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## Population geography for science and practice

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## POPULATION GEOGRAPHY FOR SCIENCE AND PRACTICE

**ABSTRACT.** Demographic potential is a necessary condition of any human activity. Its dynamics (migrations) releases resources of social activity. Therefore population (human) geography is connected with various geographical disciplines such as settlement geography, social geography, political geography, regional geography, geography of culture, historical geography, ecology and others. It is an implicational discipline – the base for other geographical disciplines and such sciences as psychology, sociology, medicine, economy and town-planning. It is also an applicational discipline, which means that it has a universal character. It serves the science but also the policy. It is a tool of multisemantic features and high political usefulness.

The knowledge of population structures and processes makes it possible firstly to distinguish: 1) social-economic character of the region; 2) regional economic differentiation of the state (continent, world); 3) level of urbanisation and its stages and secondly it is: 4) the tool of social policy – it balances job market; 5) the tool of economic strategy – efficiency of human activity; 6) prognostic category in many spheres: demographic, sociological, economic.

**KEYWORDS:** population, population politics, urbanisation.

### INTRODUCTION

Population potential is the necessary condition of any human activity, and its mobility releases resources of social life. Versatile and detailed knowledge on population problems is the basis to make diagnoses and prognoses concerning various zones of human activity. It is the main objective of our knowledge and its needs are the final reference systems in all economic and civilisation purposes.

Thus, population geography represents a universal discipline: both theoretical and practical. It serves the science and practice. This is the main thesis of

this paper. In order to confirm this thesis it is necessary to discuss both of the distinguished spheres.

Population geography is not an autonomic science. It belongs to the family of geographical sciences and side by side with physical geography and economic geography, population geography represents an important significative pillar. It is interdependent on other geographical disciplines and it co-operates with other sciences. It has an implicational character – it is the basis for other geographical disciplines and numerous related sciences such as sociology, psychology, economy, town-planning, archaeology, statistics, demography, econometry. All these sciences are connected by common methodological, objective, purposeful and methodic aspects (Kosiński, Jelonek, 1960).

A typical feature of population geography is its open access, which shows its special position among other geographical disciplines and related sciences. From the one hand, population geography is influenced by other geographical disciplines and related sciences, from which it adopts philosophical conceptions and methods. From the other hand, it is a source of diffusion of new orientations, methods and research establishments for the whole economic geography and other sciences, in which man is the main investigation object.

Population structure and processes are not only the reflection of qualitative features of a given population in a certain area, but it also contains information about direction of population development. It becomes the main element of social and economic policy, because the efficiency of human activities in each territorial level depends on the knowledge of population structures and processes. This shows the increasing importance of population problems. They are not only the objects of scientific reflection, but also the subjects of social consideration and practical application. They are seen as certain indicator of social and economic transformations. Often an optical analogy is used – similarly to mirror reflection, problems of economic development and social progress are reflected in population structures and processes. They influence (on micro- and macro-social levels) demographic transformations especially in the periods of political, economic and cultural transformations. This process is continuous and the rate and directions of civilisation development trends are differentiated mainly by economic conditions of given areas. Economic situation of population influences their natural and migrational movement. Demographic modernisation is accompanied by modernisation of population spatial mobility (Zelinsky, 1971).

## POPULATION GEOGRAPHY AS A THEORETICAL DISCIPLINE

The investigations on transformations aim to understand their regularities, which, as a systematic set of statements, create demographic theory. This theory, as any other theories, explains, evaluates and prognoses investigated phenomenon and processes.

In order to document the thesis which expresses the character of population geography, its basic theories, conceptions and models will be briefly discussed. According to Chesnais (1986) two theories comply with criteria of generality and timeliness, i.e. Malthus' es conception and theory of demographic transformation (modernisation). The views of T. R. Mathus are only partially still valid and the only true statement is the one concerning the exponential character of increase rate of the world's population. For European countries, quantitative relations determined by Malthus are not true any longer.

The assumptions of the theory of demographic transformation contain two basic premises, which explain its general and total role in population theory. Firstly, it represented universal description of historical (civilisation) population transformations in form of a scheme of the distinguished phases. Secondly, it linked the determined demographic phases with co-occurring economic and cultural transformations.

The theory of demographic transformation (modernisation) was the recapitulation of the investigation results explaining population processes. According to this theory, population goes from the phase of balance of archaic type (high mortality and fertility) to the phase of balance of modern type (low mortality and fertility) and between these main phases population undergoes through the following stages of historical development: 1) natural system, 2) demographic explosion, 3) demographic implosion, 4) demographic modernisation (Poursin, 1971).

The dissemination of this theory developed into three trends:

- 1st led to the increase of the description of the demographic transition,
- 2nd aimed to enlarge an explanation layer of the theory,
- 3rd led to determine the place of current population transformations in the hitherto human history (Okoński, 1990).

Most of the works included in the first trend was devoted to individual countries. Some of them concerned the description of demographic transformation in regional or world-wide scale (Chesnais, 1986; Noin, 1983). Their investigation results modified the classical form of theory of demographic transformation. The three-phase cycle was replaced by 4-phase cycle (commonly accepted). It divides the middle phase (proper "transition") into two subphases.

In the descriptions of demographic trends, some supplementary aspects were included such as population migrations and demographic and social structures (Chesnais, 1986; Zelinsky, 1985). Their investigations revealed the coexistence of migration transformations with demographic transformation. Zelinsky (1983) gave a hypothesis according to which demographic transformation correlates with transformation of spatial mobility, which is a polyphase process and its phases have specific forms, intensity and directions of population migrations.

Population spatial mobility is a complex phenomena. Its genesis reaches the beginnings of human activity and it has a significant research output. First works concerning migration problems started E. G. Ravenstein, who studied "laws"

which influence spatial human behaviours. According to Lee (1966) the so-called migration “laws” (migration theory) include:

- 1) Migration and distance,
- 2) Migration in stages (currents of migration have stages),
- 3) Flow and counter flow (main current creates an equivalent counter currents),
- 4) Differences in disposition to migration between urban and rural population,
- 5) Predomination of women in small distance migrations,
- 6) Technology and migration (technological and technical progress stimulates migrations),
- 7) Predomination of economic motives.

Despite the fact that these “laws”, which rule population as well as economic laws usually do not have a stiffness of physical laws, many hypotheses established by Ravenstein are still true in modern times.

Lee (1966) stated:

The present century has added nothing new to migration theory, which would be comparable to earlier achievements in this field (...). Then he says During the last 75 years, E. G. Ravenstein was repeatedly cited and questioned.

Further investigations (Chesnais, 1986; Zelinsky, 1971) complemented and enlarged the hitherto regularities adding establishments resulting from modern investigations on spatial mobility of individual people and whole human societies. Although these results make an essential element of modernisation processes, very often modern investigators bring back migration “laws” in their research on migration motives and most of all they include the most important determination – distance (Szajnowska-Wysocka, 1999).

Methodological values of population geography are underlined by numerous migration models elaborated by geographers, sociologists, economists, demographers produced in order to investigate prognoses of human mobility. This is a continuous research problem, because it synthesises the whole range of conditions, which influence human life and activity. Mobility is a specific feature of humans. This phenomena of complex nature became an investigation object and methodological solution for many specialists. The specificity of human spatial behaviour was a guiding principle of migration models development. These models may be divided according to:

- 1) features of migration phenomena,
- 2) features of the model itself.

The first group of models concerns gross migration, i.e. migrations between the emigration place and immigration place, or net migration, i.e. balance of emigration and immigration. Migration model may be used for permanent migrations and periodical migrations, or internal and external migrations (domestic and international).

Migration models may be classified taking into account the features of the model itself. This group includes 1) deterministic models and 2) probabilistic models. Among deterministic models the following types are distinguished: a) descriptive models, which are based on migration "laws" (these are mainly gravitational models), and b) explanatory models.

Probabilistic migration models, which concerns the behaviour of individuals or migration community may be divided into:

- a) statistical models
- b) stochastic models.

There are many models, which are left only as theoretical models due to empirical difficulties. The statistics does not keep up with methodical progress. The adjustment of statistical specification to current level of scientific investigations is an important issue because it concerns the role of statistical models in the creation of migration theory enlarging in this respect a theoretical range of population geography.

Population investigation, as it was mentioned earlier, represents an investigation field for many sciences as geography, demography, sociology, anthropology, history, economy and others. Thus different scientific currents and conceptions intersect and various research approaches and methods occur.

This makes it possible to distinguish several very important interests in population geography, which include

- chorological current (regional approach),
- environmental current (ecological approach),
- analytical-spatial approach,
- eclectic current (without its own methodological background, but it joins the elements of the other approaches in order to supplement analytical studies).

## POPULATION GEOGRAPHY AS AN APPLICATION DISCIPLINE

Population theories mentioned in Chapter 1, especially the theory of population modernisation, which reveals succeeding stages of the transition of traditional society to modern society serves with its establishment to other geographical disciplines and related sciences involved in spatial behaviours of humans and their conditions.

The practical value of population geography insists in this that individual elements of its interest, i.e. state, structure and processes (natural and migration movement) may serve as synthetic indicators of e.g. urbanisation process and as measure of social and economic diagnosis of certain areas.

The state of population from the moment of nomadic life to settled life shows first human settlements, from primitive to large modern metropolises. They always represent a form of a human concentration, because a settlement or

metropolis without population would only be a scansen-museum documenting material culture heritage of humans. Therefore the most popular and often formal criterion of population concentration and population activity in form of towns is the population number. It systemises towns in a hierarchical typology starting from small towns, through medium, finishing on large metropolises. This border number (population) is somehow information about the border size of demand. The certain size of population is accompanied by certain types of functions typical for towns. This criterion is relative and changeable in time and space. It is different in densely populated and poorly populated countries and it depends also on the structure of rural settlement (very large compact villages inhabited by several thousand people).

In the classical and common understanding of urbanisation (as a process of town development), the measure of urbanisation is usually the number of urban population and changes in population distribution caused by population migration from villages to towns.

From a demographic point of view the urbanisation is the same as population movement from the areas of low concentration to the areas of higher concentration.

Many conceptions of phases (stages) of town development are based on empirical studies of processes of population concentration and disconcentration. The distinguished phases of 1) urbanisation, 2) suburbanisation, 3) disurbanisation, 4) reurbanisation are reflected in different directions of population concentration process and its structure.

Centripetal trend typical for the first phase is manifested by the migration from villages to towns and then also from small towns to large ones. This causes increasing population concentration in the boundaries of large towns, depopulation of rural areas and stagnation of small towns. In the second phase, disconcentration forces towards suburban areas predominate. The transition to the third phase i.e. disurbanisation, is associated with population movement towards poorly populated areas. The last phase, i.e. reurbanisation is typical for large towns, where "revitalisation" of their "old town centres" was taken up as well as the general aesthetic renovation of the whole town. Thanks to these measures the town revives and its industrial functions are replaced by service functions, especially administration, financial, educational, scientific, cultural, telecommunication computer, etc. (Klaassen, Paelinck, 1979).

Population, and especially natural movements reflect the economic and social development of the world. The European countries, North America, Australia and Japan, where over half of the population is concentrated in towns show small rate of natural growth and large rate of national income. In contrast, African and Asian countries are poorly urbanised with high natural growth and low national income per capita.

The differences in the social and economic development level are reflected in disproportions of population number in developed and developing countries. This is shown in a simplified scheme below (Poursin, 1976):

Population	
Developed countries (34%)	Developing countries (66%)
National income	
Developed countries (66%)	Developing countries (34%)

These economic disproportions are reflected in polarisation of population distribution: north – south, which correlates with the division into rich and poor, between population stagnation and population explosion.

The most painful consequence of this inequality law is undernutrition. This problem was discussed in numerous works and many controversial opinions were given. But famine is still the world's calamity.

Here, the role of population and economic policy in life of economic regions should be underlined. The programming of economic and social development of a given territory should be based on a detailed evaluation of population situation, where population migration is the main problem. Because of differentiated importance (demographic, economic, sociological) of population migration, it occupies a specific place among other synthetic measures of economic development and civilisation progress. According to Potrykowska (1993; 1999) they are one of the most important evidences of population mobility considering population spatial distribution and they are the main factor of changes in population distribution, its structure, proportions of populations concentrations in towns or in regions of large economic potential.

The significance of migrations as a cultural-civilisation indicator results from the fact that they are a specific feature of people and their motivations are determined by complex nature of humans. Therefore migrations are the interest subject of many specialists and a lot of scientific and social attention (conferences, publications, reports) is paid to them because spatial behaviours of population are resultants of various social and economic circumstances (Szajnowska-Wysocka, 1998; 2000).

The application character of population problem is underlined by world population prognoses, where the problem of "demographic explosion" is still valid. This problem, because of its reason and result is the world's not only population problem, but also economic and political once. This results not only from the fact that world's forum is devoted to this problem – Population Conferences organised every 10 years and sponsored by the United Nations.

The recent conferences were observed with interest not only by different specialists but also representatives of governments of many countries, as well as by mass media and public opinion.

The understanding of population picture differentiated by not only economic and political factors but also cultural (often religious) ones is at present very important. The humans face the dilemma – the necessity of correlation of their modern activities with the interest of future generations.

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