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THE PROBLEM OF SOCIAL INEQUALITIES IN THE CONTEXT OF INTERREGIONAL DIFFERENTIATION

Introduction

The problem of social inequalities is one of many complex issues which, due to their interdisciplinary character, are difficult to evaluate precisely. Additionally, these problems comprise a wide range of various possible approaches which, because of their imponderability, are not easy to measure. Some of them may refer to education, work, health, as well as income, living standards, etc. The reason for all these planes and dimensions lies in certain conditionings modified complementarily by peculiar circumstances. Thus, the aim of the paper is to show the defined phenomena which may remain either in the input area of the problem of social inequalities or in the output circle referring to the results or definite effects of peculiar inequalities, e.g. differentiation. This differentiation, in turn, will concern the interregional relationships within one state, i.e. the provinces (NUTS 2 level) will be compared to one another and analyzed.

The question of inequalities

Analyzing the notion of inequality we are facing the quality of being unequal or uneven as a result of certain conditionings. This lack of evenness, combined with differences in size, rank, wealth, etc. may result in definite disparities, e.g. social disparity, disparity of distribution or opportunity, etc. The term “inequality” treated as the condition of being variable may lead us to the notion of changeableness perceived as an instance of being unequal or a formal statement of inequality between two quantities usually with a sign of inequality. Hence, we find the logical approach to the issue of inequality (*inégalité*) considered as an ordering relation in the set (*relation d'ordre dans un ensemble*) with two possible types of inequalities: strict inequality (*inégalité stricte $a > b$*) and inequality *sensu largo* (*inégalité au sens large $a \geq b$*) [cf. Larousse, 1995; Webster, 1977].

There exist many types of inequalities, e.g. economic, social, etc. In case of social inequalities and their determinants we are facing different planes referring to various dimensions of perceiving the living standard and mentioning also about the quality of life. While the living standard seems to be of a more objective character, the quality of life aims at its subjectivity. In practice, i.e. in normative economy, we find (in the global scale) great inequalities in wealth which in effect cause social unrest. The complex question of social inequalities (*les inégalités sociales*) requires the perception of different aspects of these inequalities, which concern the input as well as the output approaches. In case of the input approach we have to consider mostly the economic basis and reasons showing us the cause of the economic inequality. In case of the output approach we deal mostly with the social dimension and social results creating the so called social inequality effect. Next, we ought to find the trend so as to compose a reliable socio-economic outlook on the basis of the former process. This process of forming the inequalities and its ex post analysis should guide us to finding the proper tendency with the use of the ex ante analysis.

Summing up, in order to provide an understanding of the nature of social inequality one has to understand the roots of inequality, as well as its effect. An intrinsic issue here is to understand the structural mechanisms that generate and maintain social inequality. Most of them determine the process of diversifying on the basis of the starting (input), multi-field (socio-economic) conditionings.

The effect of inequalities

The process of the creation of inequalities leads in consequence to the phenomenon of differentiation within the stratification systems. Both inequality and differentiation are inevitable. The point is how deep these inequalities which reflect the form of differentiation are. In case of deep inequalities we are dealing with the form of differentiation called disparity. If inequalities are rather slight, we face the positive form of differentiation called diversification. There is the question of the threshold level which determines the particular case either to diversification or disparity sets.

If we analyze in a dynamic dimension the path of different inequalities resulting in different types of differentiation, we may observe the existence of some tendencies. If we find a positive trend it means that we are dealing with a convergent development in terms of differentiation, i.e. passing from disparities to diversification in many social areas. If we notice a negative trend then we face a divergent development in terms of

differentiation leading from slight diversification to deep disparities. Not so rarely we may encounter the third possibility, not related to any of the two mentioned trends, which denotes the phenomenon of persistence in development, in fact meaning stagnation or slight positive and negative trends which repeat cyclically. Such situation means a persistent, non creative feedback of inertia. No matter which situation we are dealing with the effect of inequalities means the status of differentiation denoting definite levels of stratification.

The policy towards sustainability

The reaction to the action of social and economic inequalities in the form of various differentiations (specially dangerous interregional disparities) ought to be the proper policy in the field of socio-economic state relationships. The concept of sustainability should be treated as a peculiar normative and substantive delimitation of a socio-economic area within the state, based on our responsibility towards future generations, with regard to normative instructions (precision, consistency and content). Analyzing the importance of the policy leading or increasing the sustainability effect as the main convergent aim, we may distinguish some components. Among them we may find such as [cf. Christen, 1996]:

- ethical considerations (fairness between generations),
- frugal use of resources (basis for production),
- preserving biodiversity (biological component),
- securing economic viability (economic component),
- improving employment opportunities (social component),
- social responsibility for agriculture and rural areas (rural component),
- consideration of the global aspect of sustainable development (global component).

Finally, one may state that the role of policy is only to lessen the effects of differentiation or stratification, because the elimination of these phenomena is impossible and thus, should be treated as an unnecessary utopia.

The Polish interregional case study

The present case study refers to the interregional dimension regarding the area of Poland. Some data concerning technical infrastructure and GDP per capita have been presented. All of them verify the thesis of inevitability of inequalities and result in a form of differentiation and

stratification. All those things influence the differences in the living standard in various places.

Table 1 shows the network of water, sewage and gas installations at the province level. In order to normalize data the zero unitarization method has been used (MUZ).

Table 1. Network installations in provinces*****

Province	Water*	MUZ	Sewage**	MUZ	Gas** *	MUZ** **
DOLNOŚLĄSKIE	46,0	0,28	14,1	0,32	6,6	0,05
KUJAWSKO-POMORSKIE	98,6	0,99	12,9	0,28	0,8	0,00
LUBELSKIE	61,3	0,49	5,4	0,05	18,1	0,15
LUBUSKIE	28,2	0,04	4,0	0,00	5,9	0,05
ŁÓDZKIE	97,1	0,97	5,8	0,06	4,0	0,03
MAŁOPOLSKIE	88,2	0,85	23,4	0,62	113,7	1,00
MAZOWIECKIE	76,1	0,69	6,0	0,07	15,0	0,13
OPOLSKIE	59,2	0,46	9,1	0,16	1,6	0,01
PODKARPACKIE	60,5	0,47	35,5	1,00	78,7	0,69
PODLASKIE	47,2	0,29	3,9	0,00	1,3	0,00
POMORSKIE	50,8	0,34	14,9	0,35	3,6	0,02
ŚLĄSKIE	99,2	1,00	21,2	0,55	64,6	0,57
ŚWIĘTOKRZYSKIE	83,6	0,79	10,2	0,20	18,7	0,16
WARMIŃSKO-MAZURSKIE	39,0	0,18	7,7	0,12	1,1	0,00
WIELKOPOLSKIE	78,4	0,72	10,5	0,21	15,0	0,13
ZACHODNIOPOMORSKIE	25,5	0,00	8,8	0,16	6,5	0,05
<i>POLAND (mean value)</i>	<i>63,6</i>	<i>0,52</i>	<i>11,1</i>	<i>0,23</i>	<i>19,0</i>	<i>0,16</i>

Remarks:

*water-line distribution system (in km²) per 100 km²

** sewage distribution system (in km²) per 100 km²

*** gas-line distribution system (in km²) per 100 km²

****Zero unitarization method, the set <0, 1>

*****Due to the Polish version of Microsoft Excel all points in data are substituted by comas, e.g. instead of 0.72 » 0,72

Source: own elaboration on the basis of the data taken from National Census Bureau in Warsaw for the year 2004.

The problem of technical infrastructure influencing social inequalities at the regional level may also be shown in a different way in Table 2.

Table 2. Percentage of total population using the following systems (water, sewage, gas)*

Province	Water	MUZ**	Sewage	MUZ	Gas	MUZ
DOLNOŚLĄSKIE	90,6	0,86	65,7	0,76	63,1	0,85
KUJAWSKO-POMORSKIE	89,5	0,81	60,6	0,59	45,2	0,44
LUBELSKIE	78,4	0,31	44,3	0,04	36,4	0,24
LUBUSKIE	87,9	0,74	60,4	0,58	50,2	0,55
ŁÓDZKIE	88,5	0,76	56,5	0,45	39,7	0,31
MAŁOPOLSKIE	71,4	0,00	47,6	0,15	62,9	0,84
MAZOWIECKIE	79,2	0,35	56,9	0,46	54,0	0,64
OPOLSKIE	93,8	1,00	52,1	0,30	41,4	0,35
PODKARPACKIE	73,7	0,10	48,8	0,19	69,7	1,00
PODLASKIE	85,7	0,64	56,9	0,46	26,1	0,00
POMORSKIE	91,5	0,90	72,7	0,99	53,1	0,62
ŚLĄSKIE	92,8	0,96	66,5	0,78	61,7	0,82
ŚWIĘTOKRZYSKIE	81,1	0,43	43,0	0,00	35,7	0,22
WARMIŃSKO-MAZURSKIE	87,0	0,70	63,7	0,69	45,1	0,44
WIELKOPOLSKIE	91,5	0,90	56,6	0,45	44,6	0,42
ZACHODNIOPOMORSKIE	92,9	0,96	73,0	1,00	58,7	0,75
POLAND (mean value)	85,4	0,63	58,3	0,51	51,8	0,59

Remarks:

*Due to the Polish version of Microsoft Excel all points in data are substituted by comas, e.g. instead of 0.72 » 0,72

**Zero unitarization method, the set <0, 1>

Source: own elaboration on the basis of the data taken from National Census Bureau in Warsaw for the year 2004.

Comparing the results of the two Tables we may create the following rankings of provinces which differ between themselves (Table 3).

As we may observe the first ranking emphasizes the spatial aspect, i.e. the dimension of area, thus revealing infrastructural inequalities in a territorial way. The second ranking underlines the role of technical infrastructure in households, presenting the population aspect, i.e. the dimension of inhabitants, showing the inequalities in a social way. Hence, we may notice different aspects of inequalities depending on the way of their perception, i.e. regarding the subject of reference.

Table 3. Two rankings of provinces*

Ranking of province in terms of network installations		Ranking of provinces in terms of total population using water, sewage and gas systems	
PROVINCE	RANKING**	PROVINCE	RANKING**
MAŁOPOLSKIE	2,47	ZACHODNIOPOMORSKIE	2,71
PODKARPACKIE	2,16	ŚLĄSKIE	2,56
ŚLĄSKIE	2,11	POMORSKIE	2,51
KUJAWSKO-POMORSKIE	1,28	DOLNOŚLĄSKIE	2,46
ŚWIĘTOKRZYSKIE	1,15	LUBUSKIE	1,87
ŁÓDZKIE	1,06	KUJAWSKO-POMORSKIE	1,83
WIELKOPOLSKIE	1,05	WARMIŃSKO-MAZURSKIE	1,82
MAZOWIECKIE	0,88	WIELKOPOLSKIE	1,77
POMORSKIE	0,72	OPOLSKIE	1,65
LUBELSKIE	0,69	ŁÓDZKIE	1,53
DOLNOŚLĄSKIE	0,65	MAZOWIECKIE	1,45
OPOLSKIE	0,63	PODKARPACKIE	1,30
WARMIŃSKO-MAZURSKIE	0,31	PODLASKIE	1,10
PODLASKIE	0,30	MAŁOPOLSKIE	1,00
ZACHODNIOPOMORSKIE	0,21	ŚWIĘTOKRZYSKIE	0,65
LUBUSKIE	0,08	LUBELSKIE	0,59

Remarks:

*on the basis of Tables: 1 and 2

**Sum of the three unitarized values of water, sewage and gas

Due to the Polish version of Microsoft Excel all points in data are substituted by comas, e.g. instead of 0.72 » 0,72

Source: own elaboration.

In Tables 4 and 5 differences between the urban and rural population, in terms of the accessibility to water, sewage and gas, have been shown.

Table 4. Percentage of urban population using the following systems (water, sewage, gas)*

Province	Water	MUZ**	Sewage	MUZ	Gas	MUZ
DOLNOŚLĄSKIE	96,4	0,90	84,1	0,36	85,3	0,94
KUJAWSKO-POMORSKIE	95,8	0,83	85	0,43	72,2	0,65
LUBELSKIE	93,0	0,49	84,4	0,38	66,9	0,54
LUBUSKIE	95,4	0,78	85,4	0,46	74,3	0,70
ŁÓDZKIE	94,1	0,63	82,3	0,22	59,7	0,38
MAŁOPOLSKIE	90,5	0,19	81,8	0,18	78,7	0,80
MAZOWIECKIE	88,9	0,00	82,3	0,22	76,0	0,74
OPOLSKIE	97,0	0,98	85,8	0,49	76,5	0,75
PODKARPACKIE	91,0	0,25	82,6	0,24	87,9	1,00
PODLASKIE	95,3	0,77	86,8	0,57	42,4	0,00

POMORSKIE	97,2	1,00	92,3	1,00	76,5	0,75
ŚLĄSKIE	96,8	0,95	79,5	0,00	70,8	0,62
ŚWIĘTOKRZYSKIE	94,2	0,64	82,3	0,22	68,8	0,58
WARMIŃSKO- MAZURSKIE	96,9	0,96	91,8	0,96	73,3	0,68
WIELKOPOLSKIE	95,9	0,84	83,9	0,34	68,7	0,58
ZACHODNIOPOMORSKIE	96,7	0,94	89,8	0,80	80,4	0,84
<i>POLAND (mean value)</i>	<i>94,4</i>	<i>0,66</i>	<i>84,0</i>	<i>0,35</i>	<i>73,2</i>	<i>0,68</i>

Remarks:

*Due to the Polish version of Microsoft Excel all points in data are substituted by comas, e.g. instead of 0.72 » 0,72

**Zero unitarization method, the set <0, 1>

Source: own elaboration on the basis of the data taken from National Census Bureau in Warsaw for the year 2004.

Table 5. Percentage of rural population using the following systems (water, sewage, gas)*

Province	Water	MUZ**	Sewage	MUZ	Gas	MUZ
DOLNOŚLĄSKIE	76,3	0,63	20,6	0,44	8,7	0,12
KUJAWSKO-POMORSKIE	79,4	0,71	21,3	0,47	1,8	0,00
LUBELSKIE	65,6	0,35	9,3	0,01	9,6	0,14
LUBUSKIE	74,6	0,59	15,4	0,24	6,7	0,09
ŁÓDZKIE	78,3	0,68	9,1	0,00	3,0	0,02
MAŁOPOLSKIE	52,4	0,00	13,7	0,18	47,2	0,82
MAZOWIECKIE	61,5	0,24	10,3	0,05	13,6	0,21
OPOLSKIE	90,3	1,00	14,6	0,21	2,4	0,01
PODKARPACKIE	62,0	0,25	25,8	0,64	57,3	1,00
PODLASKIE	71,8	0,51	13,6	0,17	2,5	0,01
POMORSKIE	79,6	0,72	32,0	0,88	4,5	0,05
ŚLĄSKIE	77,9	0,67	18,4	0,36	27,9	0,47
ŚWIĘTOKRZYSKIE	70,2	0,47	10,1	0,04	8,0	0,11
WARMIŃSKO- MAZURSKIE	72,1	0,52	21,5	0,48	2,5	0,01
WIELKOPOLSKIE	85,5	0,87	20,1	0,42	12,3	0,19
ZACHODNIOPOMORSKIE	84,1	0,84	35,2	1,00	9,8	0,14
<i>POLAND (mean value)</i>	<i>71,3</i>	<i>0,50</i>	<i>17,3</i>	<i>0,31</i>	<i>17,8</i>	<i>0,29</i>

Remarks:

*Due to the Polish version of Microsoft Excel all points in data are substituted by comas, e.g. instead of 0.72 » 0,72

**Zero unitarization method, the set <0, 1>

Source: own elaboration on the basis of the data taken from National Census Bureau in Warsaw for the year 2004.

Confronting Tables 4 and 5 we may observe the differences in inequalities of the socio-economic character, depending on the situation in urban and rural areas. Precise rankings of provinces are shown in Table 6.

Table 6. Two rankings of provinces*

Ranking of provinces in terms of urban population using water, sewage and gas systems		Ranking of provinces in terms of rural population using water, sewage and gas systems	
PROVINCE	RANKING**	PROVINCE	RANKING**
POMORSKIE	2,75	ZACHODNIOPOMORSKIE	1,98
WARMIŃSKO-MAZURSKIE	2,60	PODKARPACKIE	1,89
ZACHODNIOPOMORSKIE	2,58	POMORSKIE	1,64
OPOLSKIE	2,22	ŚLĄSKIE	1,50
DOLNOŚLĄSKIE	2,21	WIELKOPOLSKIE	1,48
LUBUSKIE	1,95	OPOLSKIE	1,22
KUJAWSKO-POMORSKIE	1,92	DOLNOŚLĄSKIE	1,20
WIELKOPOLSKIE	1,77	KUJAWSKO-POMORSKIE	1,18
ŚLĄSKIE	1,58	WARMIŃSKO-MAZURSKIE	1,01
PODKARPACKIE	1,50	MAŁOPOLSKIE	0,99
ŚWIĘTOKRZYSKIE	1,44	LUBUSKIE	0,92
LUBELSKIE	1,42	ŁÓDZKIE	0,70
PODLASKIE	1,34	PODLASKIE	0,70
ŁÓDZKIE	1,23	ŚWIĘTOKRZYSKIE	0,62
MAŁOPOLSKIE	1,17	LUBELSKIE	0,50
MAZOWIECKIE	0,96	MAZOWIECKIE	0,50

Remarks:

*on the basis of Tables: 4 and 5

**Sum of three unitarized values of water, sewage and gas

Due to the Polish version of Microsoft Excel all points in data are substituted by comas, e.g. instead of 0.72 » 0,72

Source: own elaboration.

Looking at Table 6 we may easily notice the two-dimensional inequalities in terms of the socio-economic components of the living standard. Firstly, we face the inequalities at the interregional level, secondly – inequalities depending on the rural or urban point of view.

A complementary measure showing social and economic inequalities, despite many critics, may be the Gross Domestic Product counted per head (Table 7).

Table 7 presents the distinctly social as well as the economic inequalities, which would vary even deeper if we compared the NUTS 3 or LAU levels.

All these data and rankings have been presented so as to mark the question of social and economic inequalities, their inevitability and consequences concerning the phenomena of differentiation and stratification.

Table 7. GDP per head by region (2005*)

Ordinal	Province	GDP per head **
1.	MAZOWIECKIE	over 150
2.	DOLNOŚLĄSKIE	101-150
3.	ŚLĄSKIE	101-150
4.	WIELKOPOLSKIE	101-150
5.	KUJAWSKO-POMORSKIE	91-100
6.	LUBUSKIE	91-100
7.	ŁÓDZKIE	91-100
8.	MAŁOPOLSKIE	91-100
9.	OPOLSKIE	91-100
10.	POMORSKIE	81-90
11.	ZACHODNIOPOMORSKIE	81-90
12.	PODLASKIE	71-80
13.	ŚWIĘTOKRZYSKIE	71-80
14.	WARMIŃSKO-MAZURSKIE	71-80
15.	LUBELSKIE	61-70
16.	PODKARPACKIE	61-70
17.	<i>POLAND (mean value)</i>	<i>100</i>

Remarks:

*Estimate

**Poland=100

Source: data taken from PMR Publications ("The Economist", May 13th -19th 2006).

Final remarks and conclusions

There are a lot of elements which contribute to the development of the social capital of rural areas. All these components simultaneously exert impact on the final result of inequalities taking into consideration the differentiation and the stratification order.

Looking at the tables above we may encounter the stratification of the provinces in terms of different criteria.

According to Table 3 the top ranking provinces, as regards network installations (sum of the three unitarized values of water, sewage and gas is more or equal to 2.00.), are: MAŁOPOLSKIE, PODKARPACKIE and ŚLĄSKIE (the dimension of area, revealing infrastructural inequalities in a territorial way).

In case of the ranking of provinces referring to the total population using water, sewage and gas systems, the best provinces (sum of the three unitarized values of water, sewage and gas is more or equal to 2.00.) are: ZACHODNIOPOMORSKIE, ŚLĄSKIE, POMORSKIE and DOLNOŚLĄSKIE (the dimension of inhabitants, showing the inequalities in a social way).

In these two rankings we may observe the inequality concerning two different dimensions and consequently – ways.

Analyzing Table 6 we may notice the ranking of provinces in terms of urban population using water, sewage and gas systems. To top provinces (sum of the three unitarized values of water, sewage and gas is more or equal to 2.00.) belong: POMORSKIE, WARMIŃSKO-MAZURSKIE, ZACHODNIOPOMORSKIE, OPOLSKIE and DOLNOŚLĄSKIE.

Regarding the ranking of provinces in terms of rural population using water, sewage and gas systems, ZACHODNIOPOMORSKIE, PODKARPACKIE and POMORSKIE may count as the best provinces (sum of the three unitarized values of water, sewage and gas is more or equal to 1.60.). Due to very high inequalities, the level of perception in this case has been lowered to 1.60.

In the above mentioned rankings from Table 6 the criterion of rurality of an area within the dimension of inhabitants, has been chosen. Comparing rural areas with urban ones we notice higher inequalities in the first group.

The problem of interregional differentiation combined together with the issue of social inequalities points distinctly to the importance of the stratification order as an intrinsic component for future regional development. Depending on the definite stratification order, i.e. its structure with regard to amplitudes between the regions taking into consideration social and economic inequalities, we may face different aspects of this differentiation. And thus, diversification seems to be in favour of regional development, being simultaneously a natural positive aspect, whereas deep disparities block the developmental pace. Hence, everything converges to the inequality gap which denotes the distance in the interregional dimension. Whether we measure this gap in terms of income, wealth, standard of living, or opportunity, the result is the same. This gap testifies the inequality which forms the definite stratification order in terms of socio-economic relationships. The same applies when perceiving inequalities from the global perspective.

Summing up, the phenomenon of social inequality seems to be inevitable being at the same time a result of social progress in improving the

quality of life or preserving the living standard for the vast majority of population.

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Summary

The paper presents the issue of social, as well as economic inequalities as a result of a certain process of diversifying the living standard in the interregional dimension. Such notions as differentiation, diversification, disparities, stratification order, inequality gap a.s.o. have been considered. The statistics and rankings referring to the provinces in the interregional comparison have been shown.

Problem nierówności społecznych w kontekście zróżnicowania międzyregionalnego

Streszczenie

Artykuł przedstawia problem nierówności społecznych, jak również ekonomicznych jako wynik pewnego procesu różnicowania poziomu życia w układzie międzyregionalnym. Uwzględniono takie pojęcia jak zróżnicowanie, różnorodność, dysparytety, porządek stratyfikacji, lukę nierówności, etc. Zaprezentowano statystyki oraz rankingi województw w układzie międzyregionalnym.