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POPULATION PROBLEMS IN POLAND

WIKTOR ORMICKI

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BALTIC AND SCANDINAVIAN COUNTRIES



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BALTIC AND SCANDINAVIAN COUNTRIES

A SURVEY OF THE PEOPLES AND STATES ON THE BALTIC WITH SPECIAL REGARD TO THEIR HISTORY GEOGRAPHY AND ECONOMICS

EDITORIAL POLICY

Baltic and Scandinavian Countries is a periodical dealing with the whole Baltic region, that is to say with the 'Baltic States' (Estonia, Latvia and Lithuania), with Poland and with three of the 'Scandinavian States' (Denmark, Sweden and Finland). Norway, Germany and Russia, not being predominantly Baltic in their orientation, are touched upon only within the limited sphere of their contacts with the other countries of the region. An exception to this rule, however, is made in the case of the German coastal area, especially as regards Pomerania and East Prussia. Other countries also, not belonging to the region, but connected with it by the ties of a common history or culture, or by racial affinity, are dealt with on occasion. Important among these are the lands lying between the Baltic and the Black Sea.

The countries of the Baltic region have a population of over sixty millions, and their cultural and political influence has been for centuries of great significance. Moreover there are in the United States and Canada about fifteen million persons who are emigrants, or immediate descendants of emigrants, from this part of the world. Of those in the United States some four million are of Polish origin and about the same number of Scandinavian. In spite, however, of its many close connexions, the English-speaking world receives remarkably little first-hand information on the Baltic. The want of such has in recent years been increasingly felt, and *Baltic and Scandinavian Countries* is designed to supply it.

Baltic and Scandinavian Countries presents information both on the conditions of life and on the cultural and economic development of the countries of the Baltic region. Special regard is paid to the establishment of contacts and to the investigation of the causes of conflicts, past and present, estranging the different nations. It is believed that by fostering their cultural and scientific co-operation, better relations will be brought about between them, together with a keener appreciation of the community of their interests, both in the past and today.

Main attention is devoted to the history, geography and economics of the region, although its cultural and political, social, racial and religious structure is by no means neglected. The range of subjects being so wide, exhaustive analytical treatment is difficult, and the contents are therefore chiefly concerned with such matters as bring out the region's homogeneity. Each issue contains scientific papers, reports on cultural trends and studies, reviews, a bibliography and a chronicle.

From the contributors to *Baltic and Scandinavian Countries* it is hoped in the future to form a group for the furtherance, by research and instruction, of the various aims enumerated above. Moreover, the contributions themselves, collected in permanent form, will it is hoped be of use to future investigators. The Baltic region forms a geographical whole, and the political and economic ties joining its component States, already in some cases strong, are capable of being widely developed in the future to great mutual advantage.

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POPULATION PROBLEMS IN POLAND*

by WIKTOR ORMICKI

(CRACOW, POLAND)

The present enquiry has three aims: to sketch the general outlines of the population problem in present-day Poland, while emphasizing its characteristic regional differentiation; to furnish fresh material and criticize modern methods of approach; and to call attention to the urgent need of clarifying the main points of government population policy.

At a time when everything everywhere is subject to strict control it is impossible to admit the principles of pure liberalism in a sphere which is in the highest degree decisive for the future of the State and the fortunes of its people. One of the most burning and immediate needs is to decide whether the interests of the State require an increase of the pressure of population, or the preservation of the present numerical level coupled with closer attention than has been paid hitherto to the quality of the human material.

This decision cannot but be the fundamental starting-point for a broad and far-seeing system of government economic planning, which must take into account the postulates determined by population policy. For insofar as an economy developed by man at any given time is conditioned by nature and by the pattern of culture, its level and character cannot fail to have a shaping influence on population conditions. This interdependence and mutual influence finds expression in the population 'content', i.e. 'holding capacity', of the national economy at any and every moment, a capacity which is indissolubly bound up with the standard of life of the people.¹

The population content or 'holding capacity' may fluctuate according to the elasticity of the standard of life, changes in the technique of economic production and vicissitudes in the general economic situation. If we are to examine the problem of the population content of the national economy in the light of its structure we must distinguish the population content of the agricultural and stock-raising economy, conditioned by domestic possibilities of food supply,² from the population content of other branches of the national economy, which insofar as they outgrow the absorptive capacity of the domestic market must take account of the influences of the international economic situation. For this reason a discussion of population problems ought to start by considering the domestic capacity for food-production as the most essential basis for assessing the actual maximum or optimum density of population.³

GRAIN PRODUCTION AND CONSUMPTION

Such an examination of the domestic capacity for food-production may start with the relation existing between the domestic production of bread-grain and the density of population, as well as with the same relation regionally considered. It is an interesting fact that the relation between the local production of cereals and the local demand is approximately uniform over large areas. The phenomenon is becoming regional (Fig. 1). Western and north-western Poland, the Black Sea region (the southern part of the Voivodship of Lublin, southern Wołyń and eastern Podolia) and the Voivodship of Nowogródek are characterized by a constant surplus of production, while southern and north-eastern Poland never produce enough for their own needs, and the remaining sections, together constituting the central region, vary, sometimes producing more than they require and sometimes less. This phenomenon is often the result of weather conditions, but more often it is due to insufficient effort on the part of the farmer and above all to his failure to adapt his expenditure of labour and of capital and the standard of cultivation to the ever-increasing density of the population. Thus the loess region of the South Polish uplands (Sandomierz, Proszów, Opatów and Miechów), which was until recently one of the granaries of Poland, has ceased to be a region of constant surplus production and has passed into the class of varying production.

The results of this undesirable development become clearly evident when we examine the relation between the domestic production of bread-grain in Poland and the density of population, which is expressed most simply as the amount of grain per head of the population (Table 1).

The figures for this amount in Poland for the years 1923-35 prove to be extraordinarily significant. In 1931 there was observable for the first time a distinct fall in the amount of bread-grain produced per head of the population, and this reduction was maintained in the year following. The causes for this are to be sought in the increasing disparity between the production of grain and the growth of the population (Table 2).

The first signs of decrease in the production of grain were apparent in 1930-31, whereas the population continued to increase. Both the reduction in consumption and the fall in the production of grain were without effect on the increasing export of bread-grain,

* This article was published in abbreviated form under the title 'Problemat ludnościowy w Polsce' (The Population Problem in Poland), in *Ekonomista*, Warsaw 1937, and was later published as No. 1 in the series 'Publications of the Section for Population and Migration', issued by the Institute for Nationality Research, Warsaw 1937.

¹ Albrecht Penck, 'Das Hauptproblem der physischen Anthropogeographie', *Zeitschrift für Geopolitik*, II, pp. 331-333.

² Wiktor Ormicki, 'Regionalna pojemność ludnościowa a aprowizacyjna samostarczalność regionu' (Regional Population Content and Autarky in Food-production of a Region), *Zbornik Rađova na III Kongresu slovenskih geografa i etnografa u Jugoslaviji*, Belgrade 1930, pp. 187-189.

³ Józef Poniatowski, *Przeludnienie wsi i rolnictwa* (Rural and Agricultural Overpopulation), Warsaw 1936, p. 8 foll.



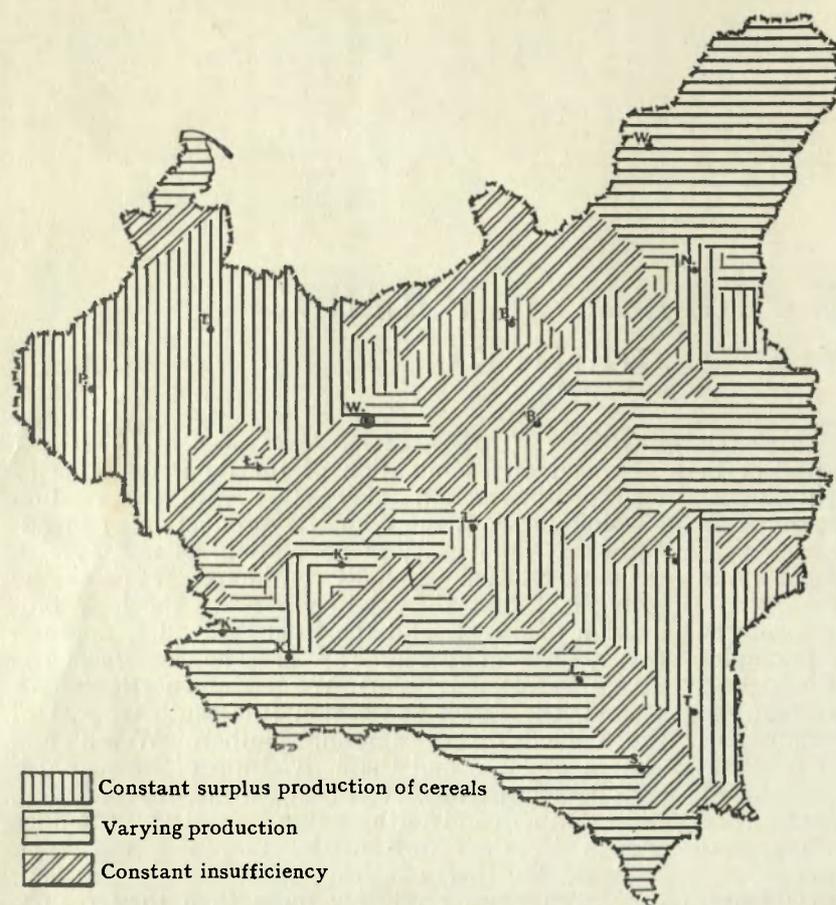


Fig. 1. Geographical distribution of the production of cereals

Drawn by I. Ormicka

which can only be interpreted as evidence of growing impoverishment; all the more that there was a falling off in the intensiveness of cultivation and an increase in the area which may be called 'extensively' cultivated, that is to say under potatoes—while sugar beet, which requires more outlay, was restricted. This growth of extensiveness in agricultural economy corresponded with the general economic situation as revealed by the consumption of coal or by imports.

The accompanying growth of population leads inevitably to a lowering of the standard of life. In fact the thesis may be advanced that the capacity

and the will to lower the standard of life rendered the growth of population possible. In the period 1929-33 the standard of life as revealed by the restricted consumption of grain fell 15 per cent.; as revealed by the decline in imports it fell 26 per cent., and by the lower consumption of coal, by 44 per cent.⁴

The cause of this lowering of the standard of life is the failure to gear the social economy to the increase of population which is a necessary pre-condition for the accumulation of capital in general and of profitably invested capital in particular.

The ultimate results of the numerical increase of the population are negative and dangerous, because the productivity of agriculture insofar as food-grain is concerned does not keep pace with the actual growth of population, this meaning that the average amount of grain produced per head falls. The situation, unfavourable in itself, is rendered still worse by the export of grain and flour, doubtless caused by 'hunger' offers.

The demographic results of such stunted economic growth are too well known to require detailed discussion.

DEMOGRAPHIC CONDITIONS

The fight against over-population⁵ may be waged in one of two ways, economic or demographic. One may strive on the one hand to widen and deepen the foundations of the economic structure in order to promote a decisive increase in its population content; or one may seek to control the situation by interfering with the structure and dynamics of demographic conditions. Economic intervention, though more difficult, is undoubtedly creative in its consequences, whereas action in the sphere of demographic conditions must not only be very carefully pondered beforehand, but must be applied with the utmost caution if more harm than good is not to be done and to ensure that moral corruption does not result instead of advantages which are at best doubtful.

Table 1
Consumption of Grain per Head in Poland *
(in quintals)

Year	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Grain consumption . . .	2.29	1.39	2.63	1.70	2.14	2.19	2.37	2.29	1.96	1.88	2.27	1.97	1.95	1.92
Index figure . . .	100.00	60.69	114.84	74.23	93.44	95.63	103.49	100.00	85.58	82.09	99.12	86.02	85.15	83.84

* Calculated from a comparison of the grain offered on the domestic market (after deducting 16 per cent. seed-corn) with the estimated population at the beginning of each calendar year. To the amount thus obtained is added the balance of flour (counting 70 kg. of flour as equivalent to 100 kg. of grain).

Sources: J. Łagoda, *Zasiwy i zbiory w roku 1928-29* (Sowings and Harvests in the Year 1928-29), Warsaw 1930, pp. 115-116; *Statystyka Rolnicza* (Agricultural Statistics), Warsaw 1935, p. 15; 1936, p. 58.

⁴ *Concise Statistical Year-Book of Poland*, Warsaw 1935, p. 81.

⁵ I resumed the geography of over-population in a note entitled 'Mapa przeludnienia wsi w Polsce emigracyjnej' (Map of Rural Over-population in Emigrational Poland), in *Rolnictwo* (Agriculture), IV, Warsaw 1936, p. 43, where I distinguished over-populated districts in Poland, districts threatened with over-population, or insufficiently populated, and

divided the whole country into terrain for domestic emigration and immigration. Some of my views were questioned by J. Poniatowski, 'Rozmiary przeludnienia rolnictwa w świetle krytyki' (The Extent of Agricultural Over-population in the Light of Criticism), *Rolnictwo*, *ibid.*, p. 43. The fundamental conclusions, however, were approved by R. Buławski, 'W sprawie optimum gęstości zaludnienia rolniczego w Polsce' (Optimum Density of Agricultural Population in Poland), *Ekonomista*, III, Warsaw 1937.

Interference in demographic conditions aims at diminishing the density of the population. It proceeds on the assumption that just as the stabilization of the density of population is equivalent to checking a further lowering of the standard of life, so the abolition of population surpluses tends to improve local economic conditions. In both cases, however, the action tends to diminish the vital forces of the community and is open to various objections. None the less, it requires consideration.

First, however, let us glance at the distribution of population in Poland (Fig. 2). The density is highest in the south-west, in the industrial region, where there are over 500 persons to the square mile. The whole of southern Poland save for the mountainous districts shows a density of over 200, 250, 300, or 375 persons per square mile according to situation, local conditions and the like. The foot-hills of Little-Poland, southern Mazovia and large strips of the Lublin region and Wołyń are likewise among the densely populated sections of the country. In marked contrast to them are the sparsely populated areas of western Poland, Pomorze, and eastern and south-eastern Poland. In this connexion the differences in economic level as well as in the use made of arable land and the requirements of the population should not be forgotten.

Density of population cannot then by itself be taken as a criterion by which to judge economic and population-conditions. It needs to be projected on the basis of the existing economy with reference to the standard of life of the inhabitants, as may be seen from the researches of S. Szulc.⁶ Poland may be regarded as twenty years late in its demographic processes as compared with Western Europe.

The reduction in the absolute and relative number of births, a phenomenon observable recently through-

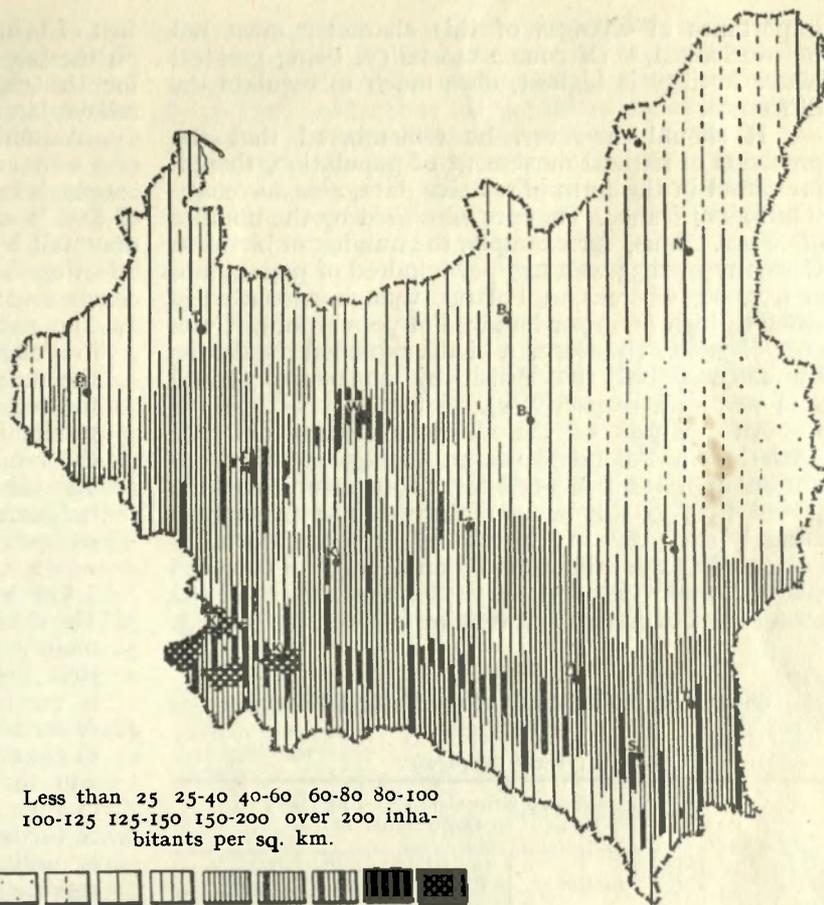


Fig. 2. Density of population in Poland in 1931

Drawn by I. Ormicka

Note: In calculating the density of the population account has not been taken of the following towns: Warsaw, Łódź, Częstochowa, Sosnowiec, Lublin, Białystok, Wilno, Bydgoszcz, Gniezno, Inowrocław, Poznań, Gdynia, Grudziądz, Toruń, Bielsko, Cracow, Lwów.

out the world, bears in Poland a different complexion. The geographical distribution of the lower birth rate indicates that whereas in the years between 1896 and 1900 the maximum intensity of births was localized in the western voivodships,⁷ nowadays they occupy the last place, the first having passed to the voivodships in the east. The domestic and political

Table 2

Grain Production and Growth of Population.

Year	1923-24	1924-25	1925-26	1926-27	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36
Domestic production of grain per head (in kg.)	165.9	290.0	222.2	250.7	253.3	284.7	294.2	251.4	231.7	283.3	258.7	258.1	263.0
Index figure, growth of population	93.1	94.5	96.2	97.3	98.6	100.0	101.1	102.5	104.1	105.6	106.8	108.1	109.3
Index figure, production of grain	54.2	96.3	75.1	85.7	87.7	100.0	104.5	90.5	84.7	105.1	97.1	98.0	96.52
Export or import (—) of grain and flour per head (in kg.)	2.61	—18.81	15.64	—5.6	—10.87	—0.21	11.22	15.05	6.63	10.87	19.75	21.64	18.31

Sources: *Statystyka Rolnicza* (Agricultural Statistics), 1933; J. Łagoda, op. cit.; *Zagadnienia demograficzne Polski* (Demographic Problems of Poland), Warsaw 1936, p. 15, Table 12.

Note: The base-year for the index figures is 1928-29, as in that year the methods of computing the agricultural statistics were improved.

⁶ Stefan Szulc, 'Ruch naturalny ludności w latach 1895-1935' (Natural Movement of Population, 1895-1935), *Za-*

gadnienia demograficzne, 1936 p. 38.

⁷ *Concise Statistical Year-Book of Poland*, 1936, p. 23.

importance of changes of this character must not be overlooked.⁸ Of course mortality, being greatest where fertility is highest, does much to regulate the difference.

It should, however, be remembered that the processes of natural movement of population, though presented in the form of relative data, also have absolute significance. They are expressed by the number of heads. Thus, for example, the number of births in Germany in 1933 was 1.47 per hundred of population, or 957,000, whereas in Poland, though percentually twice as high (2.65 per hundred of population), it was only 869,000. The German births exceeded the deaths by 228,000, but the Polish by 403,000 (0.35 and 1.23 per cent. respectively).

An analysis of the absolute figures of vital statistics in Poland shows an average annual diminution in natural increase of 11,200 persons over the period 1925-36, this being mainly due to an average annual decrease in births of 1,200. Mortality decreased at the same time by an average of 800 each year. A more detailed survey of the aspect of the coefficients of natural movement is given in Table 3.

Table 3
Changes in the Intensity of the Natural Movement of Population
(yearly averages)

Period	Average annual fall (—) or rise (+) in the number of		
	Births	Deaths	Natural decrease
1925-27	—25,960	+11,130	—37,090
1928-32	—11,180	—3,540	—7,640
1933-36	+5,900	+1,800	+4,100

In such conditions as these it does not seem that propaganda for birth-control, which is in any case increasingly practised, though it be inspired by the noblest humanitarianism, is either circumspect or rational. The cry for birth-control ought to be countered by a demand for greater care of the child. Assuming the cost of bringing a child into the world to be about 200 zlotys, apart from the cost of caring for the mother, the losses due merely to insufficient care of infants may be quite cautiously estimated at about 140 million zlotys in the period 1919-36, or an average sum of 7.6 million zlotys yearly.⁹ Birth-control advocates may be reminded that the mere

fact of bringing up a child constitutes a certain check on the begetting of others. Besides greater solicitude for the child, legislation should be encouraged to relieve large families.

Assuming that the only way in which the numbers of a community can be maintained is by each married couple bringing up three children to above the age of five,¹⁰ and also that the rate of natural increase may fall by one-third in twenty-four years without affecting the absolute increase,¹¹ we reach the following conclusions:

1. The natural evolution of population-movement in Poland is such as to cause anxiety regarding the numerical strength of the community in the future, its age-composition, the numbers of the productive age-groups and their proportion to the remainder of the community.
2. The diminution in natural increase observable between 1925 and 1934 is a disquieting and dangerous phenomenon because of the tendency which it shows to continue and thus to perpetuate a low level.
3. The diminution in natural increase is to be ascribed mainly to limitation of the number of births, so that the advisability of birth-control propaganda is questionable.
4. A certain though slight counter-effect to the fall in natural increase is the decrease in infant mortality and the prolongation of the average expectation of life.
5. A further decrease in the general mortality rate is unlikely in view of unfavourable economic conditions.
6. If a further diminution of natural increase is to be averted it is necessary
 - (a) to provide increased care for infants and children,
 - (b) to take action which may promote 3- and 4-children families, while at the same time recognizing that larger families than these are undesirable from a demographic and economic standpoint.

EMIGRATION

Emigration likewise offers certain possibilities of relieving the burden on the national economy, dependent on its character: permanent and colonizing, or seasonal, for the purpose of earning money; but it looks very like interference with demographic conditions, though at the same time revealing characteristics of strictly economic intervention. In both cases, however, the fact that emigration undoubtedly tends

Table 4
Actual Increase of Population in Poland in 1925-36
(in thousands of persons)

Year	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Natural increase	544	456	433	487	475	534	471	448	403	402	406	410
Balance of migration	—60	—112	—68	—68	—139	—117	+12	+17	—17	—9	—1	—11
Actual increase	484	344	365	419	336	427	483	465	386	393	405	399

Sources: *Wiadomości Statystyczne* (Statistical News), Warsaw 1935, No. 30; 1937, No. 8.

⁸ On this question I have written two notes: 'Szanse zmian w strukturze wyznaniowej w Polsce' (Chances of Change in the Denominational Composition of Poland), in *Wiadomości Geograficzne* (Geographical News), Pt. 1, 1936; and 'O demograficzną podbudowę osadnictwa wewnętrznego' (The Demographic Basis

of Domestic Habitation), in *Ekonomista*, Vol. III, No. 61, 1936.

⁹ The year 1936 was marked by a rise in the mortality of infants.

¹⁰ Paul Mombert, *Bevölkerungslehre*, Jena 1929, p. 323.

¹¹ *Ibid.*, p. 279.

to reduce the density of population, either temporarily or permanently, suggests that it should be treated as action affecting the complex of demographic conditions. The most radical form it takes is emigration for purposes of settlement, and the milder form is seasonal migration. Emigration for settlement permanently relieves the national economy of a proportion of its population, but at the same time, if it is purposefully planned, lays upon it a formidable financial burden. In the best case, i.e. with the minimum of expense, the colonists have to be allowed to take their capitalized property with them, and there is the further cost of their transport in foreign ships. The significance of seasonal migration lies in the fact that it temporarily relieves the pressure of population and strengthens the national economy by the savings which are brought home from abroad.

Recent years have very much limited the possibilities of emigration: the field for permanent emigration has been almost completely closed, and seasonal migration has been greatly hampered. These circumstances have had a particularly unfavourable effect on conditions in Poland, causing an unfavourable shaping of the migrational balance-sheet, both in respect of population movement and financial turn-overs.

The curtailment of emigration coupled with the strong current of return migration which set in stimulated the actual annual increase of population in Poland (Table 4), which notwithstanding the fall in the birth-rate showed in the years 1931-32 greater growth than in the period when births were more numerous but the opportunities for emigration greater. Altogether 1,886,000 persons emigrated from Poland between 1918 and 1936 and 967,000 returned. The net loss was thus 919,000, equivalent to a diminution of the density of the population by 2.36 persons per sq. km. Analogous calculations for the period between censuses (1922-31) indicates that emigration diminished the actual increase by 785,300 persons, or 2.01 per sq. km., and was equivalent to a diminution of the actual increase by 12.7 persons per sq. km., or 15.82 per cent. The significance of emigration as a demographic factor is brought into equally clear relief in the demonstration of S. Fogelson,¹² who relates the balance of migration to the natural increase. His researches show that in the years 1926-29-30 the excess of emigration corresponded to 24.6, 29.2 and 22 per cent. respectively of the annual natural increase, while in 1931 and 1932 the excess of immigration over emigration was equivalent to 2.4 and 3.8 per cent. respectively of the natural increase for those years.

In any case no one nowadays questions the need for emigration. The problem is at present one of form: how the movement should be viewed, and what territories should be selected and acquired in accordance with the character of the emigration. This raises the question of international agreements for the protection of seasonal migration and facilities for foreign emigration, in fact for the general protection of the country's interests abroad.

However, just as the problems of seasonal migration lead in principle to measures for the protection of human dignity and the dignity of work, and the regulation of recruiting and transport, so in obtaining a concession for settlement it is necessary to tackle a series of problems relating to the choice of emigrants, their vocational training, transportation

and early start in whatever occupation they may have chosen or been allotted, the care of their cultural and material welfare, the maintenance of ties with their home land, and above all the financing of the whole project. The expenditure of material means by the State, that is to say the question of social and economic organization, gives the scheme the character of economic action. Consequently a good emigration policy is not a question of humanitarianism but of the well-understood mutual interest of the emigrants and their home country.¹³

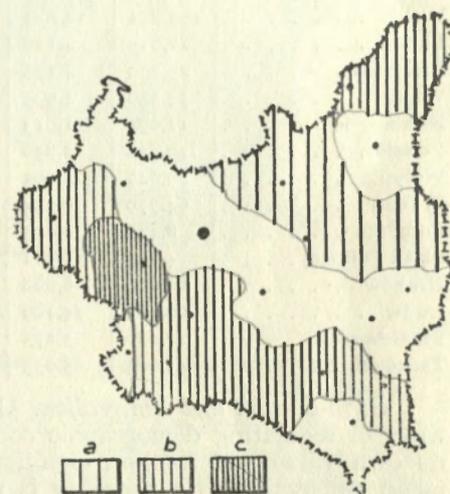
Passing over further discussion of the problems attaching to emigration, to the nationality and religious confession of the emigrants, their occupations, age and sex, the proportion of the active, occupationally, to the passive, as also the direction in which the emigrants go and the effect this has on the above-mentioned processes, as being problems less directly connected with the subject—we shall now examine the geographical distribution of the intensity of emigration (Fig. 3), although the material at our disposal does not enable us to go further than voivodships in our study of the question (Table 5).

Fig. 3. Intensity of foreign emigration (in percentage of the density of population in 1931)

- c — Relatively stronger emigration (1-1%)
- b — 2-3 times weaker
- a — 5 times weaker

Note: The average annual emigration per sq. km. has been calculated from the series 1928-34 and then expressed as a percentage of the density of population in 1931.

Drawn by I. Ormicka



A glance at Figure 3 indicates that there are in Poland two particularly sharply and clearly defined emigration areas: the first in the south-west, embracing the Voivodships of Poznań, Kraków, Łódź, Kielce and Lwów, and the second in the north-east, comprising the Voivodships of Białystok, Polesie and Wilno. Between 1928 and 1934 the former furnished 64.9 per cent. of the whole number of emigrants from Poland, and the latter 10.12 per cent. This division is based not on the actual numbers of emigration but on the proportion between the intensity and the number of inhabitants. The emigration from particular areas and voivodships was directed to various and changing goals. Analogous changes are to be noted in the tension of the movement and consequently in the general composition of the emigrant body, producing clearly marked effects on the nationality, age and occupational groups of which the community left behind was composed.

A study of the demographic effects of emigration reveals that:

1. Emigration, whatever its character, is of decisive significance in the struggle against over-population; and that

¹² S. Fogelson, 'International Migrations during the Economic Crisis', *Baltic Countries*, Vol. II, No. 2, Sep. 1936 pp. 201-213.

¹³ Adam Jarzyna, *Polityka Emigracyjna* (Emigration Policy), Lwów 1933, pp. 111-118.

2. this is especially true of seasonal migration, as being cheaper, because
3. emigration for settlement requires the mobilization of considerable liquid capital and a thoroughly planned and organized scheme.
4. The considerable advantages (see Table 6) resulting from properly organized emigration, together with the now unavoidable necessity for exporting vital populational forces, give the emigration question one of the first places among the pressing problems of State.

Table 5
Relative Intensity of Emigration Force

Voivodships	Number of emigrants			
	1928-34	Annual average	Per sq. km.	Percentage of population in 1931
Poland	823,991	117,713	0.3	0.36
Warsaw City	21,166	3,024	25.39	0.26
Warszawa	33,151	4,736	0.16	0.18
Łódź	204,994	29,285	1.53	1.10
Kielce	103,831	14,833	0.57	0.49
Lublin	28,815	4,116	0.13	0.16
Białystok	29,253	4,179	0.12	0.23
Wilno	34,336	4,905	0.16	0.36
Nowogródek	12,695	1,913	0.07	0.15
Polesie	19,856	2,836	0.07	0.22
Wołyń	29,828	4,261	0.11	0.19
Poznań	64,779	9,254	0.34	0.42
Pomorze	8,440	1,205	0.07	0.10
Śląsk (Silesia)	4,065	581	0.13	0.04
Kraków	62,219	8,888	0.51	0.38
Lwów	99,185	14,169	0.49	0.44
Stanisławów	22,226	3,175	0.18	0.20
Tarnopol	41,684	5,955	0.36	0.37

Birth-Control and Emigration. Of the two possible ways of regulating demographic conditions each has its own value and its own significance. To recommend emigration as a necessity is not to contradict the warning against birth-control propaganda, nor the call for greater interest in the fluctuation of population figures. Maintenance of the numbers of the population is the cardinal condition if the political importance and productive power of the State is to be safeguarded; support for emigration is an expression of the desire not only to raise the level of existence and prosperity by diminishing density of population, but also to establish new bases for individual and national economy. There is not the least doubt that this field also offers a solution of the population problem.

Methods of intervention in the sphere of economic relations are beyond comparison more numerous than

the possibilities of modifying demographic conditions. In the latter case it was possible clearly to define the direction to be followed and to indicate the character of the desired action; but in the former there are great difficulties in the way of determining the relative importance of tasks and the order to be followed in undertaking reforms, which may often be introduced individually, but frequently require organized co-operation.

Further it should not be forgotten that economic measures produce an effect in the population field, perhaps by strengthening or weakening the natural pulse of population movement, or by creating the conditions for the rise and maintenance of more or less specific population-groups: age-groups, sex-groups religious and occupational groups, etc.

A programme of economic activity designed to increase the population content of the national economy raises problems of land tenure, the economic level, the growth of towns, industrialization, and communications.

AGRARIAN STRUCTURE

Land tenure. Poland is a country of 'dwarf' holdings and of large estates. Farms of less than 5 hectares (12 acres) form 64.7 per cent. of the total number (in 1921) but occupy only 14.9 per cent. of the surface. 44.8 per cent., or almost half of the cultivated surface of the country, is in the hands of large landed proprietors, who comprise only 0.6 per cent. of the total number of land-holders. Their estates, irregularly scattered up and down the country, differ regionally in their methods of utilizing the soil. 100 hectares of agriculturally usable land in the western districts are composed of at least 60 per cent. arable, whereas in Polesie, for example, the proportion of arable does not reach even 25 per cent.

The relation of the agricultural population to the soil may be expressed geographically as its specific density (Fig. 4). This signifies the number of the agricultural population per hundred hectares (250 acres) of cultivable land. Its inverse gives the amount of cultivable land in hectares per head of the agricultural population (or of the rural population as a whole). It should, however, be remembered that an equal number of hectares per head may represent very unequal economic value owing to varying quality of soil and money yield.

The density of the rural agricultural population in southern Poland, that is to say in the strip of central-Polish hill-country and to the south of it, exceeds 100 per square kilometre of cultivable land, attaining its maximum in the foot-hills and the Western Beskids, in the valley of the San and in almost the whole of south-eastern Poland. There is a characteristically dense population along the western border of the

Table 6
Balance of Payments of Polish Emigration *
(in millions of zlotys)

Year	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Discernible current income	136.4	271.1	258.0	241.1	242.7	271.1	277.8	291.5	274.3	206.6	151.8	151.6	168.5
Discernible current expenditure	24.2	49.7	78.0	62.4	53.6	61.1	68.7	52.2	18.3	8.4	17.8	42.6	64.0
Balance	112.2	221.4	180.0	178.7	189.1	210.0	209.1	239.3	256.0	198.2	134.0	109.0	104.5

* On the basis of data published by the Chief Bureau of Statistics, Warsaw.

South Polish uplands. In northern Poland the density of population is considerably less, an exception being found in the Pulawy-Warsaw section of the Vistula valley, which has a denser agricultural population. An interesting phenomenon is the strip of denser peasant population extending north of Warsaw in continuation of the above-mentioned concentration on the Vistula. It marks a quite fresh meridional division of Poland into east and west, and owes its origin probably to the growth of Warsaw as the capital, to the accompanying suburban settlement, and the increased profitableness of agriculture and resultant transition to an intensive form of cultivation, requiring much labour and thus enabling a larger number of people to subsist from the soil. The favourable influence of this profitableness of agriculture on its demographic structure seems to be evidenced by conditions in the Polish Coal District, which is distinguished from its nearest neighbours by lower density of rural agricultural population. Not always or everywhere, however, is lower density evidence of better conditions of life. It is sometimes otherwise, especially where differences in soil-productiveness come into play. If for example in the district of Nowy Targ 78.38 head of rural agricultural population inhabit 100 hectares (250 acres) of cultivable land, as compared with 142.87 in the district of Bochnia, it should not be forgotten that the agricultural money yield in the two districts (on the basis of assessed net income) is as 1:0.326 in favour of the latter, while the density of rural agricultural population in the Nowy Targ district is in this respect 3.26 times greater (about 250 head of rural agricultural population per 100 hectares of cultivable land).¹⁴

Generally speaking, therefore, Poland falls into two fundamental divisions: a southern, with a density of more than 100 head of rural population per 100 hectares of utilizable land, and a northern where the density is lower.

In the southern portion the districts of the western industrial region are distinguished as having more than 200 and up to 400 village-inhabitants per 100 ha. of cultivable land, as well as the mountain and foot-hill districts. In the northern portion also some regions may be specially distinguished. Above all it must be remembered that there are considerable areas where the density will shortly exceed 100 persons per 100 ha. of cultivable land (central Wolyn, the left bank of the Bug, western Podlasie, the eastern environs of Warsaw, western Kuyavia, southern strips of West-Poland and a few regions in Pomorze). Further there is the striking fact that in wide areas of eastern Poland and in a considerable part of Great-Poland the rural population is in much the same relation to the surface of cultivable land.

¹⁴ Proper utilization therefore of data relating to density of population requires a number of corrections, and an in-

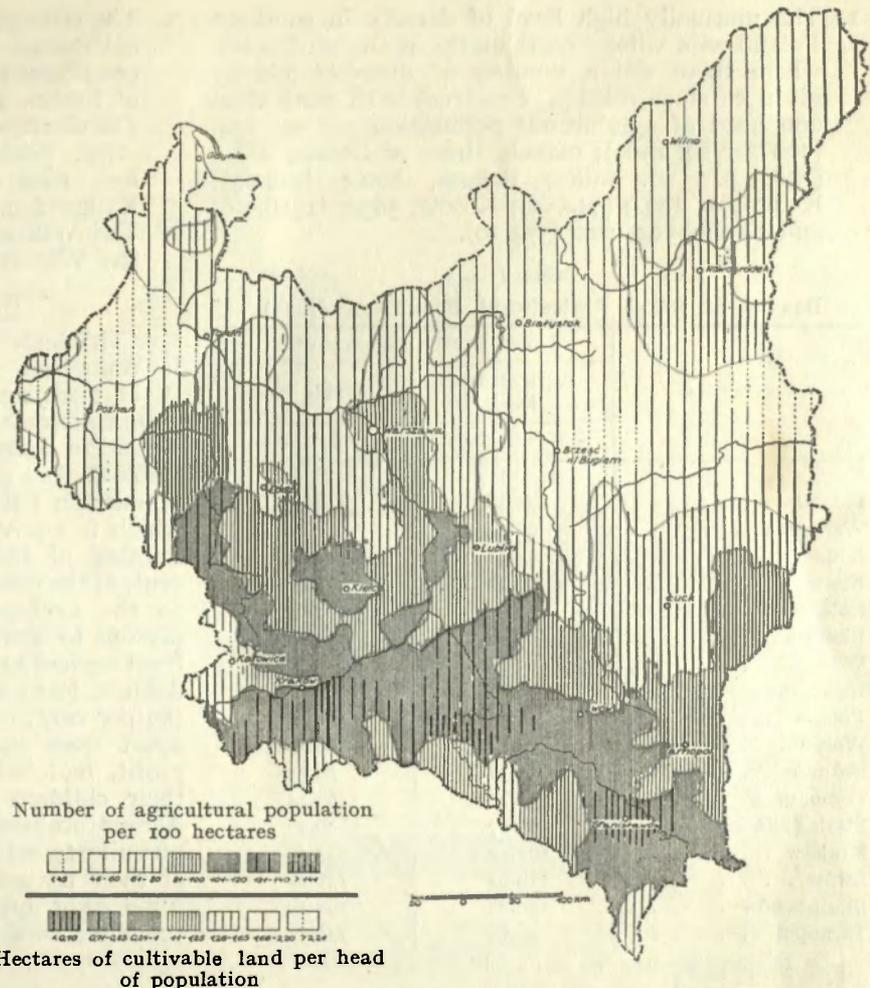


Fig. 4. Rural agricultural population and area of cultivable land (1931)

Drawn by Z. Figlewicz

When comparing these conditions one has to bear in mind on the one hand the already mentioned differences in the utilization of land and on the other the great predominance of large estates in western Poland, which causes an improper division of the national income and finds expression in the unexpectedly low density of the West Polish rural population.

The qualified density, taken as a basis for further analysis, differs from the foregoing in that the data refer only to arable land. It accordingly gives the number of rural population per 100 ha. of such land. It is quite true that in this case the differences in the quality of the soil and the profitableness of farming retain their importance, but sharper emphasis is laid on conditions of life and on the general conditions of the labour market by the use of a qualitatively uniform basis of reference.

The mean density of rural agricultural population is in Poland 104.18 persons per 100 ha. of arable land (Table 7), as compared with 87.2 in Czechoslovakia, 62.0 in Italy, 42.2 in Denmark and 38.2 in Germany and France.

This brief comparison indicates that the density of the rural agricultural population in Poland remains at a remarkably high level in spite of the low harvests per hectare. From a geographical and social-economic point of view the following points deserve emphasis:

cautious perusal of the map may lead to completely false conclusions.

1. The unusually high level of density in southern Poland as a whole, particularly in the south-east, where there are a number of districts (chiefly given to stock-raising, it is true) with more than 200 head of agricultural population per sq. km. (500 per sq. mile); namely those of Dolina, 281.2 (728.3 per sq. mile); Kałusz, 200.4 (519.04); Kołomyja, 209.3 (542.09); Kosów, 585.7 (1516.96); and Drohobycz, 221 (572.39).
2. The strongly marked land-hunger in physiographical Polesie, which approximates to southern-Polish conditions (districts of Łuniniec, 186.6 [483.29], and of Stolin, 152 [393.68]).
3. The clearly-marked occurrence of an over-populated strip, Wieluń-Włoszczów-Kielce (districts of Wieluń, 160.6 [415.95]; Włoszczów, 135.2 [350.17]; Kielce 149.2 [386.43]; and Konin, 164 [424.76]).
4. The confirmation of the changes brought about in the Warsaw sphere of influence.

Table 7

Density of Rural Agricultural Population (1931)

Voivodship	Per square kilometre *	
	Agricultural land	Arable land
	Rural agricultural population	
Poland	75.48	104.18
Warszawa	68.34	82.49
Łódź	91.91	112.61
Kielce	96.48	116.66
Lublin	78.99	102.97
Białystok	56.84	79.80
Wilno	52.20	85.99
Nowogródek	61.94	96.26
Polesie	47.63	112.12
Wołyń	74.78	110.02
Poznań	50.58	59.35
Pomorze	52.27	62.44
Śląsk (Silesia)	66.57	89.40
Kraków	102.14	153.52
Lwów	112.92	156.68
Stanisławów	110.28	194.20
Tarnopol	98.66	116.91

* To convert into data 'per square mile' multiply by 2.59.

INTERNAL MIGRATION

The high density of the agricultural population is connected with the economically unsatisfactory flight from agriculture¹⁶ to other occupations. The actual increase of the agricultural population lagged behind in comparison with all the groups specified in Table 8. As a result of this the share of the agricultural population fell from 63.8 per cent. to 60.6 per cent. which is equivalent to a diminution of the relative number of this occupational section by 0.316 per cent. of the total population annually, and corresponds to the average annual influx of 90-100 thousand persons to non-agricultural occupations.¹⁷ The flight from agriculture is witnessed in an acuter and more definite form among agriculturalists living in towns (50 per cent. of the natural increase¹⁸); these, quite apart from more favourable conditions for making profit, had better opportunities both for educating their children and for changing their occupation. Agriculturalists living in the country passed to other pursuits to no greater extent than 26-28 per cent. of their natural increase. This circumstance throws some light on the causes of the diverse course of economic conditions observable in the two groups of agricultural population.

Table 8

Total and Agricultural Population in Poland (1921-31)

Period	Total population ^a			
	Total	Urban	Rural	Not included under either place or occupation
1921	27,175,757	6,988,001	19,869,231	318,525
1931	32,133,500 ^b	8,731,100	23,184,700	217,700
Increase { actual	4,957,743	1,743,099	3,315,469	-100,825
{ % of 1921	18.25	24.94	16.68	-31.65

Period	Agricultural population			Percentage of the	
	Total	Urban	Rural	total	rural
				population	population
1921	17,121,892	559,354	16,562,538	63.77 ^c	83.35
1931	19,347,000	609,600	18,737,400	60.61 ^d	80.81
Increase { actual	2,225,108	50,246	2,174,862	-3.16	-2.54
{ % of 1921	12.99	8.98	13.13	-4.95	-3.04

Notes: *a* *Skorowidsz gmin Rzecz. Polskiej* (List of Communes in the Polish Republic), Pt. IV, Warsaw 1934, p. 9.

b Division into town and country population according to 'Ludność Polski według wyników Powszechnego Spisu Ludności z dn. 9. XII. 1931' (The Population of Poland according to the Census of Dec. 9, 1931), in *Wiadomości Statystyczne 1937*, No. 13. Supplement.

c Number of the population, after subtracting those not included under either place or occupation, 26,857,232.

d Ditto, 31,915,800.

¹⁶ The agricultural population here denoted is exclusive of those engaged in fruit-growing, market-gardening, floriculture, horticulture, fishing, hunting and trapping.

¹⁷ In order to ascertain the percentage of agricultural population in 1921 we have utilized the occupational list for that year and have made an estimate of the occupational structure of the unincorporated section of the population. Also consulted was the official return of the numbers, dwelling-

place and distribution of this section, and of the return of occupations in the various areas concerned in 1931. The percentage of agricultural population for 1921 thus obtained seems to be, if anything, underestimated.

¹⁸ The calculation has been based very cautiously on the mean annual increase for the whole population (18 per cent.), although the agricultural population undoubtedly showed a higher degree of natural increase.

The efflux of a portion of the natural increase of the rural agricultural population to non-agricultural pursuits has also had its effect on the occupational structure of the rural population, shown by the rise of the figure for industrial and commercial pursuits from 16.65 per cent. to 19.19 per cent.

The flight from agricultural to non-agricultural occupations observed in the past decade cannot by any means be regarded as sufficient relief, especially if the existing density of rural agricultural population (Table 3 and Figs. 4 and 5) is critically and comparatively appraised, with due regard to differences in the quality and assessment of soils, methods of utilizing the land, aims and systems of farming, and in the standard of life of the inhabitants.

It is a fact that a square kilometre (0.386 sq. miles) of cultivable land in Poland supports on an average 75.48 head of rural agricultural population, giving 1.324 hectares per person. The average extent of a farm, therefore, counting 5.2 persons to a family, is 6.884 ha. of cultivable land. However, these mean figures are more than usually abstract, because the surface to which they relate is not only differently utilized under varying local conditions, but also belongs only in part to peasants (about 70 per cent. only being in their hands), a situation which excludes the possibility of drawing from their density direct conclusions as to their degree of wealth and prosperity. Nowadays less than a hectare (0.92 ha.) of cultivable land of their own is available for each head of rural agricultural population, and no more than 4.8 ha. for each farm; and the conditions are in all probability deteriorating, for the natural increase, proceeding faster than the subdivision of great estates, undoubtedly contributes to still further density. The significance of regional differences in the utilization of land is due to the fact that they have a decisive influence—quite apart from geographical and economic considerations and conditions of supply and demand—on the profitability of farming undertakings; the expenditure of labour required and the value of the product are completely different in different districts, depending on the mutual relation between arable and meadows and pastures. The nature and scale of these fluctuations may be easily demonstrated. In the Republic of Poland as a whole 75 per cent. of the cultivable land is arable, the remainder forming meadows and pastures. In particular voivodships the proportion of plough-land varies considerably, in that of Tarnopol reaching 87.7 per cent., in Polesie falling to 44.2 per cent. Consequently identity in the data of density cannot be taken as an adequate basis for concluding that the material situation of the inhabitants is identical.

Evidence of the economic significance of the proportion of agricultural population to land under cultivation is to be found in, among other things, the fact that the pressure of internal migration, regarded

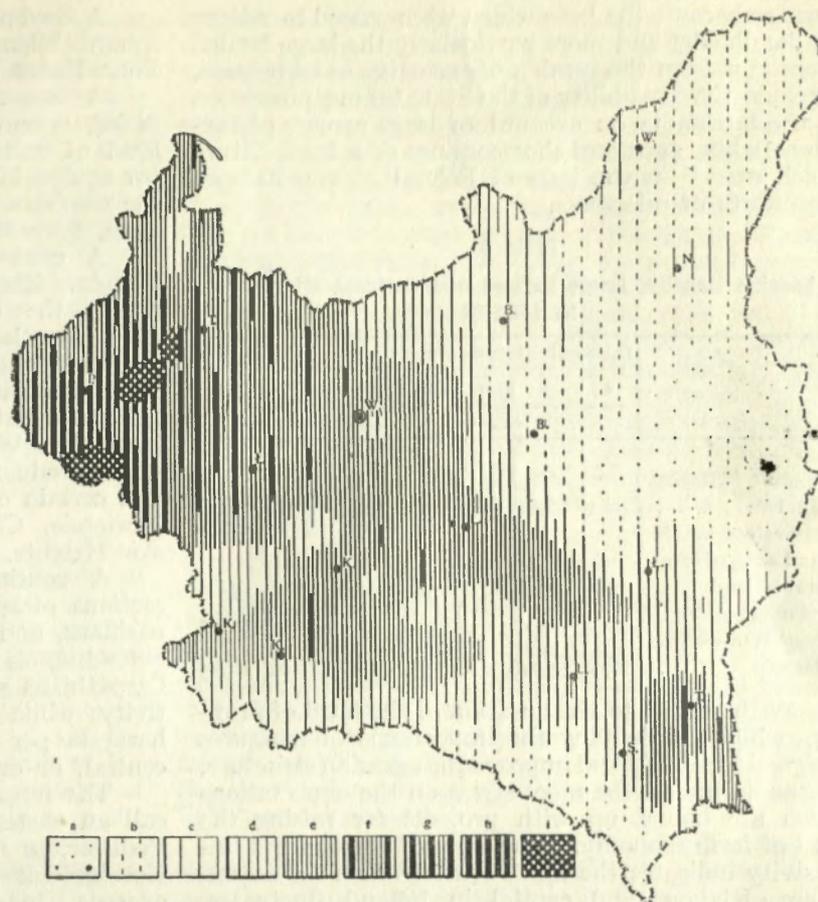


Fig. 5. Productivity of farming in Poland (average for 1920-29). According to E. Ozimek-Piochocka

Drawn by I. Ormicka

Average harvests of 5 main crops per sq. km. of total area in percentages of the average largest harvest recorded in Poland (1,445 quintals):

a — less than 10	d — 31-40	g — 61-70
b — 10-20	e — 41-50	h — 71-80
c — 21-30	f — 51-60	i — 81 and over

by some investigators as a symptom of over-population, remains in clear connexion with the specific density and the distribution of arable land belonging to large estates (Table 9).

Analysis of domestic migration over the whole area of the country permits us to put forward the theses that (1) the efflux of population from each square kilometre of surface is directly proportional to the specific density, and (2) that an increasing proportion of arable land belonging to large estates is accompanied by increasing pressure of migration from each square kilometre of surface.

AGRARIAN REFORM

The importance of land reform lies in its counterbalancing the ruinous economic and demographic results of the defective agrarian structure. Parcelation, the consolidation of patch-work farms into a whole, the abolition of servitudes including internal settlements—these are undoubtedly among the most important methods leading to a reconstruction of the agrarian framework. But it would be a great error to believe that even the broadest and most radical measure of land reform could solve the problem of Polish rural over-population. Not only is the necessary capital lacking, but also a sufficiency of land;²⁰ the

²⁰ *Struktura społeczna wsi polskiej* (The Social Structure of the Polish Village), Warsaw 1937. The supplement to this work

entitled *Możliwości akcji parcelacyjnej* (The Possibilities of Parcelation) gives extremely interesting calculations. L. Gro-

more so because the laws which were passed to relieve the landholder and more particularly the large landed proprietor from the burden of excessive indebtedness, preclude the possibility of the State taking possession of the latifundia on account of large arrears of taxation; while gaps and shortcomings of a legal nature which exist²¹ in the laws of Poland greatly hamper the efforts of reformers.

Table 9
Specific Density, Large Estates and Internal Migration
in 1921-31

	Internal migration per sq. km. of total area						
	2	4	6	8	10	12	14
	Inhabitants						
Specific density total	96.2	98.82	96.7	95.7	100.5	101.5	114.2
Large-estate arable land as % of total arable land. . . .	19.4	23.2	24.6	25.6	27.3	30.5	34.6
Percentage of emigration to specific density	2.08	4.04	6.2	8.35	10	11.82	12.25

With regard to the question of the level of farming, while not denying the importance of measures designed to modify and improve the agrarian structure, we should lay all the more stress on the expectations which are bound up with projects for raising the level of farm economy. The map of agricultural intensity indicates the limits within which the expenditure of labour and capital in Poland fluctuates, measured by the size of the harvest of the five principal crops.

The western region, with harvests of over 18 quintals per hectare,²² embraces the Voivodships of Poznań, and Pomorze, Kuyavia and the middle valley of the Warta. The central region, with harvests of over 16 but under 18 quintals per hectare, extends southwards to the Vistula and eastwards to the Bug, and embraces Podolia in the south-east. The districts of Sandomierz and Lublin, though included within it, form a sub-region approximating to the western in the size of its harvests. The southern mountain and foothill region has larger harvests than the eastern, in the northern portion of which the crops fall to a minimum.

A characteristic feature is the fall of harvests towards the east owing to differences in the level of farming, and towards the north-east owing to climatic reasons. This circumstance also plays a certain part in the mountainous areas of southern Poland.

The difference between particular regions in Poland is rendered still clearer by the figures of harvests per square kilometre of total surface (Fig. 5).

dzicki, 'Kilka słów o możliwościach kolonizacyjnych Polesia obecnie i po przeprowadzeniu melioracji' (A few Words on the Possibilities of Colonizing Polesie at the Present Time and after the Amelioration Works), *Rocznik Ziemi Wschodnich* (Eastern Districts Annual), 1937. Warsaw 1936. S. Rychłowski, *Dzisiejszy stan problemu melioracji Polesia* (The Present Position with regard to the Amelioration of Physical Conditions in Polesie), Warsaw 1937. 'Legenda o pojemności kolonizacyjnej Polesia' (The Legend of the Colonizing Potentialities of Polesie), *Kurier Poranny* (Morning Courier), Sept. 21, 1936.

The investigations of these two last enquirers into the actual possibilities for domestic colonization in Polesie show that the maximum capacity of this province after its complete amelioration and the granting of land to the local peasantry does not exceed a quarter of a million people, or rather more than half the annual increase (establishing 10 ha. farms and

According to the average size of harvests per square kilometre (0.386 sq. m.) of total surface, Poland may be divided into four regions:

A western region having a negligible percentage of forests and much arable land with a high technical level of cultivation, yielding at least 880 quintals per square kilometre (8.80 per hectare). It embraces the southern part of Pomorze, the Voivodship of Poznań, Kuyavia and much of Masovia.

A central region extending southward to the Vistula. East of Cracow it crosses the river and covers the Cracow-Sandomierz plain, penetrating deep into the foot-hills. In the east it includes the Lublin heights so that its general outline reaches the Bug. The average production of this central region fluctuates between 590 and 880 quintals per square kilometre. Within its area there are certain 'islands' where production is larger (Miechów, Janów Lubelski), and certain others where it is smaller (Włoszczowa, Zawiercie, Częstochowa, Końskie, the Świętokrzyskie Heights, etc.).

A southern region embracing the remaining sections of south-western Poland, the Eastern Carpathians, and considerable areas of western Podolia, extending as far as southern Wołyń. The Eastern Carpathians stand out as areas of minimum productivity; while the steppes of Podolia with their rich harvests per square kilometre approximate to the central, or even to the western, region.

The remaining wide strip of eastern Poland we call an eastern region. It is only to the north of Podlasie, in the Augustów Lake District and on the Nowogródek Heights, that productivity somewhat exceeds 300-590 quintals per square kilometre. Elsewhere a square kilometre of total surface does not give more than 300 quintals. The reasons are to be sought in the small percentage of arable, the large extent of forests and the wide area taken up by meadows and pastures, the climatic conditions and the backward systems of cultivation (such as the three-year rotation).

To the eastern region corresponds the northern part of the Voivodship of Pomorze.

A study of the map shows that the task of intensifying Polish agriculture indubitably demands action on several fronts, such as: (1) the extension of the surface of cultivable land by bringing waste land under good cultivation and by completing the regulation of rivers and draining of swamps; (2) the better utilization of agricultural land (by partial draining, or the intensification of cultivation and stock-breeding); or (3) the suitable organization of the whole of agricultural or stock production (rationalization combined with agricultural industrialization and regionalization of cultivation and stock-raising), which leads to increased expenditure of labour and raises the level of production.²³

assuming families of 5.2 persons, there being some 4-5 hundred thousand hectares of available land).

²¹ Some of them have already been either removed, or at least partially made good (the question of freedom to transfer land which has been parcelled out, partial acceptance of the principle of indivisibility and so forth).

²² To convert quintals per hectare into cwts. per acre multiply by 0.797.

²³ The above emphasized need for intensification should not be connected with problems of marketing. Such an approach to the question is intelligible in the larger peasant farms and in the great estates, but does not appear justified in relation to the small-holders and landless workers, who, like the urban population, are interested chiefly in getting agricultural produce cheap. Intensification as I understand it ought to rest in the first stage at least on a notable increase in the expenditure.

Action intended to raise the level of farming must put the technical training of the agricultural worker in the forefront of its programme. Accordingly the problem of the vocational agricultural school is brought by force of circumstance to the first place in the Polish scheme. When leading the discussion on the best means of raising the level of agricultural economy in Poland to the theme of technical training for the agricultural worker, we have been guided by the thought of regarding solely existing possibilities and domestic needs. We have therefore deliberately passed over the possible effect of foreign sales on the development of agriculture. Accordingly, the main emphasis is laid on the importance for the raising of the level of farming of increasing the expenditure of manual labour. This should enable the peasant not only to save himself from ever greater poverty, but even to raise his standard of life to a certain extent.

INDUSTRIALIZATION

With regard to industrialization, any rise in agricultural production and any increase in the productivity of farms will undoubtedly help to increase the population content of this branch of national economy, although the growing needs of the individual will mitigate against the employment of the whole agricultural population in its present occupation. On the other hand these very demands on the part of the farmer, though reducing the population content of the improving system of cultivation, justify us in the hope that there will be more active consumption of industrial products and a consequent increase of industrial prosperity, which should facilitate the process of absorbing the surplus of the agricultural population.

A modification of this sort in the social occupational structure would relieve the burdens at present weighing on the country folk; it would call to life broad new classes of consumers, and would lead to a general rise in the standard of life, an actual increase of national income per head, improved possibilities of domestic capitalization, a modification of the structure of foreign trade, particularly in the field of export, and the creation—dependent on the fundamental points of settlement and industrial policy—of larger or smaller markets for agricultural produce, which could not but react favourably on the profitability of agriculture.

A great part in the promotion of industrialization might be played by a well conceived programme of large-scale public works.²⁴ The discussion inaugurated by Z. Ludkiewicz²⁵ on the subject of assuring continuity in action once begun opens broad horizons.

An expression of the decided will to overcome the difficulties blocking the way to industrialization is to be found in the works connected with improving the level of handicrafts, small-scale industry and home

industries, the development of which is dependent to a very large degree on the supply of cheap electric power to as large an area as possible. It is enough to recall the part played by Krzyzanowski's²⁶ electrification programme in the Soviet economic plan, or the achievements of Czechoslovakia in electrifying the Czech and Moravian villages.

For the same reason also the problem of the distribution of sources of motor energy is of outstanding importance, not only as a fundamental condition of the mechanization of agriculture and the extension of the possibilities for handicrafts, but also as an aid to the deconcentration of industry, a matter which demands special attention in any detailed plan. The dispersion of industrial centres is required alike by considerations of national defence (the avoidance of easily paralysed great concentrations of industry) and by considerations of a demographic and economic nature (employment for small holders and the landless agricultural workers).

URBANIZATION

The growth of industry, irrespective of whether it is localized in existing towns or embraces the village, raises the problem of urbanization. What is even more, since Polish industry is as a rule localized in towns, and the processes of industrialization and urbanization go on contemporaneously, both processes, frequently identified, form an integral part of the programme for increasing the population content of Polish social economy.

Insofar, however, as the problem of industrialization touches matters bound up with the occupational structure of the community, by so far does the process of urbanization closely connect with the processes of transference of population, promising the creation of fresh markets and the establishment of a number of activities and investments, without the existence of which it is difficult at present to foresee the assemblage of a large population within a small area.

In underlining the necessity for such investments we are touching on one of the chief shortcomings of Polish national economy, namely the existence of scores of larger and smaller towns, industrial settlements and the like which are sadly lacking in up-to-date installations. The mere undertaking of their modernization would greatly stir the economic pulse, as is evidenced by the effects of the last two years of communal investment policy carried out in agreement with the Employment Fund.

On another, somewhat different plane are the tasks associated with the development of existing towns and settlements and the building of new ones. It is true that where it is a question of laying out building sites and streets the differences are insignificant, but the main point is to be found in the problem of house-building in its various forms.

of manual labour. This requires no capital and there is nothing to hinder it, remembering that surplus production will be consumed on the spot. Similarly there is no fear of any unfavourable effect on the market for agricultural produce, and the community will be better fed. An increase of individual consumption is therefore possible even under present conditions, if the organizers of chambers of agriculture, etc. would devote more attention to the question.

Regard for consumption, its quantity and quality, may in certain cases lead to conflict with the aims of specious rationalization. It is a well known fact that the peasant in suburban districts has worse food than one in similar circumstances inhabiting a neighbourhood without such a ready market for his produce. The same is true with regard to dairy co-operative societies. If it is practised by a number of farmers who each own a single milch cow, there is a certain profit in it, but the harm

done to the community is infinitely greater by the frequently almost complete cessation of the consumption of milk at home. In such cases reasons of State (regard for the physical welfare of the vital forces of the community) bid us oppose such short-sighted economic policy.

²⁴ This opinion is shared by the Polish Government, though for many other reasons. This is clear from the speeches of ministers concerned in connexion with the great plan for State investments works. Cf. *Ku przebudowie gospodarczej, Wytoczne inwestycji państwowych* (Towards Economic Reform, the Salient Points of State Investments Works), Warsaw 1937.

²⁵ Z. Ludkiewicz, *Polityka wielkich robót publicznych* (Policy of Great Public Works), Warsaw 1936, pp. 98 foll.

²⁶ M. Krischanowski, *Die Planwirtschaftsarbeit in der Sowjetunion*, Berlin 1927, pp. 21-22.

Considered in its relation to agriculture and the over-population of the village, the process of urbanization is seen to have a twofold significance, resulting on the one hand from the efflux of population surplus from the land, and on the other from the increase in the profitableness of agriculture due to the rise of markets for its produce. Regarded in this light the tasks of urbanization take the leading place among all the measures for raising the level of farming and improving conditions of life. This is true in the first place of the extensive areas of eastern Poland. For as urbanization progresses one may expect to see a rise in the money yield of land accompanied by its topographical differentiation,²⁷ and an effect on the territorial distribution of the incoming population and of the newly founded industrial undertakings.

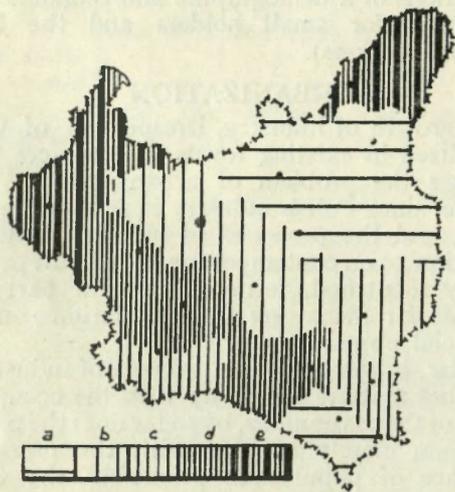


Fig. 6. Geographical distribution of the intensity of urbanization in 1921-31 (index for Poland 1:29)

Drawn by I. Ormicka

a — less than 1 c — 1.20-1.40 e — over 1.60
b — 1.0-1.19 d — 1.41-1.60

Note: The index figure of the intensity of urbanization is based on a comparison of the real increase of town population (expressed as a percentage of the total real increase) with the average density of population in towns (expressed as a percentage of the total average density of population).

Urbanization (Fig. 6) made great progress in Poland between 1921 and 1931. Altogether the towns including the areas incorporated with them absorbed 30 per cent. of the natural increase of population. The greatest growth was shown by towns of more than 20,000 inhabitants, these accounting for 80.8 per cent. of the urban increase. The course of urbanization is decidedly regional in character (Table 10). The movement into the towns was most marked in the west, south and north-east of the country; the Voivodships of Warszawa, Lublin and Wołyń have maintained approximate equilibrium, whereas in the areas of the Voivodships of Białystok, Nowogródek and Polesie the towns have increased but little in size.

It is further worth remarking that in the region where urbanization was most progressive in the west and south, it was the smaller towns which mostly increased, whereas in central and eastern Poland increase was confined to the large towns.

²⁷ Mieczysław Sowiński, *Rolnictwo włościańskie w zarysie statystyczno-terytorialnym* (Peasant-farming in Statistical and Territorial Outline), pp. 64-67, Warsaw 1933.

A comparison of the index map of urbanization with the maps of emigration and domestic migration²⁸ not only indicates the mutual dependence of these phenomena, but also enables us to discover and determine their causes and to connect them with the general economic state of the country.

COMMUNICATIONS

Among the mass of population and economic problems that of communications is of considerably greater importance than might appear at first sight. This is true alike of land and sea communications.

In the sphere of land communications it is a fact that if there is no good connexion between town and village the hope of developing concentrations of industrial and handicraft workers as fresh markets for agricultural produce is vain and delusive. The road is the deciding factor controlling the possibility of the town's influencing the profitableness of farming, and the existence of the road is an essential condition for the development of domestic settlement. Alike then the prosperity of the town and the success of the village is dependent on the development of communications facilitating the transport of raw materials and provisions and the transport in the reverse direction of manufactured articles. The dependence of an area of agricultural production on an urban market, and similarly of an urban centre of industrial production and commodity exchange on a rural area, is the cardinal condition whereby the soundness of the national economy may be assured.

Table 10
Intensity of Urbanization in Poland (1921-1931)

Voivodship	Average population of towns	Actual increase of urban population	Index figure of urbanization intensity $\left(\frac{a}{b}\right)$
	Percentage		
	of the average population 1921-1931 (b)	of the total actual increase 1921-1931 (a)	
Poland	26.43	34.31	1.29
Warszawa	22.77	25.37	1.11
Łódź	40.44	61.51	1.52
Kielce	24.87	35.30	1.41
Lublin	17.42	19.72	1.13
Białystok	24.32	22.54	0.92
Wilno	18.94	34.96	1.84
Nowogródek	9.99	7.80	0.78
Polesie	13.76	10.18	0.73
Wołyń	11.98	13.16	1.09
Poznań	37.66	108.31	2.87
Pomorze	28.59	66.06	2.31
Kraków	25.42	33.72	1.32
Lwów	24.29	37.25	1.53
Stanisławów	19.79	19.12	0.97
Tarnopol	15.55	20.98	1.34

A proper appreciation of the social and economic rôle of communications brings into prominence two principles which should govern the lay-out of land communications on the ground: (1) roads should be built radiating from the towns; and (2) no new settlement should be started until it has first been connected with the nearest market by a modern artery of communication.

²⁸ Wiktor Ormicki, 'Nasilenie wędrowek wewnętrznych w Polsce' (Force of Domestic Migration in Poland), *Wiadomości Geograficzne* (Geographical News), Cracow 1932, p. 119.

To describe the losses suffered by the social economy owing to insufficient communications seems altogether impossible, because ill-kept roads and the absence of highways not only cause serious direct damage, but also incomparably greater indirect injury from the lowered level and profitableness of the whole economy in every branch.²⁹ It is relatively easy to determine the losses resulting from unsatisfactory communications by sea. The best example of this is to be seen at Danzig, a port which—according to the very conservative estimate of the Chief Bureau of Statistics at Warsaw—is enabled by its position as a commercial emporium and a centre of communications with Poland to take 4.5 per cent. of the value of all the goods passing through it.³⁰

The aggregate cost of foreign means of transport to Polish foreign trade has been estimated by Dr. A. Gazeł³¹ at from 63 to 180 million zlotys gross annually. Thus the essential importance of a national mercantile marine and a native body of merchants is clearly apparent; they are irreplaceable instruments of State economic policy if imported raw materials are to be cheaper, the export of foreign exchange restricted or averted, and the general level of the national economy raised.

It may be asserted as an axiom that without the development of communications there can be no question of successfully combating over-population, and that the possession of a national mercantile marine is an essential condition if important capital values are to be retained within the country; values which may be utilized for domestic economic develop-

ment, which is equivalent to an increase of the total population content of the social economy.

Every effort to make productive use of the demographic element and every attempt to promote economic activity is doubtless faced by difficulties whose origin is seated in the past, apart from those of structure and general situation at the time—difficulties such as the undeveloped state of industry, the terrible devastations of the War, the varying psychology of the people, and so on. They can be successfully overcome only by the co-ordination of action which, though it has economic aims, is guided and controlled by population policy.

Our rejection of the idea of finding a solution by means of birth-control, emigration and reorganization of the national economy implies recognition of the necessity for formulating a decided population policy 'as an activity directed to the maintenance of equilibrium between the population and the social economy by the purposeful taking of certain legislative steps calculated to harmonize the results of the growth of the population with the demographic consequences of economic evolution.'

This general statement of the tasks and aims of population policy must be followed by a careful study of contemporary demographic and economic conditions, based on a knowledge of the dynamics of the processes to be analysed and aiming at the establishment in the centre of interest, as an object for scientific examination to whose needs all economic measures ought to have reference, of the people, the living source of the country's thoughts and strength.

²⁹ An attempt to assess the losses resulting from lack of roads is made by L. Bobrowski in an article entitled 'Komunikacje lądowe w województwach wschodnich' (Land Communications in the Eastern Voivodships) and published in *Prace Instytutu Badania Gospodarczego Ziemi Wschodnich* (Publications of the Institute for Economic Research in the Eastern Districts),

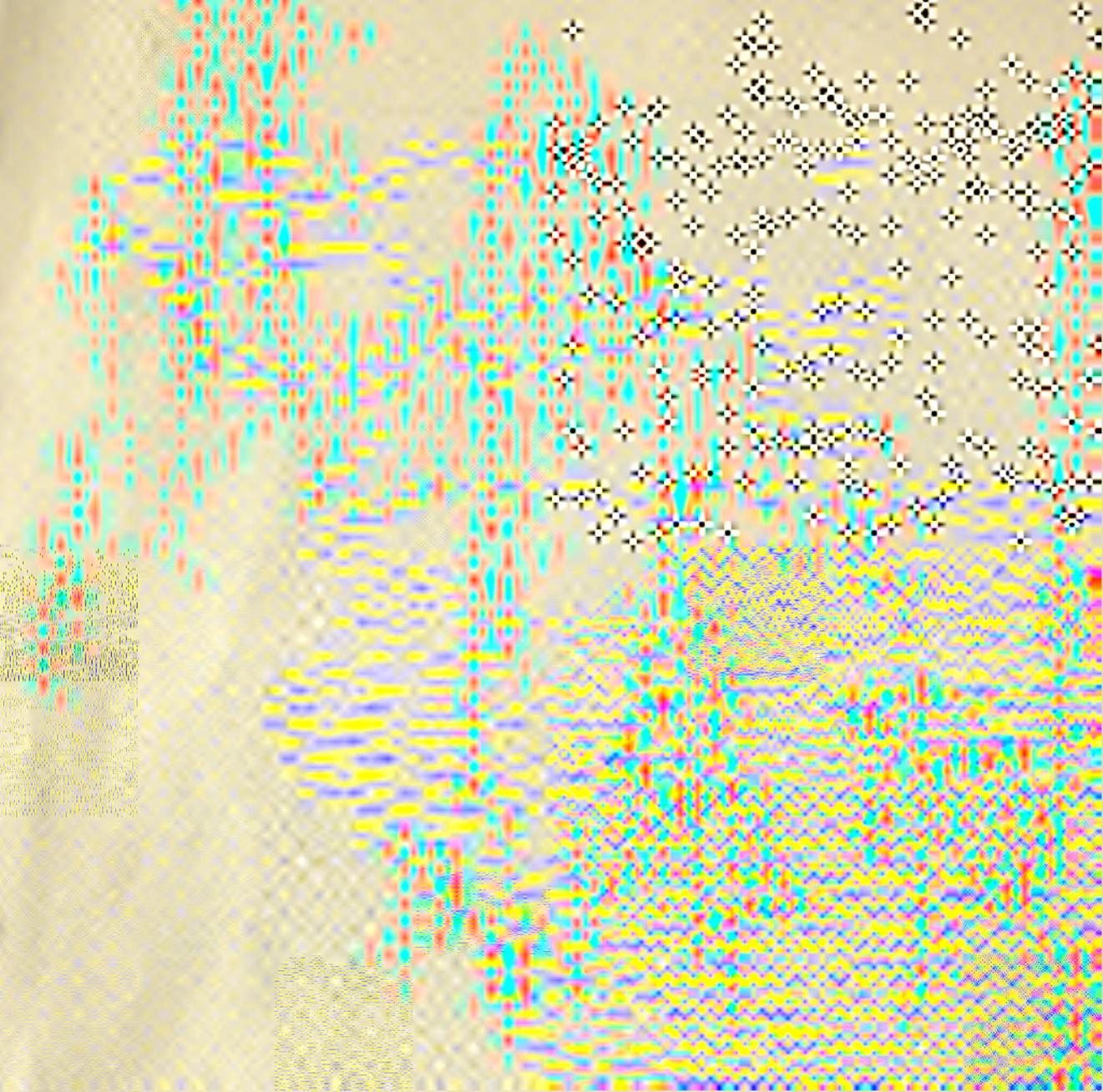
1, Warsaw 1937, pp. 20-24.

³⁰ Poland's balance-sheets, 1926-29. Chief Bureau of Statistics, Warsaw.

³¹ A. Gazeł, 'Szacunek wartości usług morskich' (Estimate of the Value of Maritime Services); lecture read at a meeting of the Maritime Committee of the Baltic Institute, Gdynia.

TRANSLATED BY B. W. A. MASSEY





THE BALTIC INSTITUTE

The Baltic Institute was created in Toruń in 1926 for 'the investigation of Pomeranian and Baltic affairs'. At first it directed its attention mainly to Polish Pomerania and its neighbouring countries, but it now aims to include the whole Baltic region within the scope of its interests. It endeavours also to organize scientific co-operation among all those studying in Baltic countries.

The Institute does not possess its own research staff, but invites specialists from Polish and foreign universities and other

centres of research as corresponding members and collaborators. Over 300 professors and assistant professors have given active assistance or have contributed to the publications of the Institute, and the number of these helpers is constantly growing. The main line of research is economic, and is chiefly connected with maritime trade, navigation and harbour matters. Much attention, moreover, is paid to cultural relations between the peoples of the Baltic region, and to problems concerning their history and geography.

PUBLICATIONS OF THE INSTITUTE

The publications of the Institute, which present the results of its activities, can be divided into four main groups: the 'Records of the Baltic Institute'; the 'Baltic Pocket Library', booklets which appear also in English; the publications of the

Economic Maritime Archives Department of the Institute; and periodicals such as the quarterly *Jantar*, dealing with Pomeranian and Baltic affairs, and *Baltic and Scandinavian Countries*. In all, the Institute's publications comprise about 500 items.

RECORDS OF THE BALTIC INSTITUTE

The 'Records', chief among the publications of the Institute, appear in six distinct series, arranged according to subject.

1. *Dominium Maris*, comprising works on maritime trade, navigation and ports.

2. *Balticum*, comprising geographical and cultural studies of various territories of the Baltic.

3. *Research Workers on Pomerania*, comprising lectures

and papers read at meetings, together with their minutes.

4. *Pomeranian Bibliography*.

5. *Monographs on Pomeranian Towns and Villages*, a series in which only one work has so far appeared.

6. *Cartographical-Statistical Works*.

Below is a list of some of the publications of the Institute. (All these works are in Polish, unless otherwise stated.)

DOMINIUM MARIS

'International Trade on the Baltic': by W. Stopczyk. Toruń 1928, pp. 192 + VIII, 71 stat. tables and 6 graphs. Price: 4.50 zł.

'The Case of Gdynia': by A. Siebeneichen and H. Strasburger. Toruń 1931, pp. 180 + VIII, 43 stat. tables. Price: 5.50 zł.

'The Development of the Port of Danzig': by K. Swiatecki. Toruń 1932, pp. 309 + XIV, 148 stat. tables, 5 maps and 8 graphs. Price: 7.50 zł.

'German Transit through Poland': by J. Piasecki. Toruń 1935, pp. 187 + VIII, 2 stat. tables and 4 charts. Price: 5 zł.

'Sea Consciousness': collective work edited by J. Borowik. Toruń 1934, pp. 390 + XVI, 35 stat. tables, 13 maps, 11 graphs, 6 ills. Price: 8 zł.

'The Technical and Commercial Equipment of a Sea-Port': collective work in four volumes edited by J. Borowik, B. Nagórski and T. Seifert. Vol. I. 'Organization of Ports, with Special Regard to Gdynia and Danzig'. Toruń 1934, pp. 150 + VI, 2 maps. Price: 6 zł.

'Sea Transport and International Agreements in Navigation': by F. Hilchen. Toruń 1934, pp. 104 + X, 11 stat. tables. Price: 4 zł.

'Polish-British Coal Export Competition in Scandinavian Markets': by A. Jałowicki. Toruń 1935, pp. 191 + X, 50 stat. tables. Price: 5 zł.

'The Port of Copenhagen': by B. Leitgeber. Toruń 1935, pp. 256 + X, 5 maps, 28 stat. tables. Price: 8 zł.

BALTICUM

'Polish Pomerania': collective work edited by J. Borowik. Vol. I. 'Land and People'. Toruń 1929. Vol. II. 'History and Culture'. Toruń 1931. Vol. III. 'Agricultural Life'. Vol. IV. 'Communication in Pomerania'. (Printing.)

'Reply to German "Corridor" Propaganda': collective work edited by J. Borowik. Toruń 1930, pp. 163 + VII. Price: 3.50 zł.

'The Struggle for the Baltic': by W. Sobieski (in German). Markert & Petters, Leipzig 1933, pp. 269 + VI. Price: 7.50 zł.

'The District of Malborg': by W. Łęga. Toruń 1933, pp. 256 + XVIII, 180 ills. 10 maps. Price: 9 zł.

'The Cassubian Civilization': by F. Lorentz, A. Fischer and T. Lehr-Splawiński. Toruń 1934, pp. 306 + XVIII, 38 ills., 1 map. Price: 10 zł. (Also published in English by Faber & Faber, London 1935. Price: 21s.)

'Economic Conditions in East Prussia': by A. Munnich and J. Wilder. Vols. I and II. Toruń 1934-36. Price: 5.50 zł.

'Cassubian Songs': by Ł. Kamiński. Toruń 1935, pp. 350 + XXII, 1 map, 1 illustr. Price: 12 zł.

'History of East Prussia': collective work in three volumes. Vol. I. 'Prussia under the Teutonic Order'. Toruń 1936. Vol. II. 'Ducal Prussia'. (Printing.)

RESEARCH WORKERS ON POMERANIA

'National Problems in Pomerania'. Toruń 1931, pp. 130, 1 map, 1 graph. Price: 3.50 zł.

'Landownership in Pomerania. Historical and Juridical Problems'. Toruń 1933, pp. 244. Price: 7.50 zł.

'Polish Land Settlement in Pomerania'. Toruń 1934, pp. 216, 7 maps, 7 graphs, 19 stat. tables. Price: 8 zł.

'Landownership in Pomerania. Economic and Geographical Problems'. Toruń 1935, pp. 254, 13 maps. Price: 8 zł.

CARTOGRAPHICAL-STATISTICAL WORKS

'National Aspects of Pomeranian Agriculture': by A. Wrzosek and S. Zwierz. Gdynia—Toruń 1937. Price: 2.50 zł.

'Foreign Element in the Economic Life of Pomerania': by A. Wrzosek and S. Zwierz. Gdynia—Toruń 1937. Price: 2.50 zł.

PUBLICATIONS OF THE ECONOMIC MARITIME ARCHIVES

'Goods Turnover of German Sea Ports': by M. Brzozowski. Gdynia 1937, pp. 118. Price: 2.50 zł.

'International Trade of the Countries of the Baltic Region, 1929-1935': by A. Gazeł and B. Polkowski. Gdynia 1937, pp. 42. Price: 1.50 zł.

'Maritime Goods Services': by A. Gazeł and S. Oltarzewski. Gdynia 1937, pp. 20. Price: 1 zł.

'Elements of Maritime Transport': by B. Żórawski. Gdynia 1937, pp. 34 and supplement. Price: 2.50 zł.

'Shipchandlery': by B. Koselnik. Gdynia 1937, pp. 51. Price: 2.50 zł.

'Tramps and Regular Shipping': by I. Buxell. Gdynia 1938, pp. 67. Price: 2.50 zł.

'Credit Organization in a Port': by M. Szytkgold. (Printing.)

