

# Edyta Jakubowicz, Krzysztof Janc

---

## Regional social structures in the European Union

---

Bulletin of Geography. Socio-Economic Series nr 5, 173-191

---

2006

Artykuł został opracowany do udostępnienia w internecie przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego. Artykuł jest umieszczony w kolekcji cyfrowej [bazhum.muzhp.pl](http://bazhum.muzhp.pl), gromadzącej zawartość polskich czasopism humanistycznych i społecznych.

Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

EDYTA JAKUBOWICZ, KRZYSZTOF JANC

WROCLAW UNIVERSITY

## REGIONAL SOCIAL STRUCTURES IN THE EUROPEAN UNION

**ABSTRACT.** The paper aims to describe regional differentiation of social structures in Europe. In addition, the article analyses distance between Polish regions and European ones, as well as the relation between socio-economic development. The following research paper uses the Hellwig's multivariate classification method. The most advantageous social structure is demonstrated by the metropolises. The Central-Western Europe and the most of the Mediterranean countries have the weakest social structures. Relation between social structures and socio-economic development is positive and fairly strong. All in all, main conclusion is that poorly developed social structures in new members of the Union, inherited from the socialist system, are crucial factors determining low level of development.

**KEY WORDS:** European regions, social structures, demographic potential, social potential, level of advancement of post-industrial economy.

### INTRODUCTION

Technological advancements, a need for fast adjustment to the economic and social changes, the economy's ability of inducing and absorbing innovations – they all influence the fact that the people make the development wide and efficient. Factors influencing the competitiveness of a particular area are both the quality of human resources and the possibility of their exploitation. Business services create the field offering the most attractive, but also demanding, workplaces.

This paper aims to explore the regional differentiation in demographic and social potential and the social distribution of work understood as the level of

advanced services in the economy. In other words, the paper strives to identify regional social structures of Europe. This forms the basis for an analysing the distance between Polish regions and European ones, as well as the relations between the most characteristic measuring instrument of social-economic development – Gross Domestic Product and the above mentioned factors.

The analysis is of a static nature. 258 regions from 27 countries were taken into account, 25 of the countries are EU members and the remaining two will probably join the EU in 2007 (Bulgaria, Romania). Most of the data comes from 2002. Where there is a lack of data, the figures for the given years come from the closest available periods (EUROSTAT Database).

The factors were designated on the basis of the following features:

A. Demographic potential.

1. Share of population of pre-productive age (up to 24).
2. Share of population of productive age (25-64).
3. Birth rate (on the population of 1,000 inhabitants).

B. Social potential.

1. Share of population with higher education, aged 24-64.
2. Economic activity index – the share of population aged over 15, economically active (working and unemployed).

C. Social distribution of work.

1. Share of population working in services.
2. Share of population working in section J (financial intermediation) and K (real estate, renting and business activities).

The criteria of the features choice were determined by the access to regional scale and the data applicability to the analysed issues. It has to be emphasised that the Eurostat Database offers a rather narrow range of materials for regional analysis. There is a lack of comparable statistics for all European countries caused by the different degrees to which the countries execute the European regulations concerning the process of gathering and providing the data according to particular methodological guidelines. Nevertheless, all data applied to this paper are comparable and variable (1). The threshold value of variation coefficient – 10%, is violated only for A2 feature (share of population in productive age). However, distinct spatial differentiation and high research value render A2 a key factor in the analysis.

The following research paper uses one of a multivariate classification method- Hellwig's Method. It concentrates on the arrangement of units according to, so called, maturity measure (development model) and replaces all the features with one, synthetic index. The development model can be described in three ways (Hellwig, 1968; Ilnicki, 2002):

- the assumed figures of a particular model are not reached by the units in given time and space (they do not come from the information matrix);

- an implicated model which is the unit from the given class, rendered as the best one;
- an abstract model is formed on the figures chosen in the process of selection of the maximum value for the stimulants and the minimum value for the destimulants.

It requires further determination which features are stimulants and which are destimulants. The paper is based on the abstract model. All the features are defined stimulants.

Before the classification procedure, chosen features are normalized:

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{S_{x_j}}$$

where:

$z_{ij}$  - normalized feature value  $j$  in unit  $i$ ;

$x_{ij}$  - feature value  $j$  in unit  $i$ ;

$\bar{x}_j$  - arithmetical means of the feature  $j$ ;

$S_{x_j}$  - standard deviation of the feature  $j$ .

A co-ordinates for the development model are established ( $z_{01}, z_{02}, \dots, z_{0n}$ ):

$$z_{0j} = \max_i (z_{ij}), \text{ if } j \in I (j = 1, 2, \dots, n)$$

and

$$z_{0j} = \min_i (z_{ij}), \text{ if } j \notin I$$

where:

$I$  - stimulant class

The next stage of the procedure is the calculation of the distance ( $d_{oi}$ ) between the model and the remaining objects using the Euclidean distance:

$$d_{oi} = \sqrt{\sum_{j=1}^m (z_{ij} - z_{oj})^2}$$

The measure of development-  $d_i$ , is calculated in the following way:

$$d_i = 1 - \frac{d_{oi}}{d_o}$$

where:

$$d_o = \bar{d}_o + 2S_0 \quad \bar{d}_o = \frac{1}{n} \sum_{i=1}^n d_{oi} \quad S_0 = \sqrt{\frac{1}{n} \sum_{i=1}^n (d_{oi} - \bar{d}_o)^2}$$

The measure assumes values ranging from 0 to 1. The closer to 1 the better the given object is developed; the closer to 0, the situation of the objects is definitely worse. Additionally, following Ilnicki's (2002) comments, the measure can assume minus values characteristic for pathological units in the given class.

## THE SPATIAL DIFFERENTIATION OF SOCIAL STRUCTURES

When analysing social structures in the European Union, it is worth emphasising that the most influential factors in the spatial differentiation of social and economic structure are two basic ones: historical conditions and the relationship between big cities and the other areas.

Crucial historical conditions are:

- different cultural and religious heritage: the division into Latin and Byzantine Europe, the influence of Ottoman conquest,
- division into centres and peripheral areas, dating from the Middle Ages,
- various pace of assimilation of the industrial revolution,
- the heritage of the division into the capitalist and socialist countries;

The most influential factor, when applied to the modern European social structures, is the division into the capitalist and socialist countries. The transformation taking place in the social sphere manifests serious inertia which will probably have no meaningful influence even in the next few years.

The influence of big cities on regions has always been vital. Moreover, this fact is gaining more visible effect in the spatial perspective which results from the intensive modern processes of metropolisation. Urban regions concentrating high level of capital, workforce and social life have connections above the country's relations networks (Scott, 2001; Smętkowski, 2001). It affects in the growing disproportion between the metropolitan regions and other ones.

Demographic potential (Fig. 1) indicates a distinct disparities, not only at the European scale, but also in particular countries. There is a lack of a common model that explains the spatial differentiation evident of the analysed potential. The greatest part, among the regions of the highest potential, is composed by the highly developed regions on the Europe – London and the surrounding areas, Paris and the surrounding areas, Ireland, Holland, Denmark, the capitals of the Scandinavian region, Spain and Portugal. They are points concentrating young population in the productive age; they also offer high living standards and a high number of work places. The majority of the immigrants coming from the former colonies (mainly to London, Lisbon, regions of Holland) is also a significant element. The largest part of the immigrant population in France and Spain (2), comprises of Muslims, which has a strong influence on the birth rate in the given countries. However, the low contribution of this population in productive age reduces the summaric value of the demographic po-

## REGIONAL SOCIAL STRUCTURES IN THE EUROPEAN UNION

tential index. The remaining regions of high potential are placed in the south of Europe (e.g. Cyprus, Malta, Andalusia, Catalonia, Sardinia, Attica) as well as in the central part of the continent (western Poland, the Czech Republic, part of Slovakia, Austria). The south of Italy shows a high birth rate and share of young population which is the result of traditional family model. The countries of Central Europe are in the early stage of the process of a ageing population. They mark a high share of the young population resulting from post-compensation of demographic explosion – Poland has the largest contribution of the population in the pre-productive age.

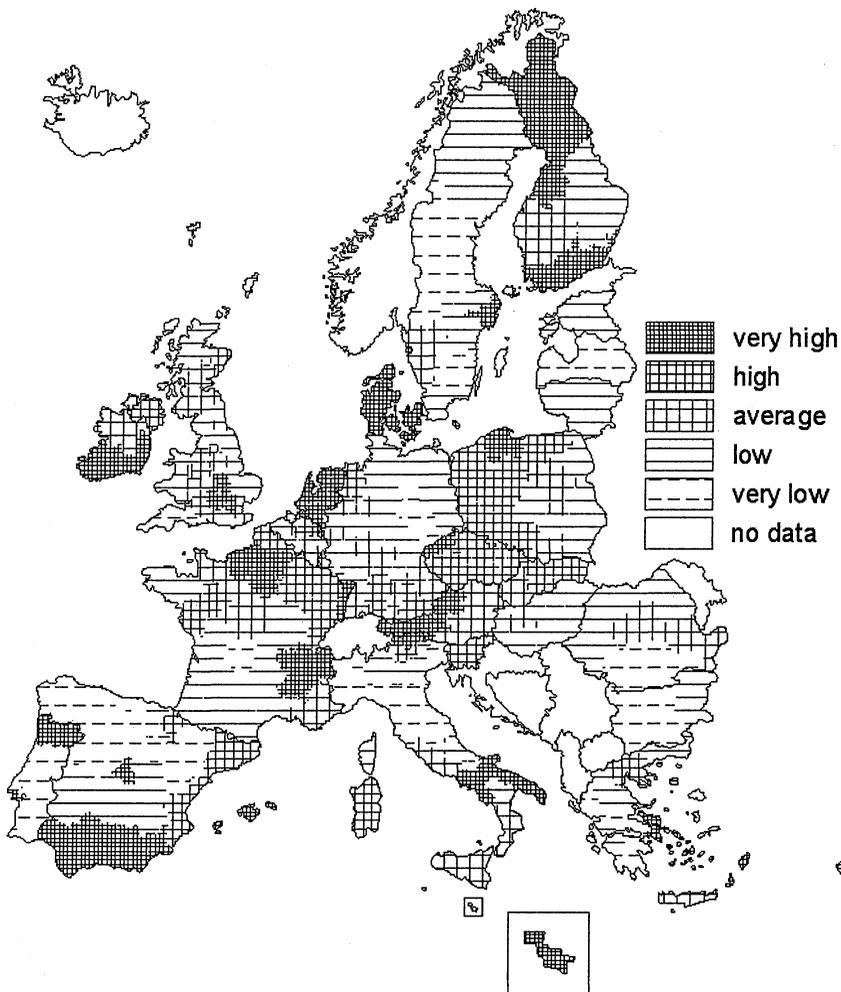


Fig. 1. The spatial differentiation of demographic potential in Europe.  
*Source:* Authors own study based on EUROSTAT Database.

Table 1. Development index figures for Polish regions against the background of the best and worst regions in Europe.

SOCIAL STRUCTURES – SYNTHETIC INDEX	D <sub>i</sub> (RANK)	DEMOGRAPHIC POTENTIAL	D <sub>i</sub> (RANK)	SOCIAL POTENTIAL	D <sub>i</sub> (RANK)	LEVEL OF ADVANCEMENT OF POST-INDUSTRIAL ECONOMY	D <sub>i</sub> (RANK)
Inner London	0.77 (1)	Inner London	0.69 (1)	Stockholm	0.95 (1)	Inner London	1.00 (1)
Stockholm	0.66 (2)	Flevoland	0.65 (2)	Utrecht	0.94 (2)	Stockholm	0.86 (2)
Ile de France	0.66 (3)	Utrecht	0.57 (3)	Berkshire, Buckinghamshire and Oxfordshire	0.94 (3)	Region de Bruxelles-Capitale	0.80 (3)
Mazowieckie	0.27 (114)	Pomorskie	0.37 (42)	Mazowieckie	0.79 (128)	Mazowieckie	0.33 (126)
Pomorskie	0.25 (136)	Zachodniopomorskie	0.36 (47)	Lubelskie	0.77 (155)	Dolnośląskie	0.29 (165)
Zachodniopomorskie	0.24 (146)	Śląskie	0.34 (53)	Małopolskie	0.76 (166)	Zachodniopomorskie	0.28 (173)
Dolnośląskie	0.23 (154)	Lubuskie	0.33 (61)	Podlaskie	0.76 (168)	Pomorskie	0.26 (190)
Lubuskie	0.21 (169)	Kujawsko-Pomorskie	0.32 (70)	Łódzkie	0.75 (174)	Lubuskie	0.24 (197)
Śląskie	0.19 (182)	Opolskie	0.32 (71)	Pomorskie	0.75 (178)	Śląskie	0.22 (201)
Kujawsko-Pomorskie	0.19 (184)	Warmińsko-Mazurskie	0.31 (76)	Podkarpackie	0.75 (181)	Łódzkie	0.18 (213)
Małopolskie	0.18 (194)	Wielkopolskie	0.31 (80)	Dolnośląskie	0.74 (188)	Kujawsko-Pomorskie	0.18 (214)
Wielkopolskie	0.18 (197)	Dolnośląskie	0.30 (90)	Wielkopolskie	0.74 (194)	Warmińsko-Mazurskie	0.15 (226)
Warmińsko-Mazurskie	0.17 (201)	Małopolskie	0.26 (120)	Kujawsko-Pomorskie	0.73 (205)	Małopolskie	0.15 (227)
Opolskie	0.17 (203)	Mazowieckie	0.26 (124)	Opolskie	0.73 (207)	Wielkopolskie	0.14 (232)
Łódzkie	0.16 (208)	Podkarpackie	0.21 (162)	Zachodniopomorskie	0.73 (211)	Opolskie	0.13 (237)
Podlaskie	0.12 (224)	Łódzkie	0.20 (174)	Lubuskie	0.73 (212)	Świętokrzyskie	0.10 (244)
Lubelskie	0.12 (225)	Świętokrzyskie	0.19 (177)	Świętokrzyskie	0.73 (213)	Podlaskie	0.09 (247)
Świętokrzyskie	0.11 (231)	Podlaskie	0.19 (183)	Warmińsko-Mazurskie	0.73 (214)	Lubelskie	0.08 (248)
Podkarpackie	0.10 (235)	Lubelskie	0.17 (195)	Śląskie	0.71 (228)	Podkarpackie	0.03 (251)
Sud (Romania)	-0.01 (256)	Severen tsentralen (Bulgaria)	-0.07 (256)	Sterea Ellada	0.65 (256)	Sud	-0.10 (256)
Sud-Vest (Romania)	-0.02 (257)	Liguria	-0.14 (257)	Basilicata	0.65 (257)	Sud-Vest	-0.13 (257)
Severozapaden (Bulgaria)	-0.04 (258)	Severozapaden	-0.15 (258)	Corse	0.62 (258)	Nord-Est (Romania)	-0.14 (258)

Source: Authors own study based on EUROSTAT Database.

## REGIONAL SOCIAL STRUCTURES IN THE EUROPEAN UNION

The regions of the lowest demographic potential were found mainly in Germany, Sweden, part of Great Britain, as well as in the south of France and in northern Italy. They represent the countries that experienced modernisation rather early, where the series of transformations in the family model took place and the process of ageing of population is advanced. A distinctively low share of the population in productive age is evident in Germany, apart from a large influx of the immigrants. Other regions of high demographic potential are placed in Baltic countries, Romania and Bulgaria. Low birth rate and share of the population in productive age are decisive in this case.

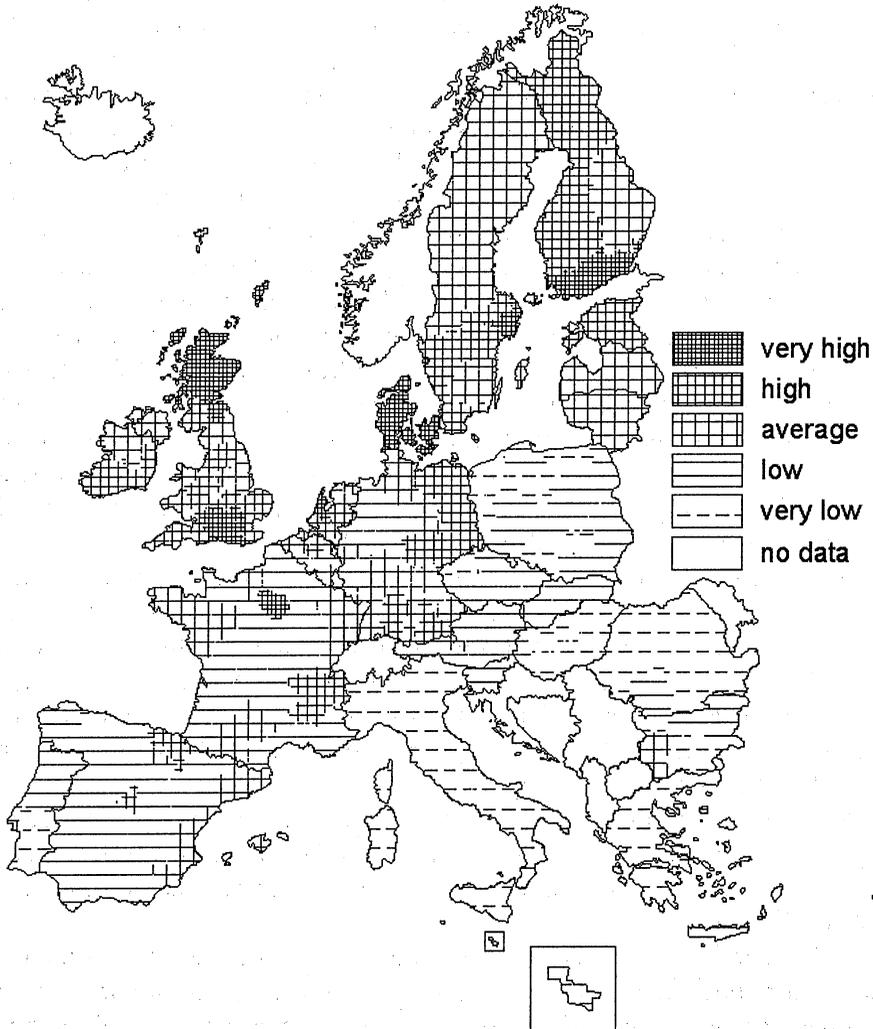


Fig. 2. The spatial differentiation of social potential in Europe.  
*Source:* Authors own study based on EUROSTAT Database.

Polish regions demonstrate a favourable position against the European background. The truth is that the distance to the richest regions is rather great (Table 1), however the situation proves positive in relation to the whole continent. The most profitable demographic situation is in western Poland, mainly in the areas undergoing the exchange of the population after the World War II. A large share of young population proves a trump card. On the other hand, it is also problematic because of continuously increasing in the rate of unemployment among the youngest part of the population.

The social potential (Fig. 2), contrary to the demographic one, tends to a distinct regionalisation. The highest social potentials are characteristic for Western European metropolises such as London, Paris, Madrid, Brussels, Stockholm as well as the regions of Great Britain, Scandinavian countries, the Benelux countries, eastern and southern Germany, Estonia. They are areas of highly educated populations (3), with easy access to academic education, attractive and well-paid work places requiring highly qualified personnel (the seats of transnational corporations, researches and development, specialised services, advance technology industry, international organisations, etc.) which stimulate the influx of well-educated people. The level of professional activity is also higher. It is the result of a large number of the population in productive age as well as the assumed attitudes giving priority to career over the family life. The same factors influence greatly the social potential in Scandinavian and the Benelux countries as well as the remaining well developed regions. Moreover, it is worth emphasising, that in the given countries the level of education of the population is higher in comparison to the countries with the lowest social potential. High values of the potential in eastern parts of Germany and Estonia are rooted in high level of education inherited from the socialist system.

Mediterranean countries, mainly Greece and Italy together with the regions of Central Europe (apart from the Baltic countries), indicate low social potential. It is the effect of insufficient outlay on education resulting in a poorly educated population, economy based on unqualified human resources – large contribution of agriculture and industry with undeveloped technologies. The discussed regions demonstrate a strongly traditional attitude towards family and low professional activity of women.

Polish regions of low social potential, against the background of the remaining areas, hold a distant position in relation to the countries with high social potential, placing themselves in the second and even third hundred in the total number of regions.

In the sphere of the social distribution of work, more precisely, of the advancement of post-industrial economy (Fig. 3), capital regions are perceived as being the most advantageously. These are areas of concentrated services, especially business services (sections J and K). They hold metropolitan functions in the economic and social life of countries, as well as of the whole continent.

## REGIONAL SOCIAL STRUCTURES IN THE EUROPEAN UNION

They are financial, administrative, service and academic centres, with trans-regional importance; they constitute the activity deciding on the level of social-economic development in modern times. Great Britain, Sweden and regions of traditional development centres in Europe, manifest a high level of development. It is a derivative of large contribution of high-technology in biotechnology (Holland, western Germany), pharmaceuticals (Oberbayern), aerospace industry (south of France), information technology and computing industry (Ireland, Scotland). The above mentioned types of activity require a high level of service support. High rates of development for the social distribution of work in Western Europe result also from the contribution of the population working in services, as a consequence of entering a post-fordist stage of development earlier than in countries of East-Central Europe.

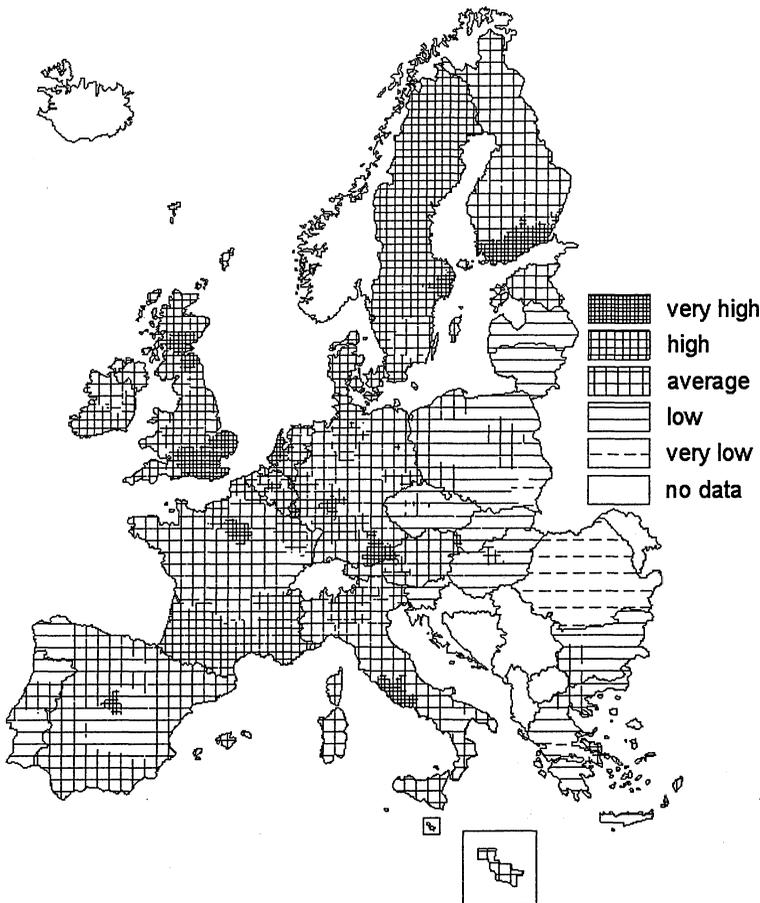


Fig. 3. The spatial differentiation of the level of advancement of post-industrial economy.  
*Source:* Authors own study based on EUROSTAT Database.

Regions such as Greece, some parts of Portugal and Spain as well as most of the regions of the Central-Eastern Europe fall out badly when it comes to the distribution of work. In the case of post-socialist countries it is inherited from the former system which was based on the heavy and primary industries, large contribution of population working in agriculture, and services were limited to those satisfying the basic needs of society and the economy. A crucial fact was that there was no real possibility of private enterprise on larger scale. The high contribution of the population working in agriculture still prevails (also in Mediterranean regions) which contrasts with low figures of population working in services. The lack of highly developed new services influences the great distance between these regions and the best regions. Particularly bad is the situation of the Romanian regions demonstrating negative values of the development measure, indicating that they are pathologically undeveloped.

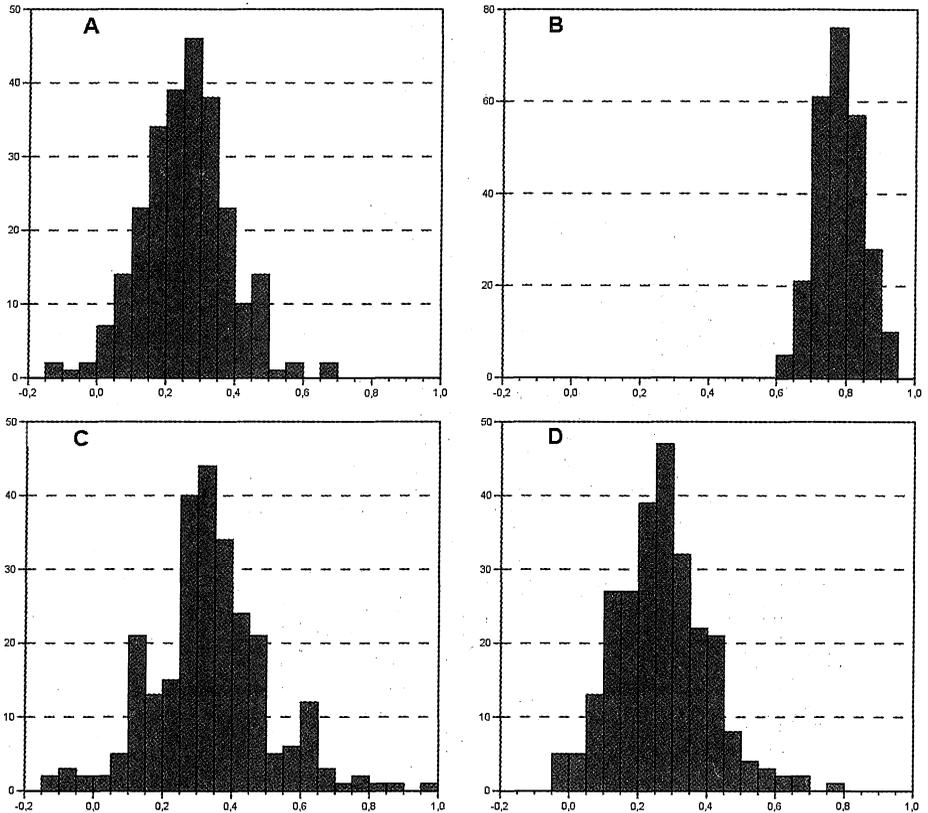


Fig. 4. The distribution of frequency for the demographic potential (A), social (B), level of advancement of post-industrial economy (C) and the social structures in general (D).  
 Source: Authors own study based on EUROSTAT Database.

The distance in the development of Polish regions is also large, holding the position, similarly, in the second and the third hundred of all European regions in the view of the analysed potential which indicates their weakness clearly. Particularly, eastern regions fall out badly, the results are close to 0, as poorly developed services and the large contribution of rural population play a significant role in this situation. The most prosperous situation can be found in Mazowsze with capital city Warsaw, playing similar role in Poland like London or Brussels on the European scale. The positive situation in western part of Poland is the result of the proximity of the country border which stimulates the service activity.

The analysed potentials demonstrate great variability. The greatest disproportions can be found between the best and the worst regions in the social distribution of work and the smallest ones – in social potential which results from the fact that each society demonstrates some kind of economic activity vital for their existence (Fig. 4). As a result, there the differences in relation to the model region that can not have really low values. Similar situation occurs in the case of the level of education – every society has a group of people demonstrating high qualifications. The processes taking place in education over the period of the last few years did not change the distance between the western and the other parts of Europe, but they significantly affected and improved the level of education of the population. Big differences in social distribution of work within the regions result from the differences in work structure on the continent. On the one hand, there are metropolises where the share of the population working in services reaching 80% (in section J and K about 25%), on the other, there are regions dominated by the agriculture and industry, where the share of the population working in services reaches 30-40% (in sections J and K 1-3%). This group includes all Romanian and the weakest Polish regions.

The spatial differentiation of Hellwig's measure of development for all the constituents of social structures (Fig. 5), refers to the previously discussed spatial regularity on the European continent.

The most advantageous social structure is demonstrated by the metropolises, mainly on the European and global scale. An interesting fact is that Scandinavian metropolises (Stockholm, Helsinki) finally joined those considered dominant in Europe, namely London, Paris, Brussels. Some of the western regions, such as the Benelux and Scandinavian countries, also reach high figures for the measure of development. The areas which have fairly well developed structures, demonstrate high figures only in one or two partial measures simultaneously reaching low figures in the remaining ones. What follows, they do not have proportionally developed social structures like metropolises or the other dominating regions in Europe.

Central-Western Europe and the most of the Mediterranean countries have the weakest social structures with the worst situation in Romania, Bulgaria and Hungary. The factors influencing such bad conditions are the above mentioned

ones, however, the negative strengthening of the situation occurs as all the partial potentials demonstrate low figures. Poland does not fall out badly against the background of this group of regions, especially Mazowsze, however, the distance to the leading regions is still significant.

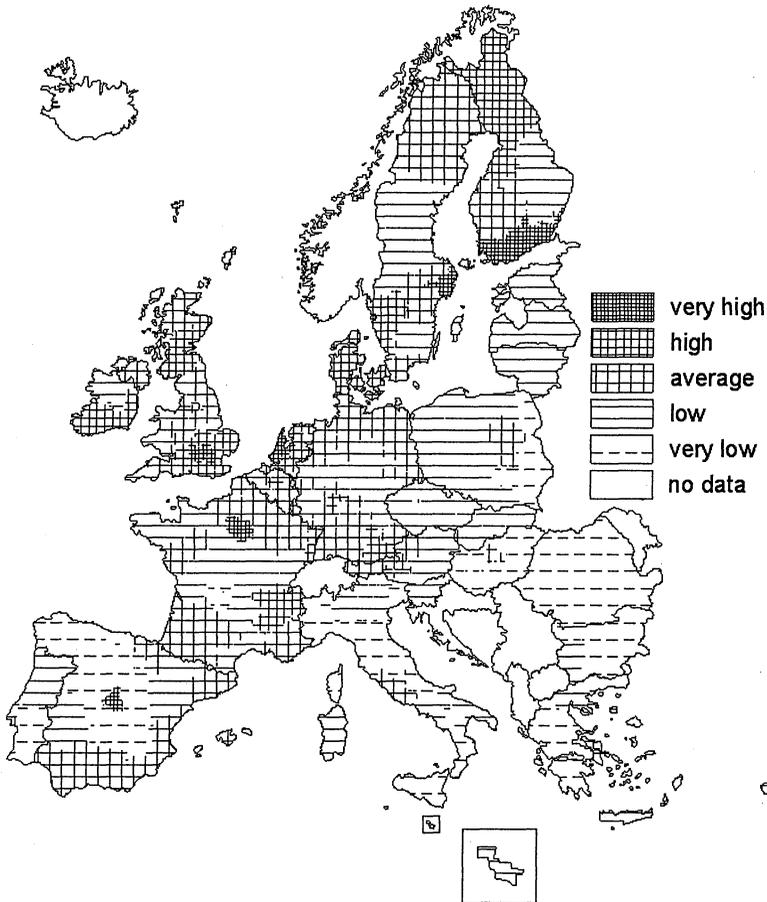


Fig. 5. The spatial differentiation of social structures in Europe – composite index.  
*Source:* Authors own study based on EUROSTAT Database.

The distribution of frequency for the given measure of development (see Fig. 4) proves the fact that there are very few regions on the continent with particularly well developed social structures. The most illustrious part of them, are those with the average results. It is convenient situation for Polish regions in the long term perspective. Although, the social structures can not be modified easily in full consciousness. Taking into account the large young population, increasing level of education and the potential possibilities of service de-

velopment it can be stated that Polish regions are able to compete successfully in creating the base for development with a numerous group of regions of similar level of development. Achieving the desirable level of the best regions is, unfortunately, doubtful.

### SOCIAL-ECONOMIC DEVELOPMENT AND SOCIAL STRUCTURES

The level of social-economic development measured using Gross Domestic Product (GDP) *per capita* (Fig.6) is strongly differentiated, where the areas of the highest level are marked clearly. The greatest concentration is visible in “the European Banana” area (also called “Blue Banana”) – stretching from the south of Great Britain, through the Benelux countries, Western Germany, Paris to the north of Italy. These regions are traditionally perceived as the centre of the European Union. Additionally, following Therborn (1998), this area overlaps the Lothar’s Kingdom from 843 AD, located between the Latin, catholic and Germanic, protestant Europe. Cities have been the basis of this structure for ages. Also modern times indicate the leading role of cities. The process of metropolisation brought about the phenomenon called The Pentagon (4) – the area consisting of five metropolitan cities: London, Paris, Milan, Munich and Hamburg. The areas outside The Pentagon, mainly metropolitan, also demonstrate high GDP figures: Scandinavian capitals, Denmark, Ireland and a part of Scotland. It is a result of deliberate development policy. Long-term investments in education and science, contributed to the appearance of an area with high innovation potential in Scandinavia. High level of education featuring modern technologies can also be observed there. Ireland and Scotland are on the point of holding an integral position in Europe due to their policy attracting foreign investments of advance technologies and creating their own “silicon areas”. It can be stated that the traditional spatial structure in Europe becomes more polycentric. Florida and Tingali’s researches (2004) are worth mentioning here as they worked out the typology of the countries based on the figures and changes of the indexes referring to human capital, creativity, technological development, innovation and tolerance. The list of leaders in this field includes Finland, Sweden, Denmark; Ireland is classified as a “up and coming” and Germany and Great Britain are in the position of the countries losing their power (“loosing ground countries”). It is a manifestation of the moving development weight from central regions of Europe to the peripheral ones.

The lowest figures for GDP per inhabitant are characteristic for new EU states and the candidates. It is an obvious effect of: the weak economy, outdated employment structure, being belated in relation to well developed countries on the continent, low level of the development of education, etc. Only metropolitan regions distinguish themselves against the background of the badly develo-

ped countries: Prague, Bratislava, Budapest, Mazowieckie voivodeship and the smallest countries such as Slovenia, Malta and Cyprus. Capital regions in Central-Eastern Europe have demonstrated the fastest increase in recent years, causing distinct differentiation

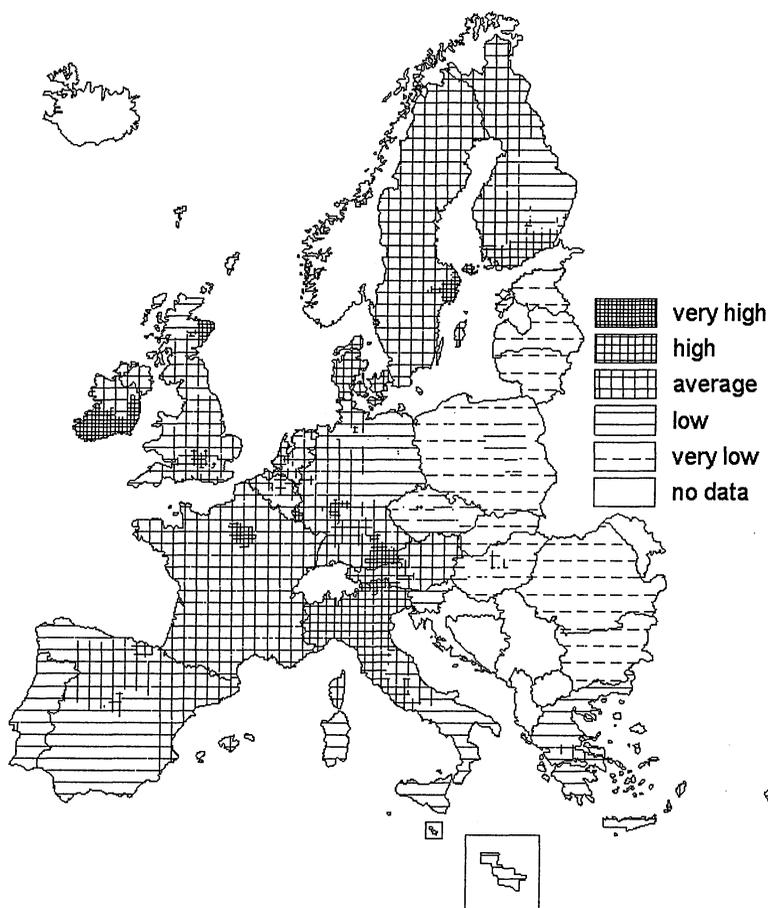


Fig. 6. GDP according to purchasing power in Europe in 2002.  
 Source: Authors own study based on EUROSTAT Database.

between the regions within the countries (Domański et al., 2003). They attracted foreign investments, have a number of well qualified personnel, stronger bounds to other European countries, modern economy and employment structure as well as the number of academic and research centres. The distance of Polish regions from the weakest ones of the “old Union” (Greece, Portugal, southern Italy and Spain) is distinct. The vital fact here is that Mazowsze holds

the weakest position as Warsaw is connected with the whole Mazowsze region within one unit, which does not exist in other metropolises of Central Europe.

Relation between social structures and GDP demonstrated in Figure 7 is positive and fairly strong - Pearson's linear correlation coefficient equals 0.70 (significance level 0.01). The determination coefficient values ( $R^2=0.49$ ) does not allow to state whether social structures are the only determinant of social-economic development measured in GDP. Social structures, however, explaining 49% of GDP variability, are certainly decisive factors influencing the level of GDP. The understanding of social structures is a key process not only in determining the stimuli of development but also the remaining factors affecting unequal development of the regions.

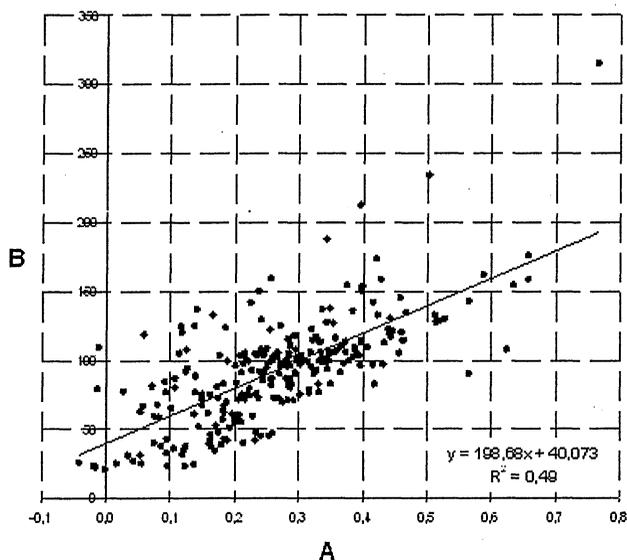


Fig. 7. Relations between Hellwig's index for social structures (A) and GDP for inhabitant (UE=100) in Europe.

Source: Authors own study based on EUROSTAT Database.

On the basis of the residuals from regression (Fig. 8) it can be determined which regions show off the surplus or the shortage of GDP in relation to the potential, stemming from the social structure of the given region.

Plus values are demonstrated by the northern part of Italy. One of the main factors here is undoubtedly the influence of social traditions on development, which has been proved by Putnam (1995). It triggered further research into social capital – the concept has an immense potential to explain irregular social-economic development. Evidently, this “Italian economic miracle” is some kind of phenomenon as, with low demographic and social potentials, the northern parts of Italy became a spectacular example of economic growth. It does

not suggest that other regions will not have the chance to experience similar phenomena. Ireland, Austria, some regions on Iberian Peninsula, France, Greece and southern Germany also have plus values. Ireland, as a country with intensive foreign investments bringing measurable economic profits, demonstrates a high surplus of GDP in relation to its social structures. Similar situations exist also in the remaining examples – modern economic structure, characterised by large contribution of advance technology, allows for surpluses of GDP. A crucial fact is, that the areas of plus values from the regression demonstrate, at least, average, developed social structures – apart from the Mediterranean regions. In case of Spain, Portugal and Greece, the surplus of GDP in relation to the theoretical value, results from the accession to the European Union.



Fig 8. Values of the residuals from regression for GDP.  
Source: Authors own study based on EUROSTAT Database.

The minus values of the residuals from the regression are demonstrated mainly by the post-socialist countries; moreover, it also occurs in Finland, a major part of Great Britain, the south of Spain and some parts of the "Pentagon region". In the case of a post-socialist countries, (including all Polish regions), it results from economic weakness and low efficiency of human resources exploration in relation to their potential. The minus values of the difference between the theoretical and real values of GDP result from the figure values of measure of development for social structures. Regardless high values of real GDP figures in these regions, they are too little in comparison with their potential possibility.

## CONCLUSIONS

Poorly developed social structures in the new member states of the European Union, inherited from the socialist system, are the pivotal factor determining low levels of development. The chances can be seen in their fairly good demographic potential, however, some essential steps must be taken to make it profitable: adjust the system of education to meet economic requirements, enable young population from rural areas to access the proper level of education- especially in eastern Poland, creating stimulating conditions for working in services, particularly in the business environment. It has to be emphasised that, as the situation of the new member states of the European Union is unfavourable, the future accession of Romania and Bulgaria to the structures is challenging for the whole Union. Inconvenient social structures and extremely slow economic development in the initial stage of the accession doom the entering countries to the role of outsiders.

The concentration of the development potential in scattered metropolises may have undesirable effects. Further accumulation without the simultaneous transfer of positive development impulses, may consequently intensify the differences between the cores (metropolises) and the peripheral areas.

The last key issue that has been evident in recent years is the contribution of the Muslim population in the countries of Western Europe. The increase in this area is reflected in a better demographic situation, however the functioning of these population on the social margin is still a serious problem. In order to prevent the exclusion of this group from society and to make use of its big potential, there should be a need for actions breaking the process of isolation and increasing the level of education.

## NOTES

(1) Data can be comparable, provided the requirements are met: the European System of national and regional accounts in the Community (EU, 1996);

the Statistical Classification of economic activities in the European Community (EU, 2002); International Standard Classification of Education. ISCED 1997 (ISCED, 1997).

(2) The areas of high demographic potential in Spain overlap the regions of the highest contribution of the Moroccan population (*Anuario...*, 2005). In France, the Maghreb population is two times, the remaining African population even two a half, larger than the indigenous French population (*La fécondité ...*, 2003). Similar relations take place in other countries with large contribution of African and Asian population.

(3) More detailed and broader analysis of the level of education, the outlay on education in the regions of the European Unions can be found in Jakubicz's (2004) research.

(4) More detailed information in ESPON report (*In search...*, 2005).

#### ACKNOWLEDGEMENT

This paper was supported by Ministry of Science and Information Society Technologies and it is a part of scientific project *Zróżnicowanie przestrzenne kapitału ludzkiego w Polsce* (grant No 2 PO4E 032 28).

#### REFERENCES

- Anuario Estadístico de España 2005*, 2005, Madrid: del Instituto Nacional de Estadística.
- EU, 1996: *Commission Regulation (EC) No 2223/96 of 25 June 1996 on the European System of national and regional accounts in the Community*.
- EU, 2002: *Commission Regulation (EC) No 29/2002 of 19 December 2002 amending Council Regulation (EC) No 3037/90 on the Statistical Classification of economic activities in the European Community*.
- Domański, B. and Guzik, R. and Micek, G.** 2003: Zróżnicowanie regionalne krajów Europy Środkowo-Wschodniej i jego zmiany w latach 1995-2000. *Biuletyn KPZK PAN*, z. 204, pp. 125-142.
- Florida, R. and Tinagli, I.** 2004: *Europe in the Creative Age*. DEMOS ([www.demos.co.uk/creativeeurope](http://www.demos.co.uk/creativeeurope)).
- Hellwig, Z.** 1968: Zastosowanie metody taksonomicznej do typologicznego podziału kraju ze względu na poziom ich rozwoju oraz zasoby i strukturę wykwalifikowania kadr. *Przegląd Statystyczny*, t. XV, z. 4, pp. 307-327.
- Ilnicki, D.** 2002: Próba określenia zmienności czasowej zjawisk przestrzennych metodami wzorcowymi – przykład metody Hellwiga. In Rogacki, H. editor. *Możliwości i ograniczenia zastosowań metod badawczych w geografii społeczno-ekonomicznej i gospodarce przestrzennej*, Poznań: Bogucki Wydawnictwo Naukowe, pp. 185-196.

REGIONAL SOCIAL STRUCTURES IN THE EUROPEAN UNION

*In search of territorial potentials. Midterm results by spring 2005*, 2005, Luxembourg: ESPON.

**ISCED**, 1997: *International Standard Classification of Education. ISCED 1997*.

**Jakubowicz, E.** 2004: Edukacja a kapitał ludzki. In Ciok, S. and Ilnicki, D. editors, *Regionalny wymiar integracji europejskiej. Przekształcenia regionalnych struktur funkcjonalno-przestrzennych*, t. VIII/1, Wrocław: IGI RR UWr, pp. 359-366.

*La fécondité des étrangères en France: une stabilisation entre*, 2003, Paris : INSE.

**Putnam, R.D.** 1995: *Demokracja w działaniu. Tradycje obywatelskie we współczesnych Włoszech*. Kraków: Społeczny Instytut Wydawniczy Znak.

**Scott, A.** 2001: Globalization and the Rise of City-regions. *European Planning Studies*, vol. 9, no 7, pp. 813-826.

**Smętkowski, M.** 2001: Nowe relacje między metropolią i regionem w gospodarce informacyjnej. *Studia Regionalne i Lokalne*, nr 4(7), pp. 83-101.

**Therborn, G.** 1998: *Drogi do nowoczesnej Europy. Społeczeństwo europejskie w latach 1945-2000*. Warszawa: WN PWN.

**CORRESPONDENCE TO:**

Edyta Jakubowicz

Department of Spatial Management

Institute of Geography and Regional Development, Wrocław University

Kuźnicza 49/55, 50-138 Wrocław, Poland

[e-mail: jakubowicz@geogr.uni.wroc.pl]

Krzysztof Janc

Department of Spatial Management

Institute of Geography and Regional Development, Wrocław University,

Kuźnicza 49/55, 50-138 Wrocław, Poland

[e-mail: janck@wp.pl]