Prace Naukowe Akademii Ekonomicznej we Wrocławiu No. 782. Zarządzanie i Marketing. Aspekty regionalne i lokalne”. Wrocław 1998, pp. 39-48.
- Sztefko J., *Fundusze w specjalnej strefie ekonomicznej*. „Fundusze Europejskie” 2007, No. 3, pp. 51-53.
- Szulc R., *Rządowy projekt ustawy o zmianie ustawy o specjalnych strefach ekonomicznych w Polsce*. „Przegląd Ustawodawstwa Gospodarczego” 2001, No. 2, pp. 10-18.
- Szymaniak A., *Problem specjalnych stref ekonomicznych w negocjacjach Polski o członkostwo w Unii Europejskiej*. „Wspólnoty Europejskie” 2002, No. 9, pp. 15-21.
- Świątkowski Z., *Specjalna strefa ekonomiczna jako forma pobudzania inwestycji przedsiębiorstw (na przykładzie doświadczeń Kostrzyńsko-Słubickiej Specjalnej Strefy Ekonomicznej)* [in:] *Nowoczesne zarządzanie przedsiębiorstwem*. Wyd. Politechniki Zielonogórskiej, Zielona Góra 1999, pp. 464-474.
- Trojak A., Wiedmann K., *Specjalne strefy ekonomiczne i strefy przemysłowe w kształtowaniu rozwoju gospodarczego regionów na przykładzie Polski i Czech* [in:] *Wpływ procesów globalizacji i integracji europejskiej na transformację struktur przemysłowych*. „Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego” (ed. Z. Ziolo and T. Rachwał). Warszawa-Kraków 2008, Vol. 12, pp. 133-143.
- Wpływ systemu podatkowego na podejmowanie inwestycji*. Raport dotyczący Bezpośrednich Inwestycji Zagranicznych wykonany przez Instytut Badań nad Gospodarką Rynkową w ramach programu INVESTPROM na zlecenie Państwowej Agencji Inwestycji Zagranicznych, PAIZ, Warszawa 1998, Report No. 6.

Streszczenie

WPŁYW GLOBALNEGO KRYZYSU GOSPODARCZEGO NA FUNKCJONOWANIE SPECJALNYCH STREF EKONOMICZNYCH W POLSCE

Globalny kryzys gospodarczy w sposób widoczny wpłynął na dynamikę liczby udzielonych zezwoleń na prowadzenie działalności w specjalnych strefach oraz na wysokość ponoszonych nakładów inwestycyjnych. Obserwujemy także niepokojącą dy-

namikę ogłaszania upadłości firm produkujących na potrzeby przemysłu samochodowego, liczne przypadki parotygodniowego zatrzymania taśm produkcyjnych w montowniach samochodów, zwolnienia grupowe oraz znaczne ograniczenie produkcji w firmach tej branży.

Szczególnie niepokojącym zjawiskiem jest obserwowany od dwóch kwartałów spadek liczby nowych miejsc pracy o blisko 12 tysięcy. W IV kwartale 2008 r. zanotowano spadek liczby utworzonych miejsc pracy w 9 strefach, natomiast w kolejnym kwartale – aż w 12 (poza krakowską i łódzką). W ciągu rozpatrywanych 6 miesięcy liczba nowych miejsc pracy w strefie katowickiej i wałbrzyskiej zmniejszyła się o ponad 3000.

Rada Ministrów, po dokonaniu analizy skutków kryzysu finansowego, które dotknęły także przedsiębiorców działających w specjalnych strefach ekonomicznych, przygotowała *projekt ustawy o zmianie ustawy o specjalnych strefach ekonomicznych*. Istotną jest nowelizacja art. 5, która dopuszcza włączenie do obszaru strefy gruntów stanowiących własność lub użytkowanie wieczyste spółki kapitałowej, w której nie więcej niż 15% głosów, które mogą być oddane na walnym zgromadzeniu lub zgromadzeniu wspólników, posiadają podmioty inne niż: zarządzający, Skarb Państwa, jednostki samorządu terytorialnego lub związki komunalne. Szczególnie istotną zmianę zamierza wprowadzić ustawodawca w art. 12 omawianej ustawy, polegającą na jednoznacznym określeniu, że przy kalkulacji wielkości pomocy publicznej przedsiębiorca może odliczyć stratę poniesioną na działalności w strefie w latach ubiegłych, co zapewni uzyskanie urealnionej wysokości tej pomocy. Z kolei proponowana zmiana art. 16 dopuszcza wydanie zezwolenia również w sytuacji, gdy realizacja nowej inwestycji przez funkcjonującego na terenie strefy przedsiębiorcy nie powoduje wzrostu zatrudnienia, ale pozwala na utrzymanie określonej liczby istniejących już miejsc pracy. Kolejna zmiana art. 19 ustawy pozwala obniżyć poziom zatrudnienia o nie więcej niż 25% wielkości bazowej we wszystkich zezwoleniach, niezależnie od daty ich wydania.

Przeprowadzone badania potwierdziły tezę, że specjalne strefy ekonomiczne w Polsce nie są, jak dotychczas, skutecznym instrumentem przyciągania inwestorów zagranicznych do wybranych regionów kraju. Potwierdziła się słuszność hipotezy, że specjalne strefy są bardziej instrumentem restrukturyzacji przemysłu w regionach dotkniętych bezrobociem, niż instrumentem polityki regionalnej.

Do katalogu błędów popełnionych na omawianej niwie należy zaliczyć: brak konsekwentnej strategii kształtowania specjalnych stref ekonomicznych, ich żywiołowy rozwój (w tym zwłaszcza częstotliwość dokonywanych korekt granic i powierzchni stref), zmienność (a w skrajnych przypadkach nieporadność) regulacji prawnych, w tym zwłaszcza systemu ulg i preferencji dla przedsiębiorców działających w strefach, nietrafne ustanowienie limitu powierzchni stref (w ciągu niespełna 15 lat wzrósł on trzykrotnie) oraz horyzontu ich działalności, liczne przypadki nietrafionych lokalizacji podstref, wynikające z nadmiernej wiary w iluzoryczne, potencjalne walory atrakcyjności tych terenów oraz uporczywe preferowanie rozwoju przemysłu samochodowego, który okazał się najbardziej wrażliwy na uwarunkowania kryzysowe gospodarki światowej.

Przewiduje się, że w wyniku dokonanych w 2009 r. (oraz w przypadku strefy pomorskiej zaplanowanych, według stanu na 30 czerwca) zmian powierzchni specjalnych stref ekonomicznych wzrośnie liczba miejsc pracy o 22 651, nakłady inwesty-

cyjne wyniosą ponad 6 mld zł, przewidywana pomoc publiczna 3, 2 mld zł oraz wpływy do budżetu państwa oraz do budżetów jednostek samorządu terytorialnego wyniosą 11,8 mld zł.

CONCEPT OF CLUSTERS – SOLUTION TO THE ECONOMIC CRISIS?

Vladimír SZÉKELY

Institute of Geography
Slovak Academy of Sciences
Bratislava

Introduction

The role of media in the modern society continuously increases and their effect on people's lives is enormous. According to various sociological researches information received by people influences their perception of the real world and their subsequent behaviour. Interests of governments or media owners often motivate and burden the selection of the diffused information, the importance attributed to information and its interpretation by the political and economic commentators. Interpretation of different events and processes is the question of point of view while the diffusion of unproven or even false information is a special problem.

Media have been concentrating on the global financial and economic crisis for quite a long time now. Causes of its origins are sought, its scope and depth are discussed and its impact on the behaviour of populations and the economic entities are analysed. Discussions of future developments and search of solutions are characterized by a considerable heterogeneity of opinion and the limited level of cognition. The possible scenarios of future include expectations of:

- Great economic depression connected with deflation;
- Long-year stagnation with alternating periods of decrease and moderate increase of the economic growth;
- Development characterized by increased consumption, production and inflation.

Existence of the admitted and broadly disseminated ignorance propagates uncertainty among people, which manifests itself in change of their life attitude and behaviour.

People sensitively respond to changes on labour market, which cannot be perceived in an isolated manner or as confined within the frontiers of Slovakia. People that have once travelled abroad pursuing jobs are now returning because

the number of jobs is decreasing. So do the Slovak citizens and thus contribute to the increasing unemployment rate in the country. The redundancy of labour also affects the behaviour of employers who are not exposed to pressure of employees in terms of wage-increase. Wages stagnate or drop. It is caused by the decreasing production and profits due to difficulties with sales and marketing and the overall uncertainty on global market. Slovak economy is small and distinctly oriented to exports. Dependence of the country on situation on international markets is extreme.

How did the present global financial and economic crisis supervene? A rare consensus exists among experts as far as the answer to this question is concerned. Carelessly provided bank loans and the massive propaganda of indebtedness led to an increased consumption paid from the borrowed finances. The problem emerged when economic entities and small debtors were not able to pay back their loans. Problems on labour market have further aggravated the situation. Banks are now more apprehensive when providing loans. Their behaviour changed and their loan policies are stricter. There is less borrowed money on the market, which leads to the decreased consumption. Small consumers in Slovakia and abroad respond to the overall uncertainty and start to spend less money or in the consequence of the economic behaviour they spend the accessible financial means in more advantageous foreign markets (e.g. consumers from Slovak boundary regions). This is the reason why the demand of products (above all of luxury ones) decreases, the production decreases and redundant staff is dismissed. The joint effect of individual interlinked processes became the cause of the present global financial and economic crisis.

Apart from analysts, politicians also comment the solution to crisis and use various arguments in order to defend their points of view. The impact of such views rather than being proportionate to the number of their electors depend on possibilities of medialization and diffusion of those views. Opinion of politicians in Slovakia is very disparate and more or less qualified. The opinion exposed on the web site of the non-parliamentary political party *Slobodné fórum* by its vice chairman František Zilka on 13 May 2009 is highly qualified and may intrigue experts who are concerned with the issue of the regional development. However, the question is whether the content of the qualified formulation of a solution to the crisis is true. František Zilka asserts that the solution of crisis in Slovakia can be reached by the removal of regional disparities applying clusters. As the politician may but does not have to be proficient in the given field, the question whether his assertion is right, is justified. Although František Zilka is not one of prominent politicians in Slovakia, it is appropriate to subject his remarkable opinion to scrutiny.

Porter's concept of clusters

Introduction of the fashionable term *cluster* into the scientific and specialized literature is connected with the name of the American economist Michael Porter who presented the cluster not only as an analytical concept but also as a political tool for the reaching the competitiveness of industries and spatial units. Porter (1998) defines clusters as „*geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (universities, standards agencies, and trade associations) in particular fields that compete but also cooperate*”. Contracting supply-demand relationships, joint technologies, common purchasers or distribution channels or even the common labour market are the factors that unite cluster into one unit. Existence of the relationships between the participating actors is clearly accented. The second but not less important characteristics of the cluster is the geographical proximity of the groups of interlinked companies as a precondition of intensive intercompany and interpersonal contacts (Porter, 1998).

In his work Porter (1990), deals with the national competitive advantages and international competitiveness, Porter developed the idea that the success of exporting companies in a country (competitiveness of companies is associated with the success in exports) depends on the „competitive diamond” of four sets of factors:

1. Strategy and structure of companies and the intensity of the domestic competition between rivals (for instance, the most successful world producers face an intense competition in their own countries);
2. Factor input conditions (availability of labour, capital, natural resources, infrastructure in the territory);
3. Demand conditions (size and heftiness of market expressed by behaviour of local consumers and their specific demands);
4. Presence of locally based related and supporting industries (for instance, rubber industry as a supplier of automotive industry).

These sets of factors interact. The more developed and more intensive are interactions between these four sets of factors, the greater will be the productivity of companies that enter these relationships. It is supposed that precisely the geographical proximity may help the existence and development of an interaction beneficial for all participating partners. Porter saw the cluster as a geographically localized grouping of interlinked businesses as one of the possibilities to increase their competitiveness, improve the productivity and through them to increase the economic well-being of population living in the concerned territories.

Marshall's „industrial district”– inspiration for the concept of clusters

Porter's ideas are not new. It is Alfred Marshall, the representative of the neo-classic economics who used the term *industrial districts* (Marshall, 1890) for groupings of similar or interlinked small firms and who is considered the author of the idea about geographically concentrated clusters (bringing to the participating companies greater advantages than in the case of their isolated locations). Advantages resulting from company's co-location (referred to as agglomeration savings in the context of economic geography) were involved with the reduction of cost identified by Marshall for three areas. Use of certain common sources, for instance a specialized infrastructure where cost and maintenance are shared. A typical example can be perhaps the specialized education, building of which is normally interesting for all companies competing in the same sector.

The second area is the local labour market characterized by a high specialization of labour sources and jobs (demand and supply on a spatially confined labour market) which, accompanied by the reduced cost, makes it possible to meet the interests both of employees and employers. In places where such branch concentration is accomplished, the particular industry is felt everywhere (Marshall, 1890). In this way spatial decisions of companies can be so strongly influenced by the availability of labour with special, for them indispensable, skills. The correct choice of location facilitates saving of cost connected with training or re-qualification of workers. On the other side, territories with concentration of companies dedicated to the similar activity, which employ people with special skills, are attractive for persons who are job hunting and fulfil the required criteria of a potential employee. On a small territory they find enough adequate work opportunities. Their existence makes it possible to response not only to more attractive offers on the side of the competing company but also to find a suitable job in case they join the category of short-term unemployed (for instance because of economic problems of the employer who solved it by dismissing of workers). Such possibilities lead to the increased mobility of workers where both sides of the spatial labour market can profit.

The third area concerns reduction of intercompany transactions and trade cost due to the short distance between actors. It manifests itself above all in case of a vertically integrated manufacturing system, i.e. the system based on the relationships between suppliers and consumers. It is much simpler for companies or it should be substantially easier to conclude contracts with partners, which provide subcontracting and specialized services and are located in their proximity.

Knowledge spillovers as a presumed advantage from spatial concentration of companies

As obvious from the most recent literature involved with the subject, assessing the advantages from spatial concentration of companies does not only consider those ensuing from the cost reduction. One of the principal reasons of this changed thinking ensues from the paradox discrepancy between the theory and practice. Numerous empirical researches brought the evidence that the realized business decisions that should be aimed at cost reduction ignore the theoretical advantages from exchanges of goods between the closest neighbours. Spatial projection of the demand-supply interlinks between the individual regional companies located in territories with high concentration of economic subjects and potential business partners can serve as an example. In spite of their co-location, advantages from the cost reduction connected with a distinct reduction of the distance effect on the activity of individual actors are pushed to the background and business is often realized with entities situated beyond the regional boundaries. Malmberg and Maskell (2002) even stress that no theory explaining the existence of cluster can be based exclusively on reduction of interaction cost. This is the reason why to three types of advantages from the co-location of companies, also the factor of forming the special local (regional) conditions is included. Such conditions create the special local (regional) milieu that may facilitate the „*knowledge spillovers and stimulate various forms of adaptation, learning, and innovation*” in favourable circumstances. The distance, from which the geographical proximity of the interlinked economic subjects is derived, is considered one of the decisive factors which controls the possibilities of regular, formal, but above all the irregular and informal discussion meetings of leader managers of companies entering the competing-cooperating interlinks. The development of their mutual relationships (sometimes ending in partnerships), which can be the product of geographical proximity, can stimulate knowledge spillovers enriching both the competitors and co-operators. Dynamic processes of mutual learning, accumulation of knowledge and innovation can also be the result. The special local or regional culture and climate (both represent local or regional milieu) are created and facilitate not only formal but also ever more important intuitive (tacit) knowledge between the participants of the networked cluster. All these processes led to increased competitiveness of not only participating economic actors but also the region where they are acting.

Discrepancy between the theoretical ideas and results of empirical research

However, it is necessary to stress that the results of empirical research not always correspond to the drawn theoretical ideas. It was expected that the mentioned research would confirm and support the idea concerning the advantages of the co-located firms in terms of higher competitiveness reached by the reduction of cost and easier adoption of progressive technologies together with production of innovation. Confrontation of the theory with the reality has shown that the results of the company and regional performances (as indicators of their competitiveness) are as a rule determined by the local (regional) specificity, which reflects the character and power of the competitive and cooperating environment formed by the participating economic actors and their representatives. The knowledge gained, inherited and acquired capacities, innovation and other positive personal properties contribute to the formation of a unique entrepreneur environment in a particular territory and in particular time (Feldman et al. 2005).

Quality of the regional management, their enthusiasm, openness, progressiveness and purposeful movement to the set aims also plays an important role in formation of the regional specificity. The existing quality of human capital and „culture” that are unique in region is something that cannot be simply reproduced in another region. In the consequence of these facts, it is not possible to apply any simplified or mechanic generalizations (generated only by empirics of the „successful” companies from the „successful clusters”. Regions of Emilia-Romagna in Italy, Baden-Württemberg in Germany and Silicon Valley, USA are mentioned in this context). The practice gained by the individual states, however, proves that the politicians do not accept this piece of knowledge when formulating regional policies (see for instance Hospers and Beugelsdijk, 2002, and Lepawski, 2009). In spite of the fact that uniqueness of local factors increasingly determines the economic success of companies and regions, the efforts of politicians to cope and apply the „*best practice*” of successful regions (regardless the evident differences in specific regional features) are frequent in a very questionable process of the new cluster formation. They are often followed by disappointment from failure and inefficiently spent finances.

The matters associated with the establishment of intentional clusters are very complicated. A number of heterogeneous factors of other than economic nature (initiated by the political representatives) enter the play. In efforts to support formation of clusters, special rules reflecting the attempt to maintain political power are often introduced. Comprehension of the whole process involved with the formation of an intentional cluster requires incorporation of its political dimension as well, hence it is comparatively complicated.

Lepawski (2009) exposed an interesting example of a very active approach on the side of the political representation to a highly politicized process in-

volved with the establishment of intentional cluster and the concrete regional consequences. On example of the Malayan high-technology cluster called MSC (Multimedia Super Corridor), he points to the need to explore the political dimensions of cluster policies, and describes the particular political decisions that rather pursue the political benefits than the economic development. Political speculations decided not only on the unusual location of a delimited cluster (MSC was planned and built as a spatially isolated cluster south of Kuala Lumpur), but also on the political protection of companies owned by the representatives of one ethnic population group (Malays) and located on the by State delimited cluster territory. Owners of companies obtain tax reductions and obey business-friendly laws created especially for them (for instance, exclusive options to employ domestic and foreign „knowledge workers” without restriction). However, what is important, Lepawski notes that MSC is neither unique not a peculiarly Malaysian phenomenon. Also in other Asian states experiments with clusters are under way, nature and applied rules of which differ from the rest of the national space-economy.

„Automotive cluster” – the specific feature of the Slovak economy

It is not rare to run into a cluster in Slovakia with a positive image. According to this image cluster means high productivity, increasing entrepreneurial activity, support of competitiveness and innovation, generator of knowledge and the path to the progressive knowledge economy (Székely, 2008). Hence, it is no surprise that the pronouncements of some politicians about clusters (for instance above-mentioned F. Zilka) are inspired by the media image created on the basis of the short-term prosperity.

Several years before the beginning of the crisis, Slovakia started relatively successfully to develop something that was later referred to as the „automotive cluster”. It was presented in a positive light only. Its basis was the automotive industry formed in the 1990s. Nowadays, three important foreign investors in the automotive industry are active in Slovakia: German *Volkswagen*, French *PSA Citroën Peugeot* and South Korean *Kia*. Reasons that have led them to invest in Slovakia are associated with plenty of qualified available labour sources and the offer of important direct and indirect governmental incentives that made possible to increase the profit rate. Activities of car factories have distinctly contributed to the increase of industrial production, employment and exports. The automotive industry alone participated by about 30% in total industrial production in Slovakia close before the beginning of crises. Slovakia even reached the first position in the world in production of cars per population number (in 2008, almost 106 cars per 1,000 inhabitants were manufactured in Slovakia).

The automotive industry ties numerous other industries (electrical engineering, chemical, textile and other branches). The close co-operation forms important vertical supply chain. *Just-in time* as a new system of organization of industrial (and especially automotive) production requires co-location of subcontractors and various suppliers of automotive industry contribute to an increased spatial concentration of production. The above-mentioned processes and spatial decisions of foreign investors led to considerations of a support to the development „automotive cluster” which was geographically connected with the whole Slovakia. In time of the economic growth, automotive industry positively influenced other branches, which developed and in interaction with the dominant industry increased the performance of the national economy. In time of crises accompanied by decline of demand, the situation reversed. The economy with the dominance of one export-oriented branch with many depending subcontracting companies became very vulnerable. The number of jobs dropped in Slovakia by 120 thousand since the beginning of crisis. The share of the automotive cluster in this drop has not been precisely established but because of strong ties between the individual industries it is presumably decisive. The top governmental officials admit that Slovakia entangled itself after accepting the offered possibility of an abrupt economic growth and by an inadequate support to the automotive industry and underestimation of the associated risk. In the consequence of pro export orientation of the automotive industry the solution of the present problems of the small Slovak economy now depends on the overall status of global economy.

Conclusion

On the one side there is the genesis, existence, functioning and influences of spatial clusters on the economic performance and competitiveness of companies as well as on the regional/local economic growth accompanied by many obscurities, which have an impact on an unsatisfactory situation in creation of the theoretical constructions regarding this phenomenon. On the other side, the reality is that the concept of clusters as an avenue to the economic prosperity and well being gained (because of extremely successful marketing strategy) popularity among the decision makers on all hierarchical levels (national, regional, local). The result is the dichotomy of opinion between scientists and politicians. It also is the cause that unconventional terms appear in literature involved with clusters. Martin and Sunley (2003) talk about the „*cluster brand*”, or the „*Porter brand*” built in connection with positive associations. These positive associations markedly help promotion of the cluster concept as the developmental strategy in competition with other theoretical and applied constructions.

No critical debate about clusters exists in Slovakia. Studies that warn against the numerous potential dangers (see for instance Nemcová, 2004, 2005; Székely, 2008) are rather rare. Politicians did not take into account that the economic development built on clusters is based in local and regional specializations that in the consequence of empirically and theoretically justified alternation of economic prosperity and decline represent a very risky strategy of regional development. The present global financial and economic crisis is the period of economic decline with all consequences for the existing cluster initiatives. This is the reason why author of this paper believes that the opinion of the Slovak politician F. Zilka (solution to the crisis dwells in removal of regional differences by creating clusters) is a bit one-sided disregard for a wider context. On the other side, the presented opinion is a challenge to critical assessment of the cluster concept and the expanding cluster initiatives in specific territory of Slovakia.

Translated by H. Contrerasová

This article was prepared as part of the Project No. 2/0096/09 „Regional „winners“ and regional „losers“ – identification of successful and less successful localities and regions in Slovakia”, funded by the Slovak VEGA Grant Agency. The author thanks to the Slovak VEGA Grant Agency for its financial support.

Literature

- Feldmann, M. P., Francis, J., Bercovitz, J.: *Creating a cluster while building a firm: entrepreneurs and the formation of industrial clusters*. Regional Studies, 39, 2005, no. 1, pp.129-141.
- Hospers, G. J., Beugelsdijk, S.: *Regional cluster policies: learning by comparing?* Kyklos: International Review for Social Sciences, 55, 2002, no. 3, pp. 381-402.
- Lepawsky, J.:(2009). *Clustering as anti-politics machine? Situating the politics of regional economic development and Malaysia's Multimedia Super Corridor*. Regional Studies, 43, 2009, no. 3, pp. 463-478.
- Malmberg, A., Maskell, P.: *The elusive concept of localization economies: towards a knowledge-based theory of spatial clustering*. Environment and Planning A, 34, 2002, no. 3, pp. 429-449.
- Marshall, A.: *Principles of Economics*. London: Macmillan 1890. (<http://www.econlib.org/library/Marshall>)
- Martin, R., Sunley, P.: *Deconstructing clusters: chaotic concept or policy panacea?* Journal of Economic Geography, 3, 2003, no. 1, pp. 5-35.

- NemcovÁ, E.: *Klastre a ich úloha v rozvoji regiónu. Ekonomický časopis*, 52, 2004, no. 6, pp. 739-754.
- NemcovÁ, E.: *Analýza vývoja automobilového priemyslu na Slovensku. Ekonomický časopis*, 53, 2005, no. 10, pp. 1009-1022.
- Porter, M.: *The Competitive Advantage of Nations*. New York: The Free Press 1990.
- Porter, M.: *On Competition*. Harvard Business School Press 1998.
- Székely, V.: *Regionálne priemyselné klastre a problémy (nielen) s ich identifikáciou. Ekonomický časopis*, 56, 2008, no. 3, pp. 223-238.

Streszczenie

KONCEPCJA KLASTERÓW – ROZWIĄZANIEM DLA KRYZYSU GOSPODARCZEGO?

Obok analityków także politycy komentują obecny światowy kryzys finansowy i gospodarczy, używając różnych argumentów. Opinie polityków słowackich są wielorakie i w różnym stopniu kompetentne. Jeden z nich, F. Zilka dowodzi, że rozwiązanie dla kryzysu na Słowacji tkwi w usunięciu różnic regionalnych poprzez stworzenie klastrów. Celem niniejszego studium jest analiza krytyczna tej wartej odnotowania opinii na temat problemów rozwoju regionalnego.

Wprowadzenie modnego terminu *klaster* do literatury naukowej i specjalistycznej ma związek z nazwiskiem amerykańskiego ekonomisty Michaela Portera, który zaprezentował klaster nie tylko jako koncepcję analityczną, lecz także jako narzędzie polityczne dla osiągnięcia konkurencyjności różnych gałęzi gospodarki i jednostek przestrzennych. Zacieśnianie się relacji podaźowo-popytowych, stosowanie wspólnych technologii, wspólnych kanałów zakupów i dystrybucji, lub nawet korzystanie ze wspólnego rynku pracy są czynnikami, które jednoczą klaster jako jeden zespół. Istnienie wzajemnych relacji pomiędzy uczestniczącymi graczami jest wyraźnie akcentowane. Drugą, lecz nie mniej ważną cechą klastrera jest bliskość geograficzna grup powiązanych ze sobą firm jako warunku wstępnego intensywnych kontaktów między firmami i osobami (Porter, 1998).

Jednakże idee Portera nie są nowe. To Alfred Marshall, przedstawiciel ekonomii neoklasycznej, użył terminu *dystrykty przemysłowe* (Marshall, 1890) dla grup podobnych lub powiązanych małych firm i którego uważa się za autora idei klastrów skupionych geograficznie (przynoszących uczestniczącym firmom większe korzyści niż w przypadku ich izolowanego położenia).

Na kilka lat przed początkiem kryzysu, Słowacja zaczęła z powodzeniem rozwijać coś, co później nazwano „klasterem samochodowym”. Prezentowano to jedynie w pozytywnym świetle. Jego podstawą był przemysł samochodowy stworzony w latach 90-tych XX w. Dzisiaj trzech ważnych zagranicznych inwestorów przemysłu samocho-

dowego nadal działa na Słowacji: niemiecki *Volkswagen*, francuski *PSA Citroën Peugeot* i południowo-koreański *Kia*.

W okresie wzrostu gospodarczego przemysł samochodowy wpłynął pozytywnie na inne gałęzie, które się rozwinęły i we wzajemnym oddziaływaniu z dominującym przemysłem poprawiały wyniki gospodarki narodowej. W okresie kryzysów, którym towarzyszy spadek popytu, sytuacja się odwróciła. Gospodarka z dominującą jedną gałęzią proeksportową przy wielu zależnych firmach podwykonawczych stała się bardzo słaba. Od rozpoczęcia kryzysu ilość miejsc pracy spadła na Słowacji o 120 tys. Nie ustalono dokładnego udziału klastera samochodowego w tym spadku, ale z powodu silnych powiązań pomiędzy poszczególnymi gałęziami przemysłu ma on prawdopodobnie znaczenie rozstrzygające. Wyżsi urzędnicy rządowi przyznają, że Słowacja sama się usidliła po tym jak zaakceptowała zaoferowaną możliwość gwałtownego wzrostu gospodarczego i poprzez niewystarczające wsparcie dla przemysłu samochodowego i niedoceniając towarzyszącego ryzyka. W rezultacie nastawienia proeksportowego przemysłu samochodowego rozwiązanie obecnych problemów małej gospodarki słowackiej zależy teraz od ogólnego stanu gospodarki światowej.

Politycy nie wzięli pod uwagę tego, że rozwój gospodarczy oparty na klasterach bazuje na wyspecjalizowaniu o charakterze miejscowym i regionalnym, które w rezultacie uzasadnionych empirycznie i teoretycznie następujących po sobie pomyślności gospodarczej i upadku, stanowi bardzo ryzykowną strategię rozwoju regionalnego. Obecny ogólnoswiatowy kryzys finansowy i gospodarczy jest okresem upadku gospodarczego ze wszystkimi konsekwencjami dla istniejących inicjatyw odnośnie tworzenia klasterów. Dlatego autor artykułu uważa, że opinia słowackiego polityka F. Zilki (rozwiązanie dla kryzysu tkwi w usunięciu różnic regionalnych poprzez stworzenie klasterów) jest trochę jednostronna z pominięciem szerszego kontekstu. Z drugiej strony przedstawiona opinia jest wyzwaniem dla krytycznej oceny koncepcji klasterów i rozszerzania inicjatyw odnośnie tworzenia klasterów na specyficznym terytorium Słowacji.

ENTREPRENEURSHIP IN POLAND IN THE DAY OF THE GLOBAL CRISIS AND ITS CONDITIONINGS

Lidia KALISZCZAK

University of Rzeszów, Faculty of Economics, Economics and Enterprise Organisation Unit

Introduction

The global economic and financial crisis, accompanied by an abroad drain of a significant amount of capital already invested in Poland, triggered investment restraints and shutdowns of many work places. In the study it was assumed that the term „crisis” would refer to the processes occurring in the global economy since August 2008, that is since the time of a sudden plunge of resource prices, credibility breakdown of a number of financial institutions of global significance, large fall of real estate prices, strong decline of indexes on primary global stock markets, increased unemployment indicators on primary markets and, as a consequence, drop of demand as well as a decrease of trade exchange value. These processes were accompanied by significant changes of exchange rates between the primary currencies among each other, as well as the primary currencies in relation to other currencies. Therefore the last months showed what an important meaning own capital based on native entrepreneurship has. It is an important attribute of competitiveness, and a strong economy.

The objective of this study is an attempt to answer a question, whether the crisis can be an opportunity in the development of entrepreneurship, and also identification of conditionings which stimulate the rise of new companies. Background of the analysis comprises of a judgment of influence the globalization process has on conditions of activity and development of enterprises, mainly including those classified in the SME sector.

Entrepreneurship in the globalization process

Entrepreneurship is a complex and multi-aspect occurrence, it has its own dimension mainly in the form of an entrepreneur, however also institutional, constituting a result of individual or collective (in the form of partnership) initi-

atives, leading to forming and activity of mainly small and medium enterprises¹. Nowadays, the modern view states that small and medium enterprises are the primary link, by which entrepreneurship reveals itself, realizes and affects macro-economical effects². SME's affect economic growth by creating new workplaces, implementing innovations, upholding competition, internationalization of activities, creating cooperation network.

In Poland, internationalization processes of enterprises' activity in the SME sector date back to the nineteen-nineties. It is a result of the fact that in the last two decades conditions of managing economic activities on an international scale has changed, especially for smaller enterprises. Small, albeit dynamic companies more often exploit possibilities of international expansion as a lift to rapid development. New occurrences and tendencies, which have their roots in the globalization process, favour this approach. They are³:

- international orientation of the company owners and managerial staff (commanding unit), resulting from the education profile, knowledge of foreign languages, or previous profession experience. Such orientation induces the search for business opportunities on foreign markets;
- the ability to acquire information and learning (cognizing) international markets;
- the ability to initiate co operations, creating partnerships, strategic alliances, cooperation and license agreements etc., which favours restocking deficient resources. A small company often doesn't have at its disposal knowledge and experience, as well as an infrastructure required to conduct international operations (departments, branches), therefore building an own network is of crucial importance.

On the basis of present-day reality observations, a thesis can be formulated, that the globalization process contributed to the change of managing economic activities on an international scale by eliminating or decreasing barriers, which mostly small companies faced. Namely rapid exchange of information, thanks to modern technology, allowed a decrease of cultural distance between individual countries, costs of international communication, travel and transport de-

¹ S. Sudoł, *Przedsiębiorczość, jej pojmowanie, typy i czynniki ją kształtujące*, [in:] *Uwarunkowania przedsiębiorczości – różnorodność i zmienność*, edited by K. Jaremczuk, PWSZ in Tarnobrzeg, Tarnobrzeg 2008, p. 29-46; L. Kaliszczak, *Współczesne znaczenie kategorii przedsiębiorczości jako warunku rozwoju*, [in:] „Przedsiębiorstwo i region”, edited by R. Fedan, Uniwersytet Rzeszowski, Rzeszów 2006, p. 39-50; T. Kraśnicka, *Koncepcja rozwoju przedsiębiorczości ekonomicznej i pozaekonomicznej*, AE Karol Adamiński pub. in Katowice, Katowice 2002.

² P. Dominiak, *Sektor MSP we współczesnej gospodarce*, PWN Warszawa 2005, p. 107-108.

³ J. Cieślak, *Przedsiębiorczość dla ambitnych*, Wydawnictwa Akademickie i Profesjonalne Warszawa 2006, p. 279-280.

creased, which obviously had an effect on lowering international operation costs. Furthermore, educated people with a good knowledge of foreign languages entered the sector of new generation small, dynamic enterprises, and even if they did not know the specificity of international operations, they knew how to employ essential specialists. A gradual reduction of customs duties and other barriers in international trade ensued, which also contributed to the improvement of small companies activities conditions⁴.

Crisis – barrier or an opportunity of entrepreneurship development?

The reviewed changes in conditions of managing economic activities, especially the small ones in the internationalization aspect, have been imposed by new occurrences in the second half of 2008. Worldwide economic crisis began to exert negative influence also on the real sphere of Poland's economy. It is depicted by many macroeconomic indicators, including the GDP factor rise (on the 4,9% level) which was lower than the results from the previous two years. However it should be noted, that at the same time it was one of the best results among countries of the European Union. The primary factor of growth was the national demand⁵, whereas the drop of foreign demand contributed to a significant fall of the growth pace of the merchandise turnover (Table 1). According to GUS (Primary Statistics Bureau) the value of export went up by 12,5% (compared with 15,8% in 2007), although the IV quarter recorded a 5% drop⁶.

Table 1. Indicators of export activity among the group of small, medium, and large enterprises in Poland between 2002 and 2008.

| Enterprises | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|------|------|------|------|------|------|------|
| part of export sales in netto income (%) | | | | | | | |
| 10–49 (small) | 6,0 | 7,3 | 8,0 | 8,0 | 8,0 | 7,0 | 7,0 |
| 50–249 (medium) | 9,0 | 11,9 | 12,0 | 12,0 | 13,0 | 12,0 | 12,0 |
| over 249 (large) | 16,0 | 18,9 | 20,0 | 21,0 | 23,0 | 23,0 | 22,0 |

⁴ Experiences of Poland and other countries which became rightful members of the European Union in 2004 are the best example. It must be noted though, that not all changes were beneficial. For example, after Poland's accession to the European Union a popular commission form of trade exchange with foreign countries was imposed with a 22% VAT tax, which radically decreased it's profitability. J. Cieřlik, *Przedsiębiorczość dla ambitnych*, Wydawnictwa Akademickie i Profesjonalne Warszawa 2006, p. 279.

⁵ *Entrepreneurship In Poland*, Ministry of Economy, Warszawa July 2009, p. 5.

⁶ See above.

| dynamics of incomes from the entirety of activity(%) | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|
| 10–49 (small) | 98,2 | 100,3 | 116,7 | 101,1 | 109,3 | 112,0 | 112,6 |
| 50–249 (medium) | 99,2 | 109,4 | 118,0 | 101,8 | 111,5 | 113,7 | 110,8 |
| over 249 (large) | 103,0 | 109,7 | 115,6 | 105,9 | 115,1 | 115,1 | 111,2 |
| dynamics of export sales (%) | | | | | | | |
| 10–49 (small) | 209,8 | 121,6 | 107,8 | 92,0 | 115,7 | 105,9 | 108,4 |
| 50–249 (medium) | 144,5 | 143,9 | 112,2 | 103,6 | 114,4 | 115,0 | 104,2 |
| over 249 (large) | 120,1 | 126,1 | 130,2 | 107,0 | 121,2 | 114,3 | 101,0 |

Source: PONTINFO based on F-02 (2002) and CISG based on GUS F-01 (2003-2008 – Przedsiębiorczość w Polsce, Ministry of Economy, Warszawa July 2009, p. 132).

Analysing the indicators of export activity among the group of small, medium, and large enterprises in Poland between 2002 and 2008, it must be concluded that small enterprises which employ 10-49 people are relatively in the best situation (Table 1). In the face of the global crisis they recorded an increase of export sales dynamics by 2,7 percent points, as well as incomes from the entirety of activity by 0,6 percent point. Moreover the judgment of investment activity in case of small companies singles them out among other groups, because a 20% increase of investment expenditure was achieved, with an average increase of expenditures by 5% in all enterprises in general⁷. High investment dynamics proves that companies perceived their own condition as relatively good (despite a meaningful rise of finance costs), which translated into an investment tendency. At the same time thanks to an increase (although not large) of finance surplus, it was easier for companies to apply for a loan.

However, the crisis period had a distinct effect on the deterioration of financial outcomes of enterprises from the private sector, which employ more than 9 people (Table 1).

Table 2. Financial data of enterprises from the private sector against a background of change of their numbers in years 2002-2008.

| Item | 2007 | 2008 |
|---------------------------------------|-------|------|
| Gross financial outcome (billion zł.) | 112,1 | 88,3 |
| Net financial outcome (billion zł.) | 93,3 | 70,6 |
| Rate of gross profit (%) | 6,3 | 4,4 |
| Rate of net profit (%) | 5,2 | 3,5 |
| Rate of profitability of actives (%) | 7,4 | 4,9 |
| Participation of profitable units (%) | 82,4 | 78,1 |

⁷ See above, p.40.

| Item | 2007 | 2008 |
|---|-------|-------|
| Financial result netto on 1 employer (thousand zł) (companies with over 9 employers) | 21,8 | 15,8 |
| Dynamics of change of the number of enterprises (previous year=100) | 101,4 | 101,6 |

Source: Own research on the basis of: PONTINFO based on F-02 (2002) and CISG based on GUS F-01 (2003-2008 – Przedsiębiorczość w Polsce, Ministry of Economy, Warszawa July 2009, p. 127-129).

Despite worsening of the conditions of the economic conjuncture the number of newly created enterprises displayed ascending tendencies. The largest amount of entities came into being in the group of small enterprises, employing from 10 to 20 people (28 284 in 2007 against 29 671 in 2008 – a change of 4,9%)⁸.

According to representative researches conducted in September 2008 by a Polish Confederation of Private Entrepreneurs Leviathan (PKPP)⁹, small enterprises are characterized by an important factor – during the global finance market crisis and the weakening of world economic conjuncture – their owners are optimists. The research indicates that small and medium enterprises had, in September 2008, large plans regarding their activities in 2009. Almost 75% of SME's had planned an increase of incomes; over 70% expected an increase of profits, a third of them thought that their share of the market would increase. Over 40% planned investments, and nearly 40% – releasing new products and services on the market. Small and medium companies planned an increase of expenditures to purchase new technologies. They expected limitation of the gray zone. They estimated that access to credits would improve, and the contractors would pay their obligations in time. They also had large expectations regarding access to the European Union funds¹⁰.

The French also happen to be optimists, they are more eager to establish small enterprises despite, or perhaps because of, the crisis. The French Statistics Bureau published data regarding establishing of new companies in the country. According to the National Statistics Institute INSEE, in April 2009 the number of new companies was nearly 50 thousand, a 6% increase compared with March. It is expected that by the end of the year half a million enterprises will be established¹¹. This rapid increase of the amount of new companies is related with an introduced – on January 1, 2009 – simplified status of an individual entrepreneur. It allows for an easy forming of a new company without excess for-

⁸ *Przedsiębiorczość w Polsce*, Ministry of Economy, Warszawa July 2009, p. 133.

⁹ „Monitoring kondycji sektora MSP”, PKPP Leviathan, Warszawa 2009.

¹⁰ www.pkpplewiatan.pl/; 9.12.2008.

¹¹ www.wiadomosci24.pl/.../francuzi_coraz_chetniej_zakladaja_male_przedsiębiorstwa, from 19. 05.2009.

mality, and supervising it as a primary career activity, or as an additional activity which allows the raise of own income. From this status, called the „auto-entrepreneur” in France, often benefit students, people employed on a part-time basis, or the unemployed. That’s why small, individual companies may prove to be a good solution to surviving the times of crisis.

Though one should be aware, that the global crisis exerts a significant influence on the changes of the markets’ conditions. The Euler Hermes Institutes’ CIMA report indicates that the number of enterprise collapses in the first quarter of 2009 increased by 11% in comparison with the analogous period in 2008¹². Therefore only elasticity in activity and quick adjustment to new conditions on the market can help survive the economic slowdown period. Those entrepreneurs who treat this time as a challenge to induce a diversity of changes within the company may outdistance the competition in the future, and strengthen the company’s position on the market.

Enterprise development conditionings in the time of the global crisis

Updating the enterprises’ strategy, introducing new innovative products or services on the market, or even a change of the current activity profile constitutes an indispensable factor of the entrepreneurs behaviour during the economic slowdown. For that knowledge, courage, and an ability to calculate and bear the risk is necessary. These competencies and characteristics are typical for entrepreneurial behaviours, however initiatives and entrepreneurs activity may prove insufficient in the face of massively accumulating problems. Processes of the Schumpeter’s „creative destruction” accompanied by a lack of relative stability of operating conditions results in a deep disequilibrium between collapsing and the creation of new companies. Pace and thoroughness of the markets’ change (surroundings) causes entrepreneurs to lose the ability of managing creative destruction – for new ideas to flourish, the old must disappear¹³. Introducing innovations requires effort, which entrepreneurs unfortunately concentrate on the struggle to overcome difficulties such as bureaucracy, coping with complicated law regulations, or searching for new sources to finance economic activities.

In Poland, like in other European Union countries, steps have been undertaken to make managing a business easier, on both the state and institutional level.

¹² CIMA (Chartered Institute of Management Accountants).www. firma.egospodarka.pl, from 23.08.2009.

¹³ R. Foster and S. Kaplan, *Twórcza destrukcja*, Wyd. Galaktyka Łódź 2003, p. 131; L. Kaliszczak, *Paradygmat przedsiębiorczości i jego implikacje*, [in:] *Uwarunkowania przedsiębiorczości – różnorodność i zmienność*, edited by K. Jaremczuka, PWSZ in Tarnobrzeg, Tarnobrzeg 2008, p. 110-122.

The Ministry of Economy, in the face of an increasing economic crisis introduced a project titled „*Ministry of Economy's activities towards stability and development*”¹⁴. The objective of the project is creating conditions towards increasing consumption and investment demand, strengthening the SME financing system, accelerating investments based on EU resources, development of innovativeness and elasticizing the employment market. Currently these activities are in the final stages of realization:

- perfecting procedures regarding granting financial resources within the operating programs,
- increasing availability of outer financing sources by means of a loan and guarantee funds system,
- making export activity support and getting product certificates more accessible,
- simplifications on behalf of the „Innovation grant” and CIP programs.

This work is constant and focuses mainly on legislation solutions. More important changes also regard law amendments concerning the freedom of economic activity, special economic zones, some of the forms of supporting innovative activity (technological bonuses), public – private partnerships, service activity, changing the community economy bill, province governments, and district governments ensuing from a document titled „Directions of loan and guarantee funds development for small and medium enterprises between 2009 and 2013”, employment market (subsidizing the so called standing), increasing the time for work-time accounting period. „Ministry of Economy's activities towards stability and development” is an open document and may be further modified.

Despite many beneficial changes, which were carried out during the previous year, institutional surrounding doesn't entirely support enterprise development. One of the main activity barriers is still the excessively expanded law, and constant regulation changes. Economic regulations which currently are obligatory generate numerous administrative burdens, regarding for example informative duties. Entrepreneurs are still concerned about such problems as complicated tax regulations, extended legal proceedings regarding economical cases, and inflexible work law.

The Polish Entrepreneurship Development Agency (PARP) steps forth to meet the demands by, in compliance with it's competencies, joining the Ministry of Economy's actions on behalf of stability and development¹⁵. The PARP's tasks focus on making functioning in the conditions of an economic slowdown easier for small and medium enterprises (SME's). PARP's support for the SME's is realized mainly through advice, training, promoting and finance instruments.

¹⁴ Based on the project version from 13.07.2009. This project was presented by the Ministry on the 23 of January 2009.

¹⁵ <http://www.parp.gov.pl> from 16. 03. 2009.

In compliance with its educational activities, PARP prepared a training and seminar cycle for entrepreneurs, regarding managing changes, risks, and financial fluency, securing trade transactions, alternative financing sources, access to public order contracts, bankruptcy and reconstructive laws, checking the reliability of trade contractors, marketing and promoting under the crisis conditions.

In order to expand useful knowledge for entrepreneurs under the conditions of an economic slowdown, as part of informative services, Consulting Posts offer entrepreneurs and individuals attempting to initiate economic activity information on the subject.

In the case of promotional instruments, PARP supports enterprises in their aspirations to conquer new foreign markets by organizing trade missions, market shows, cooperation exchanges and business forums.

The agency's another field of activity, in accordance with the prepared packet, is providing SME's with easier access to exterior financing sources. PARP takes part in compiling and implementing functioning standards of loan and guarantee funds, and also works to make them widely available.

PARP will cooperate with the Ministry of Economy, which is responsible for preparing and implementing a „second chance” policy for entrepreneurs who are bankrupting, or in danger of bankrupting. Activities regarding this policy will be aiming to reduce the number of bankrupting enterprises and also increasing the number of entrepreneurs who are beginning economic activity for the second time. Currently instruments required to implement this policy are being prepared.

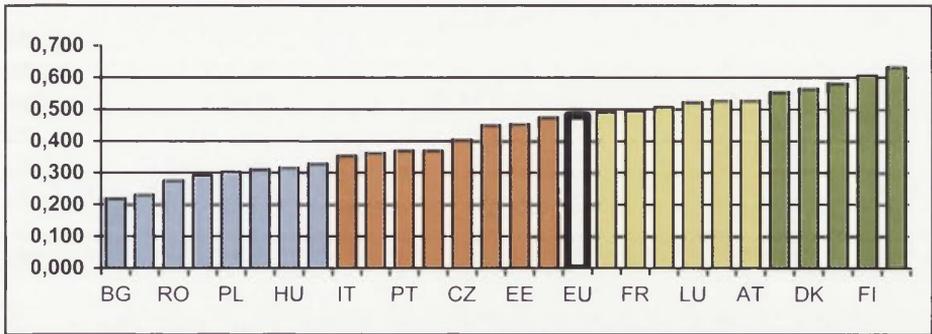
Under the economic slowdown conditions, activities aiming to reduce law, administrative and procedural barriers become more significant. That's why PARP takes part in activities of a Group for enterprises functioning in the framework of a Team for simplifying the system of implementing EU funds and undertakes interior perfecting activities in the range of operations realized by the Agency regarding implementing operating programs.

Ministry of Economy formulated a guide-book „Instruments internationalizing entrepreneurs activities”¹⁶. This document presents information on available instruments for assisting entrepreneurs and institutions which support them. The meaning of securing appropriate conditions for internationalizing activities by entrepreneurs during the globalization era is acknowledged. This fact is fundamental for the economic development of Poland. Assisting the activities internationalization will be conducted by means of supporting export, cooperation with foreign partners, and also by Polish foreign investments.

¹⁶ The guide-book *Instruments internationalizing entrepreneurs activities* was first presented during the XIX Economic Forum in Krynica that took place between 9-12 of September 2009. www.mg.gov.pl/.../Informator+dla+przedsiębiorcow.htm

To be competitive in the global economy, Polish enterprises must be innovative. In order to support this process, new conditions and instruments are created which make implementing new technologies and developing enterprises on the basis of innovative ideas easier. It is of utmost importance that in the near future Poland becomes one of creators of changes, not only it's beneficent. These aspirations should justify Poland's position in the innovativeness ranking of European Union's nations (fig. 1). According to a recent report, published by the European Commission, regarding innovativeness [*European Innovation Scoreboard 2009*], Switzerland is the leader in the field of innovations, followed by Sweden, Finland, Germany, Denmark, and Great Britain. This ranking was created using data from before the economic crisis, and 29 indicators which measure the level of each country's innovativeness were taken into account. These indicators include the number of people with higher university degrees in the science field or an engineer title, number of patents, level of research and development expenditures, availability of higher risk capital for new companies and the level of export of advanced technologies.

Fig. 1. Values of the combined innovativeness indicator (*Summary Innovation Index – SH*) for particular European Union countries.



Source: European Innovation Scoreboard 2008, Comparative Analysis of Innovation Performance 2009, p. 3.

The XXI century technological progress is attaining a stunning pace, which is proven by the data regarding the number of patent applications submitted to the World Intellectual Property Organization. In 1990 the number of applications oscillated around 20 000, whereas in 2006 it reached nearly 160 000¹⁷.

¹⁷ *Raport o kapitale intelektualnym Polski* (Poland's intellectual capital report), Warszawa 2008, p.18.

Table 3. Number of patent applications in the given countries and dynamics of it's change.

| Kraje | Number of patents submitted to WIPO in 2007 | Increase of the number of patents dynamics (2003-2007, %) |
|----------------|---|---|
| USA | 52 280 | 27,4 |
| Japan | 27 731 | 59,2 |
| Germany | 18 134 | 23,7 |
| South Korea | 7 061 | 139,4 |
| France | 6 370 | 23,2 |
| Great Britain | 5 553 | 10,5 |
| China | 5 456 | 321,3 |
| Holland | 4 186 | 6,5 |
| Switzerland | 3 674 | 28,4 |
| Sweden | 3 533 | 35,3 |
| Hungary | 160 | 40,4 |
| Czech Republic | 123 | 48,2 |
| Poland | 102 | - 3.8 |

Source: *Raport o kapitale intelektualnym Polski* (Poland's intellectual capital report), Warszawa 2008, p.18.

Data included in Table 3 presents worldwide level of innovativeness, measured by the number of patent applications submitted to the Intellectual Property Organization. The results presented by Middle – Eastern Europe, including Poland, are divided from the first ten innovativeness ranking leaders by a vast, yawning gap. Additionally in the last few years in Poland regression took place. According to PKPP Leviathan's research, a positive fact is that only a minor percentage of companies completely abandons investments in new technologies (3%) and human capital (6%), although most companies' (51%) precognition to perceive the crisis as a bad time to invest in innovations is worrying. Such approach may cause the Polish economy to remain on an equally low competitiveness level after the crisis is over. Therefore supporting companies (38%) which want to use the crisis time for investments should be worthwhile. There are more companies with such an approach among the group of large enterprises (46%), importers (47%), producing supply goods (42%), and those in which women are the leaders, or are a part of the companies' management (70%)¹⁸.

A large opportunity of innovativeness development is created in Poland by structural funds. Our country is the largest beneficiary of the cohesion policy in the years 2007-2013, and therefore will receive 67 billion euro for moderniza-

¹⁸ *Strategie inwestycyjne przedsiębiorstw w czasie spowolnienia gospodarczego* (Enterprise investment strategies during the time of the economic slowdown), www.pkpplewiatan.pl 14.05.2009.

tion activities. For this reason a special Innovative Economy Operating Program (over 8,2 billion euro – without the countries own resources) has been compiled¹⁹. It's objective is mainly creating capital for innovations, supporting pro-innovative investments, and developing cooperation in the field of innovations. Moreover they will implement innovative activities, defined in the Regional Operative Programs (RPO). Research conducted by the Polish Confederation of Private Entrepreneurs (PKPP) Leviathan in April 2009 on a group of 515 small and medium enterprises indicates that half of the questioners (52%) thinks that Union funds are beneficial to the company's activity. At the same time they indicate that the money is difficult to access because of excessive bureaucracy. Although they admit that the opportunity to submit for the funds motivates them to plan new investments²⁰.

EU members, in December 2008, supported the help and facilitation packet for small and medium companies (Small Business Act) promising them – during the crisis period – more financial support and facilitations. The motto of the presented in June of 2008 by European Commission packet was „Think small first”, giving priority to small and medium companies. The packet is meant to support 23 million SME's (companies employing up to 250 people, and money fluency of up to 50 million euros per year). In the EU 99,8% of all enterprises are the SME's, securing two thirds of all work places in the private sector. In the recent years 80% of all new work places were created there. The European Commission perceives their development as an opportunity to raise competitiveness of the European economy.

It has been underlined, that in the face of the current crisis the most pressing matter of the small and medium enterprises is inaccessibility to capital. The European Investment Banks' (EBI) credits are meant to solve that matter, the bank plans (between 2008 and 2009) to reserve 15 billion euros for „simplified and elastic” credits on behalf of commercial banks, as part of a wholesome packet of 30 billion by the year 2011. It obligates the member countries to include their needs in constituting laws, and also is meant to encourage to eliminate unnecessary regulations, which makes economic activity difficult for entrepreneurs²¹.

So far SME development was hampered mostly by union and national regulations, which imposed on them the same administrative weights, as on the 41 thousand large European enterprises. „Small Business Act” anticipates:

- easier access to financial support, especially for researches and development,

¹⁹ *Program Operacyjny Innowacyjna Gospodarka* (Innovative Economy Operating Program 2007-2013), Ministry of Regional Development, Warszawa 2007, p. 162.

²⁰ *Strategie inwestycyjne przedsiębiorstw w czasie spowolnienia gospodarczego* (Enterprise investment strategies during the time of the economic slowdown), www.pkpplewiatan.pl 14.05.2009.

²¹ www.gospodarka.gazeta.pl/firma. 25.01.2009.

- lowering VAT rates on services distributed locally (including the ones with a high expenditure of work done by hand),
- better public administration for small and medium enterprises,
- elimination of payment delays.

SBA is also meant to introduce new ways of inducing interest in entrepreneurship, and also planting the spirit of entrepreneurship among the youth. Young people willing to establish economic activity will be able to gain experience and raise their qualifications by spending time abroad in a small or medium enterprise thanks to the „Erasmus for young entrepreneurs” program²².

The plan to stimulate the EU economy as an answer to the crisis, relies heavily on the „Small Business Act”, among other things eliminating the necessity to prepare yearly finance reports by micro-enterprises, making access to public orders easier and imposing on the authorities the duty to regulate the due amounts within a month. Additionally, it expands the state authority in granting credit guarantees to enterprises.

European Commission also proposed an introduction of a completely new form of enterprise – the European Private Company. Homogeneous regulations within the entire EU are meant to make simultaneous activity in multiple member countries easier, and lower the costs of establishing a new company – even by 10 thousand euros. According to the EC proposition, the company in question (even one-man type) is the one with limited responsibility, with a minimum capital of 1 euro, with its residence in one of the member countries, with an elastic structure, which an entrepreneur will be able to easily adjust to his own needs. Currently legislation work is being done in order to introduce this to the union law.

Conclusion

The undertaken analysis of the impact the global crisis has on the development of entrepreneurship shows its negative results. However searching for a solution to this situation is a more important matter. The key is to aspire for a rise of innovative and creative potential, which constitutes a basis for entrepreneurial behaviours and competitiveness of the economy. The presented packet of various activities supporting entrepreneurship, undertaken on both the government, institutional (cooperating institutions, such as PARP), and also Union levels indicates their relevance, even in the single fact of Polish and French experiences. However, in long-term perspective, an improvement of Poland's position in the worldwide innovativeness ranking by means of initiating entre-

²² A. Brzezińska, *Small Business Act dla Europy*, <http://www.nbportal.pl/pl/np/bloki/gospodarka/>, 6.10.2009.

preneurship energy may only induce a development of the country's intellectual capital. This challenge is addressed mainly to the Polish educational system, which should teach proper competencies, such as creativity, ability to analyze problems, or teamwork, which are necessary in the process of creating innovations.

Literature

- Brzezińska A., *Small Business Act dla Europy*, www.nbportal.pl/pl/np/bloki/gospodarka, z dnia 6.X.2009.
- Cieślak J., *Przedsiębiorczość dla ambitnych*, Wydawnictwa Akademickie i Profesjonalne Warszawa 2006.
- European Innovation Scoreboard 2008, Comparative Analysis of Innovation Performance 2009.
- Dominiak P., *Sektor MSP we współczesnej gospodarce*, PWN Warszawa 2005.
- Foster R. i Kaplan S., *Twórcza destrukcja*, Wyd. Galaktyka Łódź 2003.
- Kaliszczak L., *Współczesne znaczenie kategorii przedsiębiorczości jako warunku rozwoju*, [w:] „Przedsiębiorstwo i region”, pod redakcją R. Fedana, Uniwersytet Rzeszowski, Rzeszów 2006.
- Kaliszczak L., *Paradygmat przedsiębiorczości i jego implikacje*, [w:] Uwarunkowania przedsiębiorczości – różnorodność i zmienność, pod red. K. Jaremczuka, PWSZ w Tarnobrzegu, Tarnobrzeg 2008.
- Kraśnicka T., *Koncepcja rozwoju przedsiębiorczości ekonomicznej i pozaekonomicznej*, Wyd. AE im. Karola Adamięckiego w Katowicach, Katowice 2002.
- Monitoring kondycji sektora MSP*, PKPP Lewiatan, Warszawa 2009.
- Program Operacyjny Innowacyjna Gospodarka 2007-2013*, Ministerstwo Rozwoju Regionalnego, Warszawa 2007.
- Przedsiębiorczość w Polsce*, raport Ministerstwo Gospodarki, Warszawa lipiec 2009.
- Raport o kapitale intelektualnym Polski* (Poland's intellectual capital report), Warszawa 2008.
- Strategie inwestycyjne przedsiębiorstw w czasie spowolnienia gospodarczego*, www.pkpplewiatan.pl z dnia 14. 05.2009.
- Sudoł S., *Przedsiębiorczość, jej pojmowanie, typy i czynniki ją kształtujące*, [w:] Uwarunkowania przedsiębiorczości – różnorodność i zmienność, pod red. K. Jaremczuka, PWSZ w Tarnobrzegu, Tarnobrzeg 2008.
- www.pkpplewiatan.pl; 9.12.2008.
- www.wiadomosci24.pl/.../francuzi_coraz_chetniej_zakladaja_male_przedsiębiorstwa, z dnia 19. 05.2009.

www.firma.egospodarka.pl z dnia 23.08.2009 CIMA (Chartered Institute of Management Accountants).

www.parp.gov.pl z dnia 16. 03. 2009

www.gospodarka.gazeta.pl/firma. 25.01.2009.

Streszczenie

PRZEDSIĘBIORCZOŚĆ W POLSCE W DOBIE GLOBALNEGO KRYZYSU I JEJ UWARUNKOWANIA

Przedmiotem opracowania jest analiza wpływu globalnego kryzysu na rozwój przedsiębiorczości w Polsce oraz identyfikacja działań podejmowanych na rzecz niwelowania jego skutków, zarówno na poziomie rozwiązań krajowych, jak i Unii Europejskiej. Tło analizy stanowi ocena wpływu procesu globalizacji na warunki działalności i rozwoju przedsiębiorstw, w tym głównie zaliczanych do sektora MSP. Wyniki badań wskazują na niską pozycję naszego kraju w zakresie innowacyjności, a obniżenie wyników finansowych przekłada się na zmianę strategii inwestycyjnych, w kierunku ograniczania innowacji. Jednak mimo pogorszenia warunków koniunktury gospodarczej liczba nowo powstałych przedsiębiorstw wykazała tendencje wzrostowe. Najwięcej podmiotów powstało w grupie przedsiębiorstw małych, zatrudniających od 10 do 49 osób. Stanowi to potwierdzenie tezy, że sektor MSP w dobie kryzysu, przy stworzeniu warunków wspierających działalność, może efektywnie przyczynić się do rozwoju społeczno-gospodarczego.

INFLUENCE OF GLOBAL ECONOMIC CRISIS ON FINANCIAL STANDING OF HSW – ZAKŁAD ZESPOŁÓW MECHANICZNYCH SP. Z O.O. – (VERIFICATION OF FINANCIAL ANALYSIS METHODS)

Wojciech LICHOTA

The Marshal's Office of the Podkarpackie Province

Introduction

The purpose of the paper is effectiveness verification of financial analysis methods by evaluation of the financial standing of *HSW – Zakład Zespołów Mechanicznych Sp. z o.o.* (ZZM), which operated in the closest neighbourhood of enterprises from the Tarnobrzaska Special Economic Zone „Euro-Park Wisłosan”, i.e. e.g. *HSW – Zakład Zespołów Napędowych Sp. z o.o.*, *HSW – Zakład Kuźnia Matrycowa Sp. z o.o.*, *HSW – Zakład Urządzeń Mechanicznych Sp. z o.o.*, and as the result of the growing economic crisis in the world, declared bankruptcy. The evaluation will be carried out by means of a modified point method of risk assessment, and ten discrimination functions prepared for the Polish market.

HSW – Zakład Zespołów Mechanicznych Sp. z o.o. was established on 1 July 2000 as the result of restructuring of Huta Stalowa Wola. The majority shareholder of ZZM (88% of shares) was Huta Stalowa Wola. Zakład Zespołów Mechanicznych Sp. z o.o. manufactured parts for building machines, e.g. gear-boxes, gear-cases, and machines for processing of stone (crushing machines), and branch shredders. An important importer of the crushing machines was an Austrian firm Hartl. The examined Company employed 968 persons. The main reason for the Company's problems in 2008 was, e.g. resignation of the firm Hartl from ordering the crushing machines, and limitation of orders for parts for building machines manufactured by the parent company, i.e. HSW S.A., which received ca. 60% of ZZM's sales. Moreover, the power station cut power supply to some production halls of the Company for unpaid bills, and the law enforcement officer seized the Company's accounts. The court declared bankruptcy of the enterprise on 11 February 2009 at the moment when debts of ZZM exceeded the value of assets.

Evaluation of the Company's financial standing

Due to the limited size of this paper, I will present only the assumptions of the modified point method of risk assessment. It is possible to be acquainted with assumptions of discrimination functions studying the literature referred to at the end of this paper.

The selected modified point method of risk assessment is used by one of Polish banks and serves for assessment of the financial standing of enterprises. Considering the above, one should assume that application of the said method would allow gaining a credible image of the financial standing in the examined enterprise.

Due to the limited access to information on the examined enterprise, the assessment will be made based on the quantitative classification, i.e. by means of financial indexes and an index of branch risk, which were presented below in table 1.

Values of individual indexes have been graded, whereas the sum of their partial grades is the basis for establishing the final grade allowing classifying into one of six risk groups. At the same time, it should be stressed that the enterprise being assessed carried out manufacturing as the basic part of its performance.

Table.1. Indexes being assessed by means of the modified point method of risk assessment.

| Item | Index |
|------|--|
| 1. | Net profitability (%) |
| 2. | Profitability from sales (%) |
| 3. | (EBIT + amortization) / interests |
| 4. | Own capital / liabilities (%) |
| 5. | Current liquidity index |
| 6. | Fast liquidity index |
| 7. | Rotation of amounts due in days |
| 8. | Rotation of reserves in days |
| 9. | Total incomes / assets |
| 10. | Branch risk index |

Source: Own study.

The branch risk index is read from the Map of Investment Risk in branches of the Polish economy made by the Gdansk Institute for Market Economics [In-

stytut Badań nad Gospodarką Rynkową]. Grading of individual risk scales is the following:

- a small risk – 1 point,
- a medium risk – 2 points,
- an increased risk – 3 points,
- a high risk – 4 points,
- a very high risk – 5 points.

Table 2. Categories of quantitative classification of risk.

| Number of points | Risk assessment | Company's standing |
|------------------|-----------------|--------------------|
| 10:15 | Very low | Very good (5) |
| 16:25 | Low | Good (4) |
| 26:35 | Medium | Average (3) |
| 36:45 | Increased | Satisfactory (2) |
| 46:55 | High | Poor (1) |
| 56:60 | Very high | Very poor (0) |

Source: Own study based on the bank instruction.

Table 3. Basic financial data of Zakład Zespołów Mechanicznych Sp. z o.o. in thousands of PLN.

| Selected elements of balance sheet and profit and loss account | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|--------|--------|--------|--------|--------|--------|
| assets | 93722 | 96478 | 97745 | 82377 | 85359 | 89816 |
| asset turnovers | 29157 | 35247 | 40307 | 35598 | 37598 | 44524 |
| own capital | -2976 | 8872 | -1391 | -6917 | 7639 | 8831 |
| long-term liabilities | 39900 | 17123 | 20033 | 25192 | 26083 | 25544 |
| net incomes from sales | 85411 | 99043 | 108123 | 103900 | 119816 | 150317 |
| costs of operational activity | 98184 | 105244 | 108758 | 106583 | 119343 | 146542 |
| result from operational activity | -15786 | -8635 | -4976 | -4662 | 3348 | 3337 |
| gross result | -19957 | -13053 | -10105 | -5554 | 2545 | 1267 |
| net result | -19957 | -13150 | -10264 | -5526 | 5557 | 1191 |
| Amortization | 3962 | 4004 | 4114 | 3913 | 3790 | 3256 |

Source: Own study.

Table 4. Assessment of financial standing of the company – values of individual indexes.

| Model | ZAKŁAD ZESPOŁÓW MECHANICZNYCH SP. Z O.O. | | | | | |
|---|--|-------------|-------------|-------------|-------------|-------------|
| By E. Mączyńska and M. Zawadzki | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | -0.17 | -0.09 | -0.05 | -0.06 | 0.04 | 0.04 |
| Z ₂ | -0.03 | 0.09 | -0.01 | -0.08 | 0.09 | 0.10 |
| Z ₃ | -0.17 | -0.10 | -0.06 | -0.02 | 0.12 | 0.05 |
| Z ₄ | 0.51 | 0.50 | 0.51 | 0.55 | 0.73 | 0.80 |
| Z | -3.46 | -2.10 | -1.98 | -2.14 | -0.13 | -0.27 |
| By M. Hamrol, B. Czajka and M. Piechocki | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | -0.21 | -0.14 | -0.11 | -0.07 | 0.07 | 0.01 |
| Z ₂ | 0.29 | 0.33 | 0.34 | 0.37 | 0.41 | 0.28 |
| Z ₃ | 0.39 | 0.27 | 0.19 | 0.22 | 0.40 | 0.38 |
| Z ₄ | -0.15 | -0.06 | -0.01 | -0.03 | 0.00 | 0.03 |
| Z | -1.98 | -1.59 | -1.42 | -1.24 | 0.24 | -0.06 |
| By D. Hadasik | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | 1.03 | 0.91 | 1.01 | 1.08 | 0.91 | 0.90 |
| Z ₂ | 64.52 | 68.10 | 79.63 | 76.30 | 60.00 | 43.00 |
| Z ₃ | 52.23 | 40.99 | 43.72 | 36.64 | 45.28 | 68.38 |
| Z ₄ | -1.58 | -1.16 | 0.77 | -0.48 | 0.34 | 0.04 |
| Z | -0.41 | 0.02 | -0.25 | -0.35 | 0.00 | -0.22 |
| By A. Holda | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | 0.68 | 0.62 | 0.62 | 0.71 | 0.90 | 0.97 |
| Z ₂ | 103.18 | 90.80 | 101.42 | 108.40 | 91.05 | 90.17 |
| Z ₃ | -20.85 | -13.83 | -10.57 | -6.14 | 6.63 | 1.36 |
| Z ₄ | 60.48 | 69.65 | 86.47 | 87.35 | 69.11 | 46.74 |
| Z ₅ | 0.92 | 1.06 | 1.14 | 1.28 | 1.56 | 1.74 |
| Z | -0.97 | -0.67 | -0.82 | -0.83 | -0.21 | -0.18 |
| By D. Appenzeller and K. Szarzec | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | 0.51 | 0.50 | 0.51 | 0.56 | 0.73 | 0.80 |
| Z ₂ | -0.18 | -0.09 | -0.05 | -0.04 | 0.03 | 0.02 |
| Z ₃ | 57.21 | 44.18 | 41.67 | 43.79 | 42.44 | 54.48 |
| Z ₄ | 188.29 | 113.81 | 123.55 | 128.76 | 108.03 | 98.19 |
| Z ₅ | -0.27 | -0.62 | -3.78 | -3.92 | 0.36 | 0.40 |
| Z | -0.78 | -0.51 | -0.35 | -0.32 | -0.04 | -0.06 |
| By A. Pogorzelski | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | -0.17 | -0.09 | -0.05 | -0.06 | 0.04 | 0.04 |

| Model | ZAKŁAD ZESPOŁÓW MECHANICZNYCH SP. Z O.O. | | | | | |
|---|--|---------------|---------------|---------------|--------------|--------------|
| Z ₂ | 1.03 | 0.91 | 1.01 | 1.08 | 0.91 | 0.90 |
| Z ₃ | 1.12 | 0.88 | 0.91 | 0.85 | 0.65 | 0.54 |
| Z ₄ | -0.28 | -0.08 | -0.01 | -0.02 | 0.17 | 0.14 |
| Z | -0.67 | -0.56 | -0.62 | -0.58 | -0.48 | -0.37 |
| By J. Janek and M. Żuchowski | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | -0.17 | -0.09 | -0.05 | -0.06 | 0.04 | 0.04 |
| Z ₂ | 0.15 | 0.11 | 0.12 | 0.11 | 0.14 | 0.19 |
| Z ₃ | 1.12 | 0.88 | 0.91 | 0.85 | 0.65 | 0.54 |
| Z ₄ | -0.04 | 0.16 | 0.09 | -0.04 | 0.15 | 0.25 |
| Z | -2.59 | -1.36 | -1.47 | -1.62 | -0.60 | -0.34 |
| By P. Stępień and T. Strąk | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | 1.03 | 0.91 | 1.01 | 1.08 | 0.91 | 0.90 |
| Z ₂ | 0.39 | 0.42 | 0.42 | 0.48 | 0.51 | 0.35 |
| Z ₃ | -0.21 | -0.14 | -0.11 | -0.07 | 0.07 | 0.01 |
| Z ₄ | 0.87 | 0.94 | 0.99 | 0.97 | 1.00 | 1.03 |
| Z | -20.03 | -14.02 | -12.96 | -12.20 | -4.28 | -6.82 |
| By D. Wierzba | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | -0.21 | -0.13 | -0.09 | -0.10 | -0.01 | 0.00 |
| Z ₂ | -0.23 | -0.13 | -0.08 | -0.08 | 0.00 | 0.00 |
| Z ₃ | -0.30 | -0.37 | -0.40 | -0.35 | -0.17 | -0.12 |
| Z ₄ | 0.30 | 0.40 | 0.41 | 0.40 | 0.48 | 0.55 |
| Z | -1.30 | -0.84 | -0.64 | -0.64 | 0.01 | 0.08 |
| By J. Gajdka and D. Stos | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Z ₁ | 0.91 | 1.03 | 1.11 | 1.26 | 1.40 | 1.67 |
| Z ₂ | -0.21 | -0.14 | -0.11 | -0.07 | 0.07 | 0.01 |
| Z ₃ | 1.03 | 0.91 | 1.01 | 1.08 | 0.91 | 0.90 |
| Z ₄ | 62.24 | 72.38 | 88.14 | 89.08 | 70.16 | 47.44 |
| Z ₅ | -0.23 | -0.13 | -0.09 | -0.05 | 0.02 | 0.01 |
| Z | -0.67 | -0.46 | -0.46 | -0.46 | -0.21 | -0.30 |
| The modified point method of risk assessment | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| W ₁ | -22.66% | -12.99% | -9.23% | -4.78% | 4.24% | 0.78% |
| W ₂ | -14.95% | -6.26% | -0.59% | -2.58% | 0.39% | 2.51% |
| W ₃ | -2.87 | -6.57 | -0.09 | 0.66 | 2.31 | 4.15 |
| W ₄ | -3.18% | 9.20% | -1.42% | -8.40% | 8.95% | 9.83% |
| W ₅ | 0.51 | 0.50 | 0.51 | 0.56 | 0.73 | 0.80 |
| W ₆ | 0.29 | 0.34 | 0.34 | 0.37 | 0.41 | 0.29 |

| Model | ZAKŁAD ZESPOŁÓW MECHANICZNYCH SP. Z O.O. | | | | | |
|------------------------------|--|-----------|-----------|-------|-------|-------|
| | W ₇ | 64.76 | 83.41 | 87.35 | 79.03 | 62.65 |
| W ₈ | 46.86 | 39.44 | 44.70 | 39.78 | 49.69 | 71.30 |
| W ₉ | 0.94 | 1.05 | 1.14 | 1.40 | 1.53 | 1.70 |
| W ₁₀ ¹ | 5 | 5 | 5 | 5 | 5 | 5 |
| W | very poor | very poor | very poor | poor | poor | poor |

Source: Own study based on results of individual discrimination functions and the modified point method of risk assessment. In order to facilitate comparability of results, individual free words of the discrimination functions have been modified so that the function preset thresholds should equal zero.

The purpose of the paper has been to verify methods of financial analysis on the example of a bankrupted enterprise, i.e. HSW – Zakład Zespołów Mechanicznych Sp. z o.o. As it results of the assessment, the majority of the methods, show very similar results. Generally, the values of the discrimination functions are negative values, which is a symptom of bankruptcy threat. It is also a fact that in the years 2006 and 2007 the Company had a slight improvement of its financial standing, which is reflected by positive results of the functions, e.g. by M. Hamrol, D. Wierzba; moreover according to the modified point method of risk assessment the financial standing was poor. It should be remembered, however, that in those years a substantial economic growth of the country was noted in Poland. Unfortunately, in 2008, facing the global economic crisis, the main importer of Zakład Zespołów Mechanicznych Sp. z o.o. – the enterprise Hartl informed that in the first quarter of 2009 they would not give the company from Stalowa Wola no orders, whereas Huta Stalowa Wola S.A. substantially reduced their orders. This caused the situation that ZZM became insolvent during a few months.

While comparing the results of the discrimination functions, as well as values of indexes for individual years of the Company's performance it should be stated that:

- The method by E. Mączyńska and M. Zawadzki very precisely indicates the financial standing. The function values in each period are negative, whereas the indexes do not show much differentiation between one another,
- The method by M. Hamrol, B. Czajka, and M. Piechocki allows forecasting the standing of the enterprise. The function value is positive only in 2006, whereas the indexes do not show much differentiation between one another,
- The method by D. Hadasik allows forecasting the standing of the enterprise. The function value is positive only in 2003 and is only 0.02. The method in its construction considers rotation of liabilities and reserves, the significance

¹ For enterprises operating in the branch 29.52 of the Polish Classification of Activities the risk is very high.

of these indexes is, however, respectively small and does not affect much the values of the functions,

- The method by A. Hołda gives a clear image of the financial standing of the examined enterprise. The function values in each year are negative, whereas the construction and results of the individual indexes allow for the correct interpretation of the company's standing,
- The method by D. Appenzeller and K. Szarzec allows forecasting fully the financial standing. Attention should be, however, turned to the construction of the index „debt / EBITDA”. The significance of this index is negative. In the discussed case when the bottom shows the negative value (the years 2002-2005) it turns out that the growth of liabilities affects the improvement of the financial standing of the company.
- The method by A. Pogorzelski allows forecasting bankruptcy of the examined company, because the function values are negative yearly. In its construction, it contains an index of covering short-term liabilities with operational profit and amortization. Similarly as in the method by D. Appenzeller and K. Szarzec, the significance of the index is negative, which in the discussed case causes that in the years 2002-2005 the meaningfully negative operational profit affects favourably the financial standing.
- The method by J. Janek and M. Żuchowski allows forecasting bankruptcy of ZZM. Individual values of the indexes do not show substantial differentiation,
- The method by P. Stępień and T. Strąk very clearly indicated the poor standing of the company. In case of the model the discrimination functions in the individual years reach substantial values, which is a result of substantial significance of their variables,
- The method by D. Wierzba as the only one among the presented methods takes two positive values, e.g. by means of a substantial fall of short-term liabilities and an increase in reserves. Analyzing by this method one may draw an erroneous conclusion about the financial standing of the company, considering, moreover, that the positive values occur each year,
- The method by J. Gajdka and D. Stos – this method correctly depicts the financial standing of the company. It is worth pondering, however, why the authors in their construction of the function considered incomes from sales with the negative sign, whereas in other methods the significance of this index is positive.

The last of the presented methods is the modified point method of risk assessment. This method is the most complex in construction in comparison with the above-presented. It contains indexes of liquidity, profitability, effectiveness, and indebtedness. The results of this method are surprising in so much that it shows a slight improvement of the Company's standing in the years 2005-2007.

To sum up, one should stress that in order to make a credible assessment, it is necessary to apply at least several methods of financial analysis and to make calculations based on data covering a period that is not shorter than three years.

Literature

- Antonowicz P.: *Metody oceny i prognoza kondycji ekonomiczno-finansowej przedsiębiorstw*. Ośrodek Doradztwa i Doskonalenia Kadr Sp. z o.o., Gdańsk 2007.
- Appenzeller D.: *Ekonometryczna analiza czynników kształtujących skalę i dynamikę upadłości w Polsce*. Zeszyty Naukowe Akademii Ekonomicznej w Poznaniu, No. 49. Akademia Ekonomiczna, Poznań 2004.
- Appenzeller D., Szarzec K.: *Prognozowanie zagrożenia upadłością polskich spółek publicznych*. „Rynek Terminowy” 2004, No. 1, pp. 120-128.
- Bankructwa przedsiębiorstw. Wybrane aspekty instytucjonalne (ed. M. Mączyńska). Wydawnictwo Szkoły Głównej Handlowej, Warszawa 2008.
- Hadasik D.: *Upadłość przedsiębiorstw w Polsce i metody ich prognozowania*, Zeszyty Naukowe Akademii Ekonomicznej w Poznaniu seria II 1998, No. 153.
- Hamrol M., Czajka B., Piechocki M.: *Upadłość przedsiębiorstwa – model analizy dyskryminacyjnej*. „Przegląd Organizacji” 2004, No. 6, pp. 35-39.
- Hołda A.: *Prognozowanie bankructwa jednostki w warunkach gospodarki polskiej z wykorzystaniem funkcji dyskryminacyjnej ZH*. „Rachunkowość” 2001, No. 5, pp. 306-310.
- Hołda A.: *Ustalanie sytuacji finansowej jednostki z wykorzystaniem mierników syntetycznych – koncepcja wartości średnich*. „Monitor Rachunkowości i Finansów” 2002, No. 1.
- Korol T., Prusak B.: *Upadłość przedsiębiorstw a wykorzystanie sztucznej inteligencji*. CeDeWu, Warszawa 2005.
- Mączyńska E.: *Systemy wczesnego ostrzegania*. „Nowe Życie Gospodarcze” 2004, No. 12.
- Mączyńska E., Zawadzki M.: *Dyskryminacyjne modele predykcji upadłości przedsiębiorstw*. „Ekonomista” 2006, No. 2.
- Prusak B.: *Nowoczesne metody prognozowania zagrożenia finansowego przedsiębiorstw*. Difin, Warszawa 2005.
- Restrukturyzacja w procesie przekształceń i rozwoju przedsiębiorstw* (ed. R. Borowiecki). Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków 1996.
- Siemińska E.: *Finansowa kondycja firmy*. Poltext, Warszawa 2003.
- Upadłość przedsiębiorstw w Polsce w latach 1990-2003 – teoria i praktyka* (ed. D. Appenzeller), Wydawnictwo Akademii Ekonomicznej w Poznaniu, Poznań 2004.

Zaleska M.: *Identyfikacja ryzyka upadłości przedsiębiorstwa i banku – systemy wczesnego ostrzegania*, Difin, Warszawa 2002.

Streszczenie

WPLYW GLOBALNEGO KRYZYSU GOSPODARCZEGO NA SYTUACJĘ FINANSOWĄ HSW – ZAKŁADU ZESPOŁÓW MECHANICZNYCH SP. Z O.O. – WERYFIKACJA METOD ANALIZY FINANSOWEJ

W artykule zaprezentowano dziesięć funkcji dyskryminacyjnych oraz zmodyfikowaną punktową metodę oceny ryzyka. W celu zweryfikowania wiarygodności diagnostycznej ww. metod autor dokonał analizy sytuacji finansowej przedsiębiorstwa produkcyjnego HSW – Zakładu Zespołów Mechanicznych Sp. z o.o., która funkcjonowała w najbliższym otoczeniu przedsiębiorstw z Tarnobrzelskiej Specjalnej Strefy Ekonomicznej i została postawiona w stan upadłości w styczniu 2009 r. Badania przeprowadzono na podstawie danych finansowych Spółki obejmujących lata 2002-2007.

Generalnie sytuacja finansowa omawianego przedsiębiorstwa, w każdym z badanych okresów była zła. Funkcje dyskryminacyjne przyjmowały wartości świadczące o zagrożeniu upadłością, natomiast wyniki zmodyfikowanej punktowej metody oceny ryzyka pozwalały stwierdzić, że sytuacja firmy jest bardzo słaba lub słaba.

Należy zaznaczyć, że w latach 2006-2007 kiedy w Polsce i na świecie odnotowano znaczny wzrost gospodarczy, HSW – Zakład Zespołów Mechanicznych Sp. z o.o. także poprawił swoje wyniki finansowe. Świadczą o tym wartości funkcji dyskryminacyjnych, które mimo że nadal ujemne, zwiększyły swoje wartości. Porównując wyniki poszczególnych funkcji autor zauważył, że w celu dokonania wiarygodnej oceny należy zastosować, co najmniej kilka metod analizy finansowej dokonując obliczeń na podstawie danych obejmujących okres nie krótszy niż trzy lata. Ocena kondycji finansowej za pomocą jednej metody np. D. Wierzyby, w omawianym przypadku doprowadzić mogła do błędnej interpretacji. Analizując wyniki tej funkcji można dojść do wniosku, że przedsiębiorstwo w roku 2006 i 2007 nie było zagrożone upadłością.

BIPOLARITY OF COACHING IN ECONOMIC CRISIS

Maciej KOSNO

KoSmo Consulting

This is another economic crisis that provokes many debates on methods of prevention and going out of such economic situations. An interesting phenomenon is an attitude and behaviour of social groups as well as individuals towards the crisis situation on the market. We can notice very precisely the standard (stereotype) activity of the community and companies operating on the market. People withdraw money from circulation, creating private savings that are kept at home, instead of financial institutions; then the latter suffer from lack of capital that may be used for a credit action allocated to investments, which in this way leads to an increase in investment costs. A vicious circle is created, which is reflected in the situation visible on the market. A very similar situation is in many companies, where a modern way of management and investment in human capital are suddenly discontinued at the moment of a change on the market, and this is dictated by economizing.

Since behaviour and mentality of the community are one of the elements affecting the origin of the crisis in economy, one should work on its change and invest in personal development.

The 21st century is the age when a great stress is put on human capital, which is the foundation of our whole economy. High investments in that branch have brought high profits from effectiveness of employees, and many such companies have stood out above mediocrity on the market. High interest in investments in human capital on the market has led in this way to appearance on the market of many educational, training, and consulting firms.

However, there arises a question: How to achieve such results? The best way is to rest one's actions on the experience of highly developed countries, which have been engaged in this phenomenon for a long time and have been very successful in that field. It has been proved that several trainings for employees of companies and institutions, and the population have led visibly to a substantial socio-economic development. Some research of many specialists both in trainings and in psychology, as well as a detailed observation of various fields of life and mainly sport have led to appearance of coaching. It is sport from which it has originated, and in the sport, a great stress is put on a continuous development, self-improvement, and mastery. Successes in sport are dic-

tated by two factors; on the one hand, it is physical fitness, and on the other hand, it is mental fitness. The psychological factor is a strong weapon of a sportsperson, and that is why much effort is taken in forming it.

The last two decades have brought an intensive development of coaching in the United States, and it came to Poland from there via Western Europe. It is a process aiming at development and learning. Work of a coach (a personal trainer) consists in unearthing our strong sides, overcoming barriers, and supporting in specifying targets and pursuing their realization. In comparison to the classical system of „investments” and human development through the traditional system of trainings, coaching is a more flexible method of development. A coach does not have a formalized scenario of his actions and need not be a specialist in one of the branches where his client works. Hence it is a very flexible process, where it is the client who answers very well-thought-out questions of the coach, and in this way realizing solutions, which so far he has not been able to create or has not attached much weight to them. Very important in the process itself is that the client should find solutions, and the system of asking questions should not suggest and impose ready solutions. In the end, it is the client who must find a solution that will be ideal for him. This is the most important element of the process, and also at the same time a great advantage of the method. The trainer works individually mainly only with one person, adapting the work system to individual needs, features and requirements of his clients, and at the same time targets and ways of their realization are not imposed on him, but are his idea, which he will realize in a greater part than some imposed solutions.

Thus, the coaching process may be defined as a path that is followed by the client and his coach supporting him during that journey.

Coaching as development of an employee

Most of the readers must agree with a statement that everybody in the personnel affects to some extent the operation of the total „organism” of the firm, irrespective whether this is a large global corporation, or a small regional firm. Since one of the most important elements, according to the modern approaches to management and economics, is human capital, it is worth re-thinking what elements of the capital should be developed and worked on to improve operation of the total „organism” of the organization.

Each of us, whether in our private or professional life, follows a certain plan, which we often create ourselves. The operational plan consists of targets that we are to achieve and tasks that are specified during realization of the targets. It happens very often that such a plan of actions is blurred in time; it is forgotten and unrealized for many reasons, e.g. it is not sufficiently elaborated and consistent with the environment where we function. How many people of

us know and identify themselves with the vision and mission of firms where we work? How many know what tasks are realized by individual organizational units or what relations are between them? Surely, it would be difficult to know all answers to such questions, but knowledge of the basic ones would have to affect the picture of the role played by our person in „the organism” and the way of our realization on the position held by us.

Coaching allows us to build such a plan, to create a vision of our life in cooperation with our environment. Very often during work at coaching sessions it turns out that the client has a specific target that he wants to achieve, yet he is unable to obtain it. Thus, there arises a question what the reason is for it. Well, very often there is such a target, but in abstraction from the entirety of what a given person is doing; there is no further action, i.e. an answer to the question what I could do to achieve it, and then, what else and in what way. Such a construction allows for a detailed specification of „a road”, which the client must pursue to realize the target that he has made. Of course, the present times mean very fast changes and continuous taking of decisions, and that is why the action plan, which we have made, may be changed. Such a situation is normal and from time to time, we should return to it to introduce some minor corrections.

It is exactly identical with companies and institutions that have their own missions. They are the main target for operation of those „organisms”, and that is why identification of employees with the vision of the company is so important in its implementation.

Coaching in development of a company’s employees may be perceived through the prism of four determinants:

- a motivation,
- an output of the potential,
- a change to the view,
- a reorganization.

A continuous change to the mode of work and a high pace lead to wearing off the main targets, which are made by the employee. It often results in monotony and lack of involvement in implementation of his tasks. It happens that motivation systems that have been implemented into companies and realized for a longer period of time slowly become ineffective. This leads to low effectiveness and efficiency of work, which in the time of the crisis is reflected in weak results of the company on the market, lay-offs, and sometimes bankruptcies. It is coaching that may become a fruitful element of supporting the employee and enhancing his motivation. During sessions, we may establish all the targets that the employee wants to pursue in the organization, and we may reconstruct or even build from scratch his personal business plan, which will clarify his position, targets, and tasks, thanks to which it will be easier for him to function. It leads to a greater motivation and much facilitation through reduction of mental burdens caused by continually repeated question of existential nature.

Very often people put getting ideal work as their dream target. What happens when they have already achieved this target? They usually perform their duties and at any costs, they wish to keep the position that they have. Such a situation may be compared to the journey of the trout upstream, which fights to swim to its goal and when it reaches it, it dies. Unfortunately, such a comparison is often pertinent, as our goal is only to get the job, and not our development in it and our support for the organization. It is not, however, a situation without a way out; it is enough to work with such a person. In such a situation as well, it is coaching that proves correct, as it allows putting out the potential, dormant in the employee, for example, while creating a personal business plan, establishing new targets and tasks for their realization. Since the employees' targets are to be convergent with the mission and the vision of the company, and they are to be manifestation of an own creativity of the client, we may be sure that he will take a greater effort and use his potential for their realization; and in this way for development of the company.

An attitude of the employee also depends to a large extent on external factors. They are for example: management system, co-workers, clients of the company, acquaintances. Such factors affect the change of the employee's attitude to the situations, with which he has to do, and even they restrict perceiving solutions that could be applied to it. Coaching allows „showing a mirror” to such an employee to individualize his previous actions and to apply possible changes that he could implement. The coach's work allows the client (the employee), through tools of different types, to analyze several solutions that could be pursued in his actions. A change of view at oneself and targets that we want to achieve through the prism of many solutions allows generating new ideas, develops creativity, enhances self-assessment of the employee, and affects positive results that he gains at work, developing both himself and the organization where he works.

Reorganization of actions with the use of coaching may lead to many changes, starting from rearranging of targets, tasks, and actions in the company, by means of organizational and personnel changes, ending even with the employee's resignation from work. Sometimes the last element is debatable, which leads to arising of a question: „...what coaching is then if it leads to destruction instead of improvement...?”. Well, this process is mainly designed for individuals, serving in this way the whole organism, which, as we have already noted, is „built” out of them. It is also worth stressing that this is not a compulsory process and if an employee, by all means, avoids changes, we cannot force him to make them. Let us imagine now a situation when we have such an employee in our company and his position does not meet his expectations; he does not realize himself on it and he does not want to work on changing it; what would be better in this case: his further abidance, or his exchange on this position? Well, this is a seemingly drastic situation for the company, but only seemingly, as in the end, it will bring great profits for each party.

The exemplary situations that have been presented above lead to a change aiming at improving the functioning of an employee as an individual, and this is coaching – face-to-face work. It brings, however, profits for the whole company, organization, because it is built out of human individuals and it depends on them how it will function on the market, irrespective of the fact whether this is a positive economic growth or a crisis.

On the Polish market, we can find perfect examples of such companies; one of them is a large corporation, where in one of the regions the coaching system was introduced long ago, and management in that branch is based on that system. In the time of the crisis, it records perfect financial results, higher than in the times of growth, contrary to other regions, in which the company operates and where the situation seems to be rather poor. The company is a very good and unexceptional example of the fact how work with the personnel and investments in them can bring perfect effects, which begins increasingly to be noticed and appreciated in Poland.

Profitability of coaching branch

A way out of the economic crisis is manifested in development of the economy and branches that will propel growth and will allow obtaining a stable situation on the market. The optimal situation in such a development occurs when several branches are developing, as it allows for a stable growth, without oscillations, and it eliminates a risk of failure in reaching the full stabilization.

The majority of new branches appearing on the market, and at the same time gaining high popularity, effectiveness, and interest of consumers, are very fast accepted by the market and developed on it. The same situation happens to coaching, which is a fairly young discipline both in the world and in Poland, but developing resiliently. Hence, it is one of the elements of the whole economy, although still a small one, and leading to coming of the economy out of the crisis situation.

Coaching means not only firms offering their services in this field, or groups of trainers engaged in this type of work with the client. This also includes several additional branches strictly related to coaching, starting from many institutions creating coaches thanks to studies, courses, trainings, etc. This branch also provides an increasing income to publishing houses, media, online companies servicing websites related to this branch. We could list many ties; it is important that development of coaching also leads to increasing incomes in other branches, and in this way directly (maybe only slightly) affects the situation in the economy. This leads to creation of ties in the economy allowing for additional sources of incomes and opportunities for surviving the difficult situation by many affiliated entities.

An increase of incomes in the training and coaching branch, and the branches directly affiliated to them also induces a greater consumption demand, which very often mitigates the crisis effects, which not long ago could be seen on the example of Poland, which in the time of the global economic breakdown noted the growth at the level of +0.3%. A phenomenon that is produced by development changes in this branch may be referred to as an indirect effect of coaching influence upon the economy.

Yearly almost 850 persons leave schools for coaches. Unfortunately, not all the graduates start work in their profession, which is dictated by many factors. It is estimated that until 2012 the coach's profession will be performed by almost 3,000 persons. According to calculations of the Coaching Centre and the Polish Chamber of Training, the coach market will be worth almost 33,750,000 zł.¹

Thus, we can see what big role is played by coaching in the crisis time. On the one hand, it is a modern tool for the employee's development, and on the other hand, a new branch in the field of developing our skills, behaviour, and actions, bringing an additional income in the economy. Its high effectiveness still allows for development of this branch, which will be an additional „driving motor” for the economy. I can also risk a statement that a change to and work on man is also reflected in the situation, which we have on the market. It allows for enhancing social awareness, and also ensures well-thought-out actions in accordance with the personal business plan, which in trouble situations do not allow for outburst of social panic, and in this way driving of a vicious circle of the crisis.

Streszczenie

DWUBIEGUNOWOŚĆ COACHINGU W KRYZYSIE GOSPODARCZYM

Coaching jest jedną z nowych metod rozwoju osobistego jednostki. Poprzez specyficzny system pracy w tym podejściu i wysoką jego efektywność pozwala na osiągnięcie wysokich wyników przez jednostkę, co przekłada się na funkcjonowanie całego systemu. Kryzys gospodarczy to świetny moment do zastosowania coachingu, jako jednego z narzędzi do poprawy sytuacji gospodarki, która budowana i kreowana jest poprzez jednostki. Pozwala to zarówno na zmianę efektywności pracy, jaką jednostka wykonuje, jak również zmianę w podejściu mentalnym do sytuacji na rynku. Coaching, jako świetnie rozwijająca się branża pozwala na osiąganie dodatkowego dochodu, zarówno w sposób bezpośredni, poprzez pracę trenerów oraz szkolące ich instytucje. Również powiązane z tą branżą dodatkowe gałęzie w gospodarce, osiągają z tego tytułu dodatkowy dochód, łagodząc tym samym skutki kryzysu.

¹ Information taken from the website.

ROLE OF SMALL AND MEDIUM ENTERPRISES IN ECONOMY IN TIMES OF GLOBAL CRISIS

Jan ROGOWSKI

University of Rzeszów

Introduction

The main feature of the market economy is dominance of private ownership and a substantial share in production and services of small and medium enterprises. Hence, small and medium enterprises are of substantial importance in the free-market economy. Experiences of highly developed countries indicate that companies employing up to 250 employees and not large concerns decide about the strength of the economy. In the EU, small and medium enterprises constitute ca. 99% of all enterprises. SMEs globally employ more people than large companies, and in the EU they provide jobs for ca. $\frac{2}{3}$ of all the employed. A substantial part of the national income (ca. 60%) is also generated by small and medium enterprises.

In Poland only at the end of the 1980s, there were conditions for development of entrepreneurship, mainly thanks to passing of the Economic Performance Act of 1988 and amending the Joint Ventures Act. The former act abolished legal barriers for entering the market and introduced a rule that all economic entities could carry out economic performance. The latter one created more favourable conditions for foreign investments in Poland. Similarly, the process of the political system transformation, initiated in 1990, and the related economic changes, introducing liberalization of prices and trade, gave the origin to development of entrepreneurship in Poland, and small and medium enterprises, and as a motoric factor of the process have been actively participating in demonopolization and restructuring of the economy and building of the economic infrastructure, indispensable for effective operation of the whole economy.

Small and medium enterprises in the economy of each country belong to stimulators of the economic development. Features characterizing these entities include creativeness, effectiveness, innovativeness, and flexibility in taking decisions, with consideration of changes occurring in the environment. They are also distinguished by financial independence.

The State creates the rules of economic and legal system, and economic entities perform within it. In this way it plays the functions of regulations and controls, supervising their activity in investments and exploitations, and organization, concerning compliance with the established economic rules and legal norms. This direction of the state influence favours achievement of the programmed targets of all the economy, expressed, e.g. in the pace of the economic growth, the situation in the trade and payment balance, or the level of inflation¹.

The basic meaning for performance and development of enterprises has the money and credit policy. The rules for this policy are expressed in money supply and conditions of crediting. Important is establishment of basic interest rates, affecting the crediting policy of banks. Such a policy may create opportunities for development of innovativeness and investment activity of an enterprise.

Moreover, the fiscal policy is important, and its influence upon an enterprise is carried out through the created taxing system, which substantially depends on the standing of public finances. Clear rules for procedure and transparency of the system are important here.

Concept and features of small and medium enterprises

In the economic literature there is no universally recognized and uniform definition of a small firm. Different definitions are accepted, depending on the country, the region, the character of performance, or the purpose of their formulation to separate this category of firms. Each definition contains features of arbitrariness, conventionality, and relativism, and each measure of the firm size is dependent on the size of the whole economy, branch, technical level, territorial distribution, etc. Apart from the category of „small enterprises”, a term „small and medium enterprises” (abbreviated to SMEs) is universally used. Assuming the fact that each firm is developing, it is very difficult to establish a visible end limit for a small enterprise and the beginning of a medium one. That is why the group of small and medium enterprises is discussed jointly, distinguishing this group from large enterprises².

Basic features distinguishing SMEs from large enterprises are presented in table 1.

¹ *Przedsiębiorstwo, zasady działania, funkcjonowanie, rozwój*, ed. J. Żurek, Fundacja Rozwoju Uniwersytetu Gdańskiego, Gdańsk 2007, pp. 62-63.

² E. Stawarz, *Innowacja a mała firma*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 1999, p. 89.

Table 1. Features distinguishing small and medium enterprises from large enterprises.

| Features of SMEs | Features of a large enterprise |
|--|--|
| Performance based on own intuition of the owner or a hired manager | Use of modern methods and techniques of management |
| A relatively low educational level of personnel | A high educational level of management |
| Dominance of operational decisions | Dominance of strategic decisions |
| Ability to operate without being a legal entity | Being a legal entity |
| Frequent sharing of the owner's and the manager's functions | Management by hired managers |
| Taking decisions, important for the firm by the owner or the owners | Taking decisions based on opinions of a panel of advisers |
| Small-scale performance and usually locally | High volume of sales and at least national range |
| Independence of the firm from other entities | Numerous organizational and capital ties |
| No access to financing resources immanent for capital market | Ability to use different instruments of capital market |
| A relatively small share on the market | A substantial share on the market |
| Low-capital-consuming development | High investment outlays |
| A small care of the firm's image, resulting in many cases from lack of marketing knowledge | Use of modern techniques to create the corporate image |
| Operation of management as „a fire brigade” | Operation of the firm based on the development strategy and partial strategies |
| A slight share in export | Developed export |
| No tendency to organize themselves into local groups of interest self-defence | Participation in numerous economic organizations and business clubs |

Source: W. Piątkowski, Małe i średnie przedsiębiorstwa. Etyczny wymiar przekształceń gospodarczych w Polsce, Akademia Ekonomiczna w Krakowie, Kraków 1996, p. 75.

Inclusion of a given entity into the sector of small and medium enterprises is usually based on various criteria. They are usually quantitative and qualitative criteria.

Definitions assuming as the starting point quantitative criteria include, for example definitions using absolute measures, e.g. the size of employment (the number of employed and working persons), the value of yearly turnovers, the

balance sum, the value of fixed assets³. Their main advantages are measurability, transparency, and facility to use in comparisons of all types. The simplest possible, and at the same time the most frequently used criterion is the number of employees employed in an enterprise⁴. (In this paper this criterion has been taken as the basis for comparisons).

According to the above recommendation, in the category of SMEs a small enterprise is defined as an enterprise employing less than 50 persons and whose yearly turnovers and/or the yearly balance sum does/do not exceed €10 million.

As a medium enterprise we should define such an enterprise that employs less than 250 persons, and whose yearly turnover does not exceed €50 million and/or whose yearly balance sum does not exceed €43 million.

The recommendation also quotes definitions of a microenterprise. It is defined as an enterprise employing less than 10 persons, and whose yearly turnovers and/or the yearly balance sum does/do not exceed €2 million.

Table 2. A new definition of a small and medium enterprise in the European Union.

| Enterprises | Micro | Small | Medium |
|----------------------------|--|-------------------|-------------------|
| Employment | <10 | <50 | <250 |
| Net incomes from sales | up to €2 million | up to €10 million | up to €50 million |
| Sum of assets from balance | up to €2 million | up to €10 million | up to €43 million |
| Dependence/ independence | <ul style="list-style-type: none"> - Autonomous enterprises - Partner enterprises - Closely related enterprises | | |

Source: MŚP w Polsce a integracja europejska pod redakcją M. Bednarczyk, wyd. AE w Krakowie, Kraków 2004, p. 21.

The number of enterprises in the small and medium sector is changeable in time and differentiated depending on the assumed criteria of the sector inclusion of individual firms. This changeability in time results from establishment of new entities undertaking economic performance, or bankruptcies, liquidations or mergers of the previously existing organizations.

The basic source of information on the number of economic entities is the REGON register, kept by an agency of public statistics. The numbers of the entities registered in the REGON register are presented in table 3.

As it results from the data presented below, between 2005 and 2007 the number of the registered entities slightly changed. The growth dynamics of the

³ B. Piasecki, *Ekonomika i zarządzanie małą firmą*, Wydawnictwo Naukowe PWN, Warszawa – Łódź 1998, p. 55.

⁴ W. Piątkowski, *Małe i średnie przedsiębiorstwa. Etyczny wymiar przekształceń gospodarczych w Polsce*, op. cit., p. 89.

number of the enterprises in the SME sector indicates that the greatest growth occurred in the number of enterprises employing from 10 to 49 persons.

In the period of 2005-2007 the structure of the enterprises, registered according to their size did not change. In 2007 the small and medium enterprises constituted 99.8% of the total number of the enterprises in Poland.

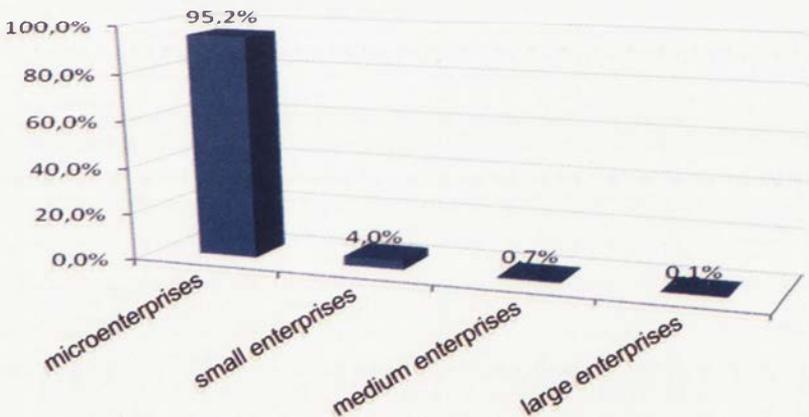
Table 3. Economic entities registered in the REGON register as of the end of the years 2005-2007.

| Year | In total | including entities employing | | | |
|--|-----------|------------------------------|---------------|----------------|------------------|
| | | 0-9 persons | 10-49 persons | 50-249 persons | over 249 persons |
| Number of entities as of the end of the year | | | | | |
| 2005 | 3 501 114 | 3 333 607 | 138 321 | 25 017 | 4 169 |
| 2006 | 3 517 898 | 3 348 708 | 139 986 | 25 057 | 4 147 |
| 2007 | 3 564 602 | 3 392 583 | 142 729 | 25 110 | 4 180 |

Source: Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2006–2007.

Ca. 95.2% of all the registered entities constituted businesses employing 0-9 persons, 4% constituted entities employing 10-49 persons, ca. 0.7% – businesses employing 50-249 persons, and ca. 0.1% – entities employing over 249 persons (fig. 1).

Fig. 1. Structure of enterprise sector in Poland according to size classes in 2007.



Source: own study based on „Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2006-2007”.

A similar structure of enterprises was in the EU in the years 2002-2007. In 2007 there were over 20 million enterprises in the European Union (EU-27). Out of the number, only ca. 43,000 were micro- and small enterprises and constituted 98.8%, and medium and large ones – 1.2% of all the enterprises in the EU.

Sector of small and medium enterprises in the Podkarpackie Province

The Podkarpackie Province was created by virtue of the self-government reform of the State on 1 January 1999, as a result of unification of the former provinces: the Rzeszowskie Province, the Przemyskie Province, the Krośnieńskie Province, and also partly of the Tarnobrzeskie Province and the Tarnowskie Province. The Podkarpackie Province is an area of substantial differentiation concerning environmental and natural, economic, and social values. The urban development level indicates its agricultural character. In the industrial branch structure the following industries are dominant in the province: aircraft, electromechanical, chemical, and food-processing industries, which produce jointly almost 70% of the industrial production in the province⁵.

Table 4. Selected data on the Podkarpackie Province against the background of Poland in 2007.

| Specification | Podkarpackie Province | Poland | Poland = 100 |
|--|-----------------------|---------|--------------|
| Area (in thousands of hectares) | 17845 | 312679 | 5.7 |
| Population (in millions) | 2.1 | 38.1 | 5.5 |
| Population per 1 sq. km | 118 | 122 | 96.7 |
| Working persons (in thousands) | 669.1 | 13239.4 | 5.0 |
| Registered unemployed persons (in thousands) | 126.4 | 1746.6 | 7.2 |
| Registered unemployment rate in % | 14.4 | 11.4 | 126.3 |
| Average gross pay | 2373 | 2866 | 82.7 |
| GDP (in millions of zlotys) | 45835 | 1175266 | 3.89 |
| GDP (per capita/zł) | 21826 | 30846 | 70.75 |

Source: own study based on „Mały rocznik statystyczny Polski 2008” Warszawa 2007 pp.644-55.

In the Podkarpackie Province, micro-businesses, i.e. employing below nine employees, have been dominant since 2000, and their number has been growing

⁵ www.money.pl.

each year. A relatively small was the share of large enterprises employing over 250 employees. In 2000 there were 275 such enterprises, and at the end of 2007 only 210.

Table 5. Entities of national economy in the Podkarpackie Province in years 2000-2007.

| Year | Total number of SMEs | Entities with number of employees | | | |
|------|----------------------|-----------------------------------|-------|--------|----------|
| | | up to 9 | 10-49 | 50-249 | over 250 |
| 2000 | 128399 | 121909 | 4981 | 1234 | 275 |
| 2002 | 138713 | 131631 | 5673 | 1170 | 239 |
| 2003 | 142682 | 135446 | 5896 | 1120 | 220 |
| 2004 | 139545 | 132243 | 5957 | 1132 | 213 |
| 2006 | 140656 | 133267 | 6066 | 1116 | 207 |
| 2007 | 142056 | 134620 | 6100 | 1126 | 210 |

Source: own study based on www.stat.gov.pl.

In 2007, 142,056 economic entities were registered in the Podkarpackie Province, and over 99.8% were micro-, small and medium businesses. Microenterprises amounted to 3.8% of the total number of the entities of this class in Poland, small ones – 4.1%, and medium ones – 3.9%. In relation to the number of the entities registered up to 2000 there were 13,657 firms more. Analyzing the survey of the enterprises registered in the REGON system, one must notice positive tendencies for development of entrepreneurship (table 6).

Table 6. Entities registered in REGON in the Podkarpackie Province in 2007.

| Specification | Entities in total | micro | small | medium | large |
|---|-------------------|--------|-------|--------|-------|
| Podkarpacie | 142056 | 134620 | 6100 | 1126 | 210 |
| Share of region in Poland in % | 3.8 | 3.8 | 4.1 | 3.9 | 4.4 |
| Private sector in % | 95.5 | 97.6 | 59.5 | 56.0 | 54 |
| Entities established in 2007 | 11801 | 11663 | 118 | 15 | 5 |
| Newly established in Poland in % | 3.7 | 3.7 | 2.8 | 3.4 | 5.4 |
| Liquidated entities | 9671 | 9538 | 112 | 12 | 9 |
| Share of liquidated entities in Poland in % | 3.3 | 3.4 | 3.0 | 2.7 | 5.1 |
| Share of foreign ownership in region | 0.7 | 0.5 | 1.7 | 4.9 | 11.3 |

Source: own study based on: „Raport o stanie małych i średnich przedsiębiorstw w Polsce w latach 2006-2007”, Warszawa 2009.

It is possible to state that over 95% of the firms registered in the region were privately owned. The most numerous group among the private enterprises were microenterprises – 97%. Public ownership covered only 4.6%. The highest numbers of the public sector entities were in the group of medium and large enterprises. Only 0.7% of the firms from Podkarpacie were entities with foreign capital, and they were chiefly large enterprises employing over 249 persons. In 2007, 11,801 new entities were established, and 9,671 enterprises were liquidated (table 3).

Considering the branch structure of the enterprises in the Podkarpackie Province one should state that in small and medium enterprises of the private sector dominant are firms in the sections: Trade and Repairs, Servicing of Real Estates and Firms; but also the branches: Industrial Processing, and Construction Engineering. In the SME structure of the public sector dominant are firms from the branch of Education – ca. 53%, and from the branch of Servicing of Real Estates and Firms – ca. 15%. The newly established firms in the Podkarpackie Province are mainly firms from the section of Trade and Repairs, and those dealing with Servicing of Real Estates and Firms. Concerning liquidated small and medium entities they are mainly commercial firms (table 7).

Table 7. Branch structure of SMEs in the Podkarpackie Province in 2007 (the most important branches).

| Specification | Public sector in % | Private sector in % | Newly established in % | Liquidated in % |
|---------------------------|--------------------|---------------------|------------------------|-----------------|
| Industry | 1.16 | 10.76 | 8.56 | 9.66 |
| Construction Engineering | 0.38 | 10.43 | 13.27 | 11.28 |
| Trade | 0.26 | 35.93 | 30.18 | 39.75 |
| Hotels and restaurants | 1.52 | 3.02 | 3.38 | 4.45 |
| Transport | 0.81 | 7.14 | 5.05 | 6.07 |
| Financial agency | 0.25 | 3.58 | 3.96 | 4.34 |
| Servicing of real estates | 15.48 | 13.44 | 17.49 | 15.38 |
| Health care | 6.27 | 4.79 | 3.44 | 2.26 |
| Education | 53.57 | 1.46 | 2.13 | 1.63 |

Source: own study based on the data from the Central Statistical Office and „Raport o stanie małych i średnich przedsiębiorstw w Polsce w latach 2006-2007”, Warszawa 2008 p. 104.

Podkarpacie stands out concerning a low number of liquidated entities (the second place in the ranking of provinces). Investment outlays of the enterprises in the region amounted to 3.72 billion zł, out of which 16% fell to microenterprises, 9% – to small ones, and 25% to medium ones. The highest investment outlays in the small and medium enterprises in Podkarpacie were located in the

sections: Industrial Processing, Building Engineering, Trade, Accommodation Sector, Transport, and Other Services.

The average size of the firms in the region in 2007 was close to the national average in case of medium and small enterprises. Incomes of an average firm in the region amounted to 1.1 million zł, and were lower than the national average. In case of micro-firms the income was 0.4 million zł, and it equalled the income of the average firm in the country. Incomes of small and medium enterprises were shaped differently, and they had incomes 30% lower than the national average. Greater disproportion concerned large enterprises where incomes were lower by 55% than the national average for that group of enterprises.

The small and medium firms in the Podkarpackie Province in all sectors financed investment tasks mainly from own means – ca. 75% in firms of the private sector, and ca. 50% of the public sector firms. A detailed division of financing resources for SMEs is presented in table 8.

Table 8. Financing resources for SME investments in % in 2007.

| Podkarpackie | Public sector | | Private sector | |
|----------------------------|---------------|--------|----------------|--------|
| | small | medium | small | medium |
| Own means | 42.6 | 49.4 | 75.9 | 72.8 |
| Budget means | 39.9 | 13.8 | 0.4 | 0.2 |
| Credits and domestic loans | 9.9 | 26.6 | 18.9 | 17.0 |
| Foreign means | 0.0 | 8.4 | 3.4 | 9.3 |
| Remaining means | 7.6 | 1.8 | 1.4 | 0.7 |

Source: own study based on the data from the Central Statistical Office and: „Raport o stanie małych i średnich przedsiębiorstw w Polsce w latach 2006-2007”, Warszawa 2008 p. 109.

An important instrument supporting development of SMEs in the period of 2004-2008 was EU financial means (in the paper only Measure 2.5 IROP (The Integrated Regional Operational Programme), Measure 3.4, and the loan fund).

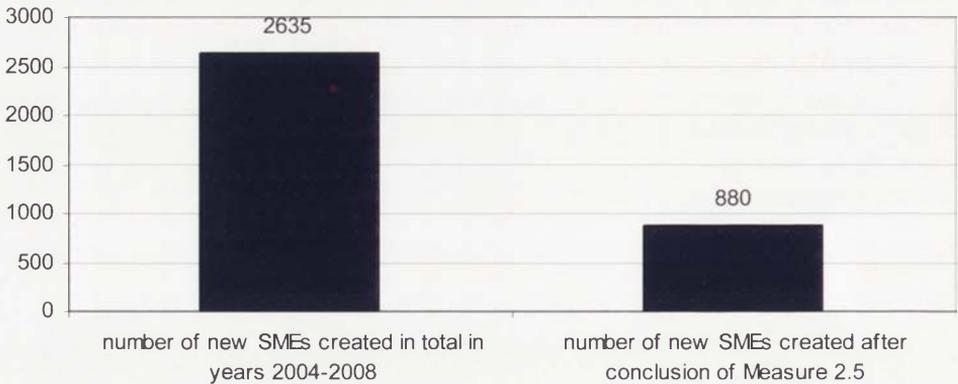
Structural funds for realization of the measure Entrepreneurship Promotion in the years 2004-2008 in the Podkarpackie Province amounted to €4,219,272.00. Measure 2.5 contributed to creation of 880 new microenterprises that created 129 jobs. The number of enterprises created thanks to measure 2.5 is meaningful in comparison with the total number of enterprises created in Podkarpackie during its operation. The financial resources distributed by the Rzeszów Regional Development Agency (RRDA) contributed to creation of 1/3 of the new enterprises in the region.

To sum up, within Measure 2.5:

- 799 persons received one-time investment grants,

- 801 persons received bridge support,
- 106 persons received extended support,
- 880 new microenterprises were created,
- 129 new jobs in newly created enterprises were created.

Fig. 2. Number of new SMEs created after conclusion of Measure 2.5 in years 2004-2008.



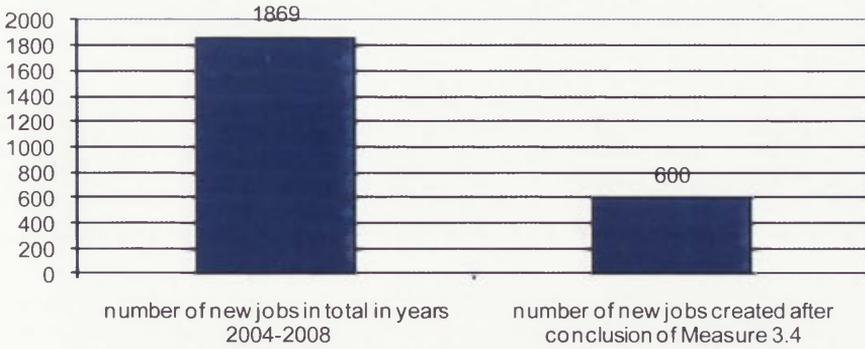
Source: own study based on materials from the RRDA.

The purpose of Measure 3.4 was to enhance competitiveness of microenterprises, carrying out economic performance shorter than 36 months through facilitation of access to specialist consulting and increasing investment capability at the initial operational stage of enterprises, as the consequence to adopt them to the single European market.

The total financial support for Measure 3.4 in the Podkarpackie Province amounted to €5,120,000, including €3,840,000 coming from the European Regional Development Fund, €1,280,000 from the State budget, and €2,304,000 from private contributions.

The EU financial resources appropriated to SMEs have contributed to reduction of unemployment rate in the region.

Fig. 3. Number of new jobs created after conclusion of Measure 3.4 in years 2004-2008.



Source: own study based on materials from the RRDA.

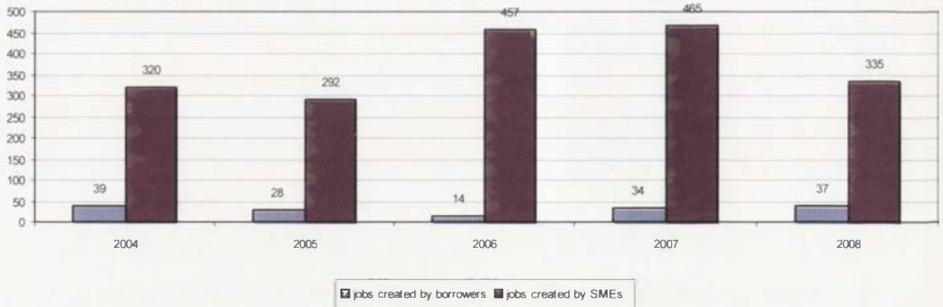
An important function in development of SMEs in the Podkarpackie Province is played by the system of loan funds. The operational purpose of such funds is to support small and medium enterprises in their access to external financing, which should contribute to growth of employment, or at least to maintaining its previous level. The loan fund is one form of activity of the Rzeszów Regional Development Agency. Data concerning granted loans by the RRDA are presented in table 9.

Table 9. Loan funds for SMEs (Podkarpacie).

| Specification | 2005 | | 2006 | | 2007 | | 2008 | |
|-----------------------|-----------------|--------------------------------|-----------------|--------------------------------|-----------------|--------------------------------|-----------------|--------------------------------|
| | Number in items | Value (in thousands of zlotys) | Number in items | Value (in thousands of zlotys) | Number in items | Value (in thousands of zlotys) | Number in items | Value (in thousands of zlotys) |
| Loans in total | 24 | 1760 | 24 | 1633 | 22 | 1526 | 14 | 1157 |
| for turnover purposes | 3 | 110 | 7 | 175 | 17 | 1087 | 9 | 739 |
| for investments | 11 | 825 | 7 | 653 | 3 | 270 | 3 | 233 |
| Mixed | 10 | 825 | 10 | 805 | 2 | 169 | 2 | 185 |
| for production | 12 | 840 | 6 | 540 | 5 | 385 | 5 | 424 |
| for services | 12 | 920 | 18 | 1093 | 17 | 1141 | 9 | 733 |
| up to 9 | 17 | 1110 | 14 | 835 | 16 | 1004 | 11 | 902 |
| 10-49 | 7 | 650 | 10 | 798 | 6 | 522 | 3 | 295 |
| 50-249 | - | - | - | - | - | - | - | - |

Source: The Polish Association of Loan Funds – a survey on loan funds in Poland.

Fig. 4. Number of jobs created by borrowers in the Podkarpackie Province in years 2004-2008*.



* – as of 30 June 2008.

Source: own study based on materials from the RRDA.

The loan fund is an important support in the process of creating and maintaining jobs in Podkarpackie. For many enterprises starting their performance, it is the only opportunity to appear on the local market, for duration, and further development.

Summing-up

In the paper the role of small and medium enterprises at the time of the global crisis was presented on the example of the Podkarpackie Province, showing opportunities and barriers for their development. Based on the empirical research it was found out that a dynamic growth of small and medium enterprises took place in the years 2000-2007, when at the end of that last year 142,056 economic entities were registered, out of which over 99.8% constituted micro-, small and medium firms. In small and medium enterprises of the private sector dominant are firms in the section Trade and Repairs – ca. 36%. It is also worth stressing that in the Podkarpackie Province the percentage of newly created enterprises in the analyzed period is higher than the percentage of liquidated enterprises. The dynamic development of the sector of small and medium enterprises is mainly the result of the way, in which investment ventures are financed. Small enterprises finance investments in 75.9% from own means, 18.9% are credits and loans, 3.4% are foreign resources; in case of medium enterprises own means constitute 72.8%, credits and loans – 17%, foreign resources 9.3%. The development of small and medium enterprises in the Podkarpackie Province should be substantially ascribed to the institutional system of supporting SMEs in a form of external financing resources (EU funds, loans,

etc.). In the years 2004-2008, 2,635 small and medium enterprises were created, including 880 ones financed mainly from EU funds.

Despite the favourable relations in development of small and medium enterprises in the Podkarpackie Province their further performance under the conditions of the global crisis will depend on the extent of overcoming development barriers, including the following:

- high extra-pay labour costs (reduction of competitiveness and increase of employment),
- lack of transparency and univocity of indirect taxes (VAT and excise), CIT, and PIT,
- inflexible labour law, and shortage of qualified employees,
- administrative barriers,
- competition of privileged enterprises (public aid, payment gridlocks, etc.).

Literature

Mały rocznik statystyczny Polski, 2008, Warszawa 2007.

MŚP w Polsce a integracja europejska pod redakcją M. Bednarczyk, wyd. AE w Krakowie, Kraków 2004.

Piasecki B., *Ekonomia i zarządzanie małą firmą*, Wydawnictwo Naukowe PWN, Warszawa – Łódź 1998.

Piątkowski W., *Małe i średnie przedsiębiorstwa. Etyczny wymiar przekształceń gospodarczych w Polsce*, Akademia Ekonomiczna w Krakowie, Kraków 1996.

Przedsiębiorstwo, zasady działania, funkcjonowanie, rozwój, ed. J. Żurek, Fundacja Rozwoju Uniwersytetu Gdańskiego, Gdańsk 2007.

Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2006-2007.

Stawarz E., *Innowacja a mała firma*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 1999.

Streszczenie

ROLA MAŁYCH I ŚREDNICH PRZEDSIĘBIORSTW W GOSPODARCE W DOBIE GLOBALNEGO KRYZYSU

Wspieranie małych i średnich przedsiębiorstw na Podkarpaciu jest niezwykle ważne, gdyż sektor ten jest dominujący w tym regionie, zatrudnia ponad 60% wszystkich zatrudnionych w gospodarce narodowej i wytwarza prawie połowę Produktu Krajowego

Brutto. Sektor MSP uznaje się za siłę napędową gospodarki. W wyniku działań mikro, małych i średnich przedsiębiorstw powstają efektywne procesy gospodarcze, wzrasta zamożność społeczeństwa w woj. Podkarpackim, zmienia się styl życia właścicieli i pracowników oparty na swobodzie wyborów rynkowych, wolności gospodarczej, efektywnej przedsiębiorczości.

Małe i średnie przedsiębiorstwa, głównie te tradycyjne, dla swojego powstania i funkcjonowania nie wymagają szczególnych uwarunkowań infrastrukturalnych. Ich lokalizacja jest możliwa właściwie wszędzie, a więc również tam gdzie dużym przedsiębiorstwom by się to nie opłacało, (tzw. efekt regionalnej decentralizacji). Te znikome wymagania to wynik stosowania nie tylko bardzo prostych technologii, prostych metod wytwarzania, lecz również ograniczonej skali działania.

Ponadto małe i średnie przedsiębiorstwa prowadzą specyficzną politykę finansową, polegającą na korzystaniu z określonych źródeł finansowania powstania i rozwoju przedsiębiorstw. Źródłami tymi są najczęściej finansowe zasoby właściciela, jego rodziny, niekiedy przybierają też postać pożyczek, a rzadziej obejmują obce źródła finansowania (efekt mobilizacji kapitałów). Niezależnie od przyczyn tego typu zachowań przynoszą one zasadniczą korzyść, polegającą na angażowaniu zasobów, które byłyby przeznaczone np. na konsumpcję.

Zainteresowanie rządu, władz lokalnych i przedstawicieli kapitału małymi i średnimi przedsiębiorstwami w ostatnich latach jest nie tylko zauważalne, ale także przedsiębiorstwa te są traktowane jako element procesów zmieniających istotnie struktury i poziom gospodarki. Sektor ten charakteryzuje się dużą dynamiką rozwoju i wzrostu gospodarczego. Odgrywa istotną rolę w zagospodarowywaniu zasobów siły roboczej, efektywnie przyczyniając się do spadku stopy bezrobocia. Firmy małe i średnie, dzięki swej elastyczności oraz znacznie efektywniejszemu wykorzystywaniu zasobów posiadają duże zdolności adaptacyjne, pozwalające na szybsze dostosowanie oferty do wymagań konsumentów, a także na szybsze dotarcie do nowych rynków.

INFRASTRUCTURAL OPPORTUNITIES FOR DEVELOPMENT OF BORDERLANDS (ON THE EXAMPLE OF AIRPORT INFRASTRUCTURE)¹

Jacek BRDULAK

Warsaw School of Economics

In 2008 Polish airports served over 20,650,000 passengers, i.e. 1,500,000 more than in 2007 (by 8.1%). It was very high dynamics of air transport growth against the European background, as it was weaker in most of the EU countries. Last year there was also a higher (by 4.3%) number of passenger operations, which in Poland amounted jointly to 259,000.

The airports serving the highest number of passengers – 9,400,000 – included Okęcie in Warsaw, playing the role of the central airport. It had the 45.7% share in the domestic air market. The next places were held – analogously to the previous years – by: Krakow Balice (a share in the market – 14%), Katowice Pyrzowice (11.6%), Gdańsk Rębiechowo (9.4%), Wrocław Strachowice (7.2%), and Poznań Ławica (6.1%). All the airports served more than 1 million passengers. It results from the information from the Civil Aviation Office (CAF) that the most dynamically are developed airports in: Poznań and Bydgoszcz – dynamics of over 45%, and the airport in Szczecin Goleniów – an increase in the number of passengers of over 30%².

Although the dynamics of passenger traffic began to fall visibly, in the situation of the global crisis it can be still referred to as high. It can be stressed that in 2004, when in conjunction with Poland's accession to the European Union the air transport market was liberalized, the Polish airports served 7,000,000 passengers, and last year as many as over 20,000,000. If Poland wants to liquidate its severe retardation in development of the transport infrastructure, it must maintain development tendencies in air transport. We have a lot to do in this respect, which also evidences the potential of the market of air services. In Poland one airport falls to 3,500,000 inhabitants, and in Western Europe to 460,000 inhabitants.

¹ The paper has been presented in its abbreviated version in *Kwartalnik Celny*, 2009, No. 2, pp. 5-6.

² Materials of the CAF conference „Lotnisko 2009”, Warszawa, 12 Feb. 2009.

The most important thing, before taking a decision to build new airports or to extend the old ones, is to examine the traffic potential and the possible demands for services in this branch of transport. There are airports that have the infrastructure but do not have passengers and permanent air connections. The example here is Zielona Góra, which is in the gravity zone of the Berlin airports. Many airports remain closed and go into ruin at high pace. Eastern Poland is „an airport terra incognita” of the EU aviation. In the economically difficult period of time we can hardly count on great airport investments in our country. The more important becomes a project to launch or sometimes only to reactivate transportation by small planes³. Creation of the connection network within the System of Transportation in Small Planes (System Transportu Małymi Samolotami – STMS) would be an important step towards supplementation of the service offer in air transport; the step that would be feasible under the Polish infrastructural conditions. Additionally, it would be a development opportunity for many local airports in regions that are considered as economically problematic. An additional, favourable factor of initiating the STMS system is an influx of financial means from the European Union for expansion and modernization of Polish airports⁴.

The east of Poland is at present bereft of the airport infrastructure. It is sensational in the European Union that large cities that play metropolitan functions in their regions – Lublin and Białystok – have no air transport. Lublin with the neighbouring Świdnik has almost 400,000 inhabitants. A comparable size has Białystok. And on the whole so-called Eastern Wall the only communication airport is the airport of Rzeszów-Jasionka in the Podkarpackie Province. An improvement of the external and internal accessibility of the region and ensuring road traffic security and enhancement of communication service efficiency will mean overcoming the peripheral character of communication in eastern and south-eastern Poland. It is very important for development to start the air transport in the region thanks to, e.g. the planned use of the existing base of airfields in Świdnik and Biała Podlaska in the Lubelskie Province⁵, and in co-operation with the army – in Dęblin. Among the priority targets in „Strategia rozwoju

³ Actions in this respect have been undertaken by the Institute of Aviation in co-operation with the Warsaw School of Economics.

⁴ In February 2009 Poland was granted €251,500,000 from the cohesion programme for that purpose.

⁵ The problem of using the airfield in Biała Podlaska was discussed by B. Zakrzewski in: *Szanse wykorzystania terenu lotniska w Białej Podlaskiej*, *Kwartalnik Celny*, 2009, No. 1(6-7), pp. 14-16.

woj. lubelskiego na lata 2006-2020” [„The Development Strategy for the Lubelskie Province for 2006-2020”] in the field of transport, the following are listed⁶:

- development of infrastructure and air transport services, including: **construction of a regional airport**, and adaptation for service provisions the existing local airfields;
- creation of an integrated intermodal system, including creation of logistic centres and trans-shipment terminals at the cross-section of the main transit routes, airports and border checkpoints;
- expansion and modernization of road, railway and air transport in the metropolitan area of Lublin, including: adaptation of the railway infrastructure to fast connections, construction of connections to the airport, reconstruction of junctions, construction of ring roads, improvement of communication links.

In the European Union the term „a regional airport” means servicing of domestic and international transport of the following characteristics:

- the average distance of flight up to 530 km,
- the total journey time below 3-4 hours,
- service of passenger transportation by planes of up to 70 seats for passengers, or of the maximal take-off weight of 30 Mg,
- connection between local spots, or such a spot and a metropolis (understood as having an international airport), and not flights between two metropolises.

It seems that in the region of south-eastern Poland, only the Lublin Agglomeration, apart from Rzeszów, may meet such criteria. Establishment of a regional airport in Lublin-Świdnik⁷ would have the key meaning for the future implementation of the STMS model of air connections. The airfield in Świdnik located between the city of Lublin and the town of Świdnik has at present: a grass runway 1100 m long and 50 m wide, air-sheds, a fuel station, and administrative buildings. A company managing the airport has its seat in Lublin. The object is used by the Aeroclub of Lublin and an aircraft manufacturer PZL Świdnik.

The localization of the airport is perfect, inside the Lublin Agglomeration, ca. 2.5 km north-east of the centre of Świdnik and ca. 10 km east of the centre of Lublin. From the northern side the airport adjoins the local road of Lublin – Mełgiew, which in case of constructing the regional airport will be moved and led by another route. The areas neighbouring the planned course of the road,

⁶ *Strategia rozwoju województwa lubelskiego na lata 2006-2020. Cele i priorytety strategii oraz system wdrażania*. Tom II, Zarząd Woj. Lubelskiego, Lublin, July 2005, p. 53 et seq.

⁷ Another concept to build such an airport in Niedźwiada near Lublin is not considered here.

especially due to its connection to the planned international road S-17 at the junction „Mełgiewska”, may become the areas of economic activation in the future. Lublin is executing major road projects that will radically improve communication of the city with other centres in the region. This primarily concerns construction of an express road Warsaw – Garwolin – Ryki – Lublin – the state border with Ukraine (Hrebenne and turns to Dorohusk), i.e. the road No. 17. In the gravity area of the city of Lublin, the road will become a ring road that will pass round the Lublin Agglomeration from the north. The city, the town and the airport will be between the express road, which at this section will be a city motorway, and the existing entry of S-17 (S-12 within the agglomeration) to Lublin, running south of Świdnik. The investment will change the road system in proximity of the airport. For example, leading of the express road to the junction „Dąbrowica”, east of Lublin will allow to change the existing Warszawska street into an estate road, and to divert the car traffic to a new route partly parallel to the presently crowded Warszawska street. Additionally, communication with Nałęczów will be facilitated.

The existing communication solutions, supplemented by new road routes and modernized railway lines, in future will ensure a very good connection of the airport, located in the southern part of the airfield, in one direction with the centre of Lublin, and in the other one with the system of express roads towards Zamość and Hrebenne, and Chełm. Provision of transportation to the terminal building of Lublin – Świdnik airport from the centre of Lublin, lasting less than 30 minutes, with use of public transport, including railbus, is an important argument to place a regional airport there. Forecasts of air operation numbers and passenger flows, prepared by specialists, indicate that in the first stage of the Lublin – Świdnik airport operation 70,000 passengers yearly can be served there⁸. Opportunities of its further development should be linked with differentiation of service operations: development of transportation within the STMS, gaining scheduled passenger flights – even at the cost of budget carriers, development of charter flights (first of all in servicing of tourist traffic), business flights, cargo transportation, aviation training, running aviation schools, technical service for aircraft. The airport of Lublin – Świdnik will then become an important element not only of the STMS, but also of the regional and national infrastructure of air transport.

Troubles connected with the airport infrastructure in Poland do not concern only regional airports. The local airfield in Krosno, located not far from the regional airport of Rzeszów – Jasionka (63 km by road) may serve as an example here. It requires expansion to extend the asphalt runway and to provide proper service for passengers. The owner of the airport is the commune of Krosno and

⁸ H. Paw, *Rozbudowa Regionalnego Portu Lotniczego: Port Lotniczy S.A. (Świdnik). Koncepcja programowo-przestrzenna*, Wrocław, November 2007, p. 6 et seq.

has made it its main infrastructural project, partly financed from the means of the European Union. The airfield is located close to the southern boundaries of the town. It is in a very poor technical condition. It has an asphalt runway 1040 m long – unused at present. Landing on the way threatens immediate crashing of the plane. From time to time the grass part of the airfield is used, located north of the ruined asphalt runway (depending on the wind directions). In Krosno it is possible to tank fuel after prior agreement. The grass on the northern runways is systematically mowed and the surface is even. The part of the airfield south of the asphalt runway is unused. The airfield also lacks lightening.

Usefulness of the airfield in Krosno for passenger flights by small planes results from many facts. First of all, Krosno with the nearby Jedlicze is the industrial capital of the area. An important refinery in Jedlicze, linked by a dual carriageway with the town, constitutes a substitute of a town-planning form, integrating on its two sides both towns into a small local agglomeration. Because it co-operates with all refineries in the country, its workers and guests may become users of small business aircraft. The air taxi is now the only rational means of passenger transport from this mountainous town in connections with Płock or Gdańsk. South of Krosno there are also in the distance of up to 18 km two important resorts of the national importance – Iwonicz Zdrój and Rymanów Zdrój. At present they are modernized and their services will be addressed more and more to richer clients, also from abroad.

The above examples have not been quoted to stress efforts of people engaged in struggle for the future of airfields in Lublin-Świdnik, Biała Podlaska, or Krosno. The point at issue is to create the infrastructural base for aviation in Poland, which in future should facilitate building a network of local communication links. The links that will allow to maintain transport subjectivity of weaker developed borderlands and sometimes to skip in communication the largest Polish cities.

Streszczenie

INFRASTRUKTURALNE SZANSE ROZWOJU OBSZARÓW NADGRANICZNYCH (NA PRZYKŁADZIE INFRASTRUKTURY LOTNISKOWEJ)

Odrabianie wieloletnich opóźnień w dziedzinie infrastruktury transportowej wymaga przemyślanej, racjonalnej polityki inwestycyjnej, która zapewni tworzenie kompletnych sieci transportowych także w regionach nadgranicznych. Permanentny brak środków finansowych wymusza hierarchizację planowanych zadań inwestycyjnych. Przestrzeń transportowa Polski ciągle się różnicuje a regiony słabsze gospodarczo przegrywają kon-

kurencję o środki finansowe z metropoliami. Przykładem narastających dysproporcji infrastrukturalnych jest opracowywany obecnie model połączeń małymi samolotami. System transportu takimi samolotami wymaga przywrócenia funkcji wielu lotniskom. Okazuje się, że w całej Polsce wschodniej i południowo-wschodniej eksploatowane jest tylko jedno lotnisko regionalne Rzeszów-Jasionka. Na Pomorzu takim lotniskiem jest Szczecin-Goleniów. Szereg miast spełniających funkcje metropolitarne (Białystok, Lublin) lub będących ważnymi ośrodkami regionalnymi (np. Krosno) nie posiada infrastruktury lotniskowej. W Europie Zachodniej jedno lokalne lotnisko przypada na 460 tys. mieszkańców, a w Polsce – na 3,5 mln mieszkańców.

REGIONAL IMAGE OF GLOBAL ECONOMIC CRISIS ON THE EXAMPLE OF LOWER SILESIA

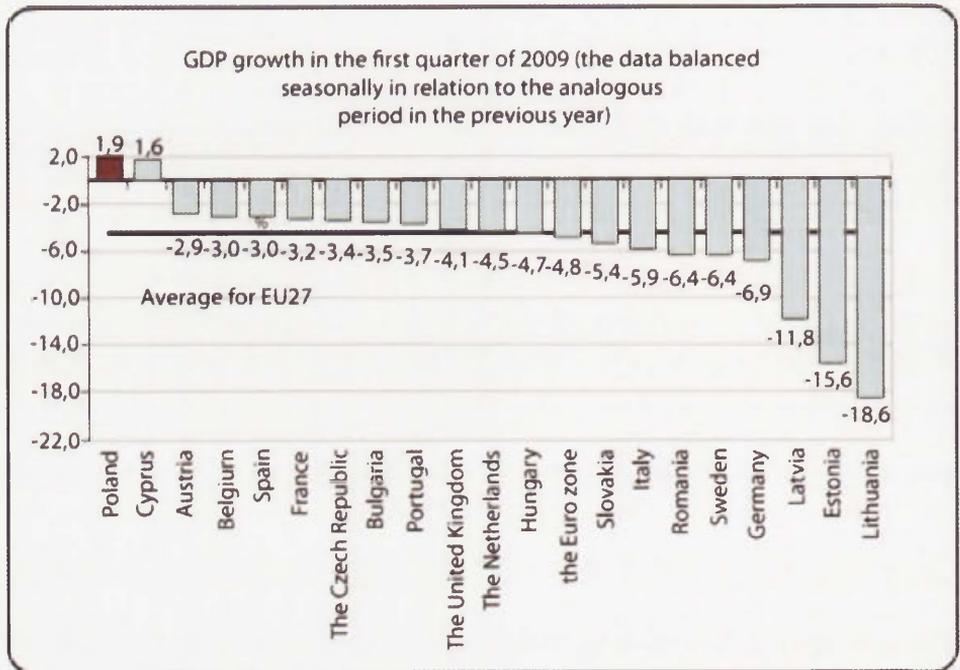
Stanisław CIOK

University of Wrocław

The genesis of the present worldwide crisis is connected with the mortgage market crisis in the USA in the mid 2007 which later spread to include the financial market as well. The drop in the financial flow of banks, difficulties in obtaining loans, payment difficulties of companies, lack of trust between various entities etc. caused a clear slowdown of the pace of economic growth, which consequently led to an economic crisis. At the beginning, the crisis occurred in the USA, and because the economy of this country has a tremendous influence on the world economy, negative effects spread to include other countries and regions. The economic crisis is affecting various areas of economy, social groups and countries at different times and with varying intensity.

A very early and serious decline in the economy occurred in the countries of „the old EU” as they are strongly financially and economically connected with the American economy. The drop in industrial production in many countries of the EU was already observed in spring 2008 and till now has not shown any signs of recovery. At present, according to Eurostat, only two countries recorded a positive rate of economic growth in the first quarter of 2009 compared with last year. These are: Poland (1.9%) and Cyprus (1.6%). All the other countries experienced sharp contractions, and in particular the Baltic countries: Latvia (-18.6%), Estonia (-15.6%) and Lithuania (-11.8%). Below the EU average (-4.8%) are also: Germany, Romania, Italy and Slovakia (see. Fig.1).

Fig. 1. Gross domestic product per capita in EU countries (31.03.2009).



Source: <http://mg.gov.pl>

The crisis in the EU could not leave Polish economy unaffected. This is clearly shown in the research into the economic situation. The economic situation presents the current state of economic activity and its changes in time. The source of information concerning the economic situation is based on opinions collected from entrepreneurs about present and future situation of their companies. These opinions include:

- production
- portfolio of orders
- financial situation
- employment
- prices
- investment activity
- encountered barriers

For coherence and comparability of data and particular countries, the research was harmonized across Europe. It covered the same areas of economy (industry, construction, trade, other services).

The thematic scope of research covered the following:

- *industry* [the sample of 3 500 enterprises; all large ones (over 250 workers) and 10% of medium-sized and small ones]
- *construction* [the sample of 5 000 enterprises; all large and medium-sized ones and 1% of small enterprises]
- *trade* [the sample of 5 000 enterprises; all large and medium sized ones and 1% of small ones]
- *services* [5 500 enterprises; all large ones and 0.4% of small and medium-sized ones]

General economic climate in the 21-century Poland is presented in Fig. 2. As can be seen, the current situation is not as badly assessed as in the previous periods. Indexes of general economic situation began to plummet in the second half of 2008 (from +20 to –18). In March, the situation was assessed less negatively (–5), and in August even positively in many areas of economy. For example, the index of general economic situation in industrial processing was already only (–1), in construction industry (–5), in trade (+3) and in chosen branches of services even positive: financial and insurance activity (+26), information and communication (+12), accommodation and catering (+2). Over half of the enterprises say their situation did not change, several per cent say that it improved, and about 1/5 say that the situation deteriorated (with proportions varying across branches).

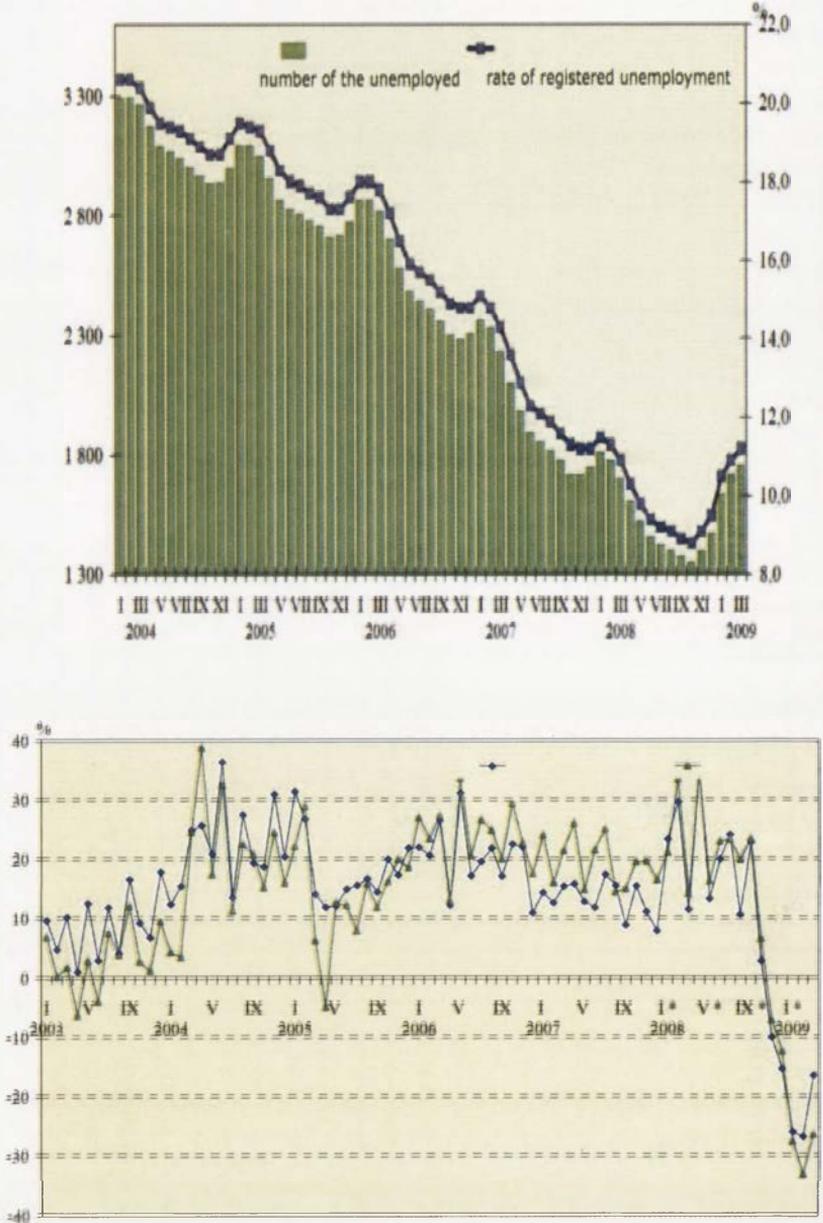
Fig. 2. Indicator of the general business tendency climate in Poland.



Source: Koniunktura Gospodarcza Nr 3/2009, GUS, Warszawa.

Deterioration of economic situation in the country in the second half of 2008 (apart from the aggregated indexes of economic situation) is reflected in a number of socio-economic phenomena. This is especially visible in the dynamics of export and import and the rate of unemployment (see Fig.3).

Fig. 3. Indication of crisis: unemployment rate and foreign trade commodity turnover .



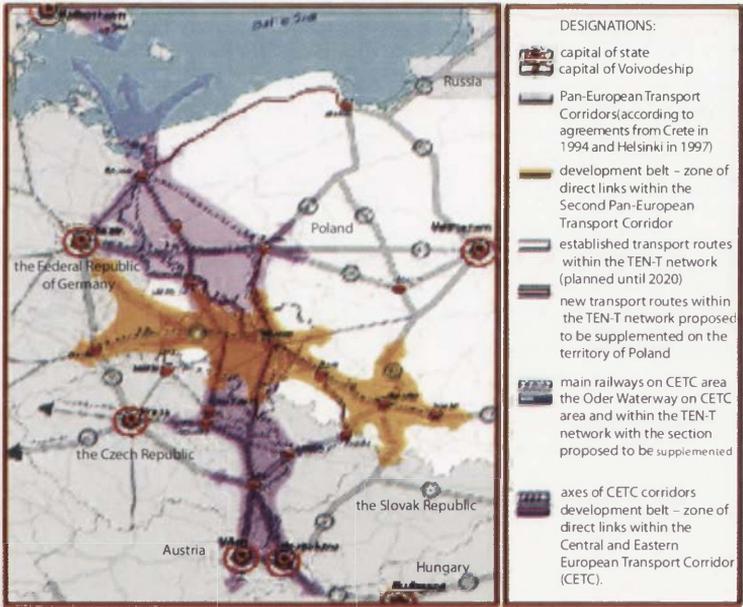
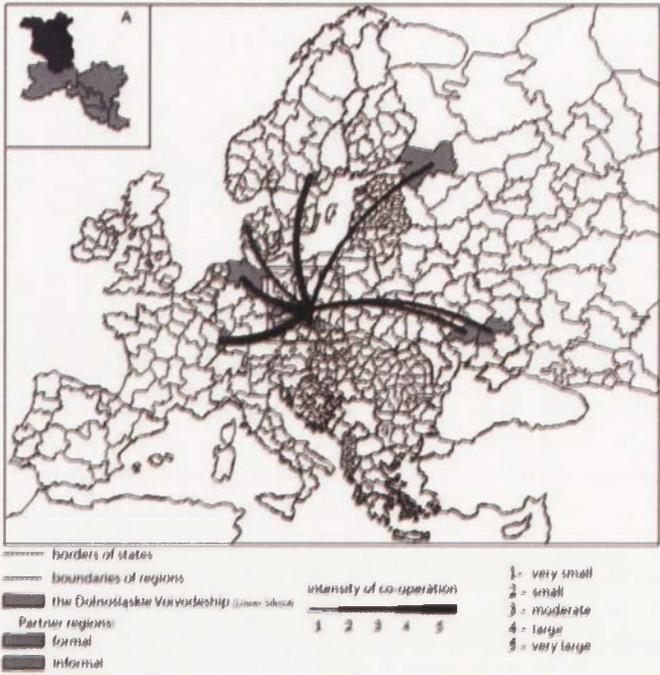
Source: <http://mg.gov.pl>

The symptoms of the worldwide financial crisis and deterioration of economic situation in the country forced the Polish government to take anti-crisis measures. For this reason, the Council of Ministers presented „Stability and Development Plan” which includes a package of measures to supply the Polish economy with the amount of 91.3 billion PLN. This package covers mainly activities concerning the following:

- stability of public finances and the financial system
- increase in the investment and consumption demand
- anti-crisis plan

The results of deterioration of the economic situation in Poland will be different both as regards its timescale and intensity for different lines of business, social groups and regions. In spatial terms, the crisis has its regional aspect – some regions will suffer more than others. Especially prone to crisis will be well-developed regions, which are more outward-oriented, as well as regions with fragile inner economic structure (e.g. with monofunctional structure or strong concentration of foreign capital). One such region is Lower Silesia, which, thanks to its location (on the route of important traffic arteries in Europe) and extensive connections with other European regions, is very open to the outside world (see Fig. 4). The inner structure of this region is sensitive to various types of crisis situations (see Fig. 5). The existence of areas characterized by monofunctional structure, whose economic base is built upon one company, poses such a threat. Such situation took place in the Wałbrzych region in the early 90s, at the time of transformation in the country; the decline of the mining industry and the companies which co-operated with it led to the decline of the whole region and resulted in structural unemployment. The second area of monofunctional structure is LGOM [Legnica – Głogów Copper District]. Should there be a crisis in the copper market, the whole region will suffer (there are communes in which 60% of inhabitants are employed in KGHM, and with the companies co-operating with KGHM, the proportion is even higher). Moreover, the region of Lower Silesia is a place of large concentration of foreign capital, e.g. the region of Wałbrzych (capital connected with automotive industry – especially sensitive to the present world economic crisis) or Wrocław agglomeration (electronic equipment, household goods). Deterioration of the economic situation in countries from which the capital comes results in shutting down factories first of all in the countries in which the capital is located, and secondly in transferring them to the countries with lower production costs.

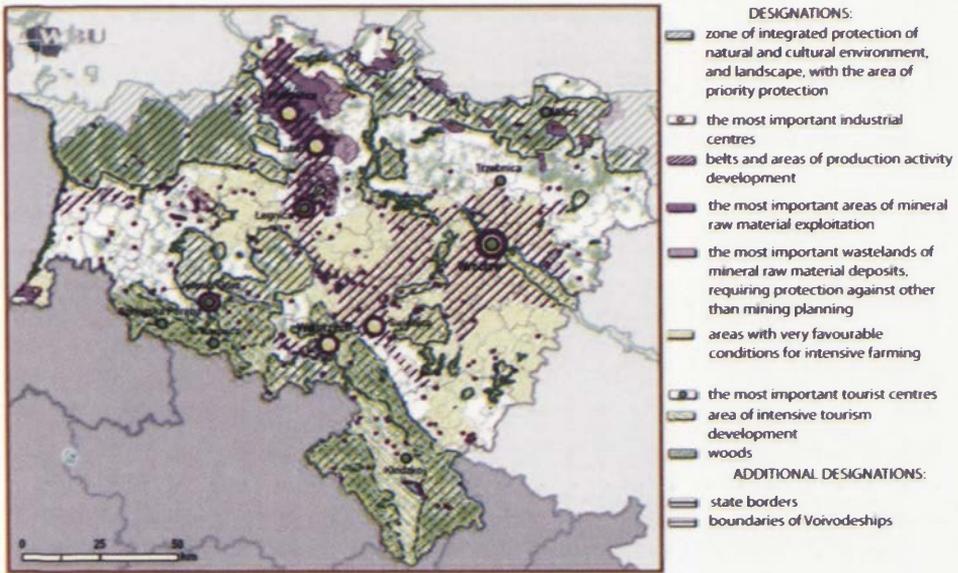
Fig. 4. Economy openness in Lower Silesia.



Source: Ciok S., Dołzbłasz S., Raczyk A., 2006; *Projekt zmian planu...*

Because the crisis has a local character, an important player of anti-crisis measures is the Voivodeship self-government, which is responsible for regional policy. Such measures were taken in the Dolnośląskie Voivodeship. Although the economic situation in the region was far from a crisis, recession or even stagnation, already in September 2008 the first prevention measures were taken. They were included in two important documents, i.e. the Voivodeship budget for 2009 and the Long-term Investment Programme.

Fig. 5. Economic structures in Lower Silesia.



Source: Projekt zmian planu zagospodarowania przestrzennego województwa dolnośląskiego...

Due to the deterioration of the economic situation, „The Anti-crisis package for sustainable development of Lower Silesia” was drafted. This package contains 5 pillars, i.e.:

1. Budget policy
2. Realization of investments
3. Protection of the labour market
4. European funds
5. Support and coordination

Re 1. Pillar I covers stable and realistic budget, assuming a good financial situation of the Voivodeship and a development-oriented structure of budget expenditure. The good financial situation is the result of: good operational results, low debt level and good financial management. Thanks to it, the Voivodeship received an international „A” long-term obligation rating both in foreign

currency as well as domestic one, which is interpreted as a high ability to honour obligations. The planned debt level for 2009 was estimated to be less than 10% (out of possible 60%). As far as the expenses structure is concerned – when planning the budget, the share of property investment expenditure was increased to about 49% (the highest in the history of the Voivodeship). The second budget assumption was to decrease and streamline current expenses (e.g. through cutting administrative costs).

Re 2. The second pillar assumes that the basic type of anti-crisis measures of self-government is investment policy, and above all, an increase in the volume of investments and acceleration of their pace as well as a more efficient management of the investment processes. The increase in the volume of investments is to be achieved via: increasing property expenses in the budget and changes in the Long-term Investment Programme (redeployment of resources from minor investments to hard projects); acceleration of investment realization via acceleration of recruitment for competition under Regional Operational Programme (RPO). A more efficient management can be achieved through: changes to the Long-term Investment Programme consisting in joining investment tasks into groups, realization of common goals etc.

Re 3. The third pillar covers protection of the labour market. Decrease in the dynamics of economic growth manifests itself in changes in the labour market, which requires intervention in the following areas: 1/ activation of the unemployed, 2/ vocational retraining and 3/ alleviation of the consequences of unemployment. Particular activities in this respect cover, among other things: participation in the programme „Modernization of vocational educational centres”, redeployment of resources to the powiat employment offices, adjustment of railway passenger transport to the needs of employers (e.g. Wałbrzych region).

Re 4. The fourth pillar is connected with European funds, which constitute an important source of financing of many self-governments' and companies' planned investments. Alleviation of the consequences of decline in the dynamics of economic growth may in this field be achieved through:

- acceleration of the use of funds (through limiting the deadlines for application assessment, creation of a network of information points for beneficiaries...)
- support for projects with anti-crisis outcome
- efforts to obtain new funding
- preparation of RPO adaptation to new European rules, which, as part of the anti-crisis package are supposed to accelerate investment activities in the territory of the European Union

Re 5. Due to the fact that the realization of anti-crisis package requires support and coordination of self-government actions, the fifth pillar contains a number of actions, e.g.:

- formation of Lower Silesian Fund for Developmental Assistance, which would provide funds for development-oriented investments for the poorest communes of Lower Silesia
- social dialogue and information (consultations with partners, meetings, expert teams and other bodies)
- obtaining direct foreign investments
- organizational support for development of strategic areas for the Voivodeship, etc.

The estimated value of anti-crisis package in 2009 is as much as 619,1 mln PLN. The realization of this package plus support from Regional Operational Programme, plus funds for investments from the list of indicative Operational Programmes will allow to create or hold over 25 thousand jobs in Lower Silesia.

Literature

Badanie koniunktury gospodarczej, GUS, Warszawa 2007.

Ciok S., Dołzbłasz S., Raczyk A., 2006, *Dolny Śląsk. Problemy rozwoju regionalnego*, Acta Universitatis Wratislaviensis; nr 2942, Studia Geograficzne 79, pp.306, Wrocław.

Dynamika eksportu i importu wg NBP, (Źródło: <http://www.mg.gov.pl>).

Gorzela G., (ed.), 2009, *Geografia polskiego kryzysu. Kryzys peryferii czy peryferia kryzysu?*, Regional Studies Association, Sekcja Polska, Warszawa Koniunktura Gospodarcza Nr 3/2009, GUS, Warszawa.

Pakiet antykryzysowy dla stabilnego rozwoju Dolnego Śląska, Urząd Marszałkowski Województwa Dolnośląskiego, Wrocław 2009.

Projekt zmian planu zagospodarowania przestrzennego województwa dolnośląskiego, cz. I Diagnoza stanu zagospodarowania oraz uwarunkowania rozwoju, Wojewódzkie Biuro Urbanistyczne we Wrocławiu, Wrocław 2009.

Sytuacja gospodarcza Polski. Analizy i Prognozy. Ministerstwo Gospodarki (Źródło: <http://mg.gov.pl>).

Streszczenie

REGIONALNE OBLICZE GLOBALNEGO KRYZYSU GOSPODARCZEGO NA PRZYKŁADZIE DOLNEGO ŚLĄSKA

Geneza obecnej sytuacji kryzysowej na świecie wiąże się z kryzysem na rynku kredytów hipotecznych w USA w połowie 2007 r., który następnie rozszerzył się na rynek

finansowy. Bardzo wcześnie i z dużym nasileniem nastąpiło załamanie gospodarki w krajach „Starej Unii” silnie powiązanych finansowo i gospodarczo z gospodarką amerykańską. (por. ryc. 1). Kryzys w UE nie mógł pozostać bez wpływu na polską gospodarkę. Wyraźnie pokazują to badania koniunktury gospodarczej (por. ryc. 2) oraz przebieg wielu zjawisk społeczno-gospodarczych. Szczególnie widać to po dynamice eksportu i importu oraz stopie bezrobocia (por. ryc. 3).

Skutki pogarszania się sytuacji gospodarczej w Polsce będą różne zarówno w czasie jak i sile dla różnych branż, grup społecznych i regionów. Odnosząc się do kwestii przestrzennych kryzys posiada swoje oblicze regionalne, jedne regiony ucierpią bardziej inne mniej. Szczególnie podatne na kryzys będą regiony dobrze rozwinięte, charakteryzujące się dużym stopniem otwarcia na zewnątrz jak i regiony o wrażliwej wewnętrznej strukturze gospodarczej (np.: o strukturze monofunkcyjnej, czy dużej koncentracji kapitału zagranicznego). Takim regionem jest właśnie Dolny Śląsk (por. ryc. 4 i 5).

Ponieważ kryzys ma charakter regionalny ważnym aktorem działań antykryzysowych jest samorząd wojewódzki, który jest odpowiedzialny za politykę regionalną. Takie działania podjęto w woj. dolnośląskim. Choć sytuacja gospodarcza w tym regionie daleka była od kryzysu, recesji czy nawet stagnacji, już we wrześniu 2008 r. podjęto w regionie pierwsze działania zapobiegawcze. Znalazły one miejsce w trakcie przygotowywania dwóch ważnych dokumentów, tj. budżetu województwa na 2009 r. oraz wieloletnim Programie Inwestycyjnym. W związku z pogarszającą się sytuacją gospodarczą opracowano tzw. „Pakiet antykryzysowy dla stabilnego rozwoju Dolnego Śląska”. Pakiet antykryzysowy obejmuje 5 filarów, tj.:

1. polityka budżetowa
2. realizacja inwestycji
3. ochrona rynku pracy
4. fundusze europejskie
5. wsparcie i koordynacja

Szacowana wartość pakietu antykryzysowego w 2009 r. wynosi aż 619,1 mln zł. Realizacja tego pakietu plus wsparcie z RPO, plus środki na inwestycje z listy indykatorywnych PO – pozwoli stworzyć lub utrzymać ponad 25 tys. miejsc pracy na Dolnym Śląsku.

ATTITUDES TOWARDS GLOBAL ECONOMIC CRISIS ON EXAMPLE OF SELECTED INHABITANTS OF PODKARPACIE

Justyna KĘDRA

University of Rzeszów

Introduction

The world faces the financial and economic crisis, which has achieved an unprecedented range. It has led to the breakdown of capital markets, a partial paralysis of the world financial system, and also to a deep recession. The economy of Poland has been affected with the crisis mainly due to the scale of crisis phenomena in the countries of the European Union. Due to strong links with the global market, the world tumbling is directly reflected in the pace of the national economic growth. Negative changes visible, for example, in the field of industrial production, sizes of investments, and consumption or labour market affect the situation of Polish enterprises. They shape in an indirect way the social sphere.

Attitudes towards crisis – presentation of research results

The paper has been prepared based on the empirical research carried out in May 2009. The research was based on an electronic version of a questionnaire distributed among students of the School of Law and Public Administration in Przemyśl. 452 forms were returned, i.e. ca. 91%. The number does not cover questionnaires supplied openly, instead anonymously, and rejected because of that reason. The questionnaire included questions concerning perception of the economic crisis (concerning perceived and forecast consequences of the phenomenon), actions undertaken to defend against the crisis and expected implications of the crisis for the Polish economy. The imprint included questions concerning five features of the respondents: gender, age, residence, source of income and evaluation of own financial situation.

The survey covered 298 women and 154 men. The largest age group (39.8%) formed the surveyees between 18 and 24 years old. To the next largest

age group (20.6%) belonged respondents at the age of 25-29. The third largest age group (19%) made respondents between 30 and 34 years old, and every eighth surveyee was over 40 years old. The smallest group (8.2%) formed persons at the age of 35-39.

Most surveyees (59.1%) had permanent incomes. Almost 27% of the respondents admitted that their main sources of incomes were irregular (e.g. seasonal work, mandate contract). A relatively small (14.4%) was a group of the surveyees, who did not have any incomes or received benefits (e.g. disability or retirement pensions).

The basic part of the surveyees (44%) formed villagers. Almost 27% of the respondents indicated a small town as their residence, and 18% indicated a medium town. Only every ninth surveyee was an inhabitant of a city.

Over a half of the respondents specified their own financial situation as moderate (table 1). Every third surveyee declared that they had a fairly good or good situation. Only every 10th one assessed their financial situation as rather bad or very bad.

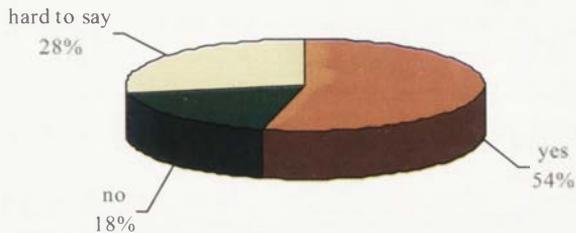
Table 1. Distribution of the respondents' answers to the question: „How do you assess your own financial situation?”.

| Specification | Frequency | Percentage |
|-------------------|-----------|------------|
| It is very good | 16 | 3.5 |
| It is fairly good | 136 | 30.1 |
| It is moderate | 254 | 56.2 |
| It is rather bad | 37 | 8.2 |
| It is very bad | 9 | 2.0 |
| In total | 452 | 100 |

Source: Own research.

Over a half of the surveyees claimed that the crisis results were already visible in their families (fig. 1). Almost every fifth respondent admitted that they did not feel the crisis consequences yet.

Fig. 1. Distribution of the respondents' answers to the question: „Have you or your family felt the results of the economic crisis?”



Source: Own research.

Feeling of the crisis results was declared more frequently by women (table 2). Much more seldom the crisis results were noticed in their families by men. Maybe it resulted from the fact that it is the woman who is responsible for expenditures in her family.

Table 2. Distribution of answers to the question: „Have you or your family felt the results of the economic crisis?” according to the respondents' gender (in %).

| Gender | Yes | No | Hard to say | In total |
|--------|------|------|-------------|----------|
| Woman | 57.0 | 13.8 | 29.2 | 100 |
| Man | 48.1 | 26.6 | 25.3 | 100 |

Source: Own research.

The economic crisis result that was experienced by the respondents the most frequently was an increase in living costs (table 3). The next result that was often indicated was limitation of earning abilities and the related fall of incomes. Almost every sixth respondent had problems with repayment of financial debts. Every eighth surveyee mentioned the loss of job as the crisis result and a fall of the property value (e.g. stocks). A relatively few people were in a situation when they were withdrawn a credit decision or refused granting a credit.

Table 3. Distribution of the respondents' answers to the question: „What results of the economic crisis have you or your family felt?”

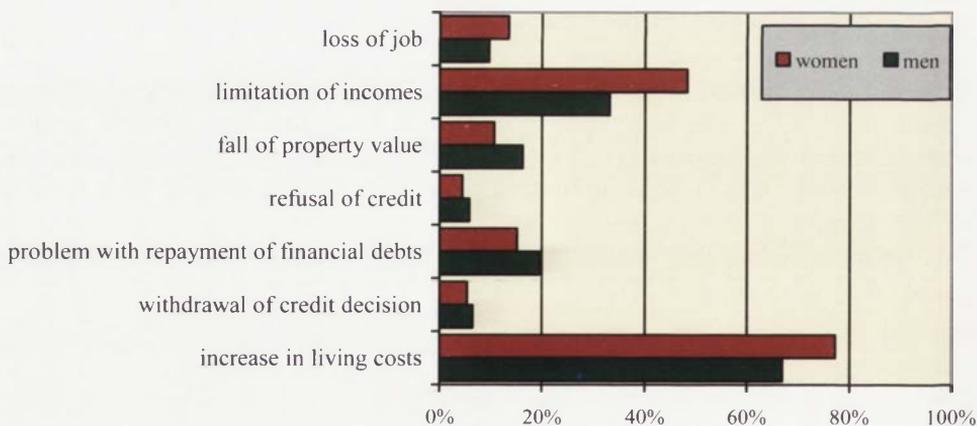
| Specification | Frequency | Percentage |
|--|-----------|------------|
| Increase in living costs | 333 | 73.7 |
| Limitation of incomes | 195 | 43.1 |
| Problems with repayment of financial debts | 75 | 16.6 |
| Fall of property value | 57 | 12.6 |
| Loss of job | 55 | 12.2 |
| Withdrawal of granted credit | 26 | 5.8 |
| Refusal of granting credit | 22 | 4.9 |

Values in the second and third columns cannot be summed up, as the respondents had several options to indicate their answers.

Source: Own research.

Women more frequently indicated an increase in living costs among the perceived crisis results (77.2%), limitation of incomes (48.3%) and loss of job (13.4%). Men more frequently stressed problems with repayment of their financial debts (19.5%), a fall of property value (16.2%), and also bank withdrawals of their decisions to grant a credit (6.5%).

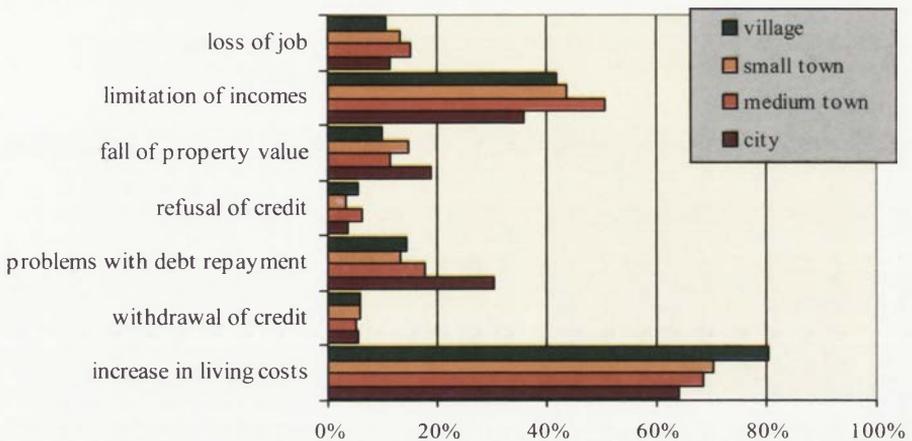
Fig. 2. Distribution of the respondents' answers to the question: „Have you or your family felt the results of the economic crisis?”



Source: Own research.

The economic crisis result that was felt the most frequently by the surveyees, irrespective of their residence, was an increase in living costs (fig. 3). It was felt the most strongly by the surveyed villagers (80.4%); whereas it was the least severe for inhabitants of cities (64.2%). The respondents living in medium towns stressed more frequently than other groups the phenomena of limiting incomes (50.6%), loss of jobs (15.2%), but also refusals to grant a credit (6.3%). On the other hand, the results of the economic crisis that were indicated most frequently by inhabitants of cities were problems with repayment of financial debts (30.2%) and value deterioration of the owned property (18.9%).

Fig. 3. Distribution of answers to the question: „Have you or your family felt the results of the economic crisis?” according to the respondents’ residence.



Source: Own research.

Among the surveyees who had permanent incomes the economic crisis results that were indicated the most frequently were an increase in living costs, limitation of incomes, problems with repayment of financial debts and a fall of property value (table 4). They stressed relatively rarely loss of job, credit refusal or withdrawal of the credit decision by the bank.

The surveyees who had irregular incomes indicated the most frequently an increase in living costs and limitation of incomes among the economic crisis implications. Almost every sixth surveyee suffered from loss of a job.

Table 4. Distribution of the respondents' answers to the question: „What results of the economic crisis have you or your family felt?” (in %).

| Specification | Level of incomes | | |
|------------------------------|-------------------|-------------------|------------|
| | Permanent incomes | Irregular incomes | No incomes |
| Loss of job | 7.9 | 17.5 | 20.0 |
| Limitation of incomes | 41.2 | 42.5 | 52.3 |
| Fall of property value | 13.9 | 9.2 | 13.8 |
| Refusal of credit | 5.6 | 4.2 | 3.1 |
| Problems with debt repayment | 16.5 | 15.0 | 20.0 |
| Withdrawal of credit | 5.2 | 9.2 | 1.5 |
| Increase in living costs | 73.4 | 71.7 | 78.5 |

Percentages do not sum up to 100%, because the respondent had an option of several variants of answers.

Source: Own research.

On the other hand, an increase in living costs and limitation of incomes turned out to be the most painful results of the crisis for the respondents who did not have any incomes. Every fifth surveyee from that group suffered loss of a job and had problems with repayment of financial debts.

It results from the table below that a strategy that is declared most often, securing against the crisis results, is now limitation of expenses. Resignation from purchases requiring high expenses was declared by 60% of the surveyees. Half fewer ones indicated necessity to resign from credit. Almost every fifth respondent decided to buy products whose prices may grow in the future. Very few surveyees decided to withdraw money from risky investments and to withdraw money from the bank.

Table 5. Distribution of the respondents' answers to the question: „What actions have you or your family taken following information about the economic crisis?”

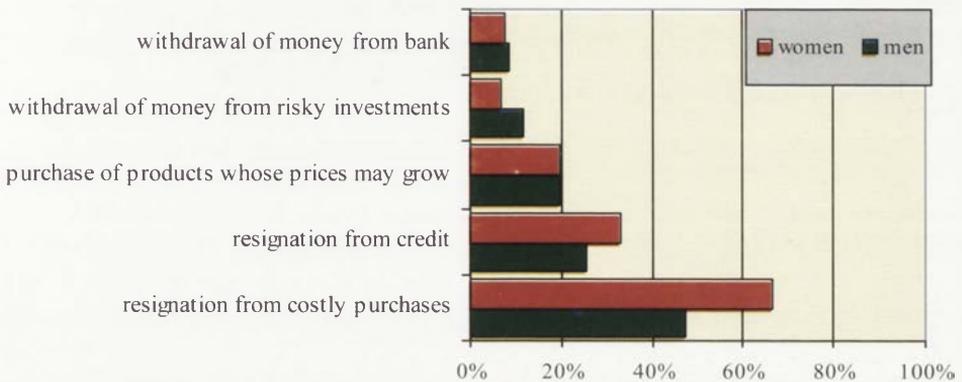
| Specification | Frequency | Percentage |
|--|-----------|------------|
| Resignation from costly purchases | 271 | 60.0 |
| Resignation from credit | 138 | 30.5 |
| Purchase of products whose prices may grow | 88 | 19.5 |
| Withdrawal of money from risky investments | 38 | 8.4 |
| Withdrawal of money from bank | 35 | 7.7 |

Values in the second and third columns cannot be summed up, as the respondents had several options to indicate their answers.

Source: Own research.

Women more frequently than men noticed necessity to resign from purchases requiring substantial financial expenses (fig. 4). Every third surveyed woman also declared resignation from taking a credit. On the other hand, men more frequently decided to withdraw their savings from the bank, and also from risky investments (e.g. stock exchange).

Fig. 4. Distribution of answers to the question: „What actions have you or your family taken following information about the economic crisis?” according to the gender of the surveyees.

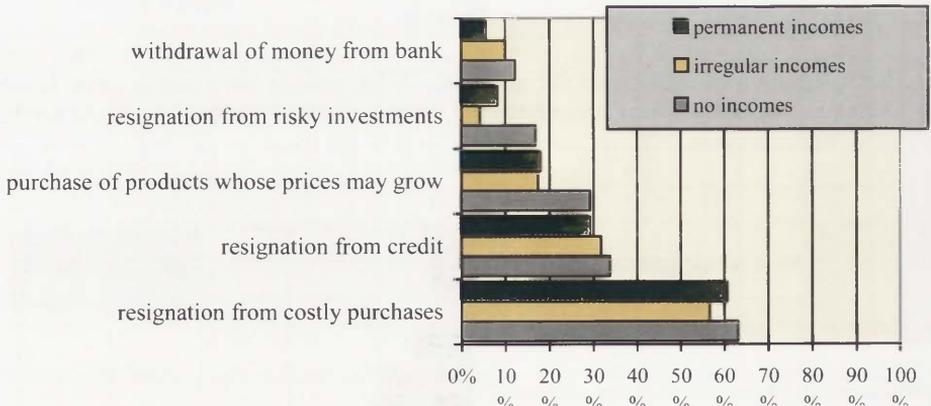


Source: Own research.

The surveyees who did not have any incomes indicated more frequently than the remaining ones resignation from risky investments among actions undertaken to secure against the crisis (fig. 5). The same respondents also decided more frequently to buy the products whose price rise they expected in the future, and also they stressed more frequently necessity to withdraw savings deposited in a bank.

On the other hand, the respondents with permanent incomes relatively most rarely took decisions to resign from applying for a credit and from withdrawing money from the bank.

Fig. 5. Distribution of answers to the question: „What actions have you or your family taken following information about the economic crisis?” according to the respondents’ source of maintenance.



Source: Own research

Almost half of the surveyees were convinced that the present economic crisis had already affected adversely the Polish economy, and 43% of the respondents admitted that they expected this in the future. Only 4.2% of the surveyees expressed an opinion that the economic crisis would not adversely affect our economy. Thus the overwhelming majority of the respondents, who had not suffered from the crisis results yet, expected at the same time its negative implications for the economy.

Conclusions

Based on the survey one can formulate a conclusion that information about the ongoing global economic crisis and the related threats have reached awareness of the surveyed inhabitants of Podkarpacie. Consequences of the crisis have become real and over a half of the surveyees have already experienced them. The crisis results that were indicated the most frequently were an increase in living costs and limitation of incomes.

Almost half of the surveyees assessed that the negative influence of the crisis on the Polish economy was already visible, and a similar percentage of the respondents expected this in the nearest future. At the same time most of the surveyees, who had not suffered from the crisis consequences yet, expected a negative influence of the crisis on the Polish economy in the future.

Among the strategies fighting against the results of the present economic situation the most frequent action was resignation from purchases requiring

substantial expenses. The next place indicated by the respondents occupied necessity to resign from credit. It is meaningful that only very few surveyees took a decision to withdraw money from banks. This fact is worth stressing because one of the most important dimensions of the present crisis in the world is a loss of trust in banks.

Streszczenie

POSTAWY WOBEC GLOBALNEGO KRYZYSU GOSPODARCZEGO NA PRZYKŁADZIE WYBRANYCH MIESZKAŃCÓW PODKARPACIA

W artykule zaprezentowano pierwszą część wyników badań empirycznych, przeprowadzonych w maju 2009 roku wśród studentów Wyższej Szkoły Prawa i Administracji w Przemyślu, w oparciu o elektroniczną wersję kwestionariusza ankiety. Celem badań było określenie postaw wybranych mieszkańców regionu wobec kryzysu gospodarczego. Kwestionariusz zawierał pytania dotyczące postrzegania kryzysu gospodarczego (w aspekcie odczuwanych i przewidywanych konsekwencji tego zjawiska), działań podejmowanych w celu obrony przed kryzysem oraz spodziewanych implikacji kryzysu gospodarczego dla polskiej gospodarki.

Badania wykazały, że konsekwencje kryzysu nabrały wymiaru realnego, a ponad połowa uczestników badania została już nimi doświadczona. Najczęściej wskazywanymi skutkami kryzysu były wzrost kosztów utrzymania i ograniczenie dochodów. Z kolei wśród strategii przeciwdziałania następstwom obecnej sytuacji gospodarczej najczęściej podejmowanym działaniem była rezygnacja z zakupów wymagających poniesienia znaczących wydatków.

The Royal College of Physicians is a body of 23,000 members, including all the medical and dental practitioners in the United Kingdom. It is the largest of the four professional bodies in the United Kingdom, and is the only one that is a body of the State. The College is a body of the State, and is the only one that is a body of the State. The College is a body of the State, and is the only one that is a body of the State.

THE ROYAL COLLEGE OF PHYSICIANS

The Royal College of Physicians is a body of 23,000 members, including all the medical and dental practitioners in the United Kingdom. It is the largest of the four professional bodies in the United Kingdom, and is the only one that is a body of the State. The College is a body of the State, and is the only one that is a body of the State. The College is a body of the State, and is the only one that is a body of the State.

CHINESE RAILWAYS IN THE CONDITIONS OF GLOBAL ECONOMIC CRISIS

Sergey TARKHOV

Institute of Geography
Russian Academy of Sciences
Moscow

The global economic crisis that started in 2008 has led to the reduction of export volumes of China (–26% in January – February 2009 in comparison to the same period of 2008), and many export-oriented enterprises mostly located in maritime provinces of South-Eastern and Eastern China (mainly in Guangdong, Zhejiang, Fujian provinces), and in the largest economic centres of others parts of the country have been crushed too. So, 67,000 small and middle size enterprises were bankrupted during the first half of 2008. As a result the production volume in adjacent branches of economy was reduced. The leading economic clusters of high-tech (Bohai coast with Tianjin and Hebei cities; delta of the Yangtze river with cities of Jiangsu and Zhejiang, and also Shanghai; delta of the Zhujiang river in Guangdong province; coastal stripe of Fujian) have suffered most seriously.

The closure of many enterprises and the reduction of production volume of the remaining enterprises have led to sharp increase of unemployed workers. The number of jobless people was very high before the crisis (9%, i.e. 73 million). But the crisis increased this number drastically. The exact number of it is unknown, but by approximate estimation is near 90-100 million. It is known that the number of migrants who left countryside and worked in the cities was 210 million in 2008, and more than 20 million of them left the coastal centres in February 2009 for their native countryside communities in inner areas (Jiangsu, Anhui, Hubei, Hunan, Guizhou, Guangxi provinces, Chongqing municipality).

Worsening of social circumstances and the closure of many industrial enterprises just after the finishing of the Beijing Olympics of 2008 have stimulated the Chinese government to adopt the program of overcoming the social and economical consequences of the global crisis in the late fall of 2008. The problem with unemployment must be solved due to arrangement of mass public works including the development of the agriculture, infrastructure (including the transport system of public use and railways), the construction of cheaper residential estates, the fuel and energy savings, the increasing of social charges.

The financial crisis later transformed into global economic crisis hit the economy of China in the autumn of 2008. The government has accepted the package of arrangements in the sum of 4 trillion Yuan (586 billion USD) in November 2008, which must stimulate the development of national economy, reduction of the unemployed, expansion of inner demand. New transport construction became the main „locomotive” of realization of this package. Its main stake was assigned to the construction of new railways and modernization of old lines.

Why were transport and railways chosen? The fact is that the old railway network was behind the fast growing economy, but express motorway network was expanded rapidly in 2000-ties and reached 60,000 km in 2008. The economy needed more new railways, especially for transportation of mass goods like coal. The growth of transport network in 2000-ties was delayed nevertheless (see table 1).

Table 1. The growth of railway and road networks, freight and passenger turnover of automotive and railway transport of China in 1995-2007 (by the end of the year).

| | 1995 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--|---------|---------|---------|---------|--------|---------|---------|--------|--------|--------|
| Length of railway network, 000 km | 59.7 | 68.7 | 70.1 | 71.9 | 73.0 | 74.4 | 75.4 | 77.1 | 78.0 | 79.1 |
| Length of electrified railways, km | 9,703 | 14,864 | 16,877 | 17,409 | 18,060 | 18,562 | 19,408 | 23,435 | 24,047 | 26,000 |
| Length of double tracks, km | 16,909 | 21,408 | 22,640 | 23,058 | 23,702 | 23,841 | 24,497 | 25,244 | 25,794 | ... |
| Length of all roads, 000 km | 1157.0 | 1402.7 | 1698.0 | 1765.2 | 1809.8 | 1870.7 | 3345.2 | 3457.0 | 3583.7 | ... |
| Length of express motorways, 000 km | 2.1 | 16.3 | 19.4 | 25.1 | 29.7 | 34.3 | 41.0 | 45.3 | 53.9 | 60.3 |
| Length of roads of 1-4 classes, including motorways, 000 km | 910.8 | 1216.0 | 1336.04 | 1382.9 | 1438.7 | 1515.8 | 1591.8 | 2282.9 | 2535.4 | ... |
| The volume of goods transported by railways, million tons | 1658.6 | 1780.2 | 1925.8 | 2049.6 | 2211.8 | 2490.2 | 2693.0 | 2882.2 | 3142.4 | 3300 |
| The volume of goods transported by roads, million tons | 9.404 | 10.388 | 10.560 | 11.163 | 11.600 | 12.450 | 13.418 | 14.663 | 16.394 | ... |
| Number of passengers transported by railways, million | 1027,45 | 1050,73 | 1051,55 | 1056,06 | 9726,0 | 1117,64 | 1155,83 | 1256,6 | 1356,7 | 1460 |
| Number of passengers transported by motor transport, million | 10.408 | 13.474 | 14.028 | 14.753 | 14.643 | 16.245 | 16.974 | 18.605 | 20.507 | ... |
| Railway goods turnover, billion tone-km | 1304,95 | 1390,2 | 1457,5 | 1565,8 | 1724,7 | 1928,9 | 2072,6 | 2195,4 | 2379,7 | ... |
| Motor transport goods turnover, billion tone-km | 469,5 | 612,9 | 633,0 | 678,2 | 709,9 | 784,1 | 869,3 | 975,4 | 1135,5 | ... |
| Passenger turnover by railways, billion passenger-km | 354,7 | 453,3 | 476,7 | 496,9 | 478,9 | 571,2 | 606,2 | 662,2 | 721,6 | ... |
| Passenger turnover by motor transport, billion passenger-km | 472,6 | 665,7 | 720,7 | 780,6 | 769,6 | 874,8 | 929,2 | 1013,1 | 1150,6 | ... |

Sources: <http://www.stats.gov.cn/tjsj/ndsj/2008/indexeh.htm>
<http://www.stats.gov.cn/tjsj/ndsj/2005/indexeh.htm>

Large-scale railway construction becomes the important stimulus for expansion of inner demand against the background the economic growth rate fall, the reduction of export volumes, and rising unemployment. It needs the big financial expenditures, the increase of the employees' number, the development of the industrial branches producing the construction materials, rails, rolling stock, railway equipment. So, the mass railway construction leads to the GDP increase, promotes the economical growth due to involvement of the new resources (natural and human ones) and the expansion of economic centre network; it accelerates the industrialization, the urbanization of the territory; it socializes the population of backward areas and involves them into economic progress. New railways let enlarge carrying and network capacity (by means of its electrification, track doubling, velocity accelerating) of the whole transport system, and reliability and security of communication (due to creation of parallel and bypass lines, new closed circuits in the network), improve transportation conditions for people and goods, lead to reduction of transport costs due to shortening of routes and time of deliveries.

Chinese investment in railway construction made up 180 billion yuan in 2007 (RMB; 1 USD = 7,3872 RMB in November 2007) and 330 billion yuan in 2008 (1USD = 6,8527 RMB in December 2008). 600 billion yuan were provided for construction of 5,148 km of railway for 2009 (1 USD = 6,834 RMB in September 2009). Such an enlargement of railway investment will stimulate the creation of 6 million jobs in 2009, demand of 20 million tones of steel and 120 million tones of cement, mass production of technical equipment for railways, new rolling stock and carrier, tractive substations, depots, repairing works. For example, 60 billion yuan (8,8 billion USD) were allocated for the construction of high-speed passenger railway Beijing – Shanghai in 2009, including 2 million tones of steel and 12 million of cement; 600,000 workers were engaged in the building of the railway beds and tunnels at the beginning of 2009.

The crisis has forced the government to revise the old plans of expansion and modernization of transport network and the rates of railway construction. The government made the final decision on 31 October 2008, and the Ministry of Chinese Railways adopted the revised medium-term and long-term plan of railway building on 27 November 2008. If the old plan (adopted by the State Council on 7 January 2004) proposed the network length to bring up 100,000 km by 2020, this limit was increased to 120,000 km by the new revised plan. It means the new 41,000 km will be built instead of former 16,000 km. The construction of 10,000 km of new rail lines (70 projects) was started in 2009, and more 10,000 km will be started in 2010. The length of the Chinese railway network will make up 86,000 km to the end of 2009, and it would be 110,000 km by 2012, including 13,000 km with train velocity of more than 200 km per hour.

Construction and delivery of new rolling stock in 2009-12 will cost 500 billion yuan (100 billion yuan every year, i.e. 14.7 billion dollars). The Chinese rail car building plants have got the purchase orders to produce 800 high-speed

passengers' trains, 7900 locomotives with strong tractive power, 25,000 passenger rail cars.

The Ministry of Chinese Railways will get 5 trillion yuan (732 billion USD) from the national budget for implementation all these plans of railway extension and modernization during 2009-2020. The railway network will grow to 120,000 km by 2020, including 18,000 km lines with train velocity of more than 200 km per hour.

Extension and modernization of railway network in China follows three directions:

- 1) renovation and technical improvement of old railway lines by means of its electrification, doubling of tracks, technical renovation of rail nodes, signaling system etc.;
- 2) construction of new railway lines;
- 3) construction of high-speed passenger railway lines.

New railways

The railway network of China has been extended from 51,700 km (1978) to 77,100 km (2006). 63,400 km of it belong to the state, 8,500 km – to joint-venture companies, and 4,800 km – to local authorities. 24,400 km are electrified and 25,200 km have two tracks (39.8% of the network). The standard gauge 1435mm is dominating, but some local and industrial lines have the narrow gauge.

The large-scale extension of network was carried out. For example, a new unique mountainous Qinghai – Tibet railway was built in 2001-06. It has 1956 km (the newly built section Golmud – Lhasa 1142 km) and crosses the mountains at the 4000 m above sea level (this section takes 960 km) and the permafrost area (600 km). 2.8 million passengers were transported here in two first years of its operation (1 July 2006 – 1 July 2008).

6,140 km of new lines were built in 2003-2007 that cost 522 billion yuan (72.5 billion USD). Many new interprovincial railways have been built and opened since 2000 (see Table 2; the list of new lines built before see Tarkhov, 2003a and 2003b). Another 1719 km were laid in 2008.

Table 2. New railways built in China in 2000-2009.

Presented by opening dates in chronological order (without high-speed passenger lines; see tables 7 and 8).

| Railway lines (provinces) | Location, what places and provinces connects, its functions, notes | Length, km | Opening date |
|--|---|------------|-------------------------------|
| Chunwan – Luoding | Guangdong, built by private company | 62 | 2000 |
| Shenmu – Yan'an | North and centre of Shaanxi | 328 | 8.02.2002 |
| Xinpu (Lianyungang) – Haian – Changxing (Zhejiang, west of Shanghai) | Connects the north of Jiangsu and the west of Zhejiang, western bypass of Shanghai | 571 | 5.12.2002; completely in 2005 |
| Neijiang (Sichuan) – Yibin – Zhaotong – Lupanshui (Guizhou) – Kunming (Yunnan) | South-east of Sichuan, extreme west of Guizhou, north-east of Yunnan; construction finished on 19.09.2001, temporary operation started since 2002 | 872 | 15.10.2003 |
| Zhanjiang (Guangdong) – Qiongzhou Straits – port Nangang (Hainan) | Freight railway ferry between ports of Guangdong and island Hainan; passenger trains ferry Haian – Haikou started operation since 5.12.2004 | 345 | 7.01.2003 |
| Dazhou – Wanzhou | To the north-east of Chongqing; part of line Wanzhou – Yichang which under construction (see table 3) | ... | 2004 |
| Nanjing – Yangzhou – Nantong – Qidong (Jiangsu) | To the east of Nanjing along the northern bank of Yangtze (Chang Jiang) river up to its mouth; for opening-up the coastal areas of Jiangsu; the section Nanjing – Yangzhou opened in 2004 | 357 | 2004-2006 |
| Xinyi (Xin'an) – Linyi – Jiaoxian (near Qingdao) | Connects the north of Jiangsu and south-east of Shandong; shortening the way between Shanghai and Shandong | 302 | 2004-2006 |
| Suining (Sichuan) – Chongqing – Huaihua (Hunan) | Sichuan – Chongqing – west of Hunan; opened only section Chongqing – Huaihua | 625 | End of 2005 |
| Ganzhou (south of Jiangxi) – Longyan (south-west of Fujian) | Between provinces Jiangxi and Fujian; construction started on 8.12.2001; investment 6.33 billion yuan | 277 (280) | 2005 |
| Xilinhot – Sanggin Dalai – Zhenglan Qi | Eastern part of Inner Mongolia; for carrying of coal to the big fuel-burning power plant | 152 | 2006? |
| Lyugou – Dunhuang | Extreme north-west of Gansu, branch from the station Lanxin to the south | 169 | 2.03.2006 |
| Daliuta (district Shenmu, Shaanxi) – Shozhou (Shanxi) | From the border of Inner Mongolia on the north of Shaanxi to the west of Shanxi; 2 nd track; coal railway | 266 | 25.03.2006 |
| Xi'an – Nanyang – Xinyang – Huangchuan – Hefei – Nanjing | Connects the south of Shaanxi, south of Henan to Anhui and Nanjing; load-off the Longhai Railway; section Hefei – Nanjing opened in April 2008 | 1129 | 18.04.2006 |
| Golmud (Qinghai) – Tanggula – Amdo – Nagqu – Lhasa (Tibet) | Qinghai-Tibet railway connected the west of Qinghai and the capital of Tibet; part of line Lanzhou – Lhasa (1956 km); investment 26.21 billion yuan (3.16 billion USD) | 1142 | 1.07.2006 |

| Railway lines (provinces) | Location, what places and provinces connects, its functions, notes | Length, km | Opening date |
|---|--|------------|--------------|
| Lushunkou (Dalian; Liaoning) – Yantai (Shandong) | Railway ferry through Bohai Haixia (Straits) | 160 | 5.11.2006 |
| Dongsheng – Wuhai | South-west of Inner Mongolia | 360 | 2007 |
| Haikou (Xinhai) – Danzhou – Dongfang – Sanya | Western section of circular line along the west coast of island Hainan; renovated line, works started in October 2005 | 364 | 18.04.2007 |
| Tangshan – island Caofeidian (Bo Hai Wan) | Hebei; to new site of metallurgic works Shoudu, moved to this island from Beijing | 70 | .06.2007 |
| Ji'an – Jingganshan | West of Jiangxi | 81 | 28.06.2007 |
| Quzhou – Changshan | West of Zhejiang; built by Changshan joint-venture company with contribution of private investment | 41 | 28.09.2007 |
| Weihe – Yabuli | South-east of Heilongjiang, the branch south of line Harbin – Mudanjiang to serve the ski resort | 24 | 6.12.2007 |
| Hefei (Anhui) – Nanjing (Jiangsu) | Connects the capitals of Anhui and Jiangsu provinces | 166 | .04.2008 |
| Tongling (south of Anhui) – Jiujiang (north of Jiangxi) | Along right bank of the Yangtze River (Chang Jiang) in the south of Anhui province; with bridge over lake Poyang Hu (5,5 km); provides the access to the mountains Jiuhuashan; construction started in May 2005 | 251 | 1.07.2008 |
| Baihe – Helong | In south-east of Jilin province, near the border with North Korea, in the Changbaishan Mountains; connects the deadened railway stations in through trunk line along Chinese – Korean border from Tonghua via Tumen to Mudanjiang (Heilongjiang) | ... | 20.12.2008 |
| Wenzhou – Fuzhou | South of Zhejiang – north of Fujian; opening-up of coastal areas; construction started in August 2005 | 298 | 30.06.2009 |
| Fuzhou – Putian – Quanzhou – Jinjiang – Xiamen | Along the coast in Fujian province; construction started in October 2005 | 275 | 20.07.2009 |
| Dali – Lijiang | north of Yunnan | 165 | 1.10.2009 |

Sources: <http://english.peopledaily.com.cn/> and <http://russian.people.com.cn/> for 2001 – 2009.

The existing railway magistral do not cope with rapidly growing freight flows. The trunk railways (Beijing – Guangzhou, Beijing – Shanghai, Beijing – Harbin, Lianyungang – Lanzhou) are overloaded (the freight volumes of main railway lines are indicated in Table 4, passengers ones – in Table 6).

The existing important coal railways hardly cope with rapidly growing volumes of coal: Datong – Qinhuangdao (790,000 tones of coal were transported here everyday in 2006 and more than 1 million tones per day at the beginning of 2009; the train sets consisted of 208 rail cars operated here since March 2006,

moving each one 20,000 tones of coal); Taiuyan – Datong; Houma – Yueshan. The demand of coal in fuel scarce areas increases very fast, this is why the construction of new railways to new coal fields started in Shanxi, Shaanxi, Inner Mongolia, Henan provinces. The capacity of latitudinal coal magistral from Shaanxi and Shanxi to seaports, from Xinjiang and west parts of Inner Mongolia to the Central China must be increased after its completion. They could let pass up to 2.5 billion tones of coal every year by 2020 after technical renovation of old coal railways and construction of new ones.

The mass construction of many interprovincial lines started in 2003-2009. They must connect neighbour provinces, and some border provinces to adjacent countries as well. The list of lines under construction is presented in Table 3 (the information in Chinese sources is not always complete, and this is why some table cells are not complete).

Table 3. Railways of China under construction.

The lines are ordered geographically: north-east, centre, east, south, north-west.

| Railway lines (provinces), notes | Length, km | Investment volume, billion yuan (billion USD) | Dates of starting construction works and its expected completion |
|--|--------------|---|--|
| Qianjin – Fuyuan (east of Heilongjiang, opposite Harbarovsk) | 169 | 2.2 (0.323) | 2008–10 |
| Harbin – Zhaodong – Anda – Daqing – Qiqihar (west of Heilongjiang); passenger, 200 km per hour | 300 | | 2009– |
| Suifenhe – Dongning (Heilongjiang) – Tumen – Heilong – Tonghua (Jilin) – Dandong (Liaoning) – Zhuanghe – Dalian; the length of new sections 410 km | 1389 | 12.7 (1.58) + 1.88 (0.238) | 2006–08/9 |
| Changchun – Changbai Shan (Jilin) | 94 | ... | 2007– |
| Changchun – Jilin (Jilin) | 96 | ... | 2007–11 |
| Tonghua (Jilin) – Guanshui (Heilongjiang) | 180 | 4.5 (0.662) | 2009–11 |
| Qianyang – Zhuanghe (Liaoning) | 165 | 3,75 (0,551) | 2009–11 |
| Qian'an – Caofeidian (Hebei); coal railway to load-off the old coal line Datong – Qinhuangdao (will transport 130 million tones of coal per year) | 213 | 4.8 (0.593) | 2005-08? |
| Ordos (Inner Mongolia) – Caofeidian (near Tangshan, Hebei) for coal transportation | 1000 | ... | 2009– |
| Fuxin (north-west of Liaoning) – Xinqiu – Bayan Ula (east of Inner Mongolia, Xilin Gol aymak) | 488 | 5.86 (0.79) | 2007-10 |
| Ji'ning (centre of Inner Mongol) – Zhangjiakou (Hebei), electrified | 177 | ... | Project |
| Linhe (Bayannur, west of Baotou, Inner Mongolia) – Qekou (cross point on Mongolia border, Ejin Qi hoshun, west of Inner Mongolia) through deserts Ulan | 768 (755) | 4.2 (0.61) | 2005-09 (07?) |

| Railway lines (provinces), notes | Length, km | Investment volume, billion yuan (billion USD) | Dates of starting construction works and its expected completion |
|---|------------|---|--|
| Buh Shamo and Badain Jaran Shama | | | |
| Wanshuiqian (Baotou; west of Inner Mongolia) – Urad hoshun – Ganq Moa (border point with Mongolia) – Tavan-Tolgoy (Mongolia); for export coal (60 million tones per year) and copper from Mongolia to China | 354 | 4.7 (0.69) | 2009–11 |
| Baotou (Inner Mongolia) – Xi'an (Shaanxi) for coal transportation, velocity of trains up to 160 km per hour | 801 | 16.73 (2.26) | 2007–10 |
| Taiyuan (Shanxi) – Dingbian (2 tracks) – Zhongwei (Ningxia) – Yinchuan (Ningxia; 1 track), velocity 160 km per hour | 944 | 30.32 (3.79) | 2006– |
| Binzhou – Dongying – Weifang – Yantai – Weihai (Shandong) | 588 | ... | 2006–10 |
| Luoyang (Henan) – Shiyan (Hubei) – Yichang? (Hubei) – Changde (Hunan) – Yongzhou (Hunan) – Hezhou (Guangxi) – Wuzhou – Yulin (Guangxi) – Zhangjiang (Guangdong) | 1180? | ... | 2005– |
| Nanjing (Jiangsu) – Anqing (Anhui), passenger, velocity 200–250 km per hour | 258 | 25.7 (3.76) | 2008–13 |
| Hefei – Bengbu (Anhui) | 131 | 10.2 (1.49) | 2009– |
| Shanghai – Nantong (Jiangsu) | 114 | 21.93 (3.09) | 2009– |
| Nanchang – Jiujiang (Lushan; north of Jiangxi), passenger, parallel to line Beijing – Kowloon | 131 (97) | 6 (0.76) | 2006–09 |
| Hengyang (south-east of Hunan) – Chaling (south-east of Hunan) – Jinggangshan (west of Jiangxi) – Ji'an (west of Jiangxi) | 211 | ... | 2008–12 |
| Wenzhou (Zhejiang) – Fuzhou (Fujian), 200 km per hour, with 53 tunnels | 298 | 17.48 (2.5) | 2004–06.2009 |
| Longyan – Xiamen (Fujian) | 171 | 6.48 (0.831) | 12.2006– |
| Xiangtang (south of Nanchang, Jiangxi) – Putian (south-east of Fujian) with branches to Fuzhou (Fujian) and Yongtai (north of Putian, Fujian) – Putian (Fujian) | 604 | 51.8 (7.62) | 2008–12 |
| Xiamen (Fujian) – Shantou (Guangdong) – Shenzhen (Guangdong) | 502 | 41.7 (5.7) | 2007–11 |
| Shaoguan (north of Guangdong) – Ganzhou (south of Jiangxi) | 194 | 6.18 (0.90) | 2009–12 |
| Airport Shenzhen – Airport Hong Kong | ... | ... | 2009–11 |
| Lines in the delta of River Zhujiang (Guangdong), i.e. | 400.3 | 37.65 | 18.12.2005–09 |
| – Guangzhou – Shenzhen – Hong Kong, passenger | ... | ... | 18.12.2005–09 |
| – Guangzhou – Zhuhai | ... | ... | 18.12.2005–09 |

| Railway lines (provinces), notes | Length, km | Investment volume, billion yuan (billion USD) | Dates of starting construction works and its expected completion |
|---|------------|---|--|
| - Cenxi (south-east of Guangxi, near the border of Guangdong) - Maoming (section of the line Luoyang - Zhanjiang) | ... | ... | 18.12.2005-09 |
| Haikou - Qionghai - Wanning - Lingshui - Sanya (eastern part of Hainan circular line), passenger, 200 km per hour | 308 | 19.2 (2.5) | 2007-11 |
| Guiyang (Guizhou) - Guilin (Guangxi) - Hezhou (Guangxi) - Guangzhou (Guangdong), 200 km per hour | 857 | 85.8 (12.53) | 2008-12 |
| Luoding (west of Guangdong) - Cenxi (south-east of Guangxi), building by private company | 76 | 1.47 (0.184) | 2006-09 |
| Yongzhou (south of Hunan) - Yudin (south-east of Guangxi), section of trunk line Luoyang - Zhanjiang | 180 | ... | 10.2005- |
| Dali - Baoshan (west of Yunnan) - Ruili (border point with Myanmar) | 350 (328) | 14.7 (1.90) | 2007-10 |
| Lijiang (north of Yunnan) - Shangri-La (north-western point of Yunnan near the Tibet border) | 139 | 9.2 | 2009- |
| Yuxi (south of Kunming, Yunnan) - Mengzi (south of Yunnan) | 142 | ... | 2006- |
| Yuxi (Yunnan) - Mojiang - Simao - Mengla - Mohan (border of Laos) | 599 | ... | Project (2006) |
| district Fuling (east of Chongqing) - Lichuan (south-west of Hubei), 200 km per hour, section of future high-speed railway Shanghai - Wuhan - Chengdu | 264 | 27.07 (3.98) | 2008-13 |
| Yichang (west of Hubei) - Wanzhou (north-east of Chongqing municipality), velocity 160 km per hour | 380 | ... | 1.12.2003-2009 |
| Chengdu - Dujiangyan (centre of Sichuan, west of Chengdu), 200 km per hour | 66 | 13.3 (1.95) | 2008-10 |
| Lanzhou (Gansu) - Chongqing, 160 km per hour | 820 | 77.4 (11.3) | 2008-14 |
| Chengdu (Sichuan) - Jiuzhaigou (north of Sichuan) - Min Shan mountains - Hezuo - Lanzhou (Gansu), including the section: | 731 | 62 (9.1) | 2009-14 |
| -Lanzhou (Gansu) - Hezuo (Gannan-Tibet autonomous district of Gansu) | 174 | 8.75 (1.3) | 2009- |
| Lanzhou (Gansu) - Urumqi (Xinjiang), passenger, parallel to line LanXin | 1892 | 120 (17.57) | 2009- |
| Golmud (Qinghai) - Ruoqiang (Qarkilik) - Korla (Xinjiang) | ... | ... | Under draft |
| Kuytun - Karamay - Beitun (Altay district, north of Xinjiang) | ... | ... | 2007- |
| Urumqi - Junggar (north of Xinjiang), to coal fields in east part of Junggar Pendi | 393 | ... | 2007- |

| Railway lines (provinces), notes | Length, km | Investment volume, billion yuan (billion USD) | Dates of starting construction works and its expected completion |
|--|------------|---|--|
| Kashgar (Kashi) – Hotan (west – south-west of Xinjiang) | 487 | 4.64 (0.676) | 2008–11 |
| Jinghe (west of Xinjiang) – Yining (Gulja) – Horgos (border of Kazakhstan), North Xinjiang Railway | 286 (296) | 6.2 (0.747) | 22.11.2004 –12.2009 |
| Golmud (Qinghai) – Aksay – Dunhuang (Gansu) | 530 | ... | 2010– |
| Lhasa – Xigaze (south of Tibet, west of Lhasa) | 254 | ... | 2010– |
| Lhasa – Nyingchi (south-east of Tibet, east of Lhasa) | ... | ... | 2010– |

Sources: <http://english.peopledaily.com.cn/> and <http://russian.people.com.cn/> for 2001–2009.

The lines under construction or under planning could be divided by spatial and socio-economic functions into the following types:

- **meridional trunk lines:** Lanzhou – Chongqing (through territory of provinces Gansu, Shaanxi, Sichuan) and Lanzhou – Chengdu (via Gansu and Sichuan provinces), Luoyang – Zhanjiang (via Henan, Hubei, Hunan, Guangxi, Guangdong), Beijing – Hefei – Fuzhou;
- **latitudinal trunk lines:** Nanjing – Anqing – Wuhan – Yichang – Wanzhou – Chongqing (along Chang Jiang), Nanjing – Hefei – Xinyang – Xi'an (completed), Shanghai – Wuhan – Lichuan – Chongqing – Chengdu (high-speed one);
- **tangential lines along land borders and coastlines:** Suifenhe – Dongning – Hunchun – Tumen – Helong – Baihe – Tonghua (with a branch to Benxi) – Dandong – Zhuanghe – Dalian in Manchuria along Russian and North Korean borders; Wenzhou – Fuzhou for opening-up the East China Sea coast (Zhejiang and Fujian provinces); Fuzhou – Xiamen and Xiamen – Shantou – Shenzhen along maritime coast between Fujian and Guangdong provinces;
- **interprovincial lines:** Tonghua – Guanshui (between Jilin and Heilongjiang provinces), Taiyuan – Zhongwei – Yinchuan (Shanxi – Ningxia), Baotou – Xi'an (Inner Mongolia – Shaanxi), Nanjing – Anqing (along Chang Jiang, between Jiangsu and Anhui), Hangzhou – Huangshan (between Zhejiang and Anhui), Henyang – Chaling – Ji'an (Hunan – Jiangxi), Xiangtang – Putian (Jiangxi – Fujian), Guangzhou – Guiyang (Guangdong – Guizhou), Guangzhou – Nanning (560 km, between Guangdong and Guangxi), Luoding – Cenxi (Guangdong – Guangxi), Wanzhou – Yichang (Chongqing – Hubei), Golmud – Chengdu (Qinghai – Sichuan), Zhonggar – Shuozhou (Inner Mongolia – Shanxi), Linhe – Qekou (Inner Mongol) –

Hami (Inner Mongolia – Gansu – Xinjiang; 1390 km), Golmud – Korla (Qinghai – Xinjiang), Xining – Zhangye (Qinghai – Gansu);

- **inner-provincial lines:** in Heilongjiang (Qianjin – Fuyuan), Jilin (Jingyu – Songjianghe in south, Helong – Nanping, Shijiazhuang – Yangtungshan, Changchun – Changbaishan, Changchun – Jilin), Liaoning (Qianyang – Zhuanghe; 165 km), in Inner Mongolia (5,300 km under construction, including Linhe – Qekou, Zhangjiakou – Jin’ing), Shanxi (Shijiazhuang – Taiyuan, Datong – Yuanping), in north and south of Shandong province (Dongying – Weifang – Denzhou – Yantai – Weihai, 588 km; Longkou – Yantai, Linqu – Yishui – Dalailong, Pingshang – Lanshan, Zaozhuang – Linyi), in Anhui (Hefei – Bengbu; 131 km; a section of future high-speed line Beijing – Fuzhou; Huangshan – Jinhua, 58 km), Jiangsu (5 lines with length of 1600 km, including Shanghai – Nantong), Zhejiang (Ningbo – Taizhou – Wenzhou), Jiangxi (Nanchang – Jiujiang, 131 km; opened in 2009), Fujian (Fuzhou – Xiamen, Longyan – Xiamen), Guangdong (Guangzhou – Dongguan – Shenzhen, Guangzhou – Zhuhai, Guangzhou – Foshan, Dongguan – Huizhou, Guangzhou – Huadu – Qingyuan (N of Guangzhou), Zhongshan (S of Guangzhou in Zhujiang Delta) – Nansha – Humen with a bridge over Zhujiang River at its mouth), Guangxi (Tiandong – Debao near Vietnam border, 73 km), Hainan (Haikou – Qionghai – Sanya; eastern semicircle of island), Yunnan (Dali – Baoshan – Ruili, Dali – Lijiang with future extension to Shangri-La, Yuxi – Hekou, Yuxi – Mohan at Laos border), Sichuan (Chengdu – Dujiangyan, Mianyang – Chengdu – Leshan, Chengdu – Suining – Daizhou, Suining – Chongqing), Xinjiang (Kashgar – Hotan, Kuytun – Karamay – Beitun, Urumqi – Junggar);
- **from inner areas to sea ports** for export of raw materials: from central and southern parts of Shanxi province to port Rizhao (1200km; coal export through the areas of provinces Shanxi, Hebei, Henan, Shandong), from Jiangxi province to the ports of Fujian province (line Xiangtang near Nanchang to Putian and Fuzhou);
- **for opening-up the deposits of mineral resources:** Urumqi – Junggar (coal deposits in the north of Xinjiang), Wanshuiquan (near Baotou) – Bayannur – Ganq Moadao (coal and copper deposits in north-west of Inner Mongolia), Kuytun – Karamay – Beitun (iron and copper ores, oil deposits in north of Xinjiang);
- **coal corridors:** Baotou – Xi’an, Taiyuan – Zhongwei, Zhungar (south of Inner Mongolia) – Shuo Zhou (north of Shanxi), Ordos (south of Inner Mongolia) – Caofeidian (island in Bo Hai near Tangshan, Hebei; to move 200 million tones of coal every year).

To open-up the remote areas and connection it to high developed areas:

there are plans to build the lines in 2009-2015 from undeveloped areas to the core areas between provinces Sichuan and Qinghai (Chengdu – Golmud), Sichuan and Tibet (Chengdu – Ya’an – Kanding – Litang – Bomi – Nyingchi –

Lhasa, 1629 km; construction of the first section from Chengdu started in September 2009), Xinjiang and Qinghai (Korla – Golmud), Gansu and Qinghai (Golmud – Dunhuang; 530 km; Zhangye – Xining); inside Tibet Autonomous Region (Lhasa – Xigaze, 254 km by 2010 with further extension to Yadong near Sikkim border in India; Lhasa – Lhinjinze to south-east; Lhasa – Nyingchi to the east).

To **arrange constant land connection**: there is a plan to build the bridge over Straits Qiongzhou in 2012-2020 to connect mainland railway system with railway network of island Hainan (south of China).

Transborder lines. Set of new lines under construction or under planning will connect the Chinese border lands to adjacent countries: North-Xinjiang railway (Jinghe – Yining – Horgos) will be extended through Saryozek to Almaty (Kazakhstan; construction of 293 km Kazakhstan section Zhetygen – Horgos started in August 2009); line Fuxin (west of Liaoning) – Bayan Ula (Inner Mongolia) first of all will be extended more 230 km to Zhuengadabuqi (border point with Mongolia), and later – to Choybalsan (east of Mongolia) and Borzya (south of Chita, Russia); line Wanshuiquan (near Baotou, Inner Mongolia) – Bayannur – Ganq Moadao (Mongolia crossborder point) will be extended to Mongolia to export from there the coal and copper ore to China.

There are plans to start the construction of new transborder lines to Myanmar and Bangladesh (line Dali – Ruili will be extended inside this country up to sea port Chittagong in Bangladesh; part of future 3rd Eurasian railway magistral which connects ports of Guangdong province with ports of Western Asia and Eastern Europe), to Kyrgyzstan and Uzbekistan (Kashgar – Torugart (Kyrgyzstan border point) – Naryn – Andizhan), to Nepal (Xigatze – Hasha; 2013; 400 km), to Laos (Batdeng – Lokning, eastern section of future Trans-Asian railway). The project to arrange the railway container ferry between China (Shandong) and South Korea through Yellow Sea was proposed in 2006 with the route Weihai – Pyongtaek.

Renovation of overloaded railway trunk lines. Many overloaded trunk railways (see Table 4) were electrified and its tracks were doubled in 1990–2000-ties (details see Tarkhov, 2003a and 2003b). Nevertheless China has a lot of single track lines and non-electrified railways, including trunk ones. This is why the electrification and doubling tracks are under way now in many areas of the country.

Table 4. Main directions of freight flows by Chinese railways in 2002-2007 (000 tones in both directions together).

| Line | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---------|---------|---------|---------|---------|------------------------|
| Datong – Taiyuan – Fenglingdu (southern branch) | 111.680 | 123.890 | 142.890 | 164.810 | 194.250 | 155.830 + 62.850 |
| Taiyuan – Jiaozuo – Liuzhou | 82.060 | 82.800 | 89.550 | 86.370 | 94.690 | 58.780 + 40.000 |
| Shanghai – Kunming | ... | ... | ... | ... | ... | 89.600 |
| Lianyungang – Lanzhou (Longhai Railway) | 63.570 | 66.770 | 69.400 | 72.120 | 74.740 | 73.800 |
| Beijing – Harbin | ... | ... | 82.740 | ... | ... | 15.260 |
| Beijing – Guangzhou | 71.870 | 69.980 | 72.640 | 67.890 | 67.840 | 70.120 |
| Baotou – Lanzhou | 38.170 | 42.780 | 52.530 | 50.100 | 60.240 | 68.600 |
| Tianjin – Shanghai (since 2007 from Beijing) | 53.040 | 53.960 | 54.950 | 54.050 | 55.040 | 57.000 |
| Harbin – Manzhouli | 31.370 | 34.640 | 39.800 | 46.850 | 54.390 | 36.420 |
| Shijiazhuang – Taiyuan | 37.600 | 39.740 | 44.570 | 51.200 | 53.660 | 57.650 |
| Lanzhou – Urumqi | 33.660 | 35.580 | 35.700 | 42.310 | 46.960 | 27.150 |
| Beijing – Kowloon | 26.440 | 32.650 | 38.820 | 39.510 | 39.290 | 37.780 |
| Harbin – Dalian | 32.330 | 32.630 | 37.050 | 37.100 | 38.540 | ... |
| Bingjing – Baotou | 58.810 | 58.590 | 48.650 | 31.190 | 37.150 | 45.140 |
| Shijiazhuang – Xinjiang | ... | ... | ... | 37.600 | 36.970 | ... |
| Xinjiang – Rizhao | 27.280 | 29.550 | 31.530 | ... | 36.970 | 40.910 |
| Hangzhou – Ganzhou | 24.640 | 26.730 | 33.060 | 32.110 | 35.550 | ... |
| Chengdu – Kunming | 19.030 | 19.810 | 22.590 | 23.690 | 25.890 | 28.000 |
| Zhuzhou – Guiyang | 19.930 | 21.670 | 22.600 | 22.940 | 25.510 | ... |
| Guiyang – Kunming | 17.770 | 20.720 | 22.080 | 21.690 | 24.590 | ... |
| Harbin – Suifenhe | 11.780 | 12.450 | 13.640 | 16.460 | 16.850 | 9.630 |
| Beijing – Shenyang | 34.380 | 31.810 | 18.870 | 17.280 | 16.610 | ... |
| Qingdao – Jinan | 37.620 | 18.900 | 20.390 | 18.190 | 15.690 | 16.560 |
| Baoji – Chengdu | 9.880 | 12.540 | 13.580 | 12.240 | 11.820 | 10.050 |
| Nanning – Kunming | ... | ... | ... | ... | ... | 15.730 |
| Datong – Qinhuangdao | 4.160 | 3.470 | 6.070 | 8.810 | 10.070 | 19.480 |
| Qinghai – Tibet Railway | 7.070 | 7.640 | 9.420 | 8.340 | 8.710 | 12.860 |
| Shijiazhuang – Dezhou | 3.790 | 3.730 | 4.080 | 6.020 | 6.680 | 5.520 |
| Beijing – Qinhuangdao | 4.400 | 3.520 | 5.840 | 4.160 | 4.310 | ... |
| Shanghai – Hangzhou | 2.020 | 2.090 | 2.550 | 2.170 | 1.800 | ... |

Sources: <http://www.stats.gov.cn/tjsj/ndsj/2008/indexeh.htm>
<http://www.stats.gov.cn/tjsj/ndsj/2005/indexeh.htm>

The lines Xiangfan (north-west of Hubei) – Chongqing, Dazhou – Chengdu (Sichuan), Guiyang (Guizhou) – Liuzhou (Guangxi; the way was shortened from 608 km to 489 km) were modernized in 2005-2008. Line Qingdao – Zibo – Jinan (360 km; Shandong) was completely renovated in 2008 and is used now as passenger line, but freight trains go through a new section laid in the northern part of this province. The railway Baoji (west of

Shaanxi) – Chengdu (capital of Sichuan), crashed in a strong earthquake, in May 2008 was restored and renovated in 2009. The penetration line from Vietnam (Hanoi – Laokai – Hekou – Kunming) will be renovated by 2015 (planned investment of 12.8 billion yuan).

Construction of second tracks. 2808 km of new second tracks were laid in 2003–2007, and 1935 km more in 2008. The second track was laid in the section of Zabaykal'sk (Russia, south of Chita) – Manzhouli (China) and inaugurated on 1 November 2007. The construction of the second track at the section Urumqi – Jinghe (line Urumqi – Alashankou) and the section Turpan – Korla (line Turpan – Kashgar) started in 2007 (both in Xinjiang).

The construction of the second track is under way on the eastern section of Qinghai – Tibet railway. Its first section (Lanzhou – Xining, 170 km; investment 390 million USD) was laid in 2005–2009 and inaugurated in April 2009. The next section of 290 km of the line Xining – Golmud will be laid by 2012.

Laying of second tracks on line Xi'an – Hefei (957 km; investment of 37.2 billion yuan) started in 2009 and would be finished by 2012.

The railway Guangzhou – Shenzhen has 3 tracks now (1st track was laid in 1911, 2nd one – in 1989, 3rd – in 1994). The construction of 4th track started in 2005 and is under way now.

Railway electrification. The length of electrified network was 23.435 km at the end of 2006, 26.000 km (32.7% of all the network) at the end of 2008, and 27.000 km in May 2009. 6529 km were electrified in 2003–2007, another 1955 km – in 2008. The list of sections under electrification is presented in Table 5. 50% of all goods and near 50% of all passengers were carried by electric trains in China.

Table 5. Railway lines of China under electrification.
Ordered geographically: north-east, centre, east, south, north-west.

| Railway lines (provinces) | Length, km | Dates of starting (completion) of electrification works |
|--|------------|---|
| Datong (Shanxi) – Hulu (Ulan Qab) – Guchengwan (Baotou; Inner Mongolia) | 452 | September 2007 (May 2009) |
| Beijing – Xiangtang (south of Nanchang; Jiangxi) of line Beijing – Kowloon | 1480 | 2008– |
| Tianjin – Bazhou | 75 | 2008– |
| Taiyuan (Shanxi) – Shaanxi – Zhongwei – Yinchuan (Ningxia) | 944 | 2006– |
| Macheng – Wuhan (Hubei) | 81 | 2008– |
| Hengfeng (east of Jiangxi) – Nanping (Fujian) | 299 | November 2008 (2009) |
| Wenzhou (Zhejiang) – Fuzhou (Fujian) | 298 | December 2004 (July 2009) |
| Guiyang (Guizhou) – Guilin (Guangxi) – Guangzhou (Guangdong) | 857 | October 2008 (2012) |
| Chengdu – Dujiangyan (Suchuan) | 66 | November 2008 (2010) |
| Lanzhou (Gansu) – Chongqing | 820 | 2008–14 |
| Lanzhou (Gansu) – Xining (Qinghai) | 170 | 2006 (April 2009) |

| Railway lines (provinces) | Length, km | Dates of starting (completion) of electrification works |
|--|------------|---|
| Jiayuguan (Gansu) – Alashankou (Xinjiang) | ... | 2008 |
| Jinghe – Yining – Horgos (Kazakhstan border) | 286 | November 2004 (2009) |

Sources: <http://english.peopledaily.com.cn/> and <http://russian.people.com.cn/> for 2001-2009

The plan of railway network extension published in November 2008 assumes that the electrified network must reach 60% of all the national railway network by 2020.

High-speed passenger railways. The Chinese government started the construction of the network of high-speed passenger railways between large centres of opened-up areas of the country due to the fact that the existing old railways do not cope with rapidly growing passenger traffic and terribly overloaded by freight trains. The list of these lines is given in Tables 7 and 8. These new lines must relieve the main lines traditionally overloaded by passengers (see the list the most overloaded passenger lines in Table 6). The main target of these high – speed railways is the drastic reduction of the journey time between the main cities of the country.

Table 6. Main directions of passenger traffic in Chinese railways in 2004-2007 (000 passengers in both directions together).

| Line | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---------|---------|---------|---------|---------|---------|
| Beijing – Guangzhou | 108.690 | 115.100 | 128.140 | 126.340 | 131.230 | 132.740 |
| Beijing – Shanghai | 92.600 | 89.460 | 105.620 | 108.920 | 127.860 | 131.100 |
| Beijing – Harbin | 85.140 | 75.610 | ... | 84.650 | 78.300 | 56.270 |
| Lianyungang – Lanzhou (Longhai Railway) | 47.590 | 45.070 | 53.650 | 61.220 | 67.950 | 72.010 |
| Shanghai – Hangzhou, Hangzhou – Ganzhou – (Kunming; since 2007) | 54.960 | 52.220 | 60.710 | 61.180 | 60.430 | 76.480 |
| Beijing – Kowloon | 37.850 | 37.170 | 43.800 | 46.610 | 52.860 | 60.030 |
| Baoji – Chengdu, Chengdu – Chongqing | 20.740 | 20.370 | 23.610 | 24.490 | 27.840 | 24.760 |
| Xiangfan – Chongqing | 15.860 | 15.830 | 18.170 | 18.710 | 19.500 | 19.070 |
| Bingjing – Baotou | 15.750 | 14.040 | 16.040 | 16.350 | 18.740 | 18.540 |
| Zhuzhou – Guiyang | 14.690 | 13.170 | 14.800 | 15.790 | 16.790 | ... |
| Chengdu – Kunming | 12.030 | 11.590 | 13.940 | 14.460 | 15.550 | 15.860 |
| Jiaozuo – Liuzhou | 18.000 | 16.010 | 17.410 | 14.920 | 14.280 | 14.390 |
| Lanzhou – Urumqi | 10.550 | 9.580 | 11.050 | 11.850 | 13.220 | 14.660 |
| Beijing – Qinhuangdao | 7.500 | 6.610 | 11.200 | 11.760 | 12.820 | ... |
| Guiyang – Kunming | 9.770 | 9.780 | 10.780 | 11.150 | 11.990 | ... |
| Datong – Fenglingdu (Beijing; southern branch) | ... | ... | ... | 12.640 | 11.970 | ... |
| Yingtan – Xiamen | 6.540 | 6.440 | 7.140 | 6.960 | 7.580 | 8.090 |
| Baotou – Lanzhou | 6.550 | 6.140 | 5.460 | 5.590 | 6.520 | 7.320 |
| Datong – Fenglingdu (Beijing; northern branch) | ... | ... | ... | 5.630 | 6.510 | ... |
| Shijiazhuang – Dezhou | 4.910 | 4.530 | 5.560 | 5.710 | 6.220 | 6.290 |
| Shijiazhuang – Taiyuan | 8.140 | 6.980 | 8.750 | 5.770 | 5.940 | 6.470 |

| Line | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|------------------------------------|--------|--------|--------|--------|--------|--------|
| Xinjiang (Shijiazhuang) – Rizhao | 2.880 | 2.840 | 3.950 | 4.530 | 5.380 | 5.340 |
| Fenglingdu – Taiyuan | 12.450 | 11.660 | 14.070 | 12.640 | 11.970 | 13.900 |
| Taiyuan – Datong | 5.410 | 4.890 | 5.330 | 5.630 | 6.510 | 7.850 |
| Nanning – Kunming | 3.870 | 4.080 | 4.760 | 3.010 | 2.860 | 4.630 |
| Lanzhou – Qinghai, Qinghai – Tibet | 4.130 | 3.930 | 3.750 | 3.550 | 3.830 | 5.520 |

Sources: <http://www.stats.gov.cn/tjsj/ndsj/2008/indexeh.htm>

<http://www.stats.gov.cn/tjsj/ndsj/2005/indexeh.htm>

The first project of high-speed railway network for China was proposed in the middle of 1990-ties. It assumed the construction of three meridional (Beijing – Shenyang – Harbin, Beijing – Shanghai, Beijing – Zhengzhou – Wuhan – Changsha – Guangzhou) and one latitudinal (Haizhou – Zhengzhou – Xi'an – Lanzhou) lines.

The new plan of pre-high-speed railways with common length 3,000 km was adopted in January 2004, including lines Beijing – Tianjin, Wuhan – Guangzhou, Zhengzhou – Xi'an, Hefei – Nanjing. Later they decided (besides this plan) to connect all cities with population more than 500,000 inhabitants by high-speed passenger railways. Such a network would serve 90% of all the nation population. First of all these railways must connect the largest nodes of Northern, Central and Eastern China.

The construction of high-speed railways started from the first one in the north-east. This first line Qinhuangdao – Shenyang (405 km; velocity of passenger trains 200–250 km per hour) was built in 1999–2002 and opened to traffic on 12 October 2003. It goes parallel to the main trunk line overloaded by freight trains.

The second such railway Beijing – Tianjin (113 km) was built in 2005–2007 for service of the guests of Beijing Olympics-2008. The trains started its operation on 1 August 2008. The journey time there takes 30 minutes. These high-speed trains make 60 trips per day (with maximum speed up to 350 km per hour), transporting 51,000 passengers per day (they carried 1,831,000 passengers during August 2008).

Two more high-speed passenger railways were put in operation on 1 April 2009: Wuhan – Hefei (250 km per hour; the journey time 1 hour 50 minutes instead of 7.5 hours before) and Taiyuan – Shijiazhuang (250 km per hour; the journey time reduced from former 5 hours to 1 hour).

200 high-speed trains (CRH) were in operation in May 2009. The first delivery of 60 sets (each set consists of 8 cars) was produced in Germany by Siemens license in 2005–2008 and assembled on the locomotive works in Tangshan (Hebei). This plant started the production of new remodelled trains.

16 new high-speed passenger railways are under construction now (see Table 7). **High-speed line Beijing – Shanghai (Jinghu)** is the first project

1318 km). It will follow parallel the old line Beijing – Tianjin – Jinan – Xiuzhou – Bengbu – Nanjing – Shanghai with some deviations. Its construction started in April 2008. Its trains will have the velocity of up to 350-380 km per hour (at the first phase – 300 km per hour). The journey time between both cities would be reduced from 12 hours to 5 hours.

21 stations, the bridges with total length of 1059 km will be built here. 1203 km of rails (91% of tracks) were laid by the end of 2008; the bridges (especially over the Huaihe and the Yangtze) have not been built yet. The grounds along the route have been bought. 50 billion yuan for this construction were spent in 2008. 113,000 workers from 700 construction firms were engaged in this project in November 2008. They work on round the clock basis, and every-day they use 10,000 tones of steel, 3,5 tones of cement, 110,000 tones of concrete. 600,000 workers were here in the spring 2009. They hope to complete all tunnels of this railway by the end of 2009.

The vast network of high-speed railways is foreseen to be created by the program of network extension by 2012. They are distinguished by velocity into two types: 1) high-speed ones (operation of trains with velocity 250-350 km per hour); 2) rapid ones (200-250 km per hour). This network will consist of 4 meridional (Harbin – Shenyang – Dalian, Beijing – Wuhan – Guangzhou, Beijing – Nanchang – Hong Kong, Beijing – Tianjin – Nanjing – Shanghai) and 3 latitudinal trunk lines (Beijing – Tianjin – Qinhuangdao – Shenyang, parallel to Longhai railway, along the Yangtze River). Lines and branches between adjacent big cities (see Table 7) will be built in addition. The final target of this program is creation of the integrated network of rapid passenger railways which must connect all cities with a population more than 500,000 inhabitants (first of all Beijing, Shanghai, Guangzhou, Wuhan, Xi'an, Chengdu). This network must cover the areas where 90% of population of China lives. The journey time between the largest cities will be reduced twice.

The lines Beijing – Shijiazhuang (270 km), Shijiazhuang – Zhengzhou – Wuchan (Wuhan; 841 km), Wuhan – Guangzhou (968 km), Zhengzhou – Xi'an (485 km), Nanjing – Shanghai (300 km), Hefei – Nanjing (166 km), Nanning – Guangzhou (560 km), Tianjin – Qinhuangdao (261 km), Harbin – Dalian (904 km) are under construction now.

The project of high-speed line Shanghai – Hangzhou with Maglev technology (operation of trains with magnetic levitation and velocity of 450 km per hour; length 175 km; investment 4.5 billion USD) planned before was rejected at the beginning of 2009. The construction of usual rapid railway started on this route on 26 February 2009. The high-speed trains will cover the distance of 160 km in 38 minutes instead of 78 minutes as before and will depart each 3 hours. The Ministry of Chinese Railways, administrations of Shanghai municipality and Zhejiang province, metallurgical works Baoshan are contributing all the construction costs of this line.

Table 7. High-speed passenger railways of China in operation and under construction. Ordered geographically: north-east, centre, east, south, north-west.

| Line (provinces) | Length, km | Volume of investment, billion yuan (billion USD) | Maximal velocity of trains, km per hour | Dates of start and completion of construction works |
|---|------------|--|---|---|
| Qinhuangdao (Hebei) – Shenyang (Liaoning) | 405 | 15.7 (1.9) | 160/200–250 | 1999–2003 |
| Beijing – Tianjin | 115 | 12.34 (1.49) | 300–350 | 2005–2008 |
| Shijiazhuang (Hebei) – Taiyuan (Shanxi) | 190 | 12.64 (1.8) | 250 | 2005–09 |
| Hefei (Anhui) – Wuhan (Hubei) | 351 | 16.8 (2.26) | 250 | 2005–09 |
| Harbin (Heilongjiang) – Shenyang – Dalian (Liaoning) | 904 | 92.3 (12.3) | 200–350 | 2007–13 |
| Beijing – Tangshan (Hebei) | ... | ... | 350 | 2009– |
| Tianjin – Qinhuangdao (Hebei) through Tangshan, Qian'an, Beidaihe | 261 | 33.8 (4.97) | 350 | 2008– |
| Tianjin – Tanggu (area Binhai in port zone of Tianjin), extension of line Beijing – Tianjin | 39 | ... | 300–350 | 2009– |
| Baoding (Hebei) – Tianjin | 145 | 24 (3.52) | 250 | 2009– |
| Beijing – Zhangjiakou (Hebei) | 160 | 30 (4.39) | 300 | 2009– |
| Beijing – Tianjin – Jinan – Nanjing – Shanghai | 1318 | 220.94 (31.6) | 300–350 | 2008–12 |
| Beijing – Wuhan – Guangzhou – Hong Kong, including sections: | 2240 | 4.000 | 350 | 2009–12 |
| –Beijing – Shijiazhuang (Hebei) | 270 (281) | 43.87 (6.4) | 300–350 | 2008– |
| –Shijiazhuang (Hebei) – Zhengzhou (Henan) – Wuchang (Wuhan; Hubei) via Xingtai, Handan, Anyang, Hebi, Xinxiang, Zhengzhou, Xuchang, Luohe, Zhumadian, Xinyang | 841 (876) | 116.76 (17.1) | 350 | 2008–13 |
| –Wuhan (Hubei) – Changsha (Hunan) – Guangzhou (Guangdong) | 968 | 116.6 (17) | 200 | 2005–10 |
| –Guangzhou – Dongguan – airport Shenzhen (Guangdong) | 87 | 19.69 (39.5 billion Hong Kong dollars) | 200 | 2008–11 |
| –Shenzhen (Guangdong) – Xianggang (Hong Kong) | 26 | ... | 200 | 2010–14 |
| Zhengzhou (Henan) – Xi'an (Shaanxi) | 485 | 70.3 (10.3) | 350 | 2005–09 |
| Hefei (Anhui) – Nanjing (Jiangsu) | 166 (154) | ... | 200–250 | 2005–10 |
| Shanghai – Kunshan – Suzhou – Wuxi – Changzhou – Danyang – Zhenjiang – Nanjing (Jiangsu) | 295 | ... | 200–260 | 2008–11 |

| Line (provinces) | Length, km | Volume of investment, billion yuan (billion USD) | Maximal velocity of trains, km per hour | Dates of start and completion of construction works |
|---|------------|--|---|---|
| Nanjing (Jiangsu) – Hangzhou (Zhejiang) | 249 | 31.38 (4.59) | 350 | 2008–11 |
| Shanghai – Hangzhou (Zhejiang) | 159 | 29.68 (4.37) | 350 | 2009–11 |
| Hangzhou – Ningbo (Zhejiang) | 150 | 21.39 (3.13) | 250 | 2008–12 |
| Ningbo – Taizhou – Wenzhou (Zhejiang) | 282 | ... | 200–250 | 2005–09 |
| Fuzhou – Xiamen (Fujian) | 275 | ... | ... | 2005–09 |
| Nanning (Guangxi) – Guangzhou (Guangdong) | 577 | 41 (6.0) | 200 | 2008–12 |

Sources: <http://english.peopledaily.com.cn/> and <http://russian.people.com.cn/> for 2001–2009.

The total length of all high-speed passenger railways in China (with train velocity of 200 km per hour and more) will make up 7,000 km by 2010, 13,000 km by 2012 (including 8,000 km with velocity 200–350 km per hour and 5,000 km with velocity 200–250 km per hour), and 18,000 km by 2020. New high-speed railways (300 km per hour) Beijing – Harbin, Beijing – Fuzhou, Shanghai – Nanjing – Hefei – Wuhan – Chongqing – Chengdu, Lanzhou – Xi'an – Zhengzhou – Xuzhou (parallel to Longhai railway), Lanzhou – Urumqi will be built by 2020. This network would be extended up to 50,000 km at a later date. It lets accelerate passenger communication considerably and to reduce the journey time (see Table 8), to increase the network capacity, to dissolve the problem of overloading of the main railway nodes of China in the seasons of mass movements of people (Chinese Spring Festival, May 1 and October 1).

Table 8. Reduction of journey time between largest cities of China after building of high-speed passenger railways and some traditional railways. Ordered by dates of opening (indicated in **bold characters**) and then geographically, like in Table 7.

| Railway (provinces) | Length, km | Journey time between end points of old line, hours and minutes | Journey time between end points of high-speed railway, hours and minutes | Time saving, hours and minutes | Data of construction starting | Data of inauguration |
|--|------------|--|--|--------------------------------|-------------------------------|----------------------|
| Qinhuangdao (Hebei) – Shenyang (Liaoning) | 404,64 | ... | ... | ... | .08.1999 | 12.10.2003 |
| Beijing – Tianjin | 115 | 1.10 | 0.30 | 0.40 | 4.07.2005 | 1.08.2008 |
| Shijiazhuang (Hebei) – Taiyuan (Shanxi) | 189,2 | 5.00 | 1.00 | 4.00 | 12.06.2005 | 1.04.2009 |

| Railway (provinces) | Length, km | Journey time between end points of old line, hours and minutes | Journey time between end points of high-speed railway, hours and minutes | Time saving, hours and minutes | Data of construction starting | Data of inauguration |
|---|------------|--|--|--------------------------------|-------------------------------|----------------------|
| Hefei (Anhui) – Wuhan (Hubei) | 351 | 7.35 | 1.55 | 5.40 | 8.11.2005 | 1.04.2009 |
| Shanghai – Wenzhou (Zhejiang) – Fuzhou (Fujian) | ... | 14.25 | 5.00 | 9.25 | 12.2004 | 30.06.2009 |
| Fuzhou – Xiamen (Fujian) | 275 | ... | ... | ... | 2005 | 20.07.2009 |
| Zhengzhou (Henan) – Xi'an (Shaanxi) | 485 | 6.00 | 2.00 | 4.00 | 25.09.2005 | 28.12.2009 |
| Ningbo – Taizhou – Wenzhou (Zhejiang) | 282 | ... | ... | ... | 2005 | 2009 |
| Harbin (Heilongjiang) – Shenyang – Dalian (Liaoning) | 904 | ... | ... | ... | 23.08.2007 | 02.2013 |
| Beijing – Tangshan (Hebei) | ... | ... | 0.30 | ... | 1.10.2009 | ... |
| Tianjin – Qinhuangdao (Hebei) | 261 | ... | ... | ... | 8.11.2008 | ... |
| Baoding (Hebei) – Tianjin | 145 | ... | ... | ... | 2009 | ... |
| Beijing – Zhangjiakou (Hebei) | 160 | 3.00 | 1.00 | 2.00 | 08.2009 | ... |
| Beijing – Tianjin – Jinan – Nanjing – Shanghai | 1318 | 12.00 | 5.00 | 7.00 | 18.04.2008 | 2012 |
| Beijing – Wuhan – Guangzhou – Hong Kong, including sections: | 2240 | ... | ... | ... | 2005 | 2013 |
| – Beijing – Shijiazhuang (Hebei) | 270 (281) | ... | 1.00 | ... | 10.2008 | 2013 |
| – Shijiazhuang (Hebei) – Zhengzhou (Henan) – Wuchang (Wuhan; Hubei) | 841 (876) | ... | ... | ... | 15.10.2008 | 2013 |
| – Wuhan (Hubei) – Changsha (Hunan) – Guangzhou (Guangdong) | 968 (995?) | 12.00 | 5.00 | 7.00 | 23.06.2005 | 2010 |
| – Guangzhou – Dongguan – airport Shenzhen (Guangdong) | 87 | ... | ... | ... | 21.12.2008 | End of 2011 |
| – Shenzhen (Guangdong) – Xianggang (Honkong) | 26 | ... | ... | ... | ... | ... |
| Hefei (Anhui) – Nanjing (Jiangsu) | 166 | 4.00 | 1.00 | 3.00 | 29.12.2004 | 2010 |
| Shanghai – Kunshan – Suzhou – Wuxi – | 295 | ... | 1.10 | ... | 2008 | 2011 |

| Railway (provinces) | Length, km | Journey time between end points of old line, hours and minutes | Journey time between end points of high-speed railway, hours and minutes | Time saving, hours and minutes | Data of construction starting | Data of inauguration |
|--|------------|--|--|--------------------------------|-------------------------------|----------------------|
| Changzhou – Danyang – Zhenjiang – Nanjing (Jiangsu) | | | | | | |
| Nanjing (Jiangsu) – Hangzhou (Zhejiang) | 249 | 4.00 | 1.00 | 3.00 | 2008 | 2011 |
| Shanghai – Hangzhou (Zhejiang) | 159 | 1.18 | 0.38 | 0.40 | 26.02.2009 | End of 2011 |
| Hangzhou – Ningbo (Zhejiang) | 150 | ... | ... | ... | 2008 | 2012 |
| Nanning (Guangxi) – Guangzhou (Guangdong) | 577 | 12.30 | 3.30 | 9.00 | 9.11.2008 | 2012 |
| Guiyang (Guizhou) – Guilin (Guangxi) – Guangzhou (Guangdong) | 857 | 20.00 | 6.00 | 14.00 | 13.10.2008 | 2012 |
| Lanzhou (Gansu) – Chongqing | 820 | 22.00 | 6.30 | 15.30 | 26.09.2008 | 2014 |
| Nanjing (Jiangsu) – Anqing (Anhui) | 258 | 5.30 | 1.30 | 4.00 | 18.12.2008 | 2013 |
| Chengdu (Sichuan) – Lanzhou (Gansu) | 731 | 17.00 | 4.00 | 13.00 | 22.02.2009 | .12.2014 |

Sources: <http://english.peopledaily.com.cn/> and <http://russian.people.com.cn/> for 2001–2009.

The high-speed passenger railways will let reduce the journey time for the moving people considerably economizing their personal time. So, these railways „shrink” the vast space of China, make its territorial structure more reliable and accessible for everybody.

Conclusions. The railway network of China will achieve 120,000 km by 2020 that is it will be increased 1.5 times in comparison to 2008. If all the mentioned projects are realized, the country will have a completely different network not only concerning the absolute size (length), but also concerning the level of spatial complexity (circuit number, number of topological tiers in the circuitual framework) and quality (network of double-tracking electrified universal magistral, network of usual single-track lines, network of high-speed passenger railways).

Different trunk lines framework will appear. Spatial structure of network will be sophisticated, which will improve its quality and increase its structural reliability (in cases of rail disasters and accidents; natural disasters; strategic safety and topology), reduce the time of journey and delivery of goods. The velocity of communications will increase, so the connections between the large

cities will be improved as well. The most freight-overloaded lines and sections will be loaded-off. The main freight overdense links between the provinces and regions will be shortened and bypass the most overloaded nodes. The unemployment problem will be dissolved partially.

The Chinese people are using the trains now more often than before the start of global economic crisis. The thing is that the level of its spatial mobility grew up due to the aggravation of this crisis. It has led to stagnation of growth rate of freight transportation from another side. The Chinese railways transported 3.3 billion tones of goods (increase rate 4.9% in comparison to 2007) and 1.46 billion passengers (increase rate 10.9% in comparison to 2007) in 2008. The growth of transportation volumes takes place in peripheral areas (north-east, north-west, south-west), but the fall of transportation volumes – in earlier rapidly developing southern and south-eastern coastal areas. The number of transported passengers in 2009 will increase by 10% by estimation of the Ministry of Chinese Railways and achieve 1.61 billion. This estimation has been proved by statistics of mass movements of Chinese people during the Spring Festival of 2009 (Chungyun): the trains transported 192 million passengers in January – February 2009 that is by 10.6% more than in the same period of 2008. The size of freight traffic will not increase due to the recession of the Chinese economy.

So, the global economic crisis stimulated the intensive large-scale railway construction in China, growth of passenger railway transportation and stagnation of freight railway traffic.

Literature

Atlas of China. – Beijing: Sinomaps Press, 2006. – 284p.

Tarkhov S. *Development of railway network in modern China*// Geopolitical Studies. Vol.11: Eastern dimension of European Union. – Warsaw, 2003 (a), p.587–609

Tarkhov S. *Growth of railway network in China during last 15 years (1988–2002)*// Promet – Traffic – Traffico (Trieste – Zagreb). 2003 (b), vol. 14, nr.3, p. 141–159

http://china.notspecial.org/blogimages/china_railwayfuturemap_large.jpg

<http://english.peopledaily.com.cn/>

<http://russian.people.com.cn/>

<http://www.stats.gov.cn/tjsj/ndsj/2008/indexeh.htm>

<http://www.stats.gov.cn/tjsj/ndsj/2005/indexeh.htm>

Streszczenie

CHIŃSKIE KOLEJE W WARUNKACH ŚWIATOWEGO KRYZYSU GOSPODARCZEGO

Światowy kryzys gospodarczy, który rozpoczął się w 2008 r. doprowadził do zmniejszenia wielkości eksportu Chin (o 26% w okresie między styczniem a lutym 2009 r. w porównaniu z tym samym okresem 2008 r.), a wiele przedsiębiorstw nastawionych na eksport, położonych głównie w nadmorskich prowincjach południowo-wschodnich i wschodnich Chin oraz największych centrach gospodarczych w innych częściach kraju zostało doprowadzonych do upadku. Bankructwo dotknęło 67 tysięcy małych i średnich firm w pierwszej połowie 2008 r. W wyniku tego zmniejszył się wolumen produkcyjny w powiązanych gałęziach gospodarki. Najbardziej ucierpiały zakłady przodujące w wysokiej technologii.

Zamknięcie wielu przedsiębiorstw i ograniczenie wielkości produkcji pozostałych doprowadziły do gwałtownego wzrostu bezrobocia wśród robotników. Już przed kryzysem liczba osób pozostających bez pracy była bardzo wysoka (9%, tj. 73 miliony). Lecz kryzys powiększył znacznie tę liczbę. Nieznana jest dokładna wielkość, lecz przybliżone szacunki mówią o 90-100 milionów. Znamy liczbę 210 milionów migrantów, którzy opuścili wieś i pracowali w miastach w 2008 r., a ponad 20 milionów z tej liczby opuściło ośrodki nadmorskie w lutym 2009 r. i udało się do rodzinnych wsi wewnątrz kraju.

Pogorszenie warunków socjalnych i zamknięcie wielu przedsiębiorstw zaraz po zakończeniu Olimpiady pekińskiej w 2008 r. zmusiły rząd chiński pod koniec jesieni tego roku do przyjęcia programu przeciwdziałania skutkom społeczno-gospodarczym kryzysu światowego. Problem bezrobocia powinien zostać rozwiązany poprzez zorganizowanie masowych prac publicznych obejmujących rozwój rolnictwa, infrastruktury (w tym publicznego systemu transportowego i kolei), budownictwa tańszych osiedli mieszkaniowych, oszczędności paliw i energii, zwiększania udogodnień społecznych.

Kryzys finansowy przekształcony później w światowy kryzys gospodarczy uderzył w gospodarkę Chin jesienią 2008 r. Rząd przyjął pakiet rozwiązań na kwotę 4 trylionów juanów (586 miliardów USD) w listopadzie 2008 r., który powinien pobudzić rozwój gospodarki narodowej, zmniejszenie bezrobocia, zwiększenie popytu wewnętrznego. „Lokomotywą” realizacji tego pakietu stały się nowe budowy w branży transportowej, a szczególnym priorytetem objęto budowę nowych kolei i modernizację starych linii.

Transport i koleje wybrano nieprzypadkowo, gdyż stara sieć kolejowa nie nadążała za szybko rozwijającą się gospodarką w przeciwieństwie do autostrad i dróg ekspresowych. Natomiast gospodarka potrzebowała kolei, szczególnie do przewozu towarów masowych, np. węgla. Niestety rozrost całej sieci transportowej uległ opóźnieniu w 1-jej dekadzie XXI w.

Dalsza część artykułu opisuje szczegółowo oddane, budowane i projektowane linie kolejowe w Chinach.

Do roku 2020 sieć kolejowa w Chinach osiągnie 120 tys. km (wzrost o 50% w stosunku do roku 2008). Jeśli wszystkie omawiane projekty zostaną zrealizowane, to kraj będzie miał całkowicie odmienną sieć nie tylko pod względem długości, ale także pod względem złożoności przestrzennej i jakości.

Struktura przestrzenna sieci stanie się bardziej nowoczesna, co poprawi jakość jej usług i bezpieczeństwo, skróci czas podróży i transportu towarów, rozładuje najbardziej przeciążone odcinki, a także częściowo rozwiąże problem bezrobocia.

Tak więc, światowy kryzys gospodarczy (paradoksalnie) ożywił budowę na dużą skalę kolei w Chinach, spowodował wzrost przewozów pasażerskich i towarowych.

EMIGRATION FROM LITHUANIA AND DISTRIBUTION OF LITHUANIANS IN THE WORLD

Vidmantas DAUGIRDAS

Institute of Geology and Geography
Department of Human Geography
Vilnius

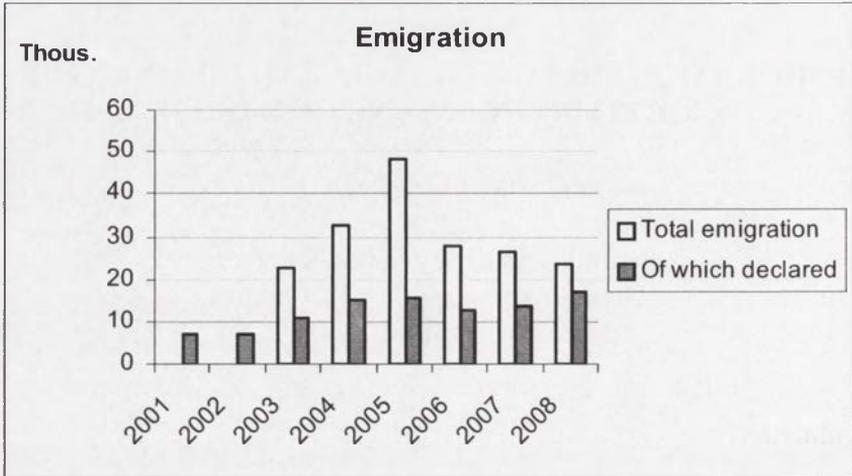
Introduction

The problem of emigration is relevant for all Middle and east European countries. This topic has been an object of discussion quite for some time already. The present article is an attempt to survey the wave of the new emigration from Lithuania and to determine the new distribution pattern of Lithuanians in the world.

The new emigration wave from Lithuania

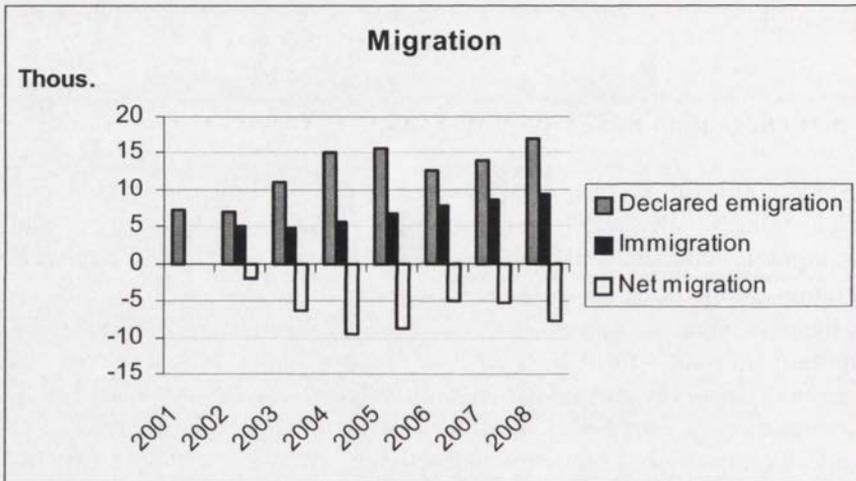
Since 2006, the processes of international migration from Lithuania have been changing for the better: emigration rates have been reducing, the number of immigrants has been increasing (remigration has set in) and declaration of emigration improved (Figs 1-2). Yet the present global economic crisis turned back the new positive emigration trends. The results of different surveys of public opinion show that from 10 to 25% of the population would choose to leave Lithuania. The survey carried out in August, 2009, by the portal delfi.lt showed that emigration is considered by 48% of respondents (Ar galvojate..., 2009). Considering does not yet mean actual leaving. Only a few would like to leave for ever. For example, at the peak of emigration wave of 2005 the portion of such respondents accounted only for 1.3% (Apklausa, 2005).

Fig. 1. Dynamics of total and declared emigration from Lithuania.



Source: International migration (2009).

Fig. 2. Trends of international migration in Lithuania.



Source: International migration, 2009.

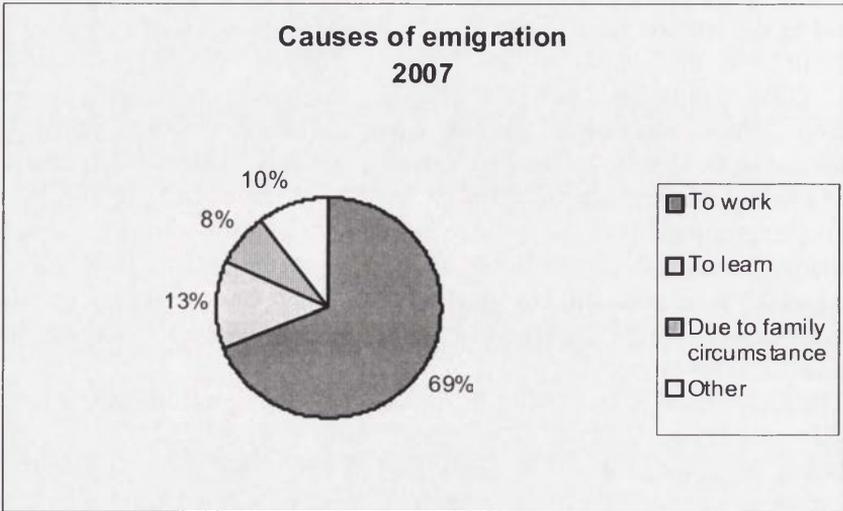
The extent of emigration from Lithuania is disturbing. Since 1990, about 500 thousand. of Lithuania's population have emigrated (Tvirutbas, 2009). This is an official number. The real number might reach 600 thousand. and more bearing in mind that only one of two or three Lithuanian declares their departure

from Lithuania or arrival to other country¹. In 20 years, Lithuania has lost about 15% of its population through emigration. For this reason, Lithuanians are regarded as the „nation most inclined to emigration” (Budvytienė, 2006; Balsys, 2008). In 2006, the relative emigration from Lithuania was five times (Iš Lietuvos..., 2006) and in 2008 almost six times as high as from Poland (Tarptautinė migracija, 2009). Bearing in mind that the natural increment of population is negative due to low birth rates Lithuanians sometimes are referred to as the „most rapidly declining nation” (0,5% per year; Lietuviai..., 2005; Eurostat, 2008). The predicted Lithuania’s population in 2050 is 2.8 mln. according to the Lithuanian Statistical Department, 2.6 mln. according to the UN Population Fund and 2.7 mln. according to Eurostat (Kumpikevičiūtė, 2009). According to these predictions, in 2170 there will remain no Lithuanians in the territory of Lithuania... (Dėl migracijos..., 2005).

The main motif of emigration is rather mundane: search for job. The unemployed account for 70-85% of emigrants from Lithuania (Laukaitytė, 2006). According to research data, the major part of emigrants includes young unemployed persons (over 50% of emigrants). 13-15% of persons leave Lithuania for studies or research work (Fig. 3, Tarptautinė migracija, 2009). This refutes the opinion about „brain drain”. It is obvious that we should rather speak about „muscle drain”. Yet recently, the causes of emigration have been changing (Fig. 4). The differences in financial reward have become a decisive motif. At the peak of emigration, the wages in Lithuania differed from the wages in the UK by 9, Ireland 6 and Spain 3 times (Nedveckaitė, 2006). Theoretically, migration should stop when the wage difference rate reached 1:5.

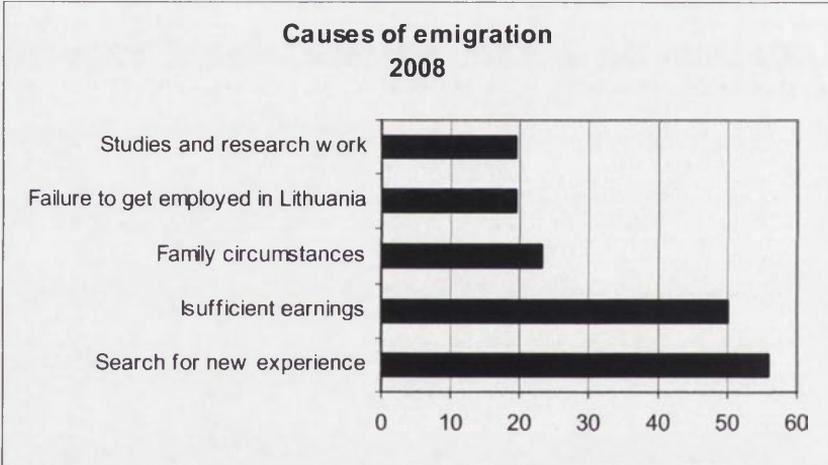
¹ According to the data of the Lithuanian Statistical Department, in 2008 about 28% and in 2007 48% of persons did not declare their departure from Lithuania (Tarptautinė migracija, 2009). Researchers of emigration suggest multiplying the official emigration data by two.

Fig. 3. Causes of emigration in 2007.



Source: db.stat.gov.lt

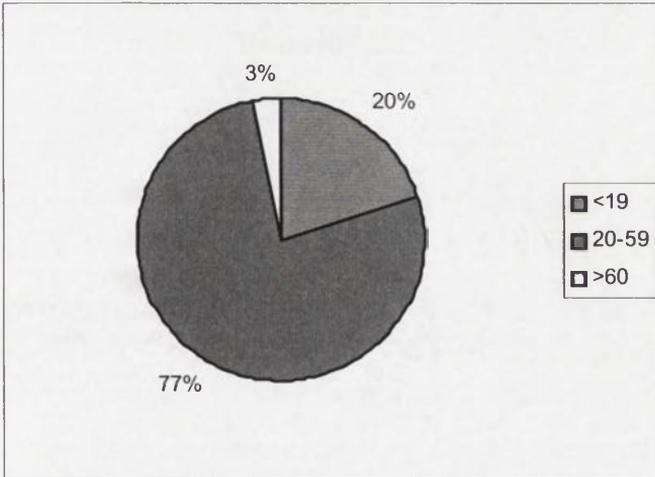
Fig. 4. Causes of emigration in 2008.



Source: TNS Gallup public survey (Kumpikevičiūtė, 2009).

It is natural that young people account for the largest part of emigrants: every second migrant is 20–34 years of age (Tarptautinė migracija, 2009). The portion of aged migrants is very small – only 3% (Fig. 5).

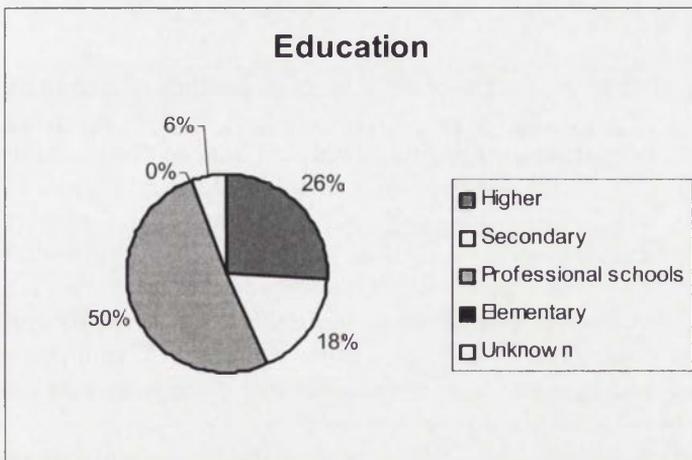
Fig. 5. Emigrants by major age groups in 2008.



Source: db.stat.gov.lt

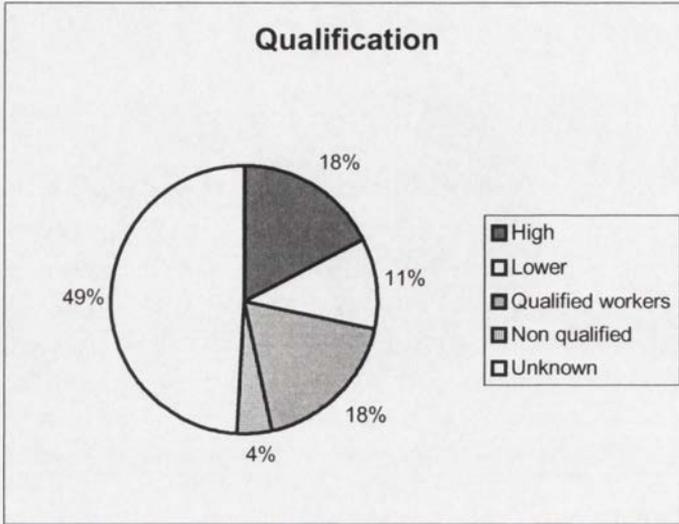
The emigration of „muscles” also is proved by the fact that half of the total of emigrants is represented by individuals with low professional qualification, i.e. graduates from vocational schools (Fig. 6). Yet the portion of higher school graduates also is high: 25%. However, high qualification experts account only for 18% (Fig. 7) and usually they are representatives of working-class professions (builders and industrial workers).

Fig. 6. Emigrants by education groups in 2007.



Source: db.stat.gov.lt

Fig. 7. Emigrants by qualification in 2007.



Source: db.stat.gov.lt

Distribution of Lithuanians in the world

The number of Lithuanians in foreign countries was established in the summer of 2008. This was not an easy task. Correctness and reliability of data were the main problems. In many cases, the obtained results are only approximate.

According to correctness and reliability of submitted data, the sources can be divided into two groups:

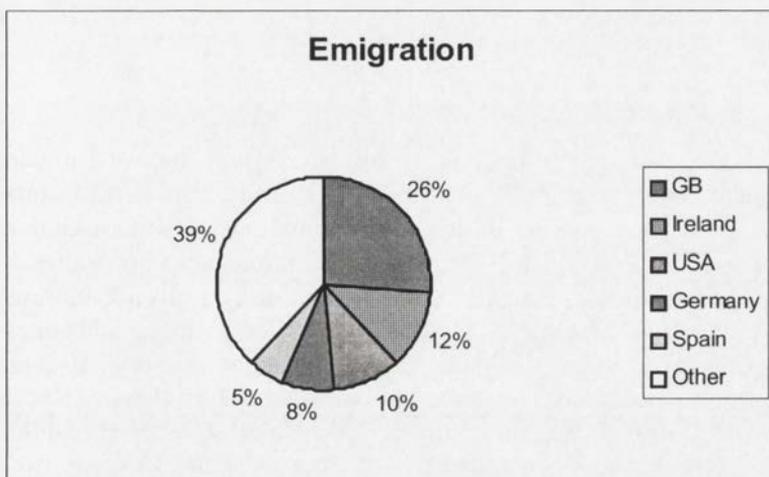
1. Official sources. They include: the data of population censuses (related problems are: the population censuses take place at large time intervals; the data often are out-of-date; citizenship is recorded instead of nationality; individuals conceal their Lithuanian origin, etc.) and registration data submitted by ministries and other establishments of countries (related problems: citizenship of emigrants is recorded instead of their nationality; in some countries, the registration is very detailed and reliable in other it is rather formal, etc.).
2. Unofficial sources: the information submitted by heads of embassies and leaders of Lithuanian communities (related problem: though these organizations do not collect data about the number of Lithuanians their information is often more reliable than the official one).

Comparison of the data from various sources showed that the indicated number of Lithuanians in a country differed by a few times. The main cause of

differences is the frequent unwillingness of migrants to declare their departure or arrival (immigration).

In the last decade, the majority of Lithuanian emigrants left for a few West European countries where new numerous Lithuanian communities developed. The UK stands out for the largest number of Lithuanian immigrants: about 250 thousand. In other countries, the Lithuanian communities amount to: 120 thousand. persons in Ireland, from 30 to 60 thousand. in Spain and 25 thousand. in Germany (Fig. 8). In comparison with 2001, the flow of migration to Spain has increased by 6.4 times, to the UK by 16.3 times and to Ireland by 17.1 times. Many Lithuanians immigrate to the USA where the number of Lithuanian immigrants presumably may amount to 800 thousand. Yet the majority of Lithuanians in the USA are the descendants of the old emigration from Lithuania.

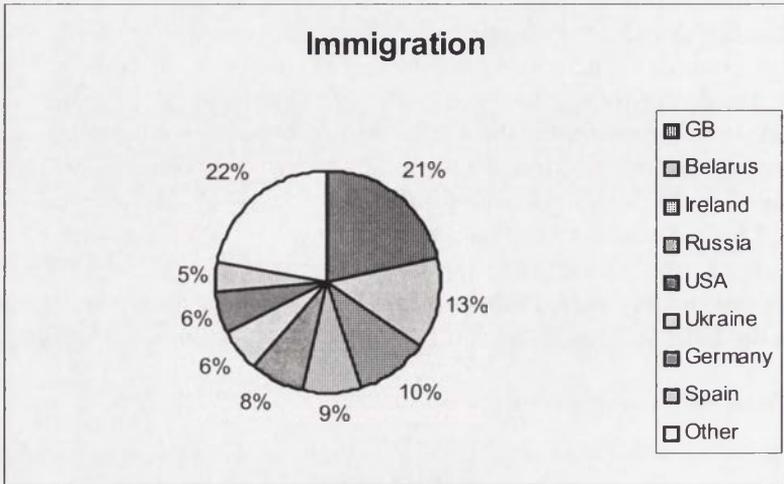
Fig. 8. The main countries of emigration from Lithuania in 2008.



Source: db.stat.gov.lt

The increasing rates of remigration are proved by immigration mainly from the countries of former emigration (Fig. 9). The numbers of Spaniards, Englishmen, Irish or Americans residing in Lithuania are small. Traditionally, many immigrants come from Russia, Byelorussia and Ukraine. Yet the nature of this immigration flow is different: repatriation and labour force immigration.

Fig. 9. Composition of immigrants to Lithuania in 2008.



Source: db.stat.gov.lt

In Europe, the transformations of the distribution map of Lithuanians are most evident. For example 20 years ago, there were almost no Lithuanians in Norway. Today their number in this country amounts to 40 thousand, or 1% of the total population. In Ireland, the portion of Lithuanians approaches 3% of the total population. New Lithuanian communities are rapidly developing in Iceland, Sweden and Denmark. Meanwhile the once large old ones in the neighbouring countries are shrinking: to 34 thousand, in Latvia, 50 thousand, in Russia, 30 thousand, in Byelorussia, and 15 thousand, in Poland. Recently, traditionally large Lithuanian communities in the USA – Canada (to 50 thousand.), Brazil (to 40 thousand.), Argentine (to 30 thousand.) and Uruguay (to 10 thousand.) have been reducing (Table 1).

Table 1. The largest Lithuanian communities in other countries.

| Country | Registered number of Lithuanians | Expected number of Lithuanians, 2008 | Portion of Lithuanians, % | Largest communities |
|---------|----------------------------------|--------------------------------------|---------------------------|---|
| USA | 659942 (2000*) | 800000 | 0.3 | Chicago, New York, Los Angeles, Boston, Atlanta, Detroit, Cleveland, Pittsburgh, Baltimore, Philadelphia, Lemont. |
| GB | 34061 (2006*) | 250000 | 0.4 | London, Birmingham, Norwich, Nottingham, Manchester, Glasgow, Newcastle |

| Country | Registered number of Lithuanians | Expected number of Lithuanians, 2008 | Portion of Lithuanians, % | Largest communities |
|--------------------|----------------------------------|--------------------------------------|---------------------------|---|
| Ireland | 24628 (2006*) | 120000 | 2.9 | Dublin, Cork, Galway, Killarney, Mayo |
| Russia | 50152 (2002*) | 60000 | | Moscow, St. Petersburg, Kaliningrad, Irkutsk, Krasnoyarsk, Petrozavodsk, Smolensk |
| Kaliningrad Region | 13937 (2002*) | 20000 | 2.1 | <i>Kaliningrad, Sovetsk, Neman</i> |
| Canada | 46690 (2006*) | 50000 | 0.2 | Montreal, Ottawa, Toronto, Hamilton, Calgary, Edmonton, Vancouver |
| Norway | 20568 (2007**) | 40000 | 0.9 | Oslo |
| Brazil | | 40000 | | Rio Grande do Sul, Rio de Janeiro, Sao Paulo |
| Latvia | 34172 (2008**) | 35000 | 1.5 | Riga, Liepaja, Daugavpils, Jelgava, Bauska, Dobeles, Saldus |
| Belarus | 6387 (1999*) | 30000 | 0.3 | Minsk, Grodno, Rimdzyuny, Radun, Astraviec, Pelesa, Lyda |
| Spain | 19155 (2008**) | 30000 | 0.1 | Alicante, Campohermoso, Kasteilyon, Valencia, Madrid |
| Argentina | | 30000 | 0.1 | Avelyaneda, Buenos Aires, Santa Fe, Beris, Cordoba, Rosario |
| Germany | 19030 (2007**) | 25000 | | Berlin, Hamburg, Nurnberg, Erfurt, Köln, Hanover, Lampertheim |
| Iceland | 1322 (2008**) | 1500 | 0.4 | Reykjavik |
| Uruguay | | 10000 | 0.3 | Montevideo |
| Estonia | 2116 (2000*) | 2000 | 0.2 | Tallinn |
| Sweden | 8766 (2007**) | 10000 | 0.1 | Stockholm |
| Denmark | 3643 (2008**) | 6000 | 0.1 | Copenhagen |
| Australia | 2800 (2006*) | 14000 | 0.1 | Pert, Gee Long, Melbourne, Canberra, Sidney, Brisbane, Gold Coast, Loncestown, Hobart, Adelaide |
| Poland | 5846 (2002*) | 15000 | | Sejny, Suwałki, Puńsk, Warszawa |
| Kazakhstan | 7000 (1999*) | 10000 | | Karaganda, Astana, Kokchetau, Kustanay, Alma Ata |
| Ukraine | 7720 (2001*) | 8000 | | Kiev, Lviv, Zaporozh, Simpheropol, Vinnica, Dnepropetrovsk |
| France | 882 (2006**) | 4000 | | Paris, Strasbourg, Marcel, Lion |

* Population census

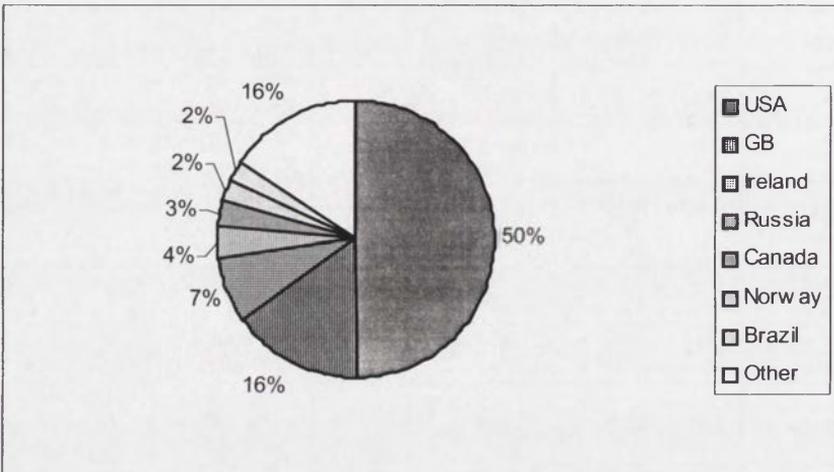
** Data from statistical and migration agencies, ministries and other establishments

Marked changes distribution pattern of Lithuanians also have occurred on a global scale. Today, one can meet Lithuanians everywhere even the countries where they have never lived before. Large communities have appeared even in

China, Japan, and Turkey. Yet the traditional faraway but large Lithuanian communities are shrinking: in Australia it has reduced to 14 thousand. in Kazakhstan to 10 thousand, etc.

Calculations of Lithuanians living in other countries showed that the expected number of Lithuanians residing outside the Lithuanian boundaries may amount to about 1.61 million or one third of the total population of Lithuania. The population in the territory of Lithuania amounts to slightly more than 3 million people. The greatest number of Lithuanians residing outside the Lithuanian boundaries has been recorded in: the USA 50%, the UK 16% and Ireland 7% of the total of Lithuanian emigration (Fig. 10). Lithuanian communities have been registered in 36 countries. In thirty two countries over the world there are 177 Lithuanian educational institutions (most of them in the USA, Kaliningrad Region of Russia, Byelorussia, Poland and the UK) and their number tends to increase. They manifest Lithuanians' attempt to preserve their national identity.

Fig. 10. Distribution of Lithuanians in foreign countries in 2008.



Generalization

Recently, the problems of emigration from Lithuania have been widely and dramatically discussed. Yet this phenomenon can be also viewed from another angle: the rates of unemployment and criminality have been reducing, the wages have been rising, 2-5 billion Lt annually reach Lithuania from other countries, the starting capital for business development in Lithuania has been growing, and the professional skills of the population have been improving. Moreover, it is questionable whether after the accession to the EU the people leaving Lithuania should be referred to as emigrants.

The world, Europe in particular, has been turning more Lithuanian due to Lithuanians' emigration. The distribution map of Lithuanians in the world has undergone considerable transformations. Lithuanians now live almost in all countries of the world. New large Lithuanian communities appeared in the West European countries and Scandinavia. At the same time, the traditionally large Lithuanian communities in the neighbouring countries and in South America have been shrinking.

Lithuanians „colonize” the developed countries. It is expected that about 1.61 million Lithuanians reside outside the Lithuanian boundaries. This accounts for one third of the total Lithuanian population in the world. London has become the fourth largest city of Lithuanians (apart the traditional „capital” of American Lithuanians Chicago). Dublin also has become a large Lithuanian city. In some Irish parishes Lithuanians account almost for 50% of the total population. The Sunday Times has pointed out that a new Baltic state has been developing in the eastern part of England (Anglijoje..., 2005). This is a result of economic crisis and unsatisfied expectations in Lithuania and it has positive aspects.

The new map of Lithuanians in the world is an interesting and relevant object of geographical research. It should be studied now because in the future there will remain no such possibility as the absolute majority of emigrants from Lithuania are planning to return back to their motherland.

Literature

Anglijoje formuojasi nauja Baltijos valstybė. (2005).

<http://www.delfi.lt/archive/article.php?id=8327504>

Apklausa: į užsienį visam laikui ketina išvykti 1,3 proc. lietuvių. (2005).

<http://www.delfi.lt/archive/article.php?id=6545469>

Ar galvojate apie emigraciją. (2009). www.delfi.lt

Balsys L. (2008). Tarp ES šalių daugiausiai emigruoja lietuviai,

<http://www.delfi.lt/archive/article.php?id=19328555>

Budvytienė G. (2006). Lietuviai išsiskiria kaip labiausiai linkę migruoti, *Kauno diena*,

<http://www.delfi.lt/archive/article.php?id=9934714>

db.stat.gov.lt

Dėl migracijos po poros šimtų metų Lietuvoje nebebus lietuvių. (2005).

<http://www.delfi.lt/archive/article.php?id=8299024>

Eurostat: Lietuva – viena iš santykinai daugiausiai gyventojų per metus praradusių ES šalių,

<http://www.delfi.lt/archive/article.php?id=19671835>

Iki 2050 metų Lietuva neteks daugiau kaip 0,5 mln. gyventojų. (2007).

- <http://www.delfi.lt/archive/article.php?id=13954720>
Iš Lietuvos emigruojančių žmonių dalis – penkiskart didesnė nei iš Lenkijos. (2006).
<http://www.delfi.lt/archive/article.php?id=11640245>
Kumpikevičiūtė I. (2009). Saldainis emigrantui – artimieji, *Atgimimas*,
<http://www.delfi.lt/archive/article.php?id=21632192>
Lietuviai – labiausiai nykstanti tauta visoje ES. (2005).
<http://www.delfi.lt/archive/article.php?id=7797519>
Lukaitytė R. (2006). Dauguma emigravusių lietuvių buvo bedarbiai,
<http://www.delfi.lt/archive/article.php?id=9999589>
Nedveckaitė J. (2006). Tautos ryškštė – emigracija, *Laikas*,
<http://www.delfi.lt/archive/article.php?id=9475446>
Tarptautinė migracija (2009). <http://www.stat.gov.lt/lt/news/view/?id=6719>
Tvirbutas S. (2009). Kyla nauja emigracijos banga, *Valstiečių laikraštis*,
<http://www.delfi.lt/archive/article.php?id=21091841>

Streszczenie

EMIGRACJA Z LITWY I ROZMIESZCZENIE LITWINÓW W ŚWIECIE

Problem emigracji dotyczy wszystkich krajów Europy środkowo-wschodniej. Już od jakiegoś czasu temat ten jest przedmiotem rozważań. Niniejszy artykuł jest próbą zbadania fali nowej emigracji z Litwy i ustalenia miejsc obecności Litwinów na świecie.

Ostatnio dyskusja na temat emigracji z Litwy objęła szersze kręgi i ma bardziej dramatyczny charakter. Jednakże można spojrzeć na to zjawisko również z innej strony: spadają stopy bezrobocia i przestępczości, wzrastają płace, co roku napływa z zagranicy na Litwę 2–5 mld litów, wzrasta kapitał zakładowy nowopowstających firm na Litwie, a kwalifikacje zawodowe ludności wzrastają. Ponadto, jest kwestią dyskusyjną czy po wstąpieniu do UE można nazywać emigrantami osoby wyjeżdżające z Litwy.

Świat, a szczególnie Europa, staje się bardziej litewski z powodu emigracji Litwinów. Mapa miejsc ich obecności na świecie uległa istotnym zmianom. Teraz Litwini żyją w prawie wszystkich krajach na świecie. Nowe, duże społeczności litewskie pojawiły się w krajach zachodniej Europy i Skandynawii. Jednocześnie kurczą się tradycyjnie duże skupiska Litwinów w krajach sąsiedzkich i Ameryce Południowej.

Litwini „kolonizują” kraje rozwinięte. Sądzi się, że ok. 1,61 mln Litwinów mieszka poza granicami Litwy. Stanowi to jedną trzecią całej ludności litewskiej na świecie. Londyn stał się czwartym co do wielkości miastem litewskim (obok tradycyjnej „stolicy” amerykańskich Litwinów – Chicago). Dublin również stał się dużym miastem litewskim. W niektórych parafiach irlandzkich Litwini stanowią 50% ich mieszkańców. Gazeta *The Sunday Times* zauważyła, że powstaje nowe państwo bałtyckie we wschod-

niej Anglii (Anglijoje..., 2005). Jest to skutek kryzysu gospodarczego i niezaspokojonych oczekiwań na Litwie, lecz ma także pozytywne strony.

Nowa mapa Litwinów na świecie jest interesującym i istotnym przedmiotem badań geograficznych. Należy go badać teraz, gdyż w przyszłości nie będzie już takiej sposobności, jako że, zdecydowana większość emigrantów z Litwy planuje powrót do ojczyzny.

REGIONAL ASPECTS OF ECOTOURISM IN LITHUANIA

Edis KRIAUCIŪNAS

Institute of Geology and Geography
Department of Human Geography
Vilnius

Introduction

The tourism phenomenon is directly concerned with economic processes and the rapid development of international tourism after World War II not only is an outcome of economic upturn and globalization but also its concurrent.

Until 1990, Lithuania was part of the Soviet Union and was isolated from the world by the Iron Curtain and concomitantly eliminated from the market of international tourism. After the restoration of self-dependence, the boundaries of other countries slowly opened to once isolated Lithuania. Today Lithuania is a member state of the EU and Schengen Agreement and a full member of the market of international tourism. By the time of Lithuania's accession, this market had developed certain regional patterns the most important among which were the following: Europe was the most travelling region of the world; the dominant direction of tourism was from east to south (actually to the Mediterranean Region).

It was long ago observed that the main flows of tourists form in the economically developed countries and are directed to other economically developed countries. In other words, the exchange of tourists actually takes place between the economically advanced countries. The general social and economic factors responsible for economic and political stability of a region (living standards, earnings, prices, social and demographic structure of the population, political stability, and legal background (visas, laws, etc.)) are of primary importance in localizing and generating the flows of tourists. It is important to point out that travelling within a region is the dominant form of tourism (in Europe, such tourists account for 81% of the total).

Thus in terms of international tourism Lithuania is situated in the most advanced touristic region of the world. The geographical situation in the central part of the continent (as also is the case with other countries of the region) also conditions transit economic and tourist flows. From the economic point of view,

Lithuania is a developing country, which means that in the future the international and local tourism will depend on its economic status.

The present article is devoted to analysis (based on a case of Lithuania) of one segment of tourism market: ecological tourism. Being closely related with other branches of tourism and environment protection, ecotourism joins these two fields of human activity (as a part of tourism market it produces an economic effect and as a means of environment protection it educates the travellers though in most cases it requires rather large economic investments).

History of the ideas of ecotourism

The term *ecotourism* was coined and came into circulation at the end of the 20th century. Its ideas developed in the 70ties after it had been observed that mass tourism produced a negative effect on nature and local communities. The main idea of the new form (branch) of tourism was to harmonize the economic benefit from recreation in natural territories and the impacts on the natural and social environment.

In recent years, the role of ecotourism has been growing all over the world. Its portion in the global tourism market also has been increasing. According to the data of the World Tourism Organization (WTO), in 1998 the ecotouristic travels accounted for 7% (45 mln of arrivals) of the total number of travels. In 2010, the expected number of travels will reach 70 mln. According to other sources, the number of ecotourists in the world increases by 20% every year (Mastny, 2001).

In Lithuania, the term *ecotourism* came into use in the last decade of the 20th century. A study of the potential of ecological tourism development in the Rusnė Island launched by the Baltic Bureau of EUCC in 1997-1998 was one of the first research works in this field in Lithuania (Ekologinio turizmo..., 1998). Earlier, a few diploma papers on the problems of ecotourism had been written at the Klaipėda University (Bielskis, 1995; Puplešytė, 1996).

There are many definitions of ecotourism. The author and a group of researchers from the Lithuanian Institute of Geology and Geography suggest the following definition of ecotourism (Ekoturizmo plėtros..., 2005): *Ecological tourism (ecotourism)* is a branch of tourism, which is favourable for sustainable development and is based on purposive cognition of natural environment and on motivated development of ecological consciousness.

Still, many works have been carried out in Lithuania which can be classified as territorial ecotourism investigation and planning works in spite of the fact that the term ecotourism was not used in their titles and content. Ecotourism as a phenomenon has existed in Lithuania and referred to as „educational tourism” or „nature tourism”. In the Soviet years, there were quite a few tourist clubs

which could as well be named as ecotourism clubs. Neither the term *agrotourism* was in use yet many citizens had relatives in the countryside and used to spend summers at their places. The territory of Lithuania was used as a tourism destination by citizens of the large cities of the USSR. The north-eastern part of Lithuania (Zarasai and Ignalina districts) was especially popular in this respect. Holiday-makers used to stay at the places of locals, tourist bases or in tents at the lakesides forming „tent boroughs” (up to 600 tents could be counted at a time on the banks of larger lakes). The country became especially attractive to tourists after establishment of Aukštaitija (Lithuanian SSR) National Park in 1974. After building of Ignalina NPP, the flow of tourists from Russia was reduced for some time.

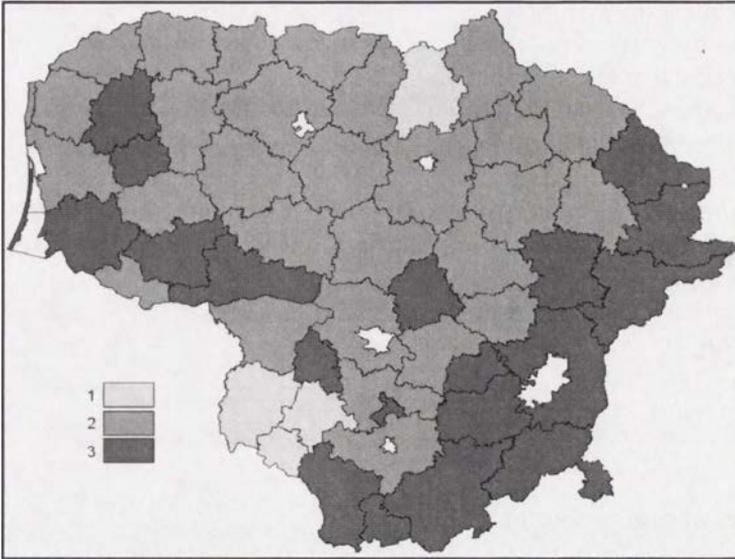
It should be noted that for a few decades (approximately from the beginning of the 70ties) educational routes (actually ecotouristic) were successfully planned in Lithuania (Jurgilas, 1977; Kavaliauskas, 1987; Kavaliauskas, Šilagalis 1979, 1981; Riepšas, Pališkis 1985; and others).

Resources of ecotourism in Lithuania

Natural resources. Ecotourism often is associated with the use of protected areas and the term ecotourists is applied to people who visit national parks or other natural preserved territories. The territorial restriction is slightly too narrow. Ecotourism resources should include components or complexes of geographical (natural or human) sphere suitable for organization of ecotourism activities.

The naturalness of a territory is one of the prerequisites of ecotourism. The natural territories by themselves do not predetermine the ecotourism potential yet provide favourable conditions for development of ecotourism. Fig. 1 demonstrates the proportion of natural and semi-natural territories in the Lithuanian municipalities.

Fig. 1. Proportion of natural and semi-natural territories in municipalities (1 – <20%; 2 – 20–40%; 3 – >40%)



East Lithuania and some districts of Žemaitija stand out for high indices of naturalness (the portion of natural and semi-natural territories exceeds 40%). South-West and North Lithuanian regions are distinguished for the smallest portion of natural territories. The municipalities with larger natural areas have better chances for development of ecotourism. Yet it should be emphasized that naturalness of a territory is only a background for ecotourism development. Even the municipalities with the lowest indices of naturalness (Vilkaviškis, Kalvarijos, etc.) have natural and semi-natural territories which can be used for ecotourism.

Abundance of natural objects of educational value in a territory also represents a favourable condition for ecotourism development. At present, Lithuania has 497 preserved objects of natural (geological, geomorphologic, hydrographical and botanical) heritage. The territorial distribution of these objects is very uneven. However even the municipalities with low general tourism resources have enough objects of natural heritage which could be used for development of ecotourism (e.g. North Lithuania).

Complexes of valuable territories. Most of the valuable natural complexes of Lithuania are included into a system of preserved territories which account for about 15% (this portion varies in the course of planning processes) of Lithuania's territory (fig. 1). In most of these territories, educational tourism is developed which in its nature is kindred to ecotourism. Certain contradictions occur in natural reserves where according to the laws of the RL is a prohibited

activity: i.e. following the law, the most valuable natural territories are not designed for cognition of natural environment.

In other preserved territories (national and regional parks in particular) the development of ecotourism is one of priorities.

Human resources. It should be pointed out that in many Lithuanian regions the demographic situation is deteriorating: emigration and natural depopulation reduce the population density. This is an especially acute problem in forested areas which are suitable for ecotourism. Depopulation tendency can be regarded as a supporting factor for ecotourism development. Yet the age structure and population ageing in rural sparsely populated areas are unfavourable for ecotourism development. The education levels in the sparsely populated rural areas are also unsatisfactory. Actually only the qualification of the staff (ecologists, geographers, biologists, foresters, etc.) of preserved territories allows organizing ecotourism in them.

Although not a single educational institution of Lithuania has a program for ecotourism studies, potential possibilities to obtain the knowledge necessary for ecotourism organization exist in the pedagogical universities of Vilnius and Klaipeda, where tourism and geography studies are coordinated, and educational institutions (scattered all over the country) which have programs for studying rural tourism. Generalizing it should be stated that not a single constituent of human resources for ecotourism development in Lithuania is sufficiently well developed.

Table 1. The system of preserved territories of Lithuania.

| Category | Number | Area (thou ha) | Portion of the total are of Lithuania (%) |
|-----------------------|-----------|-------------------|--|
| National parks | 5 | 144.5 | 2.21 |
| Regional parks | 30 | 444.7 | 6.8 |
| State sanctuaries | 6 | 18.8 | 0.29 |
| Including natural | 3 | 18.4 | 0.28 |
| State reserves | 256 | 144.9 | 2.22 |
| Including: | | | |
| Landscape | 47 | 47.0 | 0.72 |
| Geological | 10 | 0.6 | 0.01 |
| Geomorphologic | 40 | 22.8 | 0.35 |
| Hydrographical | 34 | 12.9 | 0.20 |
| Pedological | 11 | 1.3 | 0.02 |
| Botanical | 30 | 5.1 | 0.08 |
| Zoological | 29 | 15.7 | 0.24 |
| Botanical-zoological | 16 | 17.3 | 0.26 |
| Telmological | 38 | 22.4 | 0.34 |
| Biosphere reserves | 1 | 18.5 | 0.28 |

| Category | Number | Area (thou ha) | Portion of the total are of Lithuania (%) |
|---------------------------|--------|-------------------|--|
| Biosphere polygons | 27 | 202.4 | 3.10 |
| Regenerated plots of land | 3 | 0.9 | 0.01 |
| Municipality reserves | 111 | 13.1 | 0.20 |
| Total: | | 987.7 | 15.13 |

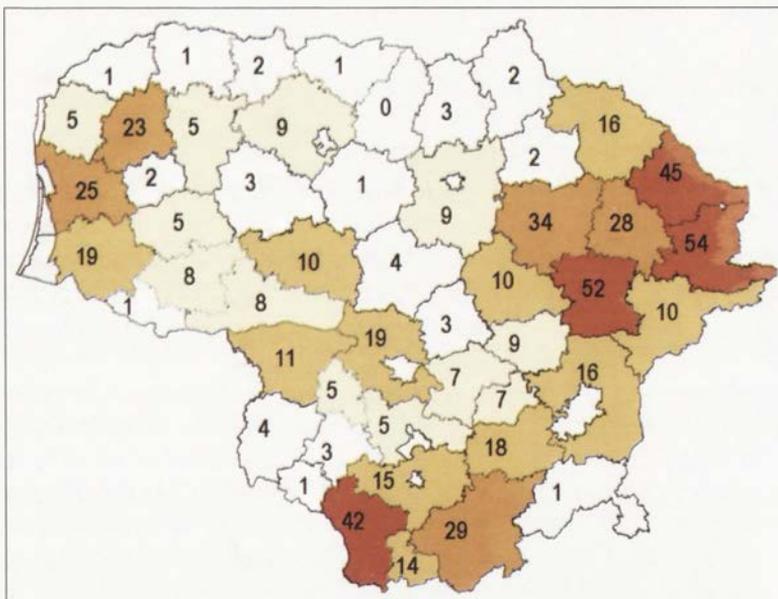
Source: State Service for Protected Areas.

Ecotourism facilities and infrastructure. Educational natural paths are among the most important objects of ecotourism infrastructure. New such paths appear in Lithuania every year yet the information about their number is rather varying. In 2005, the researchers from the Institute of Geology and Geography collected data about 71 operative educational paths for pedestrians (usually, the submitted numbers are higher). The number of paths per municipality amounted from 0 to 6 (most of them in Šilutė and Trakai districts). Certain regional regularities became evident: educational paths are absent not only in North and Middle Lithuania but also in natural valuable areas which are intensively used for recreation (e.g. Molėtai and Alytus municipalities).

Rural tourism. The farmsteads of rural tourism usually are established in relatively natural territories and in terms of location they are physically closest to the objects of ecotourism. Some farmsteads of rural tourism themselves represent objects of ecotourism and provide ecotourism services (such farmsteads are very few). The number of farmsteads of rural tourism has been permanently growing: in 2003, there were 355 such farmsteads and in 2007, 538 rural farmsteads were registered. In 2009, the author managed to find more than 600 farmsteads of rural tourism advertising their services. In 2007, according to statistical data (Turizmas Lietuvoje 2007, 2008), one rural farmstead had 18 beds.

The analysis of the territorial distribution of rural farmsteads revealed the trends common for Lithuanian tourism infrastructure in general. The greatest number of rural farmsteads is characteristic of the districts with old tourism tradition: South-East, East and West Lithuania. The smallest number of rural farmsteads is typical of North and Middle Lithuanian regions. It was mentioned above that rural tourism is one of the possible forms of ecotourism. Moreover it was pointed out that natural resources that could be used for ecotourism exist in the territories of all municipalities. In view of this, the very uneven distribution of rural farmsteads is unfavourable for ecotourism.

Fig. 2. The number and distribution of rural farmsteads in the territories of municipalities in 2009 (based on the information published by municipalities and tourism information centres).



Actually, there are very few rural farmsteads which provide ecotourism services. According to the information provided by the Lithuanian Association of Rural Tourism, there are only a few such farmsteads. Of the total of rural farmsteads 70 promote walking-tours for tourists and 52 promote healthy lifestyle. During our investigation of 2005, 28% of tourism experts pointed out that in the territories they represented there were 39 rural farmsteads which could be classified as ecotourism farmsteads of partly ecotourism farmsteads (Ekoturizmo plėtros..., 2005). It must be noted that to 90% of the owners of rural farmsteads tourism is only a subsidiary source of earnings.

Ecotourism information and marketing. The main suppliers of information about tourism in Lithuania are: 30 tourism information centres at municipalities, 3 private tourism information centres and 15 visitor centres of national and regional parks. Recently, the number of internet services has been rapidly increasing. Many web sites devoted to tourism information on a national level have been created. Yet it should be emphasized that most of the information deals with tourism in general. The information about ecotourism is lacking. The greater part of the promoted services bears an „anti-ecological” character: public catering, organized visiting of objects, superficial use of educational resources, etc.

So far, Lithuania has no organized operative information about the resources and possibilities of ecotourism. The market of tourism services in

Lithuania is not consciously formed; it emerges spontaneously. The most relevant information necessary for ecotourism is provided by administrations of state preserved territories: national and regional parks.

The use of Lithuania's territory for ecotourism purposes

The problems of ecotourism stocktaking systems occur all over the world. Lithuania has no stocktaking system which could reveal the real number of ecotourists. In recent years, the number of tourists visiting Lithuania varies around 1.5 mln people. About 30% of foreign tourists visit Lithuania for recreational purposes (in 2007 28.2%; in earlier years this index reached even 35%) (Turizmas Lietuvoje, 2008). According to the data of individual survey, the portion of ecotourists in Lithuania is less than 25% of the total of visitors to natural territories. As was already mentioned, according to WTO, ecotourism travels account for 7% of touristic travels in the world. Visits to preserved territories (in some countries visitors to state preserved territories are classified as ecotourists) could be taken as an indirect indicator of approximate number of ecotourists (Drumm, Moore, 2005). The administrations of Lithuanian preserved territories are visited by 7–8% of the total of foreign tourists (who visited information centres and museums, participated in excursions and used the services of lodging-houses). The majority of these tourists visit national parks. These data suggest about 120 thou tourists per year who devote some of their time to visiting ecotourism objects. In general, it is obvious that the number of „pure” ecotourists, i.e. persons coming to Lithuania for ecotouristic purposes, is small. According to our calculations, such tourists could account only for a part of one per cent or no more than a few thousand.

Table 2. Some indicators of trips of inbound tourist by country of usual residence (the main countries), 2007.

| Country | Number of trips Total, thous. | Average number of nights spent | Average expenditure per trip, LTL |
|---------|----------------------------------|-----------------------------------|--------------------------------------|
| Russia | 224.3 | 6.9 | 1314.9 |
| Germany | 179.1 | 5.5 | 1467.9 |
| Belarus | 174.4 | 4.0 | 893.4 |
| Poland | 158.8 | 4.9 | 828.5 |
| Latvia | 119.2 | 3.5 | 477.7 |
| Estonia | 59.1 | 3.3 | 967.6 |
| Finland | 44.4 | 2.6 | 838.4 |

Source: Turizmas Lietuvoje 2007.

The territorial distribution of foreign tourist is an unfavourable factor for even ecotourism development in Lithuania. Even 79% of all tourists visit Vilnius. The portion of tourists visiting other cities or regions is considerably smaller (Kaunas 27%, Klaipeda 23% and Palanga 15%) (www.tourism.lt). Bearing in mind that Vilnius potential for local tourism is also the highest it can be assumed that the possibilities of territorial distribution of short-lasting ecotourism are very uneven. The situation is mitigated by the fact that the eastern part of the country has sufficient resources for ecotourism.

The precise number of people visiting the educational paths of Lithuania is unknown due to the absence of stocktaking of visitors in some municipalities. By preliminary and approximate calculations, it could amount to about 100–120 thou visitors per year. Depending on the geographical situation (the paths near the largest Lithuanian cities are used most intensively) and other factors (presence or absence of show cards of educational path are the most important among them), the intensity of use of educational paths differs. The paths of Vilnius environs are visited by 10 000, Meteliai Regional Park 2000-2500 and Pagramantis Regional Park about 600 visitors per year. The educational parks usually are visited by local tourists.

In all ecotourism objects, the portion of local tourists is higher than that of foreign tourists (this also is confirmed by other data). As the stocktaking system is absent, it also is difficult to determine the number of local tourists. The suggested number is about 200 thou.

Ecotourism markets. The greatest flows of tourists to Lithuania come from the neighbouring countries where the conditions for ecotourism are comparable. The member states of the EU are the main external market of ecotourism to Lithuania. Germany should be distinguished in this context and should receive special attention (Germany generates the greatest tourist flows in the world). The number of tourists from Germany has been increasing in Lithuania and this trend is expected to persist.

Among the tendencies of foreign tourism in Lithuania we should mention the reducing flow of tourists from the CIS and increasing flows from West Europe. This factor is favourable for ecotourism development for the following reasons:

- In West Europe, ecotourism had emerged earlier than in Lithuania what means that the environmental consciousness of population had been started to foster earlier. The increasing flows of tourists from the countries where ecotourism is better known increase the probability of receiving higher number of ecologically oriented tourists.
- Lithuania relatively has more natural territories than the industrial West European countries. Thus one of the purposes pursued by foreign tourists in Lithuania is to have a rest in and acquaint with natural environment.

- The visitors from the Western Countries have larger financial resources and spend in Lithuania more money. For this reason, the same number of potential visitors from the Western countries *de facto* means a considerably larger market.

The fact that the flows of tourists from the CIS (the most important for Lithuania are Russia and Belarus) is of minor importance for ecotourism development in Lithuania because:

- Russia and Belarus have many territories suitable for ecotourism therefore the ecotourism resources of Lithuania may lack attraction for tourists from these countries.
- Tourists from Russia and Belarus are less environmentally oriented.

Conclusions

1. The specific regional features of the structure of Lithuanian nature and landscape represent favourable conditions for ecotourism development over the country (even in the municipalities with the lowest indices of territorial naturalness there are natural and semi-natural territories which could be used for ecotourism).
2. Demographic trends, depopulation of rural areas in particular, reduce the population density and can be regarded as favourable for ecotourism because the depopulated territories are becoming more natural. On the other hand, these trends may be viewed as negative because they reduce the number of people who could organize ecotourism activity.
3. The system and infrastructure of ecotourism services are in the initial stage of development and regionally uneven.
4. The trends of international tourism, i.e. increasing number of ecologically motivated tourists, contribute to development of ecotourism in spite of economic crisis.

Literature

- Bielskis P. (1995). Ekologinio turizmo vystymas Nemuno deltos regioniniame parke, *Diplominis darbas*, Klaipėdos universitetas.
- Drumm A., Moore A. (2005). *Ecotourism Development – A Manual for Conservation Planners and Managers, Volume 1: An Introduction to Ecotourism Planning*, Second Edition, The Nature Conservancy, Arlington, Virginia, USA.
- Ekologinio turizmo vystymo galimybės Rusnės saloje (1998). EUCC Baltijos biuras, Klaipėda.

- Ekoturizmo plėtros galimybių studija (2005). Geologijos ir geografijos institutas, Vilnius.
- Jurgilas R. (1977). Pasivaikščiojimo takai ir apžvalgos aikštelės – landšaftinio miško formavimo objektas. *Girios* 9, p. 12-14.
- Kavaliauskas P. (1987). Rekreacinių takų vingiais, *Kalba Vilnius* 42, p. 13.
- Kavaliauskas P., Šilagalis R. (1979). Kaimo kraštovaizdis ir pažintinė rekreacija, *Geografinis metraštis* 17, p. 29-36.
- Kavaliauskas P., Šilagalis R. (1981). Projektuokime ir pažintines trasas, *Statyba ir architektūra* 4, p. 12-13.
- Mastny L. (2001). Traveling light: new paths for international tourism, *World-watch Paper* 159.
- Puplešytė D. (1996). Ekologinio turizmo vystymas Klaipėdos apskrityje, *Diplominis darbas*, Klaipėdos universitetas.
- Riepšas E., Pališkis E. (1985). Takai gamtoje, Vilnius: LGAD.
- Turizmas Lietuvoje 2007 (2008). Statistikos departamentas, Vilnius.
<http://www.tourism.lt>

Streszczenie

PERSPEKTYWY REGIONALNE EKOTURYSTYKI NA LITWIE

Niniejszy artykuł jest poświęcony analizie (na przykładzie Litwy) jednego segmentu rynku turystycznego – turystyki ekologicznej, – która ma bliskie powiązanie z innymi gałęziami turystyki i ochrony środowiska, a w rzeczywistości łączy te dwa obszary działalności człowieka. Dokonano przeglądu regionalnych cech wyróżniających potencjał ekoturystyczny Litwy oraz trendów wykorzystywania jej terytorium dla celów ekoturystyki.

Analiza zasobów naturalnych ekoturystyki prowadzi do wniosku, że wyróżniające cechy regionalne litewskiej przyrody i krajobrazu sprzyjają rozwojowi ekoturystyki w całym kraju (nawet w gminach o niskich wskaźnikach zasobów przyrodniczych są obszary naturalne i półnaturalne, które można by wykorzystać dla ekoturystyki). Wschodnia Litwa i niektóre powiaty Żmudzi (Žemaitija) wyróżniają się wysokimi wskaźnikami naturalności (odsetek obszarów naturalnych i półnaturalnych przekracza 40%). Regiony Litwy południowo-zachodniej i północnej wyróżniają się najmniejszym odsetkiem obszarów naturalnych.

W wielu regionach Litwy pogarsza się sytuacja demograficzna: emigracja i naturalne wyludnienie zmniejszają gęstość ludności. Jest to szczególnie dotkliwy problem na terenach zalesionych, odpowiednich dla ekoturystyki. Tendencję do wyludniania się można częściowo uznać za czynnik wspierający rozwój ekoturystyki. Jednakże struktura wiekowa i starzenie się ludności na wiejskich obszarach rzadko zaludnionych nie sprzyjają temu zjawisku.

Gospodarstwa agroturystyczne powstają na obszarach relatywnie naturalnych, a jeżeli chodzi o ich położenie to najbliższą odpowiadają obiektom ekoturystycznym. Rozmieszczenie terytorialne gospodarstw wiejskich powtarza wspólne wzorce infrastruktury turystycznej na Litwie. Najwięcej gospodarstw agroturystycznych znajduje się w powiatach o najdłuższej tradycji turystyki: na Litwie południowo-wschodniej, wschodniej i zachodniej. Najmniej takich farm znajdziemy w regionach północno i środkowolitevskich. Najogólniej mówiąc, usługi i infrastruktura ekoturystyki są słabo rozwinięte na Litwie.

Ocena wykorzystania obszaru Litwy dla ekoturystyki pozwoliła na określenie oczekiwanego napływu ekoturystów: 120 tys. turystów zagranicznych, którzy mogliby spędzić trochę czasu odwiedzając obiekty ekoturystyczne, oraz 200 tys. turystów krajowych corocznie.

Wśród trendów turystyki zagranicznej na Litwie należy wspomnieć o zmniejszającym się napływie turystów z WNP i o wzroście przyjazdów z Europy zachodniej. Ten czynnik sprzyja rozwojowi ekoturystyki, ponieważ w krajach zachodnio-europejskich ekoturystyka pojawiła się wcześniej niż na Litwie, a to oznacza, że już od dłuższego czasu pielęgnuje się tam świadomość ochrony środowiska. Zwiększający się napływ turystów z krajów, gdzie ekoturystyka jest bardziej znana zwiększa prawdopodobieństwo przyjazdu większej liczby turystów o nastawieniu proekologicznym. Motywacja ekologiczna jest w mniejszym stopniu popularna wśród turystów z Rosji czy Białorusi. Najogólniej mówiąc, obecne trendy turystyki międzynarodowej, m.in. wzrastająca liczba turystów nastawionych proekologicznie, wspomagają rozwój ekoturystyki mimo kryzysu gospodarczego.

DIAGNOSIS RELATED GROUP SYSTEM AS A COST REDUCING TOOL IN HEALTH CARE (ON THE EXAMPLE OF POLAND AND ESTONIA)

Ewelina RABIEJ

University of Rzeszów

The health care system is one of the most problematic social and economic areas. Combining medicine with economics has always caused a lot of emotions and controversy. Still, it is inevitable. Health care systems all over the world undergo constant transformation processes leading to health improvement of population.

Financing mechanism of health services is one of the most important tools of realizing macroeconomic goals of health care systems, among which are economic and medical effectiveness in rendering health services as well as control of level and cost growth dynamics¹. In European health care systems there function several different mechanisms of health care financing. They are: procedure payment, per diem and personam payment, hospitalization payment, disease case payment, financing on the basis of global budget, capitation system, and reimbursement of costs for rendered health services. The most usual is a mix of several methods, which results from the health care sector uniqueness in a country.

The choice of financing mechanism of health services is extremely important, as the health care market is characterized by unlimited demand for services and limited resources for rendering them. The World Health Organization, according to new health policy, assumes that up to 2010 the member countries of WHO in the European Region *should have mechanisms of sustainable financing and allocation of means for health care systems, based on equal access, profitability and optimal quality*². The Council of Europe in its 91/C 304/05 resolution finds it necessary that *Member countries take into account changes in health care costs and their required implications for affordability of health care*

¹ A. Sobczak, [2000], *Mechanizmy finansowania usług zdrowotnych*, „Zdrowie Publiczne” 2000, suplement 1, p. 35.

² *Zdrowie 21 – zdrowie dla wszystkich w XXI wieku*, [2001], Centrum Systemów Informatycznych Ochrony Zdrowia, Vesalius, Kraków, p. 35.

services, appropriate in quality. It is not possible to define the level of financial resources essential for proper functioning of health system. There is no close correlation between the level of health care expenditures and the health condition of the population. Transformation of health care systems should be focused first of all on rational use of public financial means through drafting regulations to control precisely their flow. According to an analysis of international comparisons, the European countries undertake different organizational actions to improve effectiveness in using resources efficiently, such as control range widening of prices, costs and quality; cost reduction is stimulated through modification of hospital treatment financing mechanisms, that is implementing Diagnosis Related Group Systems and introducing budget limits³.

Increasing health service costs, especially in hospital treatment, and worsening of the economic situation in the world, stimulated research projects on health care, that is *HealthBASKET – costs of health benefits and services in Europe*⁴ and *EuroDRG – Diagnosis-Related Groups in Europe: towards Efficiency and Quality*⁵, with participation of 10 EU Member States using Diagnosis Related Groups. Poland and Estonia represent Central and Eastern Europe. The aim of EuroDRG Project, put into life in 2009, is to compare costs and prices of hospital health benefits, taking into account structural factors at the national, regional and hospital levels in order to explain the costs difference within the European countries and between them. The Project envisages research on clinical quality in the European Union within the Diagnosis Related Groups as well as creating so-called *benchmarking club* dealing with systematic comparative analysis of some selected groups of European hospitals. Depending on the research results, legitimacy and possibility of creating a pan-European

³ A. Młynarska – Wichtowska, [April 2004], *Finansowanie ochrony zdrowia w krajach UE. Informacja No. 1042*, Kancelaria Sejmu, Biuro Studiów i Ekspertyz, Wydział Studiów Budżetowych, p. 6.

⁴ The research showed a low quality of cost data transferred to payers by service providers and lack of generally accepted, uniform methods of unit cost calculations that could be the basis of health benefit pricing; *HealthBASKET – Costs of health benefits and services in Europe*, a project financed by the European Commission within the Sixth Framework Programme, Task 3 - *Comparison of health care in Member states at the level of individual services*, formulated for *identification of possible methodologies of service cost comparison and range evaluation of possibilities for future development of auditing and health care cost accounting systems as a step towards more cost-effective systems of health care*, European Health Management Association, participants: Denmark, France, Germany, Hungary, Italy, Poland, Spain, The United Kingdom, The Netherlands; project duration: 2004–2007; www.ehma.org.

⁵ *EuroDRG – Diagnosis – Related Groups in Europe: towards Efficiency and Quality*, realization within the *Seventh Framework Programme*; participants: Austria, The United Kingdom, Ireland, Estonia, Finland, France, Germany, The Netherlands, Poland, Spain; project duration: 2009–2011, www.eurodrgeu.

mechanism of hospital treatment financing, on the basis of the Diagnosis Related Groups, are taken into consideration.

Diagnosis Related Group – basic assumptions

The Diagnosis Related Group (DRG) means joining patients into groups with similar costs of treatment and diagnosis and similar treatment methods. The system assumptions were worked out by Prof. Robert B. Fetter from Yale University, USA, in the 1970s, based on the statistic data analysis of 1,700,000 patients released from hospitals in New Jersey. In the original system, patients with similar medical diagnosis and costs were put into 333 diagnostic groups in 54 main categories, according to the following assumptions⁶:

- each group should have its unique characteristics and clinical importance; physicians dealing with a given group should associate it with similar treatment method and a specified patient characteristics with respect to duration of hospital stay, kind of prescribed diagnostic procedures, medicines, treatment, etc.,
- particular groups should consist of patients with similar treatment costs,
- the number of groups should be easy to analyse, that is they should consist of hundreds not thousands of elements; particular groups should be defined according to widely available data from hospital files,
- groups should be useful for resource allocation, hospital management, planning, and control of resource use.

The basis of the DRG system performing effectively is proper pricing of health services. There are two ways of pricing within the DRG system⁷:

- group pricing method based on cost scales, defining links between disease cases according to the intensiveness of the resources used,
- group pricing method based on real average unit costs of health services, i.e. individual cost of one patient treatment ranging from medical procedure costs to pharmacotherapy costs and costs of treatment per personam and per diem⁸.

⁶ J. Grabowski, A. Kozierekiewicz, [2001], *Rozliczanie szpitali według DGR*, „Szpital Polski” 2001, No. 2(59), p. IV.

⁷ E. Erlandsen, [2008], *Improving the Efficiency of Health Care Spending: What Can be Learnt from Partial and Selected Analyses of Hospital Performance?*, OECD Economic Studies 2008, No 44/1, p. 8.

⁸ *A medical procedure* is an element of prevention, diagnosing, treatment or rehabilitation that can be separated as part of the patient's contacts with a health care institution, acceptable by medical professionals, which may be treated at the same time as an average carrier of costs (the draft ordinance by the Minister of Health and Social Care concerning specific rules of cost accounting in public health care institutions [projekt rozporządzenia Ministra Zdrowia i Opieki Społecznej w sprawie szczególnych zasad rachunku kosztów w publicznych zakładach opieki zdrowotnej], the unpublished ver-

Health services pricing based on costs demands defining cost categories that are the basis for calculation. A crucial problem is stating, which costs are justified and which costs come from ineffective activities. The changing level of abilities to render services, characteristic for operation of hospitals, may skew calculations of health services.

The DRG system should cause lowering individual health service costs but nor necessarily total hospital treatment costs. It is treatment effectiveness that is important rather than the reduction of costs in the sector. The DRG supports a costs competition of hospitals and a more effective use of resources but does not settle accounts of real costs of patient treatment borne by a hospital. When the cost of treatment within a diagnosis group in a hospital is lower than the established rate, the hospital gains profits, when the costs are higher losses are generated. The aim of the DRG system on the one hand is to state a real level of reimbursement of health service costs, on the other hand, raising effectiveness of treatment and limiting the number of useless health services.

The DRG systems play numerous functions in health care management, e.g., they enable setting health service prices, which ensure covering of own costs, comparing economic effectiveness of treatment between hospitals; assessing economic effectiveness of different therapies, planning hospital resources according to prospective changes in the population health condition.

Comparison of different financing mechanisms of hospital treatment in respect to its effectiveness, accessibility and quality of health services points to the leading position of payment per case method, whose most popular form is the Diagnosis Related Group system (table 1).

Table. 1. Assessment of selected financing mechanisms of hospital treatment according to criteria of effectiveness, accessibility and quality.

| Financing mechanisms | Assessment criteria | | |
|-----------------------------------|---------------------|---------------|-------------|
| | Effectiveness | Accessibility | Quality |
| Payment for procedure | Unspecified | + | Unspecified |
| Payment per personam and per diem | - | Unspecified | Unspecified |
| Payment for case | + | + | Unspecified |
| Global budget | + | Unspecified | Unspecified |
| Capitation system | + | Unspecified | Unspecified |

Source: own study based on: M. McKee, J. Healy, (ed.), [2002], *Hospitals in a changing Europe. European Observatory on Health Care Systems Series*, World Health Organization, p. 157.

sion, April 1996). *Pharmacotherapy* is a therapy with medicinal products as it is provided for in the statute of 6 September 2001 *Pharmaceutical Law [Prawo farmaceutyczne]* (Journal of Law - Dz.U. from 2008, No. 45, item 271, with subsequent amendments.). *Per personam and per diem* is one day of one patient's stay at hospital.

The DRG system has been implemented in many European countries, such as The United Kingdom, Ireland, Spain, France, Belgium, The Netherlands, Denmark, Germany, Austria, Hungary, Finland, Norway, Sweden, Estonia, Greece, Italy, Poland, The Czech Republic, Bulgaria, and Romania. The constitution and implementation of the DRG systems in particular countries are different. In most countries the DRG system implementation is limited to hospital treatment in the so-called emergency departments; the system is rarely introduced in long-term or ambulatory treatment. The DRG is recommended by the European Union as the basic financing mechanism of hospital treatment.

The analysis of system solutions in Poland

In Poland the obligatory health insurance system has functioned since 1998. The control is provided by the Ministry of Health and the National Health Fund [Narodowy Fundusz Zdrowia – NFZ]. The health insurance contribution equals to 9% of an employee's pay and is deducted from it. The total expenditures on health care are estimated at 6.2% of GDP, i.e. 910 \$ PPP *per capita*. Health services are financed from public and private resources. The share of public expenditures on health care in the total health care expenditures is at a low level of 69.9%.(table 2).

Table 2. Selected indexes featuring financing level of health care in Poland in years 1998-2006.

| Indexes | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|------|------|------|------|------|------|------|------|------|
| Total expenditures on health care (in % of GDP) | 5.9 | 5.7 | 5.5 | 5.9 | 6.3 | 6.2 | 6.2 | 6.2 | 6.2 |
| Total expenditures on health care <i>per capita</i> (in \$PPP) | 559 | 573 | 583 | 642 | 733 | 749 | 808 | 844 | 910 |
| Public expenditures on health care <i>per capita</i> (in \$PPP) | 366 | 408 | 408 | 462 | 521 | 524 | 554 | 585 | 639 |
| Share of public expenditures on health care in total expenditures on health care (in %) | 65.4 | 71.1 | 70.0 | 71.9 | 71.2 | 69.9 | 68.6 | 69.3 | 69.9 |
| Share of public expenditures on health care in total public expenditures (in %) | 8.7 | 9.5 | 9.4 | 9.6 | 10.2 | 9.8 | 10.0 | 9.9 | 9.9 |

Source: own study based on data of the World Health Organization, <http://apps.who.int/whosis/data/>, 20.07.2009.

The health care system is based on 3 levels of rendering health services, i.e. ambulatory (basic and specialist), regular, and emergency health care. Hospital

treatment, due to the character of used resources – medical specialists, advanced technologies – is the most cost consuming segment in health care. According to the analysis of health care costs financed by the NFZ, hospital treatment has the biggest share in the total costs – 48.23% in 2008; the hospital treatment costs dynamics reached the level of 127.81% and was higher than the total costs dynamics, which was 122.99% (table 3). The high level of hospital treatment costs entails the basic aim of health service organization in this respect, i.e. effectiveness of performance, which is on the one hand described by the number of hospital bed use, on the other hand, by the duration of a patient's stay at hospital. The first index should tend to achieve the maximum level, the other one – the minimum, on condition that the end of hospitalization means the patient's recovery.

Table 3. Level and dynamics of health care costs financed by NFZ in years 2004-2008.

| Indexes | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|------------|------------|------------|------------|------------|
| Total costs (in thousands of zlotys) | 30 487 361 | 33 003 941 | 35 965 840 | 40 122 980 | 49 348 746 |
| Dynamics of total costs | 104.36 | 108.25 | 108.97 | 111.56 | 122.99 |
| Hospital treatment costs (in thousands of zlotys) | 13 241 238 | 14 569 644 | 15 688 121 | 18 623 126 | 23 802 149 |
| Dynamics of hospital treatment costs (in %) | 108.37 | 110.03 | 107.68 | 118.71 | 127.81 |
| Share of hospital treatment costs in total costs (in %) | 43.43 | 44.15 | 43.62 | 46.42 | 48.23 |

Source: own study based on reports from operations of the National Health Fund for the years 2003-2008.

Hospital bed rate per 10,000 people is in Poland at a low level of 45.9, whereas in European countries its usually 63⁹. The duration of average hospital stay is 6.2 days, which meets European standards¹⁰. Despite the small number of hospital beds, the rate of use has been dramatically dropping for the last few years, reaching the level of 69.9% in 2007¹¹ (table 4). The downward trend is

⁹ WHO data for 2007, <http://apps.who.int/whosis/data/>, 20.07.2009.

¹⁰ OECD data: the average duration of hospital stay in days in 2007: The Czech Republic – 7.8; Slovakia – 7.2; France – 5.4; Germany – 8.5; Austria – 5.8; Hungary – 6.1; The United Kingdom – 7.5; <http://stats.oecd.org/index.aspx>, 20.07.2009.

¹¹ It is assumed that the optimal level of the hospital bed use rate is 80%-85%.

extremely dangerous. The analysis of hospital debts made by The Institute of Research on Market Economy [Instytut Badań nad Gospodarką Rynkową] within the research project *Managing of public resources in Polish hospitals [Zarządzanie środkami publicznymi w polskich szpitalach]* showed that hospitals in highest debts do not differ much from the remaining hospitals in respect to the number of beds; what is important is the number of used beds – in hospitals with highest debts, the number is lower than the average for the whole population¹². The small number of beds and their use in hospitals accompanied by long queues of people waiting for specific services being rendered, show clearly that the structure of hospitals does not meet the health needs of patients¹³.

Table 4. Selected indexes concerning hospital treatment in Poland in years 1998-2007.

| Indexes | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---------|------|------|------|------|------|------|------|------|------|
| Number of hospital beds per 10,000 citizens | 53.1 | 51.8 | 49.5 | 48.9 | 49.8 | 49.1 | 48.0 | 47.0 | 46.3 | 45.9 |
| Level of hospital bed use (in %) | no data | 72.2 | 76.1 | 77.1 | 76.8 | 74.8 | 71.8 | 71.0 | 70.4 | 69.9 |
| Average duration of hospital stay (in days) | 10.1 | 9.0 | 8.5 | 8.0 | 8.0 | 7.5 | 6.9 | 6.7 | 6.4 | 6.2 |

Source: own study based on bulletins of the Ministry of Health for the years 1998-2007.

In the Polish health care system different mechanisms of financing health services are used, depending on the kind of services¹⁴. Hospital treatment is financed by the combined method system. The basis is the DRG mechanism, to-

¹² *Zarządzanie środkami publicznymi w polskich szpitalach. Zadłużenie i restrukturyzacja*, [22 September 2008, the material for the conference, Instytut Badań nad Gospodarką Rynkową, p. 3.

¹³ *Informacja Rządu na temat obecnej sytuacji ochrony zdrowia w Polsce*, Printed material No. 176, [23 January 2008], Warszawa, p. 18.

¹⁴ The NFZ contracts health services of the following kinds: basic health care, ambulatory specialist care, hospital treatment, psychiatric and addiction treatment, long-term care, medical rehabilitation, separately contracted services, dental treatment, prophylactic programmes, supply of orthopaedic products, auxiliary products and therapeutic technical products, therapeutic programmes, emergency aid and sanitary transport, and medical rescue.

gether with payment per personam and per diem, and payment for procedures, with annually set limits of hospital global budget and inner budgets of particular wards.

The DRG system was introduced in Poland in 2008 by the order No. 32/2008/DSOZ of President of the National Health Fund of 11 June 2008, entitled *The Diagnosis Related Groups [System Jednorodnych Grup Pacjentów – JGP]*. It is the Polish version of the American Diagnosis Related Groups, and prepared on the basis of the British equivalent of the system – Healthcare Resource Group (HRG). The JGP system managed exclusively financing of such activities as *hospital treatment*. Other hospital services, like advanced specialist services, health prevention programs, emergency aid, research, and others are financed according to different rules.

The first attempts to introduce the JGP system to settlements with hospitals took place at the end of the 1990s. In 1999 the JGP system was introduced in the Łódzka Regional Health Insurance Fund in gynaecology and midwifery hospital wards (according to the data concerning patient treatment costs in 10 hospitals in the Warmińsko-Mazurskie Province). In 2000-2003 the JGP system was implemented to settlement of hospital services for some selected ones in the Dolnośląska Regional Health Insurance Fund, and in 20001 in the Podkarpacka Regional Health Insurance Fund. At the same time works on the draft adaptation of the Austrian LKF system were carried out within the World Bank project¹⁵. Within the period from April to June 2008 the pilot JGP system based on the British HRG system was checked in selected 47 hospitals in 14 provinces. According to the collected data numerous changes and supplements were introduced to procedure classification, characteristics and pricing of groups. Then the created system was introduced in the whole area of Poland in July 2008.

Within the JGP system, hospital treatment is settled according to lump sums, the so-called tariffs, which are multiplication of a group point value, and the value of a point expressed in zlotys. The tariffs are attributed to specified groups, clinically homogeneous and with the same costs of service. Within the JGP groups there are surgery groups where patients are qualified according to the decisive ICD-9-CM code and non-invasive groups, where the ICD-10 code is of deciding importance¹⁶. The following factors influence the value of the

¹⁵ *Jednorodne Grupy Pacjentów – przewodnik po systemie*, [2008], „Menedżer Zdrowia” 2008, No. 4, p. 4.

¹⁶ *Międzynarodowa Klasyfikacja Procedur Medycznych, II polska edycja z aneksem: Klasyfikacja Badań Laboratoryjnych*, Vesalius, Kraków 1999, *Międzynarodowa Statystyczna Klasyfikacja Chorób i Problemów Zdrowotnych, Rewizja 10*, Vesalius, Kraków 1994.

¹⁶ The ordinance on specification of conditions and terms of concluding and implementation of contracts of the type: hospital treatment No. 93/2008/DSOZ by President of National Health Fund of 22 October 2008 [zarządzenie w sprawie określenia warunków

groups: diagnosis, basic and additional medical procedures performed, complications and accompanying diseases, the patient's age, the way of admission and duration of hospital stay.

According to the JGP mechanism the hospital reports the payer about the completed hospitalization of the patient that covers all services rendered to the patient during the time from admission to hospital to the date of discharge or death, irrespective of the number of hospital wards where the patient has been treated. A rule has been accepted that all procedure costs during the whole hospitalization are financed. A group generating the highest costs is identified so groups cannot be summed up. There are services that cannot be defined by means of diagnoses and procedures – they have been placed in a catalogue of separate services. Due to high costs of some specific elements of procedure, especially related to complex oncological treatment and intensive therapy, and also with application of expensive medicines, or application of medical products, it is allowed to settle groups jointly with services included in the remaining catalogues. A possibility to sum up services has been indicated in the NFZ information materials. Hospitalizations with extended time above the limit established for a given group, resulting from the rules of the medical procedure (including treatment of complications and rehabilitation) are financed additionally by the payment method per personam and per diem. This solution is to cover treatment costs of the patients who require a special procedure and has been based on an assumption that due to reduction of care intensity, the average cost exceeding the established limit is lower in case of per personam and per diem. The point value exceeding the limit covered in the lump in case of per personam and per diem is established in the group catalogue at the level of 80% of the average value of per personam and per diem cost for a given group, but not higher than 6 points (i.e. 306 zł in 2009)¹⁷.

Establishment of JGP tariffs in 2008 required matching health services related to hospital treatment, specified in the NFZ catalogue of 2007 to the JGP system concerning their merits, responding to the descriptions and definitions of the individual JGP groups, and concerning assessment of cost uniformity of the services. The analysis consisted in calculation of the average value weighed by the number of occurrences during the yearly settling period for the service groups ascribed to the individual JGP, comparison of the average value of the JGP group to the value of the given group in the system of the British relations,

zawierania i realizacji umów w rodzaju: leczenie szpitalne] (BIP NFZ of 22.10.2008, with subsequent revisions).

¹⁷ The ordinance No. 93/2008/DSOZ by President of the National Health Fund of 22 October 2008 on specification of conditions and terms of concluding and implementation of contracts of the type: hospital treatment [zarządzenie w sprawie określenia warunków zawierania i realizacji umów w rodzaju: leczenie szpitalne] (Public Information Bulletin - BIP NFZ of 22.10.2008, with subsequent revisions).

and assessment of the tariff uniformity in the new JGP groups in relation to their composition elements. In 2008 within the JGP system 462 groups were separated, collected in 16 sections. The price of one calculation point was established at the level of 48 zł, and in 2009 – of 51 zł. The values of the groups were determined by the forecast financing level of hospital treatment in a given year (revenues of the NFZ), and not by real costs borne by hospitals. Establishment of the JGP tariffs in the subsequent years of the system operation is to be executed by comparison of production cost of one JGP point in all hospitals that are ready to supply data, and by comparison of production cost of one JGP point for individual hospital wards, together with assessment of their profitability. According to the binding regulations, hospitals are obliged to keep traditional accounts of full costs, collecting costs in three basic evidencing systems: of type, subject and object, with division into direct and indirect costs¹⁸. Unfortunately only very few units keep accounts enabling precise calculation of unit costs of health services¹⁹. Individual elements of the cost accounts function in fragments, and data generated by hospitals are not comparable, due to inconsistent calculation methods. Any possibility to establish JGP tariffs based on real average unit costs is conditioned by the method unification of keeping cost accounts in hospitals²⁰. The imprecise assessment rules are, according to the Ministry of Health, one of the most important problems of the health care system. Introduction of a uniform and transparent way of cost calculation, binding all hospitals using public means, is one of the basic postulates raised while reforming the

¹⁸ Accountancy Law [*ustawa o rachunkowości*] of 29 September 1994 (Journal of Law - Dz.U. from z 2002, No. 76, item 694, with subsequent amendments), *the ordinance on specific rules of cost accounts in public institutions of health care [rozporządzenie w sprawie szczególnych zasad rachunku kosztów w publicznych zakładach opieki zdrowotnej]* by the Minister of Health and Social Care of 22 December 1998 (Journal of Law - Dz.U. No 164, item 1194); the ordinance does not show any detailed solutions, which leads to discrepancies in its interpretation, and the resulting lowering of the comparability level of cost data, provided by various hospitals; the Ministry of Health are preparing draft of a new ordinance concerning cost accounts in hospitals, cf.: Biuletyn z posiedzenia Komisji Zdrowia No. 36, Kancelaria Sejmu, Biuro Komisji Sejmowych, N. 949/VI kad., 10.07.2008, p. 30.

¹⁹ According to the research carried out in 2005 only 30% of hospitals keep accounts of unit costs for all executed medical procedures, cf.: B. Pogorzelski, L. Wdowiak, [2005], *Badanie procesu wdrożeń systemów informacyjnych i narzędzi informatycznych w lecznictwie zamkniętym – analiza wstępna*, „Zdrowie Publiczne” 2005, No. 115(4), p. 632.

²⁰ *Jednородne Grupy Pacjentów – przewodnik po systemie*, [2008], „Menedżer Zdrowia” 2008, No. 4, p. 16.

health care system in Poland²¹. Lack of balance between incomes and costs of their acquisition result in indebtedness of health institutions²².

An analysis of the NFZ data, concerning realization and financing of health services during hospital treatment in 2008, has shown two opposite trends. The change to the mechanism of hospital treatment financing, at the growth of the total value of health services, caused the fall of the hospitalization number by 11% and the fall of the treated patients' number by 6%. On the other hand the average amount allocated to treatment of one patient grew by 14% and the average hospitalization value grew by 21% (table 5).

Table 5. Realization of health services concerning hospital treatment in 2008.

| Indexes | 1st 6 months | 2nd 6 months | Dynamics (1st/2nd) |
|--|--------------|--------------|--------------------|
| Total value of health services (in thousands of zlotys) | 8 971 618.07 | 9 637 038.55 | 107% |
| Number of patients | 2 947 114 | 2 764 778 | 94% |
| Number of hospitalizations | 4 102 421 | 3 653 937 | 89% |
| Average amount paid for treatment of one patient (in zł) | 3 044.20 | 3 485.65 | 114% |
| Average amount paid for hospitalization (in zł) | 2 186.91 | 2 637.44 | 121% |

Source: own study based on: *Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2008 rok*, [2009], Narodowy Fundusz Zdrowia, p. 26

²¹ *Strategia rozwoju ochrony zdrowia w Polsce na lata 2007 – 2013*, [21 June 2005], Ministerstwo Zdrowia, Warszawa, p. 25; S. Golinowska, C. Włodarczyk, (ed.), [2005], *Projekt reformy systemu ochrony zdrowia w Polsce. Raport CASE – Doradcy we współpracy z Collegium Medicum Uniwersytetu Jagiellońskiego, Część II – Zarys reformy*, CASE – Doradcy Sp. z o.o., Warszawa, p. 67.

²² Controls carried out by the Supreme Chamber of Control have shown that value fall of the financial result in independent public institutions of health care took place due to unbalanced costs and reduced incomes, which was caused by reduction of the number and prices of services contracted by the NFZ. It was following a consistent financial policy aimed at limiting expenses, according to the rule of self-financing of the health insurance, carried out by balancing costs and incomes, and by incurring obligations towards the service providers within the financial plans of individual NFZ units. Independent public institutions of health care did not receive in their obtained incomes any reimbursements of costs corresponding to the quantities and qualities of the rendered services. Cf.: *Zadłużenie samodzielnych publicznych zakładów opieki zdrowotnej*. Informacja dla Sejmowej Komisji Zdrowia, [November 2004], Ministerstwo Zdrowia, Warszawa, p. 25.

The year 2008 was the implementation period for the JGP system, that is why it would be premature to assess whether the reform of the hospital treatment financing was successful or not. The NFZ data are not authoritative as they were affected too much by external factors, disturbing the normal functioning of the new mechanism that finally should limit an increase of unit costs, not disturbing accessibility to health services.

Transformation of the health care system in Estonia

In Estonia, like in Poland, there is a system of compulsory health insurances (1992). The system is supervised by the Ministry of Social Affairs and the Estonian Health Insurance Fund. The health insurance contribution is 13% of the employee's pay and burdens the employer²³. The total expenditures on health care are at the level of 5% of GDP, i.e. 989 \$PPP *per capita*. In Estonia there is a system of private co-payment for health services. In hospital treatment it is compulsory to contribute to hospitalization, which since 2003 has been maximum 25 EEK²⁴ for each day of stay up to ten days²⁵. Despite introduction of the co-payment system public financing of health services reaches the level of 74.2% (table 6).

Table 6. Selected financial indexes of health care financing in Estonia in years 1998-2006.

| Indexes | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|------|------|------|------|------|------|------|------|------|
| Total expenditures on health care (in % of GDP) | 5.5 | 5.8 | 5.3 | 4.9 | 4.9 | 5.0 | 5.2 | 5.0 | 5.0 |
| Total expenditures on health care <i>per capita</i> (in \$PPP) | 474 | 522 | 513 | 519 | 561 | 646 | 740 | 846 | 989 |
| Public expenditures on health care <i>per capita</i> (in \$PPP) | 409 | 423 | 398 | 409 | 432 | 498 | 562 | 651 | 734 |
| Share of public expenditures on health care in total expenditures on health care (in %) | 86.3 | 81.0 | 77.5 | 78.6 | 77.1 | 77.1 | 76.0 | 76.9 | 74.2 |

²³ The health insurance contribution also includes sickness insurance.

²⁴ EEK – the Estonian kroon, 25 EEK = ca. €1.6.

²⁵ T. Habicht, M. Thetloff, [2003], *Financing of Mental Health in Estonia*, „PRAXIS Working Paper” 2003, No. 3, p. 7.

| Indexes | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|------|------|------|------|------|------|------|------|------|
| Share of public expenditures on health care in total public expenditures (in %) | 12.3 | 11.4 | 11.3 | 11.0 | 10.5 | 11.1 | 11.6 | 11.5 | 11.3 |

Source: own study based on data of the World Health Organization, <http://apps.who.int/whosis/data/>, 20.07.2009.

A comparative analysis of the selected indexes concerning shaping of expenditures on health care indicates a similar level and character of health service financing in Poland and Estonia, below European standards (table 7).

Table 7. Selected financial indexes of health care financing in Poland, Estonia, and in countries of WHO European Region in 2006.

| Indexes | Poland | Estonia | WHO |
|---|--------|---------|-------|
| Total expenditures on health care (in % of GDP) | 6.2 | 5.0 | 8.4 |
| Total expenditures on health care <i>per capita</i> (in \$PPP) | 910 | 989 | 1 719 |
| Public expenditures on health care <i>per capita</i> (in \$PPP) | 639 | 734 | 1 299 |
| Share of public expenditures on health care in total expenditures on health care (in %) | 69.9 | 74.2 | 75.6 |
| Share of public expenditures on health care in total public expenditures (in %) | 9.9 | 11.3 | 14.8 |

Source: own study based on data of the World Health Organization, <http://apps.who.int/whosis/data/>, 20.07.2009

The profile and the numbers of hospitals and hospital beds in Estonia have been conditioned historically and politically, inadequately to the health needs of the population. At present, thanks to the implemented reforms there are 57 hospitals *versus* 120 in 1990. The number of hospital beds per 10,000 persons was 56.5 (2006), and the index of bed use was at the level of 74.1% (2006), with the average duration of the patient's stay in hospital of 6.3 days (2008)²⁶.

²⁶ Cf.: *Inpatient care providers by countries and two biggest cities (Tallinn, Tartu), type of hospital and number of beds*, 07.01.2009, <http://www.tai.ee/?id=5743>, 20.07.2009; *Hospital reform in Bulgaria and Estonia: What is rational and what not? Final Report*, [January 2007], PRAXIS Center for Policy Studies, Tallinn, p. 26; A. Koppel, K. Kahur, T. Habicht, P. Saar, J. Habicht, E. Ginneken, [2008], *Health Systems in Transition – Estonia*, „European Observatory on Health Systems and Policies” 2008, No 10/1,

Estonian hospitals function as joint stock companies or foundations. They are independent units, taking independent decisions concerning financial and economic policies. They have the right to gain additional incomes, in addition to rendering health services financed on the basis of contracts within the health care system. The financing mechanism of hospitals is of mixed character – the base is the DRG system (in its Norwegian version – Nord-DRG), supplemented by payments per personam and per diem, and payments for executed procedures. The basis of health service assessment is unit costs, calculated based on the action cost accounts²⁷.

Transformation of the inpatient care is based on the governmental plan of health policy, i.e. *Hospital Master Plan 2015*, whose purpose is to ensure health security of citizens, by means of some influence on the shape of the whole system of health care and actions of its individual participants. In 2003 based on *Hospital Master Plan 2015*, *Hospital Network Development Plan* was prepared, where directions of hospital development were specified, i.e. guarantee of access to high quality medical care, cost optimization of creation and operation of hospital networks and ensuring support for hospital networks. *Hospital Network Development Plan* specified the target level of basic indexes concerning medical care in hospitals in 2015, i.e. reduction of the bed number to 3,200, increasing the level of bed use to 83%, and reduction of the index of average stay duration to 4.6 days²⁸.

The DRG system was introduced in Estonia in 2004 to stop the increase of health service unit costs. The implementation process was initiated by covering 10% of hospital treatment by the DRG system in 2004 and 50% in 2005. The simulation carried out for the subsequent years of the DRG operation confirmed achievement of the assumed target – although the unit costs are rising, the rising tendency in the DRG system is weaker:

p. 112; P. Gottret, G.J. Schieber, H.R. Waters, (ed.), [2008], *Good Practices In Health Financing. Lessons from Reforms in Low- and Middle – Income Countries*, The World Bank, p. 249, *Estonian Health Insurance Fund Annual Report 2008*, [2009], Estonian Health Insurance Fund, Tallinn, p. 51.

²⁷ Considering the changes to the cost structure that have been observed in recent years in health institutions, i.e. an increase of indirect costs to the level of 70%, introduction of action cost accounts is purposeful and justified. Cf.: K. Kahur, [9 May 2007], *Development of DRG price calculation in Estonia*, Estonian Health Insurance Fund, Stockholm, p. 16; A. Koppel, K. Kahur, T. Habicht, P. Saar, J. Habicht, E. Ginneken, [2008], *Health Systems in Transition – Estonia*, „European Observatory on Health Systems and Policies” 2008, No 10/1, p. 86.

²⁸ M. Jesse, [2008], *Governance of the health system, health insurance fund and hospitals in Estonia – opportunities to improve performance*, World Health Organization Regional Office for Europe, p. 24.

- for 2005 the unit costs of a specific disease case calculated in the DRG system were higher by 0.6% than the costs calculated based on the payment system for executed procedures (fee for service – FFS),
- for 2006 the unit costs of a specific disease case calculated in the DRG system were lower by 0.5% than the costs calculated based on the payment system for executed procedures (FFS),
- for 2007 the unit costs of a specific disease case calculated in the DRG system were lower by 1.5% than the costs calculated based on the payment system for executed procedures (FFS).

The monetary impact of DRG followed the same trend and fell during 2005-2007 indicating that the DRG system should contain the cost per case compared to the situation where only the fee-for-service system (FFS) would be used²⁹ (table 8).

Table 8. Monetary influence of DRG system.

| FFS versus DRG | 2004 (10% DRG) | 2005 (50% DRG) | 2006 (50% DRG) | 2007 (50% DRG) |
|----------------------|-------------------|-------------------|-------------------|-------------------|
| Influence of DRG (%) | 0.1 % | 1.4% | - 0.1% | - 1.5% |

Source: K. Kahur, [2007], *Development of DRG price calculation in Estonia*, Estonian Health Insurance Fund, Stockholm, 9 May 2007, p. 22.

According to *Estonian Health Insurance Fund Annual Report 2008*, the average treatment cost of a sickness case in hospitals increased by 16% in 2008 in relation to 2007, whereas the increase was 22% for ambulatory treatment. In the same time the number of payments per personam and per diem and the average duration of stay fell by 2%, at the unchanged number of patients³⁰. The level of indexes evidences a positive impact of the DRG mechanism upon hospital treatment.

The system of health care in Estonia, despite the low financing level, belongs to the most effective ones in Eastern and Central Europe. In 2009 Estonia held the high, twelfth place in the international ranking of health care systems *Euro Patient Empowerment Index 2009* (the survey covered 31 countries). The first place was held by Denmark, whose experience, to a large extent, was used by Estonia in the transformation process (table 9).

²⁹ K. Kahur, [8 October 2008], *The development of DGR based payment system and its effect on cost containment in Estonia*, Estonian Health Insurance Fund, Lisbon, p. 1

³⁰ *Estonian Health Insurance Fund Annual Report 2008*, [2009], Estonian Health Insurance Fund, Tallinn, p. 51.

Table 9. Ranking *Euro Patient Empowerment Index 2009* (selected countries).

| Countries | Ranking place | Assessment categories | | | |
|-----------|---------------|-----------------------|-----------------------|--|---|
| | | Patient's rights | Access to information | Decision-making concerning treatment financing | Decision-making concerning applied medical technologies |
| Denmark | 1 | 370 | 260 | 67 | 80 |
| Estonia | 12 | 352 | 220 | 80 | 27 |
| Poland | 25 | 315 | 120 | 40 | 53 |
| Bulgaria | 31 | 259 | 120 | 67 | 27 |

Source: own study based on: *The Empowerment of the European Patient 2009 – options and implications. Report*, [2009], Health Consumer Powerhouse, p. 28.

The Estonian experience concerning reforming health care indicates some important aspects of correct operation of the system, including e.g.³¹:

- health insurance should match the fiscal policy of the state and respond to the situation and trends on the labour market,
- private co-payment for health services plays a very important role in financing health care, but it should not be a financial barrier for the indigent part of the population,
- the financing mechanism of health services should be rational, transparent and flexible (the DRG system!),
- contracting health services stops the increase of cost and on the other hand guarantees access to health care services of specified quality,
- an important role in development and quality of health services is played by information technology.

The success of the health care system transformation in Estonia is a consequence of the way the changes were carried out, i.e. on the one hand of reaching a political *consensus* in the question of planned reforms, and on the other hand of the social support and co-operation of medical professionals. Another, no less important factor of success, was a high economic growth and specification of the health insurance rate at a level ensuring proper financing of health care. At present proper operation and further transformation of the health care system in Estonia may be substantially threatened by the economic crisis. According to the Eurostat data it is envisaged that Estonia's GDP will really fall from the level of 10.4% in 2006 to – 10.3% in 2009, which will mean a substantial reduction of financial means in the health sector³².

³¹ P. Gottret, G.J. Schieber, H.R. Waters, (ed.), [2008], *Good Practices In Health Financing. Lessons from Reforms in Low- and Middle – Income Countries*, The World Bank, p. 261.

³² GDP of Estonia was at the level of 9.6% in 2000 (EU: 3.9%), 7.1% in 2003 (EU: 1.3%), 10.4% in 2006 (EU: 3.2%), Eurostat: *Real GDP growth rate*,

Summing-up and conclusions

The period of the economic crisis does not favour transformation processes, but in the sector of health care they are unavoidable. The amounts of means allocated to financing of health services in the system of health insurances are determined by employment rate and amounts of the population's incomes. The present financial and economic crisis has led to rapid and fast shrinking of economic performance and to the world recession. The breakdown of prosperity has important effects for employment – there is a fast increase in unemployment rates and the EU faces a fall of the growth potential, which has already been threatened by ageing of the population³³. In *The OECD Strategic Response to the Global Financial and Economic Crisis [Strategiczna odpowiedź OECD na globalny kryzys finansowy i gospodarczy]*, published on 23 December 2008, it is indicated that preserving sustainable economy requires, e.g. maintaining long-term assumptions of the budget policy reform with preservation of priority treatment of health care, education and innovativeness³⁴. Although the reforms require expenditures, but in a longer perspective of time they lead to improvement of the socio-economic situation.

The year 2009 is the first one when there is no statutory increase of the health contribution in Poland and that is why the whole difference between the incomes of the National Health Fund in 2008 and 2009 rests on the economic growth. The NFZ financial plan for 2009, constructed on the basis of the Government's macroeconomic forecast, presumes NFZ incomes at the level of 56,543,994,000 zł³⁵. The forecast was prepared with an assumption that the Polish economy would suffer from the economic crisis effects to a relatively insignificant extent. The GDP growth was assumed to fall to 4.8%, against 4.9% in 2008. In *The information on the macroeconomic situation and the condition of the State budget for 2009 [Informacja o sytuacji makroekonomicznej i stanie budżetu państwa na 2009 r.]*, prepared in June 2009, the Ministry of Finances

<http://epp.www.eurostat.ec.europa.eu>, 20.07.2009.

³³ *The Commission's report to the European Parliament, the Council, the European Socio-Economic Committee and the Region Committee. Meeting challenges related to ageing effects of the EU Community (The report on the community ageing, 2009) [Komunikat Komisji do Parlamentu Europejskiego, Rady, Europejskiego Komitetu Ekonomiczno-Społecznego i Komitetu Regionów. Sprostanie wyzwaniom związanym ze skutkami starzenia się społeczeństwa w UE (Sprawozdanie na temat starzenia się społeczeństwa, 2009)]*, [29 April 2009], Commission of the European Communities, Brussels, p. 6.

³⁴ J. Adamiec, [2009], *Strategiczna odpowiedź OECD na globalny kryzys finansowy i gospodarczy*, „Analizy” 2009, No. 6(14), Biuro Analiz Sejmowych, p. 3.

³⁵ *Plan finansowy Narodowego Funduszu Zdrowia na 2009r.*, [2008], Narodowy Fundusz Zdrowia, Warszawa, p. 9.

forecasts a much greater change to GDP, i.e. the fall to the level of 0.2%. At the same time unemployment rate is forecast to grow from the level of 9.5% in 2008 to 12.5% in 2009 and 13.8% in 2010³⁶. It is obvious that amounts of financial means for health services will fall. So in this context one should focus now on the most important issues, i.e. tightening of the health care system and additional financing of it, e.g. by increasing the health care contribution, introduction of private co-paying system, and development of the Diagnosis Related Groups.

Literature

Annual Report 2001 from the WHO Collaborating Centre for the Classification of Diseases in the Nordic Countries, [21-27 October 2001], World Health Organization.

Biuletyn Ministerstwa Zdrowia za 1998r., [1999], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 1999r., [2000], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 2000r., [2001], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 2001r., [2002], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 2002r., [2003], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 2003r., [2004], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 2004r., [2005], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 2005r., [2006], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 2006r., [2007], Ministerstwo Zdrowia.

Biuletyn Ministerstwa Zdrowia za 2007r., [2008], Ministerstwo Zdrowia.

Biuletyn z posiedzenia Komisji Zdrowia Nr 36, Kancelaria Sejmu, Biuro Komisji Sejmowych, No. 949/VI kad., 10.07.2008.

Chudzik E., Juszczak G., [2003], *Współczesne metody finansowania opieki zdrowotnej*, „Menedżer Zdrowia” 2003, No. 2.

Couffinhal A., Habicht T., [2005], *Health system financing in Estonia: situation and challenges in 2005*, „Health Systems Financing Programme”, World Health Organization Regional Office for Europe.

Erlandsen E., [2008], *Improving the Efficiency of Health Care Spending: What Can be Learnt from Partial and Selected Analyses of Hospital Performance?*, OECD Economic Studies 2008, No 44/1.

Estonian Health Insurance Fund Annual Report 2008, [2009], Estonian Health Insurance Fund, Tallinn.

³⁶ *Informacja o sytuacji makroekonomicznej i stanie budżetu państwa na 2009r.*, [June 2009], Ministerstwo Finansów, Warszawa, p. 1, 15.

- Eurostat, *Real GDP growth rate*, <http://epp.www.eurostat.ec.europa.eu>, 20.07.2009.
- Gajek F., Graliński J. St., Kasietczuk B., Kozierekiewicz A., Tkaczyk P., [1998], *Analiza kosztów leczenia pacjentów hospitalizowanych w kontekście wprowadzenia polskiej wersji DGR*, Warszawa.
- Gajek F., Graliński J. St., Tkaczyk P., [1999], *Jednorodne Grupy Pacjentów. Metodyka, studium analityczne oraz skale względne rozpoznań wg ICD10*, „Zdrowie i Zarządzanie” 1999, No. 6.
- Golinowska S., Włodarczyk C., (ed.), [2005], *Projekt reformy systemu ochrony zdrowia w Polsce. Raport CASE – Doradcy we współpracy z Collegium Medicum Uniwersytetu Jagiellońskiego*, CASE – Doradcy Sp. z o.o., Warszawa.
- Golinowska S., [2006], *Zmiany i reformy systemów ochrony zdrowia w krajach transformacji*, „Zeszyty Naukowe Ochrony Zdrowia. Zdrowia Publiczne i Zarządzanie” 2006, No. 1.
- Gottret P., Schieber G.J., Waters H.R., (ed.), [2008], *Good Practices In Health Financing. Lessons from Reforms in Low – and Middle – Income Countries*, The World Bank.
- Grabowski J., Kozierekiewicz A., Gajek F., [2001], *Polski system jednorodnych grup pacjentów*, „Służba Zdrowia” 2001, No. 80-81.
- Grabowski J., Kozierekiewicz A., [2001], *Rozliczanie szpitali według DGR*, „Szpital Polski” 2001, No. 2(59).
- Habicht T., Aaviksoo A., Koppel A., [November 2006], *Hospital Sector Reform in Estonia*, PRAXIS Center for Policy Studies, Tallinn.
- Habicht T., Thetloff M., [2003], *Financing of Mental Health in Estonia*, „PRAXIS Working Paper” 2003, No. 3.
- Health, Labour and Social Sector in 2007*, [2008], Ministry of Social Affairs of Estonia, Tallinn.
- Hospital reform in Bulgaria and Estonia: What is rational and what not? Final Report*, [January 2007], PRAXIS Center for Policy Studies, Tallinn.
- Huber M., [2006], *International Comparisons of Prices and Volumes in Health Care among OECD Countries*, European Center for Social Welfare Policy and Research.
- Informacja o sytuacji makroekonomicznej i stanie budżetu państwa na 2009 r.*, [June 2009], Ministerstwo Finansów, Warszawa.
- Informacja Rządu na temat obecnej sytuacji ochrony zdrowia w Polsce*, Druk nr 176, [23 January 2008], Warszawa.
- Inpatient care providers by countries and two biggest cities (Tallinn, Tartu), type of hospital and number of beds*, [7 January 2009], <http://www.tai.ee/?id=5743>, 20.07.2009.

- Jednorodne Grupy Pacjentów – przewodnik po systemie*, [2008], „Menedżer Zdrowia” 2008, No. 4.
- Jesse M., [2008], *Governance of the health system, health insurance fund and hospitals in Estonia – opportunities to improve performance*, World Health Organization Regional Office for Europe.
- Kahur K., [9 May 2007], *Development of DRG price calculation in Estonia*, Estonian Health Insurance Fund, Stockholm.
- Kahur K. [8 October 2008], *The development of DGR based payment system and its effect on cost containment in Estonia*, Estonian Health Insurance Fund, Lisbon.
- Kangro K., [May 2006], *Estonian experiences with case – mix – system: combined DRG with fee – for – service payment in hospitals funding*, Estonian Health Insurance Fund.
- Katrynicz A., [2008], *Zyskowe grupy*, „Gazeta Lekarska” 2008, No. 7-8.
- Konsultacje systemu Jednorodnych Grup Pacjentów ze środowiskami medycznymi*, [2008], „Menedżer Zdrowia” 2008, No. 5.
- Koppel A., Kahur K., Habicht T., Saar P., Habicht J., Ginneken E., [2008], *Health Systems in Transition – Estonia*, „European Observatory on Health Systems and Policies” 2008, No 10/1.
- Kornai J., Eggleston K., [2002], *Solidarność w procesie transformacji. Reforma służby zdrowia w Europie Wschodniej*, Wydawnictwo Wyższej Szkoły Przedsiębiorczości i Zarządzania im. Leona Koźmińskiego, Warszawa.
- Kozierkiewicz A., Laurent J-F., [1997], *Ocena aktywności szpitali dla celów kontraktowania i monitorowania kontraktów – analiza narodowego systemu jednorodnych grup pacjentów*, „Antidotum” 1997, No. 7.
- Kryzys finansowy. Wybrane zagadnienia*, [2009], Biuro Analiz Sejmowych, Wydawnictwo Sejmowe, Warszawa.
- Kuszewski K., Gericke Ch., [2005], *Health Systems In Transition – Poland*, „European Observatory on Health Systems and Policies” 2005, No 5/7.
- McKee M., Healy J., (ed.), [2002], *Hospitals in a changing Europe. European Observatory on Health Care Systems Series*, World Health Organization.
- Międzynarodowa Klasyfikacja Procedur Medycznych, II polska edycja z aneksem: Klasyfikacja Badań Laboratoryjnych*, [1999], Vesalius, Kraków.
- Międzynarodowa Statystyczna Klasyfikacja Chorób i Problemów Zdrowotnych, Rewizja 10*, [1994], Vesalius, Kraków.
- Młynarska- Wichtowska A., [kwiecień 2004], *Finansowanie ochrony zdrowia w krajach UE. Informacja nr 1042*, Kancelaria Sejmu, Biuro Studiów i Ekspertyz, Wydział Studiów Budżetowych.
- National Health Plan 2009 – 2020*, [2008], Ministry of Social Affairs of Estonia, Tallinn.
- OECD, <http://stats.oecd.org/index.aspx>, 20.07.2009.

- Plan finansowy Narodowego Funduszu Zdrowia na 2009 r.*, [2008], Narodowy Fundusz Zdrowia, Warszawa.
- Pogorzelski B., Wdowiak L., [2005], *Badanie procesu wdrożeń systemów informacyjnych i narzędzi informatycznych w lecznictwie zamkniętym – analiza wstępna*, „Zdrowie Publiczne” 2005, No. 115(4).
- Romaniuk P., Krajewski-Siuda K., [2006], *System ochrony zdrowia w Estonii – wybrane elementy, kierunki przemian*, „Zeszyty Naukowe Ochrony Zdrowia. Zdrowie Publiczne i Zarządzanie” 2006, No. 1.
- Rozporządzenie Ministra Zdrowia i Opieki Społecznej z dnia 22 grudnia 1998r. w sprawie szczególnych zasad rachunku kosztów w publicznych zakładach opieki zdrowotnej (Dz.U. Nr 164, poz. 1194).
- Ryć K., Skrzypczak Z., (ed.), [2008], *Ochrona zdrowia i gospodarka. Mechanizmy rynkowe a regulacje publiczne*, Uniwersytet Warszawski, Warszawa.
- Sobczak A., [2000], *Mechanizmy finansowania usług zdrowotnych*, „Zdrowie Publiczne” 2000, suplement 1.
- Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2003 rok*, [2004], Narodowy Fundusz Zdrowia.
- Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2004 rok*, [2005], Narodowy Fundusz Zdrowia.
- Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2005 rok*, [2006], Narodowy Fundusz Zdrowia.
- Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2006 rok*, [2007], Narodowy Fundusz Zdrowia.
- Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2007 rok*, [2008], Narodowy Fundusz Zdrowia.
- Sprawozdanie z działalności Narodowego Funduszu Zdrowia za 2008 rok*, [2009], Narodowy Fundusz Zdrowia.
- Stępniewski J., (ed.), [2008], *Strategia, finanse i koszty szpitala*, Wolters Kluwer Polska, Warszawa.
- Strategia rozwoju ochrony zdrowia w Polsce na lata 2007-2013*, [21 June 2005], Ministerstwo Zdrowia, Warszawa.
- The Empowerment of the European Patient 2009 – options and implications. Report*, [2009], Health Consumer Powerhouse.
- Ustawa z dnia 29 września 1994r. o rachunkowości (tj. Dz.U. z 2002r., Nr 76, poz. 694, z późn. zm.).
- World Health Organization, <http://apps.who.int/whosis/data/>, 20.07.2009.
- Włodarczyk C., [2003], *Reformy zdrowotne. Uniwersalny kłopot*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków.
- Włodarczyk C., Poździejch S., [2001], *Systemy zdrowotne. Zarys problematyki*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków.

Wojtyniak B., Goryński P., Kuszewski K., [grudzień 2006], *Wskaźniki do projektu tworzenia sieci szpitali z elementami analizy sytuacji demograficznej i stanu zdrowia ludności*, Państwowy Zakład Higieny, Warszawa.

Zadłużenie samodzielnych publicznych zakładów opieki zdrowotnej. Informacja dla Sejmowej Komisji Zdrowia, [November 2004], Ministerstwo Zdrowia, Warszawa.

Zarządzenie Nr 32/2008/DSOZ Prezesa Narodowego Funduszu Zdrowia z dnia 11 czerwca 2008r. w sprawie określenia warunków zawierania i realizacji umów w rodzaju: *leczenie szpitalne* (BIP NFZ z 17.08.2009).

Zarządzenie Nr 93/2008/DSOZ Prezesa Narodowego Funduszu Zdrowia z dnia 22 października 2008r. w sprawie określenia warunków zawierania i realizacji umów w rodzaju: *leczenie szpitalne* (BIP NFZ z 22.10.2008, z późn. zm.).

Zarządzanie środkami publicznymi w polskich szpitalach. Zadłużenie i restrukturyzacja, [22 September 2008], materiał na konferencję, Instytut Badań nad Gospodarką Rynkową

Streszczenie

SYSTEM DIAGNOSIS RELATED GROUP – NARZĘDZIE OGRANICZANIA KOSZTÓW W OCHRONIE ZDROWIA (NA PRZYKŁADZIE POLSKI I ESTONII)

Autor podejmuje próbę analizy funkcjonowania systemu Diagnosis Related Group, (DRG), który jest aktualnie najbardziej nowoczesnym mechanizmem finansowania świadczeń zdrowotnych. Temat jest szczególnie istotny z punktu widzenia wdrożenia w Polsce w 2008r. systemu DRG jako podstawowego mechanizmu finansowania leczenia szpitalnego. W artykule omówiono główne założenia, cele i funkcje systemu. Szczegółową analizą objęto Polskę i Estonię.

Mechanizm finansowania świadczeń zdrowotnych jest jednym z najistotniejszych narzędzi realizacji makroekonomicznych celów systemów ochrony zdrowia. W krajach europejskich funkcjonuje szereg różnych mechanizmów finansowania opieki zdrowotnej, najczęściej stosuje się kombinację kilku metod, będąca pochodną specyfiki sektora ochrony zdrowia w danym kraju. Reformy systemów ochrony zdrowia koncentrują się aktualnie na racjonalizacji wykorzystania środków publicznych przez tworzenie regulacji uszczelniających ich przepływ. Z analizy porównań międzynarodowych wynika, że kraje europejskie podejmują różnego rodzaju działania organizacyjne, służące podniesieniu efektywności wykorzystania posiadanych zasobów, m.in. rozszerza się zakres kontroli cen, kosztów i jakości, stymuluje się obniżkę kosztów poprzez modyfikacje mechanizmów finansowania leczenia szpitalnego, tj., m.in. wdrażanie systemów DRG. Diagnosis Related Group zalecany jest przez Unię Europejską jako podstawowy mechanizm finansowania leczenia szpitalnego. W ramach realizowanych w Europie pro-

jektów badawczych z zakresu ochrony zdrowia (m.in. w Polsce i w Estonii) rozważa się zasadność i możliwość stworzenia paneuropejskiego mechanizmu finansowania leczenia szpitalnego w oparciu o system DRG.

Artykuł przygotowany został na podstawie studiów literaturowych opracowań autorów polskich i zagranicznych oraz innych dostępnych materiałów w zakresie przyjętej tematyki, m.in.: akty prawne, informacje o wynikach kontroli przeprowadzonych przez Naczelną Izbę Kontroli, raporty i opracowania Ministerstwa Zdrowia, Ministerstwa Finansów, Narodowego Funduszu Zdrowia, Centrum Systemów Informacyjnych Ochrony Zdrowia, Centrum Analiz Społeczno-Ekonomicznych, Banku Światowego, OECD, EUROSTAT, World Health Organization, European Health Management Association i innych instytucji, zajmujących się sektorem ochrony zdrowia. W części opracowania dotyczącej estońskiego systemu ochrony zdrowia wykorzystano przede wszystkim materiały opublikowane przez Estońskie Ministerstwo Spraw Socjalnych oraz Estoński Fundusz Ubezpieczenia Zdrowotnego.

STUDIES SYSTEM IN THE BEST EUROPEAN UNIVERSITIES – LESSONS FOR POLAND

Stanisław MACIOŁ

Centre for Development of Economic Education
Warsaw School of Economics

Introduction

The process of building European Higher Education Area – according to the assumptions of Bologna Declaration (1999) – is in its final stage. The main Bologna goals (implement a system based essentially on two main cycles, implement a credits system and Diploma Supplement, support the mobility of students, teachers and researchers) have been achieved. At some countries the works are still in progress in respect to designing and implementing National Qualifications Frameworks, which ensure the transparency and comparability of levels of qualifications (diplomas, certificates) – irrespective of the place of obtaining them¹. At the same times the degree programmes are modified at many European universities in terms of expected learning outcomes, i.e. what a student should know, understand and/or be able to do upon completing the given education period. These degree programmes should also as much as possible answer the needs of the economy. The Polish universities also require the aforementioned quality changes. In the course of the on-going discussion regarding the go-vernment assumptions of higher education reform, a reference should be made to the proved solutions applied at the best European universities. The full internationalization of Polish universities and achievement of comparable quality of education seems impossible without mee-ting this condition. This paper is limited just to the degree programme in the area of economy and management at top four English and one French university.

In the common opinion of academic and economic circles and according to the professional rankings, the best universities in Europe are: University of Cambridge and University of Oxford. These two oldest English universities are

¹ See: *Higher Education in Europe 2009: Developments in the Bologna Process*, Education, Audiovisual and Culture Executive Agency (EACEA P9 Eurydice), Brussels 2009, p. 39-42.

also in the top ten best universities in the world, in 4th and 10th place respectively in the latest *Shanghai Jiao Tong University World Ranking 2008 – Top 500 World Universities*. A third European university, University College London (UCL) is in 22th place on this list. The economy and social sciences department enjoy strong position at the aforementioned universities. Many Nobel Prize winners, including in economy, are the lecturers or graduates of these universities.

The best European economic universities include London School of Economics and Political Science (LSE) and the typically business universities – French HEC School of Management. This finds confirmation inter alia in *Financial Times – European Business School rankings 2008*, under which Master in Management Programme offered by HEC has the highest scores in Europe and similar programme at LSE is in the third place². The high educational level of LSE is further demonstrated by fourteen Noble Prizes won by its lecturers or graduates. It should be noted that LSE and HEC Paris are the members of Community of European Management Schools and International Companies (CEMS) – the organization represented by the best economic university from the given country. Poland is represented in CEMS by Warsaw School of Economics.

Table 1. Basic information on selected universities.

| Description | University of Cambridge | University of Oxford | University College London (UCL) | London School of Economics and Political Science (LSE) | HEC School of Management |
|---|-------------------------|----------------------|---------------------------------|--|--------------------------|
| Year of establishment | 1209 | 1096 | 1826 | 1895 | 1881 |
| Students, in | 25465 ¹ | 23629 ¹ | 21 620 ² | 9914 ³ | 2329 ⁵ |
| full-time undergraduate degree | 12300 ¹ | 12173 ¹ | 11354 ² | 3884 ³ | – |
| full-time graduate /postgraduate degree | 6253 ¹ | 6723 ¹ | 6024 ² | 4597 ³ | 799 ⁵ |
| Faculty members | 3933 ¹ | 4153 ¹ | 3858 ² | 2780 ⁴ | 650 ⁶ |
| Place in ranking: | | | | | |
| Shanghai Jiao Tong University World Ranking 2008 – Top 500 World Universities | 4 (1 in Europe) | 10 (2 in Europe) | 22 (3 in Europe) | 201 – 302 (80 – 124 in Europe) | |
| The Times – QS World University Rankings 2008 – Top 100 Universities | 3 (1 in Europe) | 4 (2 in Europe) | 7 (4 in Europe) | 66 (19 in Europe) | |

² <http://rankings.ft.com/businessschoolrankings/european-business-school-rankings>

| Description | University of Cambridge | University of Oxford | University College London (UCL) | London School of Economics and Political Science (LSE) | HEC School of Management |
|--|-------------------------|----------------------|---------------------------------|--|--------------------------|
| Sunday Times University Ranking 2008 | 1 in UK | 2 in UK | 6 in UK | 4 in UK | |
| Financial Times – European Business School Rankings: Masters in Management Programmes 2008 | | | | 2 | 1 |

¹ The number provided by the university on 27.06.2008 for the ranking: *QS World University Rankings 2008 – Top 100 Universities*,

http://www.topuniversities.com/schools/data/school_profile/default/universitycambridge;
http://www.topuniversities.com/schools/data/school_profile/default/universityoxford.

² The number provided by the university on 21.09.2008 for the ranking: *QS World University Rankings 2008*;

http://www.topuniversities.com/schools/data/school_profile/default/universitycollegelondonucl
 2008/2009; <http://www.lse.ac.uk/resources/statisticsOnLSE/statisticsOfStudents/tableA.htm>

⁴ <http://www.lse.ac.uk/informationAbout/aboutLSE/Default.htm>

⁵ http://www.businessweek.com/bschools/rankings/full_time_mba_profiles/hec.html

⁶ <http://www.hec.edu/Faculty>

Source: own elaboration based on information from the websites of the listed universities.

Organization of higher education programmes in England

Higher education institutions in England are independent, self-governing bodies empowered by a Royal Charter or an Act of Parliament to develop their own courses and award their own degrees. Although the power to award degrees and to use the legal title „university” are protected by law, degrees and other higher education qualifications are legally owned by the awarding institution³.

The organization of higher education programmes is not regulated by law, but the traditional structure has three main cycles. The first cycle is generally either three or four years (according to Bologna Process requirement). Students are awarded a title of Bachelor (dependent on subject/discipline study or university, for example: Bachelor of Arts – BA, Bachelor of Science – BSc, Bachelor of Laws – LLB). The second cycle – Masters degrees including one and two

³ *Focus on the Structure of Higher Education in Europe 2006/07. National Trends in the Bologna Process*, Eurydice 2007, Brussels, p. 299;

http://www.aic.lv/bologna/2005_07/Reports/Eurydice_focusEN.pdf

years both taught programmes and research programmes with titles such as: Master of Arts – MA, Master of Science – MSc, Master of Laws – LL.M, Master of Philosophy – MPhil, Master of Research – MRes). A doctorate normally requires three to four years full-time study, although many doctoral students are part-time.

Titles of degrees are not regulated by law (as is the case in Poland), however generic descriptors for all higher education qualifications and advice on qualification nomenclature are included in *the Framework for Higher Education Qualifications* (implementation from 2003)⁴.

The studies for a degree are conducted at English universities mainly in the form of full-time studies. The part-time studies, especially at undergraduate level, are rather uncommon.

The individual programmes of degree education do not correspond closely to the Polish term of “major of the studies”, but as a subject designed by a university are characterized by the differentiated degree of the specialization of knowledge within the determined discipline or two or more disciplines.

The studies in England are payable. The tuition for one year of studies in the case of 1st degree is GBP 3,145 for students from England and EU countries and on average over GBP 10,000 for students from other countries, while the tuition for 2nd degree studies is a dozen or so thousand GBP depending on the major of the studies.

It should be stressed that in England only about 25% of the graduates of 1st degree studies continue education at master's level (in the case of best universities this percentage is twice higher), while the other graduates with Bachelor degree start their professional career upon graduating.

Though England does not have state regulations regarding the degree programme requirements in the form of education standards, the individual autonomous universities developed over the years the similar rules of organization of studies and education. In addition to the traditional division of academic year into trimesters, the University of Cambridge, University of Oxford, UCL and LSE have the following common features of the education process:

- the degree programmes are conducted under course-unit system. Usually a student is required during the academic year to pass the subjects representing the total value of 4 units, while the given subject (course) can have the value of 1.0 *unit* or 0,5 *unit* (see: table 2-4);
- ECTS (*European Credit Transfer System and Accumulation System*) is used to date exclusively for the transfer of the credits for the purposes of students exchange programs such as Erasmus program. The individual British universities however have their own credit systems, which are used to plan and conduct education, register the learning progress of individual students –

⁴ Ibidem, p. 300.

these systems are based on the learning outcomes considering the student's nominal work input⁵;

Table 2. Undergraduate degree programmes in economics at LSE, University of Cambridge, University of Oxford and UCL.

| LSE BSc Economics | University of Cambridge BA. Economics | University of Oxford BA. Economics and Management | UCL BSc Economics |
|--|---|--|--|
| First year: <ul style="list-style-type: none"> • Economics B • Mathematical Methods • Elementary Statistical Theory • One outside option | First year: <ul style="list-style-type: none"> • Microeconomics • Macroeconomics • Quantitative Methods Politics (political and sociological aspects of economics) • British Economic History | First year: <ul style="list-style-type: none"> • Introductory Economics • Introduction to Management • Mathematics and Statistics | First year: <ul style="list-style-type: none"> • Economics • Applied Economics (0.5 unit) • Introduction to Mathematics for Economics (0.5) • Introduction to Statistical Methods (0.5) • Optional courses The World Economy (0.5) Students are encouraged to take options from other department |

⁵ Most often 120 British credits is the equivalent of one year of 1st degree full-time studies, which corresponds to 60 ECTS credits, while 180 credits is the equivalent of a calendar year of 2nd degree studies and has the value of 90 ECTS credits. See: *Focus on the Structure...*, p. 300.

| LSE BSc Economics | University of Cambridge BA. Economics | University of Oxford BA. Economics and Management | UCL BSc Economics |
|---|--|--|--|
| <p>Second year:</p> <ul style="list-style-type: none"> • Microeconomic Principles I <i>or</i> Microeconomic Principles II • Macroeconomic Principles • Introduction to Econometrics <i>or</i> Principles of Econometrics • One outside option | <p>Second year:</p> <ul style="list-style-type: none"> • Microeconomics • Macroeconomics • Econometrics • One outside option from Development, Sociology <i>or</i> Mathematics | <p>Second <i>and</i> third year:</p> <ul style="list-style-type: none"> • Microeconomics • Macroeconomics • Quantitative Economics • 4–5 Optional courses: Strategic Management, Finance, Organizational Behaviour, Marketing, Economics of Industry, International Economics, /.../, Development Economics <p>(2 and 3 year = 8 exams</p> | <p>Second year:</p> <ul style="list-style-type: none"> • Microeconomics • Macroeconomic Theory and Policy • Quantitative Economics and Econometrics • Optional courses <p>Choice of 1.0 unit from a range of options including: Economics of Labour (0.5) Economics of Finance (0.5) Money and Banking (0.5) Economics of Industrial Relations (0.5)</p> |
| <p>Third year:</p> <ul style="list-style-type: none"> • 4 options from Economics <i>or</i> closely related subjects | <p>Third year:</p> <ul style="list-style-type: none"> • Microeconomics • Macroeconomics • 2 options • Dissertation | <p><i>or</i> 7 exams + „thesis”)</p> | <p>Third year:</p> <p>2.0 units from:</p> <ul style="list-style-type: none"> • Economic Policy Analysis (1.0 unit) • Industrial Economics (1.0) • Game Theory (0.5) • Experimental Economics (0.5) <p>2.0 units from: Economics 3' prefix courses, <i>or</i> outside the Economics Department (1.0)</p> |

Source: own elaboration based on information from the websites of the listed universities.

- each university has in place very well functioning system of academic tutoring; the students have high degree of freedom in determining their course program, because they can select about 1/3 of the subjects, also taught at other departments;
- the system of studies is based on independent studying – own work by a student and a number of academic classes at the university is relatively low (approx. 240 hours per year; the subject of 1.0 unit value usually represents 60 academic hours. The students are required to prepare for individual classes (reading the literature, doing exercises) and submit periodical written papers (essays, designs), which are graded and included in the final grade of the given subject;
- the subjects usually end with the 3-hour written exam (2-hour if the subject has the value of 0.5 unit);
- the diploma paper is required in the majority of the degree courses (it is not required to defend it, sometimes other subject can be selected instead of a diploma paper); a student graduates upon passing the exam from the last selected subject.

Table 3. Undergraduate degree programmes in accounting and finance, and management at LSE.

| BSc Accounting and Finance Applications 2008: 2326 First year students 2008: 118 | BSc Management Applications 2008: 1386 First year students 2008: 59 |
|---|--|
| First year: <ul style="list-style-type: none"> • Elements of Accounting and Finance • Economics B • Mathematical Methods <i>or</i> Basic Quantitative <i>or</i> an outside option • Introduction to Statistics for Accounting and Finance <i>or</i> Quantitative Methods (Mathematics) <i>or</i> Elementary Statistical Theory | First year: <ul style="list-style-type: none"> • Economics B • One Quantitative Methods course • Introduction to Psychology and Behavioural Science for Management • One outside option <i>or</i> Elements of Accounting and Finance |
| Second year: <ul style="list-style-type: none"> • Managerial Accounting • Principles of Finance • Microeconomic Principles <i>or</i> Macroeconomic Principles • One option in Econometrics <i>or</i> Management <i>or</i> Business | Second year: <ul style="list-style-type: none"> • The Process of Management • Economics for Management • Social Science Research Methods for Management • Elements of Accounting and Finance (<i>if not taken in Year 1</i>) <i>or</i> one course chosen from |

| | |
|--|--|
| <p>BSc Accounting and Finance Applications 2008: 2326 First year students 2008: 118</p> | <p>BSc Management Applications 2008: 1386 First year students 2008: 59</p> |
| <p>Statistics or Commercial Law or an outside option</p> | <p>the following subject groups: Accounting and Finance, Economics and Economic History, Management Science, The International Context of Management, Public Policy and Legal Context of Management, Human Aspects of Organizations and Management</p> |
| <p>Third year:</p> <ul style="list-style-type: none"> • Financial Accounting, Analysis and Valuation • One option in Accounting • One option in Finance • One option from a Selection List including options in Accounting or Finance or Economics or Management or Business Statistics or Commercial Law or an outside option | <p>Third year:</p> <ul style="list-style-type: none"> • International Context of Management (H) and Introduction to Strategy (H) • Marketing Management: A Strategic Approach • Two courses chosen from the following subject groups: Accounting and Finance, Economics and Economic History, Management Science, The International Context of Management, Public Policy and Legal Context of Management, Human Aspects of Organizations and Management |

¹ H = 0,5 unit.

Source: own elaboration based on information from:

http://www2.lse.ac.uk/undergraduateProspectus2010/courses/Accounting_and_Finance/NN34.aspx;
<http://www2.lse.ac.uk/undergraduateProspectus2010/courses/Management/N203.aspx>

Table 4. Master's programme in economics at LSE.

| <p>MSc Economics <i>(two year programme)</i>¹</p> | <p>MSc Economics <i>(one year programme)</i></p> |
|--|---|
| <p>The preliminary year:</p> <ul style="list-style-type: none"> • Microeconomic Principles I <i>or</i> Microeconomic Principles II • Macroeconomic Principles • Mathematical Methods <i>or</i> • Further Mathematical Methods (Calculus)* <i>and</i> Further Mathematical Methods (Linear Algebra)* • Introduction to Econometrics <i>or</i> Principles of Econometrics <p>Students progressing to the final year of the MSc Economics must attend the introductory courses in September.</p> | <p>One year:</p> <ul style="list-style-type: none"> • Macroeconomics for MSc Students • Microeconomics for MSc Students • Methods of Economic Investigation • Options <p>One of the following courses: International Economics; Labour Economics; Monetary Economics; Public Economics; Economics of Industry; Development and Growth; Capital Markets; Political Economy; Topics in Quantitative Economic History; History of Economics: from Moral Philoso-</p> |

| MSc Economics (two year programme) ¹ | MSc Economics (one year programme) |
|---|--|
| Second year: <ul style="list-style-type: none"> • Macroeconomics for MSc Students • Microeconomics for MSc Students • Methods of Economic Investigation • One of the following courses (including a 6000–word dissertation): International Economics; Labour Economics; Monetary Economics; Public Economics; Economics of Industry; Development and Growth; Capital Markets; Political Economy; Topics in Quantitative Economic History; History of Economics: from Moral Philosophy to Social Science; Contracts and Organizations. | phy to Social Science; Contracts and Organizations. The assessment of the option courses requires students to pass an examination and complete a dissertation. Students are required to attend introductory September courses in mathematics for economics, and statistics before the main teaching programme starts in October. |

* Half unit

¹ For students whose first degree was not in economics. Students who successfully complete the examinations in the preliminary year will be awarded a Diploma in Economics.

Source: own elaboration based on information from:

<http://www.lse.ac.uk/resources/graduateProspectus2009/taughtProgrammes/MScEconomics.htm>

Cambridge, Oxford and UCL universities and LSE have many degree programmes (courses), while the number of these degree courses is decisively higher at master's studies compared to bachelor studies (e.g. LSE has over 140 degree courses at 2nd level and just under 40 at 1st level). These courses include economy (also in extended version – including econometry, mathematics, geography, history, philosophy, politics, environmental protection), finances and accounting, international relations and management, i.e. the courses very popular at Polish universities as well.

As mentioned before the masters studies in England are usually one or two years long and are provided in many degree courses despite the fact that some of them are attended just by a few students. These studies require an exceptionally hard work by a student himself, because the number of academic hours at the university is small, while the requirements both at the classes and at the final exam are high. Tables 2-4 below show examples of courses taught on undergraduate and postgraduate degrees at top universities in the UK.

Example of the best business school in Europe

According to *Financial Times* ranking, HEC – École des Hautes Études Commerciales de Paris⁶ was the best European business school in 2008, similar to 2007 and 2006. This school was established in 1881 (in 1989 it changed its name to HEC School of Management) and currently provides higher studies at master's and doctorate level only. HEC is the first business school in France to have received the prestigious triple accreditation: The American Accreditation AACSB (*Association to Advance Collegiate Schools of Business*), the European accreditation EQUIS from EFMD (*European Foundation for Management Development*) and *The Association of MBAs* (AMBA)⁷. HEC is a small university in terms of a number of students – it has under 2,400 students, while it employs relatively high number of professors in relation to the number of students – nearly two hundred professors, including one hundred professors on a full-time basis and approx 450 lecturers. HEC offers master's studies in the area of accounting, finances, human resources, management (of international business) and marketing, as well as MBA and Executive MBA studies and doctorate studies (in 2008 – for 80 people).

HEC Paris operates inter alia three master's studies courses: *MSc in Finance*, *MSc in Managerial and Financial Economics*, and *MSc in International Business* (the course within CEMS), targeted mainly at individuals, who obtained the first degree studies diploma or its equivalent outside France. Master in Science are one-year pre-experience full-time programs in English designed for students, who hold a Bachelor's degree in Business and who want to acquire an expertise in a specific field of management. The academic year (approx. 400 hours) is divided into four terms, which account for 90 ECTS credits. The programme consists of compulsory advanced courses and electives, track, master thesis and internship (ten weeks during the summer term)⁸. It should be stressed that HEC graduates do not have a problem finding either in France or other countries.

Conclusions

The success at the presented best European universities is determined by such factors as: appropriately designed education programme, appropriate scope of contents of individual subjects, high professional-academic level of the staff

⁶ Business School Rankings, <http://rankings.ft.com/businessschoolrankings/european-business-school-rankings>

⁷ <http://www.hec.edu/HEC-Paris/HEC-School-of-Management/HEC-programs>

⁸ HEC Paris, <http://www.hec.edu/MSc-in-Finance/Program/Program-structure>

and its high requirements in respect to the students, combining a theory with practice, focus on independent studying, development of independent thinking abilities and the attitude of students themselves. The culture of a university, university tradition, level of scientific research and the option of good selection of candidates pay a part in this success as well. The graduates of the aforementioned universities irrespective of the course they graduated from, do not have problems finding a job. The name of a university is sufficient confirmation on the market of the quality of knowledge and qualifications of its graduate.

The comparative analysis clearly indicates that Polish universities have low position on the European higher education market, are uncompetitive, usually operate rather unattractive and low quality degree programmes and the education at these universities is based on the school-lesson system (with enormous number of hours of didactic classes and subjects) rather than on learning – independent studying.

The current domination of teaching over learning-studying observed at Polish universities results directly from the education standards stipulated by the ministry of education, which require too many hours under the first degree studies. The rational reduction of the general number of didactic classes will allow the students to have more time for own studies and meet the increased requirements at the classes (obligatory written papers, projects, tasks) and final exams from individual subjects (the subjects or the modules should encompass more contents and their number should be decisively smaller than it is the case today). It is also necessary to verify the contents of the obligatory subjects within the degree programmes in terms of the expected qualifications of a graduate of the given course.

In Poland, part-time degrees require some major qualitative changes. Less qualified students are accepted on such programmes and they complete their studies in much narrower scope of hours than students on full-time degrees. In my opinion, the part-time studies, especially at undergraduate level, should be conducted on a smaller scale.

It would be recommended to include a provision in the new Higher Education Law Act that the second degree studies should last at least one year (2 semesters) instead of 3 or 4 semesters as it is the case today. This way Polish universities would be able to provide master's studies together with Western universities, where many programmes are just one year long.

In the end we should hope that the public discussion on the assumptions of the reform of Polish education system will result *inter alia* in the changes to the Higher Education Law Act, which will give the best academic institutions the right to create on their own the education programmes, including the determination of their names.

Literature

Focus on the Structure of Higher Education in Europe 2006/07. National Trends in the Bologna Process, Eurydice 2007, Brussels, p. 299;

http://www.aic.lv/bologna/2005_07/Reports/Eurydice_focusEN.pdf

Higher Education in Europe 2009: Developments in the Bologna Process, Education, Audiovisual and Culture Executive Agency (EACEA P9 Eurydice), Brussels 2009.

Report on Poland's intellectual capital, ZDSPRM, Warsaw, 10.07.2008.

Streszczenie

SYSTEM STUDIÓW W NAJLEPSZYCH UCZELNIACH EUROPEJSKICH – WNIOSKI DLA POLSKI

Artykuł prezentuje system kształcenia i organizacji studiów w najlepszych, według m.in. fachowych rankingów, uniwersytetach europejskich: University of Cambridge, University of Oxford, University College Londyn (UCL), a także w prestiżowej uczelni ekonomicznej – London School of Economics and Political Science (LSE) oraz w najlepszej uczelni biznesowej w Europie – paryskiej HEC School of Management.

Z analizy porównawczej jednoznacznie wynika, że polskie uczelnie mają niską pozycję na europejskim rynku edukacji wyższej, są niekonkurencyjne, na ogół realizują mało atrakcyjne i o niskiej jakości programy studiów, a kształcenie w nich oparte jest na systemie lekcyjno-szkolnym (z olbrzymią liczbą godzin zajęć dydaktycznych i przedmiotów), a nie na uczeniu się – samodzielnym studiowaniu. Problemem polskiego szkolnictwa wyższego jest także niski stopień jego umiędzynarodowienia. Dziś na rynku pracy bardziej liczy się ukończona uczelnia, natomiast mniej – kierunek studiów. Należy mieć nadzieję, że zapowiadana reforma polskiego szkolnictwa wyższego przyczyni się skrócenia dystansu dzielącego nasze uczelnie od najlepszych uczelni europejskich oraz umożliwi części z nich samodzielne określanie programów/ kierunków kształcenia. Dodajmy, że istotnym czynnikiem sprzyjającym reformie polskiej edukacji wyższej powinien być czynnik demograficzny (postępujący wyraźny spadek populacji młodzieży w wieku studenckim).

Geopolitical Studies

1. Polska granica wschodnia, 1997 – Marcin Rościszewski.
2. The Polish-Lithuanian border region. Research problems and scientific cooperation, 1997.
3. Strategiczne znaczenie polskiej granicy wschodniej i polskiego pogranicza wschodniego, 1997.
4. Polska i jej sąsiedzi wobec przemian cywilizacyjnych i geopolitycznych, 1998.
5. Granice Polski. Analiza zmian przenikalności w latach 1990-1996, 1999 – Tomasz Komornicki.
6. Geopolityczne aspekty tranzytu w Europie Środkowej, 1999 – Jan Wendt.
7. Geografia wyborcza Polski. Przestrzenne zróżnicowanie zachowań wyborczych Polaków w latach 1989-1998, 2000 – Mariusz Kowalski.
8. Zmiany strukturalne w przemyśle wschodnich obszarów przygranicznych Polski w latach 1985-1997, 2001 – Hanna Dziakowska, Stanisław Osiński.
9. Przestrzenny wymiar handlu transgranicznego w Polsce w ostatniej dekadzie XX wieku, 2002 – Halina Powęska.
10. Księga poświęcona pamięci Profesora Marcina Marii Rościszewskiego, 2003.
11. Eastern dimension of European Union, 2003.
12. Central and Eastern Europe at the Threshold of the European Union – an Opening Balance.
13. Зміни національної структури населення України в XX столітті – Пьотр Еберхард, 2006.
14. Regional transborder co-operation in countries of Central and Eastern Europe – a balance of achievements, 2006.
15. Countries of Central & Eastern Europe versus global economic crisis, 2009.



PL. ISSN 1429 009X

<http://rcin.org.pl>