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THE SUSTAINABLE DEVELOPMENT OF THE BRASOV GROWTH POLE

Case Study

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Abstract

The demographic dynamics analysed in the context of the relationship between economic development and social inclusion presents an image of the sustainable development of a community as well as the manner how the financial resources have been used. With an allocation of 74.3 million euro in the programming period 2007-2013, the Brasov Growth Pole has pursued the contribution to the achievement of sustainable development since 2005 by the participation in the Agenda 21. The implementation of projects with European financing in areas such as transport, social and educational infrastructure or tourism have generated changes/demographic movements, which this paper proposes to present. The evolution of the stable population, its dynamics at the level of each locality that is part of the Brasov growth pole as well as the dynamics of the number of employees or the development of the unemployment rate are presented by the cluster analysis. The effects of the European financing obtained from Regional Operational Programme 2007-2013 are thus reflected in the sustainable development of the Brasov growth pole from the point of view of the dynamics of the population.

EUROPEAN REGIONAL DEVELOPMENT FUND (ERDF) FOR THE SUPPORT OF SUSTAINABLE DEVELOPMENT

The best way of knowing the level of sustainable development is to have a clear understanding of the demography status by taking in consideration that the interaction between the human being and the economic environment exists in all the phases of the human life (Simion, 2004). As is known, the European Commission had developed three levels pyramid of indicators (SEC (2005) 161 final). The demographic change and employment are ones of the sub-themes which are part of the first theme Economic development and third theme Ageing society.

Although it was previously invoked in the European documents, sustainable development has become an objective by the Maastricht Treaty in 1992, immediately starting the elaboration of the Fundamental criteria of sustainable development and then effective establishing of what it means by establishing the Working Group from Salzburg in 1994.

The adoption of the Sustainable Development Strategy of the European Union by the European Council in Gothenburg in 2001 and its renewed version in 2006 were decisive steps in EU engagement, proven also in terms of financial involvement. The partnership between the EU, the Member States, civil society and businesses aimed at working together towards achieving the sustainable development objectives is noted in the June 2006 European Council conclusions. The financial involvement was achieved through the support by the European Regional Development Fund and the Cohesion Fund, financial instruments consistent with some areas in connection to the sustainable development. Thus, for the programming period 2007-2013 there have been allocated 9 billion euro for combating climate change and 36 billion euro for sustainable transport (COM (2007) 642 final).

ERDF FOR BRASOV GROWTH POLE

In Romania, the process of revising the National Strategy for Sustainable Development approved in 1997 began in 2006 and ended in 2008, year in which the December European Council adopted the energy-climate change legislative package on the base of the political agreement of the Heads of State and Government. In the same time, different methodologies related to sustainable development had been analysed (Ciupagea et all, 2006). The process of the demographic crisis in Romania was analyzed in the correlation with the regional disparities in the view of the stability and of the role of family. (Guran-Nica, 2005)

The membership of the European Union for Romania implied correlating measures or the implementation of the partnership EU-Member States in contributing to the sustainable development (EU, Committee of the Regions, 2009) in the use of structural and cohesion funds being an extremely relevant one in this regard. Both the National Strategic Reference Framework and the operational programs included explicit support for sustainable development.

With funds amounting to 3.726 billion euro, the Regional Operational Programme 2007-2013 had as strategic objective the support of an economic, social, territorially balanced and sustainable development of the Romanian Regions Romania. (POR 2007-2013, 2007) As outlined in the Programme, sustainable development is pursued in all actions foreseen in ROP since the environmental protection is a fundamental issue, the actions envisaged to be implemented under ROP having a significant contribution to the sustainable development of regions. Also it is mentioned explicitly the coherence with the Sustainable Development Strategy of Romania, the 1999 version in section Consistency with national policies, actions stipulated by ROP will support investments that are consistent with the sustainable development objectives. The maximum value of the assistance from the ERDF for Priority Axis 1 "Supporting sustainable development of cities - potential growth poles" has been set at 1,156,237,380 euro.

The Integrated Development Plan of the Brasov Growth Pole was developed in the context generated by a local planning process, and the need for compliance with the requirements of ROP 2007-2013 PA 1.1 Thus, at county level there are approved since 2010 "The Development Strategy of Brasov county horizons 2013-2020-2030", based on the "Concept of sustainable development of Brasov county" document approved ever since 2007.

The 74.3 million euro allocated for implementing projects in the portfolio of Brasov Growth Pole were used for the 26 projects proposed and contracted. By the end of the programming period, respectively the year 2013 only 20% of projects was completed. By the end of 2014 there were contracted 26 projects with a budget estimated at 95.86 million euro non-reimbursable funds. Out of these, 7 were carried in the field of transport infrastructure, 5 in the field of the educational and social infrastructure, 6 in the field of tourism, one in the field of business infrastructure.

THE DEMOGRAPHIC DYNAMICS, THE EVOLUTION OF EMPLOYMENT AND UNEMPLOYMENT

A first aspect of interest in the analysis of the social-economic development, from the period 2008-2013, the Braşov Growth Pole is the one of

the structure per population age groups, a special attention being given to the active population.

THE DEMOGRAPHIC DYNAMICS AT THE LEVEL OF THE BRASOV GROWTH POLE

The evolution of the stable population at the level of the Braşov Growth Pole registers an ascendant trend over the period 2008-2013 (see Figure no.1), the annual average increase rhythm being 0.15%, the increase over the entire analysed period being 0,73%. This positive evolution of the stable population from the period 2008-2013 follows an accentuated decrease tendency regarding the stable population from the period 1992 – 2002, of approximately 11.2%, as previous studies show.

The comparative analysis of the weight regarding the age group of 20-64 years at the level of the Growth Pole, respectively in Braşov County highlights the existence of significant differences from the statistical point of view (for a 95% probability – see Table 1). This result proves a tendency of concentration of the active population at the level of the Growth Pole.

The analysis of the evolution of the structure concerning the population per age groups shows (for both, county and to the growth pole) the tendency of demographic aging, a phenomenon present both at a national and at a European level. The dynamics of the stable population within the localities forming the Braşov Growth Pole, over the period 2008-2013 (see Table 2) registers significant differences from the statistical point of view for a 99% probability.

The qualitative analysis of the annual rhythms of increase regarding the stable population in the localities from the pole (see Table 3) allows the establishment of two clusters, the cluster made up of the localities from the peri-urban environment of Braşov Municipality SÂNPETRU, HĂRMAN and CRISTIAN distinguishing itself with the highest increase rhythms (see Figure no 2).

The genre analysis of the population of the Braşov Growth Pole over the period 2008-2013 highlights an increase of the female population by 1.14%, superior to the increase of the male population of 0.29%. This represents one of the effects of the financing within projects by European programs.

Another qualitative aspect in the demographic characterization of the Braşov Growth Pole is the migratory movement which has an impact upon the social and economic development. From the data analyse a positive migratory increment in the pole can be ascertained for the entire period submitted to the research. The analysis of the migratory increment in every locality from the growth pole allows the pointing out of Braşov Municipality, which had a migratory balance superior to the one regarding the entire county, as well as of Predeal and Săcele Town with significant positive increments. From the group of localities registering a negative migratory balance Zărneşti locality is distinguished, where the negative migratory increment exceeds 2% of the stable population. The positive migratory balance within the Braşov Growth Pole is 20% bigger than the one characterizing the county.

EMPLOYMENT AND UNEMPLOYMENT

In the context of the economic crisis occurred after the year 2008 the analysis of the social and economic development requires a sight in the degree of occupation and in the evolution of unemployment. The Braşov Growth Pole concentrates approximately 91% of the employees in Braşov County. The analysis of the average number of employees over the period 2008-2013 at the level of the Braşov Growth Pole (see Figure no.3) underlines two typologies of evolution: 1) a decreasing one, until the year 2010, in accordance with the tendency of evolution recorded nationally and internationally; 2) an increasing one, beginning with the year 2011, correlated with the effect of the politics regarding the pole development.

An analysis of the dynamics of the average number of employees, fathomed with regard to the localities forming the Braşov Growth Pole allows the enunciation of the following considerations: 1) the tendency of evolution of the pole is similar to the tendency of evolution of the county as there are no statistically significant differences; 2) within the pole the tendency of evolution differs in a significant way between Braşov municipality and the other localities; 3) at the level of Braşov municipality the average number of employees is lower in 2013 compared to 2008 by 16.811 people (that is by 14.11%); 4) at the level of the other localities forming the growth pole (except for Braşov town) the average number of employees increased by more than 25% in the year 2013 compared to the year 2009 (by 8389 people);

These figures entail a clustering of the localities in the pole that are characterised by behaviours that are similar from the perspective of occupation.

The analysis of the occupation must be connected to a fathomed analysis of the unemployment rate both at the level of Braşov County and at the level of the Growth Pole. Under the impact of the effects the economic world crisis had, this analysis must be made by taking into consideration the year when the crisis first started, which is in 2009. In 2009, 64.59% of the unemployed people in Braşov County came from the localities in the pole and this weight decreased to 43.83% in 2013 (a statistically significant decrease, *pvalue<0.05*). Concerning the evolution of the unemployment rate from the pole as weight in the entire county, per genres the same trend is kept, the diminution of the unemployed people weight being approximately 20 percentage points, both for the males and for the females. The analysis of the evolution regarding the number of unemployed people in 2013 compared to 2009 shows a 46% decrease at the level of the county,

respectively a more accentuated decrease, by 63.6% at the level of the Braşov Growth Pole. At the level of the Braşov Growth Pole, the dynamics of unemployed people per genres highlights an accentuated decrease of this negative phenomenon among men but especially among women and this result can be set down to the sustainable and inclusive development policies of European financing programs. The same positive effect can also be noticed in the contribution of the decrease of the unemployment rate in the pole to the abatement of this phenomenon in the entire country. Thus, the decrease of the unemployment rate by 8961 people at the level of the pole in 2013 compared to 2009 represents a contribution of approximately 90% of the diminution of unemployment rate figures at the level of the country.

CONCLUSIONS

Establishing the sustainable development at national programming level, as well as the plans of the territorial units, respectively of the growth poles and the allocation of funds in support of this objective create a dynamic of the population to areas which provide the conditions for a quality life and easy access to the work place, an aspect proved by the differences of evolution between the growth pole centre city and the neighbouring localities. As this paper shows, the projects have contributed to the achievement of the development vision approved by the IUDP, respectively: "Brasov will become a model of sustainable development in the Central region, based on inter-territorial development solidarity, interconnectivity, social cohesion and economic competitiveness."(PIDU, 2009) The modality in which the quality of life increased or the environmental conditions were improved in connexion with the reduction of carbon emissions or the increase of energy efficiency are evidence of contribution to the ideal of sustainable development. Social equity and improving the quality of social or education services are factors that directly affect the population and the modality in which it evolves.

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ANNEXES

Table No.1 Student Test

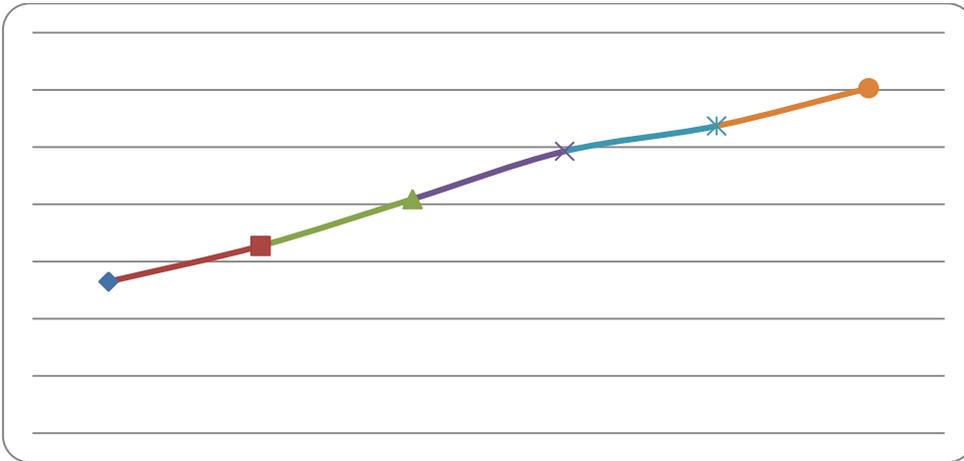| t-Test: Two-Sample Assuming Equal Variances		
	POLE	COUNTY
Mean	0,694811579	0,674320222
Variance	0,000005	0,000007
Observations	6	6
Pooled Variance	0,000006	
Hypothesized Mean Difference	0	
Df	10	
t Stat	14,25146956	
P(T<=t) one-tail	0,00000003	
t Critical one-tail	1,812461102	
P(T<=t) two-tail	0,0000001	
t Critical two-tail	2,228138842	

Source: Data processed by the authors

Table No.2 The dynamics of the stable population within the localities forming the Braşov Growth Pole, over the period 2008-2013

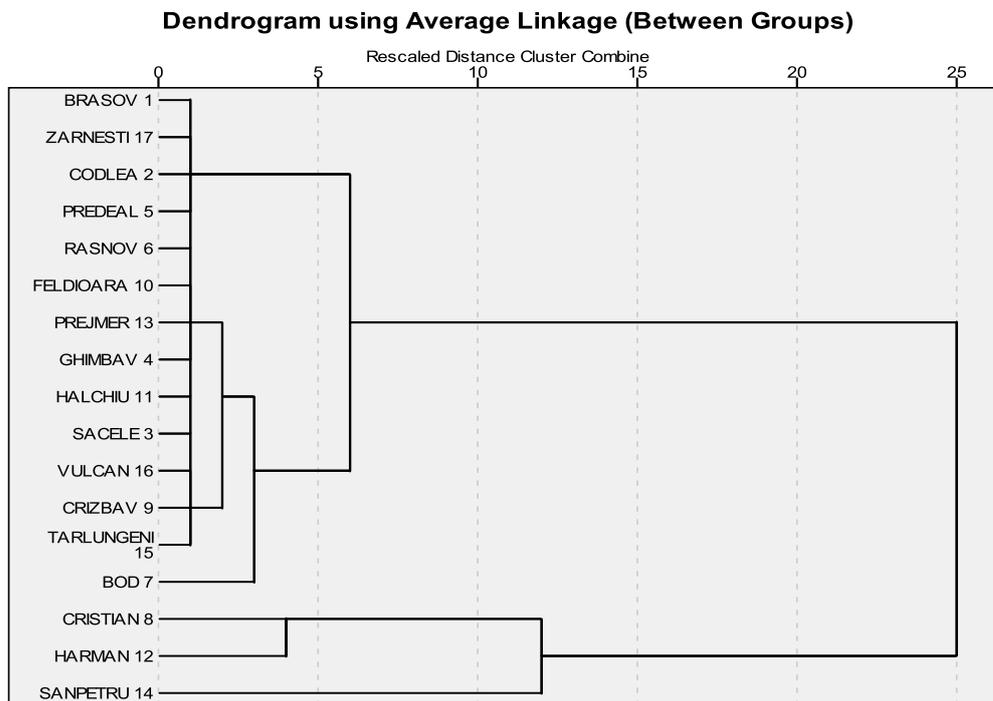|	2009	2010	2011	2012	2013
JUDETUL BRAŞOV – total	0.16	0.17	0.14	0.10	0.09
MUNICIPIUL BRAŞOV	-0.35	-0.27	-0.32	-0.28	-0.09
MUNICIPIUL CODLEA	0.20	0.18	0.11	-0.20	-0.45
MUNICIPIUL SĂCELE	1.42	1.40	1.42	1.14	0.69
ORAŞ GHIMBAV	0.69	0.54	1.43	0.84	0.98
ORAŞ PREDEAL	-0.17	0.69	0.22	-1.25	-0.69
ORAŞ RASNOV	1.07	0.80	0.42	0.69	0.32
BOD	2.36	2.31	2.23	1.28	0.54
CRISTIAN	2.10	2.15	3.59	2.72	2.51
CRIZBAV	1.81	0.99	1.33	2.01	1.02
FELDIOARA	1.21	0.37	0.41	0.81	0.67
HĂLCHIU	1.00	0.84	1.16	0.71	1.10
HĂRMAN	2.88	3.94	4.92	1.91	1.80
PREJMER	1.34	1.01	0.52	1.06	0.70
SÂNPETRU	4.42	4.30	6.11	4.73	4.54
TĂRLUNGENI	1.01	1.39	2.24	2.16	1.62
VULCAN	1.91	0.74	1.23	0.83	0.80
ZARNESTI	-0.14	-0.01	-0.38	-0.55	- 39

Source: Data processed by the authors

Figure No. 1.
The evolution of the stable population at the level of the Braşov Growth Pole 2008-2013

Source: Data processed by the authors

Figure No.2
Grouping of the localities from the peri-urban environment of Braşov Municipality

Source: Data processed by the authors

Figure No. 3
Grouping of localities (Brasov growth pole), based on the average number of employees, 2008-2013

Dendrogram using Average Linkage (Between Groups)

Source: Data processed by the authors