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**THE ROMANIAN ACADEMY
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WORKING PAPERS

***The Regional Development Policy of Romania in the
Post-Accession Period***

Daniela Antonescu

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This study - "The development policy of Romania during the post-accession period" - represents the continuation of the analyses and ideas presented in the doctoral study "Romania's development policy in the context of integration into the European Union structures" elaborated in the period 1997-2003 within the National Institute for Economic Research (INCE).

*Also, this study represents the results of post-doctoral research project **THE REGIONAL DEVELOPMENT POLICY OF ROMANIA IN THE POST-ACCESSION PERIOD** within the POSDRU Project "Scientific research, economic support to welfare and human development in a European context" developed within the "Costin C. Kirişescu" National Institute of Economic Research.*

The changes and adjustments of the regional development process after Romania's integration into the European Union have led to the emergence of some new, specific elements that left their fingerprint on the implementation and obtained outcomes. These new elements, as well as the (real and estimated) impact of the regional policy are widely discussed in the present study, in an attempt to provide an actual image on reaching the established objectives (diminishing regional disparities, achieving territorial cohesion and convergence, etc.) during the present programming period.

Combining recent theoretic elements and spatial analysis models/techniques with statistical, legislative and institutional data and information, the study contributes to better understanding the positive and negative aspects influencing the regional development evolution in Romania, as well as to formulating the directions and actions for the subsequent programming period.

*This post-doctoral study would not have been possible without the scientific guidance of **Academician Aurel IANCU** who supported me during the entire time of elaborating the study, providing his complete support and entire experience so necessary in reaching a high scientific level, and to whom I wish to express right from the beginning my entire gratitude.*

*Also, I wish to express my thanks to **Professor Thomas Dillinger**, director of the Centre for Regional Planning and Regional Development who ensured all required conditions for realising the present research study.*

CONTENTS

| | |
|--|----|
| 1. Introduction | 5 |
| 2. New theoretic perspectives of economic development at regional level | 11 |
| 2.1. Theories from a historical perspective | 11 |
| 2.2. Main Features | 14 |
| 2.2.1. <i>Location</i> | 15 |
| 2.2.2. <i>Economic development</i> | 16 |
| 2.3. Policies with territorial impact..... | 20 |
| 2.4. New trends in regional development | 23 |
| 2.5. Conclusions | 26 |
| 3. Regional Convergence – Theories, techniques and analysis methods | 28 |
| 3.1. Disparities and space..... | 28 |
| 3.2. Theoretic approaches to regional convergence..... | 29 |
| 3.3. Influence factors | 34 |
| 3.4. Indicators and analysis methods | 37 |
| 3.4.1. <i>Indicators</i> | 38 |
| 3.4.2. <i>Analysis methods</i> | 39 |
| 3.4. Conclusions | 40 |
| 4. Evaluation of public interventions at regional level. Relevant practices in some Member-States of the European Union | 41 |
| 4.1. Evaluation – Typology, logical framework and indicators..... | 41 |
| 4.2. Evaluation of public interventions within the European Union – Tradition and experience | 46 |
| 4.2.1. <i>Various perspectives regarding evaluation</i> | 46 |
| 4.2.2. <i>Obligation of evaluating public programmes and policies</i> | 50 |
| 4.3. Conclusions | 50 |
| 5. Analysis of Regional Convergence at European Union Level | 52 |
| 5.1. Regional analysis context..... | 52 |
| 5.2. Analysis of economic performance convergence | 53 |
| 5.3. Conclusions | 62 |
| 6. Analysis of economic and social disparities at regional level in Romania | 64 |
| 6.1. Regional analysis context | 64 |
| 6.2. Analysis of economic performance..... | 65 |
| 6.3. Demographic regional disparities | 70 |
| 6.4. Regional disparities in labour force | 73 |
| 6.5. Regional disparities in the research-development field | 74 |
| 6.6. Regional disparities in the health field..... | 77 |
| 6.7. Regional disparities in infrastructure | 78 |
| 6.8. Conclusions | 79 |
| 7. Regional Policy in Romania – Main Instrument for Diminishing Regional Disparities | 81 |
| 7.1. Regional policy – General presentation..... | 81 |
| 7.2. Evaluation of the impact of the Regional Operational Programme 2007-2013 | 87 |

| | |
|--|------------|
| 7.2.1. Results of previous evaluations | 88 |
| 7.2.2. Impact on urban development | 90 |
| 7.2.3. Impact on developing the regional transportation infrastructure | 92 |
| 7.2.4. Impact on the development of the regional social infrastructure | 94 |
| 7.2.5. Impact on the regional business environment | 98 |
| 7.2.6. Impact on the tourism sector at regional level | 101 |
| 7.3. Effective impact of ROP (31 st December 2011) | 104 |
| 7.4. Conclusions | 106 |
| 8. Regional policy and the Europe 2020 Strategy | 109 |
| 8.1. Premises and objectives | 109 |
| 8.2. Financial allocations and legislative proposals..... | 111 |
| 8.3. Simplification – Basic characteristic of the Europe 2020 Strategy..... | 114 |
| 8.4. Conclusions | 115 |
| 9. A strategy model regarding regional development in Romania, applicable to the 2014-2020 programming period | 117 |
| 10. Conclusions | 121 |
| Annexes | 123 |
| Bibliography | 141 |

THE REGIONAL DEVELOPMENT POLICY OF ROMANIA IN THE POST-ACCESSION PERIOD

DANIELA ANTONESCU

Abstract: *The general objective of this study is to evaluate regional disparities and the territorial convergence under the impact of the cohesion policy, in the context of the European Union integration.*

The specific objectives on which the research included in this work focused are the following: specific objectives: (i) analysis and interpretation of main theories of regional science, evolution and influence factors, main representatives; (ii) analysis of regional disparities in Romania in different fields of activity; (iii) analysis of convergence at regional level within the European Union; (iv) assessing the impact of implementing regional policy in Romania; and (v) suggestions regarding a possible model of regional strategy for the future programming period, from the perspective of the Europe 2020 Strategy.

The study contains certain quantitative and qualitative estimates on the economic effects generated by Structural Funds at regional level in Romania. The data and information presented in the research paper regarding the gross impact of allocated resources are verified by computing first an average level of obtained effects. By using currently existing qualitative and quantitative data and some analysis techniques of territorial convergence recognised at international level, the study presents the trends at regional and local level in certain fields of activity.

Key-words: *regional convergence, economic and social cohesion, regional programmes and policies, territorial disparities, evaluation.*

JEL Classification: R11, R12, F02

1 Introduction

The post-doctoral research paper “*The Regional Development Policy of Romania in the Post-accession Period*” has as general objective to evaluate regional disparities and the territorial convergence process under the impact of the cohesion policy, in the context of the European Union integration. To this end, two categories of approaches are presented.

A first approach is the theoretic-methodological one, an approach covering the entire range of recent theories of regional science, models and analysis methods regarding the impact of a public policy, conceptual approaches and critical analyses, opinions of the theoreticians in the field.

The second approach focused on analysing territorial convergence and economic and social disparities at regional level in Romania and the European Union.

Taking into account the two ways of approaching the topic proposed for analysis, the research paper pursues five specific objectives:

- Specific objective 1* – Analysis and interpretation of main theories of regional science, evolution and influence factors, main representatives.
- Specific objective 2* – Analysis of regional disparities in Romania in different fields of activity.
- Specific objective 3* – Analysis of convergence at regional level within the European Union.
- Specific objective 4* – Evaluating the impact of implementing the regional policy in Romania.
- Specific objective 5* – Suggestions regarding a possible model of regional strategy for the future programming period, from the perspective of the *Europe 2020* Strategy.

The subject proposed for the present research paper is frequently debated and analysed, both at political level and at theoretical and practical level, the opinions and beliefs of the experts being sometimes contrary, but mostly reaching a common denominator: the absorption of Structural Funds represents for the New Member States and for Romania an opportunity for supporting national economy revival, and diminishing development gaps. The interest in the issues of the post-accession of Romania into the European Union and in attracting Community funds is huge, during the current post-accession period, but also in the context of the globalised economic crisis.

Diminishing economic and social regional imbalances is the strategic objective of regional policy of Romania, a country facing nowadays some challenges generated by the integration into the Community structures. This integration process was not concluded in 2007 and, probably, shall continue for a long period of time, depending on Romania's capacity to succeed in using the funds for the economic and social cohesion and, implicitly, territorial convergence.

The research paper attempts to answer the following questions:

- What was the evolution of the convergence process at regional level in the European Union?
- How high are the regional disparities in Romania and how did they develop in the 2000-2010 period?

- What are the best methods and models for evaluating the impact of the regional policy?
- What are the impact and the effects of using European funds at regional level?
- What are the perspectives for regional development in Romania taking into account the vision of the *Europe 2020* Strategy?

For this approach, the research paper proposes, based on an adequate conceptual-methodological framework, a balanced analysis of the regional convergence process within the EU and the territorial development policy in Romania.

In *Chapters 2 and 3* a review is made about the specialised literature regarding integration, cohesion, convergence and main theories attempting to provide answers to a general and persistent question at European level: why some regions/areas develop faster than the others? The answers are given preponderantly by the regional economic science, which was supported during its development by other sciences (mathematics, geography, sociology, etc.). It can be seen that regional theories and policies have underwent important changes in the last time in their attempt to meet the new challenges triggered by the expansion of the European Community. Currently, concepts, such as endogenous development, are already “exiled” by the new theoretical approaches, which are more complex and sophisticated, using notions such as knowledge regions (those regions able to develop on the basis of own resources and adapt to the new competitiveness conditions imposed by globalisation). From this perspective, the new trends of regional policy, after 1990, were focused on regional networks (clusters) and innovation, without ignoring the development and potential specific features and differences of each area. Theoretically, there are opinions of several experts that the European Union expansion shall bring more benefits to the New Member States and a slight increase in welfare for the old ones.

At the same time, the philosophy of regional development of the European Union should not be ignored, as it states that an economic and social convergence process must be ensured both at national level and at regional level, as findings show that disparities are more numerous and of higher amplitude at this level. The main instruments of the territorial balancing process for the development level are Structural and Cohesion Funds, the effects of which can be identified at Community and national level.

Chapter 4 presents the evaluation techniques and methods of public interventions (regional policy) within the EU, by showing that once the obligation of evaluation was implemented the attitude of the Member States changed significantly, in particular of those which didn't have a minimum evaluation culture (for instance, France, Italy, Spain, Portugal, Greece, etc.). Even if evaluations of some major public interventions are costly (for instance, certain territorial or sectoral policies or programmes), it is considered that their role is decisive in outlining and implementing some policies financed from Community money (European, national, or local).

Chapter 5 analyses the evolution of regional convergence at EU level, by using the GDP per capita indicator (PPP). The analyses show territorial imbalances evaluated by econometric techniques and methods that can reflect the evolutions and trends concerning the main economic, social and environmental indicators, etc., with a high degree of relevance and accuracy. The analysis of the regional convergence at EU level was made by means of the dispersion parameters, histogram, Gini coefficients and the Lorenz-Gini curve for the period 1997-2010. The outcomes reveal that for the analysed period a slight convergence trend could be found at the level of the regions within EU Member States. An increasing trend in the regional GDP per capita is seen (both of the average value, and of the maximum one) leading to the idea that, as a whole, the development at regional level increased considerably. Also, a decrease is noticed in the number of regions that reached a GDP per capita above the Community average (from 145 in the year 1997 to 136 in the year 2009). The ratio between the regions with minimum and maximum GDP per capita decreased from 15 to 1 in 1997 to 12 to 1 (2008), which is translated into the existence of diminishing trend of discrepancies at the level of NUTS 2 regions within EU-27. Graphic representations have revealed a diminishing trend of differences between NUTS 2 regions within EU-27, the number of regions that could be found in the immediate proximity of the average GDP per capita being on the increase. Also, a decreasing trend is recorded for the concentration at regional level within the European Union which is supported by the diminution of the Gini coefficient (from 60.30% to 58.91%). There were identified three particular moments that marked the change in the GDP per capita within the EU-27 for the reported period (1997-2008): the first moment is placed in the period following the year 2004, when the ten New Member States joined the European Union,

which triggered an increase in the number of regions placed below the average (from 122 to 128). The second moment is the one after Romania's and Bulgaria's accession when the number of regions placed below the Community average increased to 137. As of 2009, the effects of the economic and financial crisis at regional level are visible, which disturbed the convergence process at Community level.

Chapter 6 includes an analysis of economic and social disparities at regional level in Romania. According to the obtained results, the development regions of Romania evolved in the period 2000-2010 at different rates and speeds. Thus, the annual average growth rates and the variation coefficients calculated for different fields of activity have registered higher or smaller values depending on the complexity of the internal or external phenomena that had an important impact on them. The analysed fields at the level of the eight development regions (demography, labour force, research-development, infrastructure and health) have shown different evolutions regarding their variability in the 2000-2010 period.

Chapter 7 presents and evaluates the regional policy of Romania, and its main instrument – the Regional Operational Programme (ROP). An analysis is made about the possible impact of ROP on the general regional development level in the context of Structural Funds absorption.

Chapter 8 contains information and elements about the future regional cohesion and development policy of the European Union. From the perspective of the *Europe 2020* Strategy, the regions shall continue to obtain differentiated support depending on their economic development level (GDP per capita), as a clear distinction is made between “less developed” and “most developed” regions. As regards the regions with a similar level of economic development, gradual support should be possible by a simplified system that will include a new intermediate category of regions. This category should contain eligible regions currently pursuing the convergence objective, but for which the GDP per capita is 75% higher than the European Union average.

Finally, the paper makes suggestions regarding a possible regional development strategy for the future programming period taking into account the present conditions and the *Europe 2020* perspective.

The methodology used for the analysis consists, mainly, in econometric evaluations of NUTS 2 regions within EU and Romania. The scientific research and analysis methods are those consecrated at

international level and take into account the fact that identifying regional disparities can be done, mainly, by means of convergence and its characteristic indicators (GDP per capita).

The study contains certain quantitative and qualitative estimates of the economic effects generated by Structural Funds at regional level in Romania. The data and information presented in the research paper regarding the gross impact of allocated resources are verified by computing first an average level of effects. By using currently existing qualitative and quantitative data and some analysis techniques of territorial convergence recognised at international level, the study presents the trends that took place at regional and local levels in certain fields of activity.

2. New theoretic perspectives of economic development at regional level

The regional issue approach faced in time difficulties resulting mainly from the way in which main currents of economic thinking regarded the area/territory (homogenous, without considerable influence on the economic, etc.). Moreover, regional theories were considered as appendices of the main economic trends, or in some instances, reflections of the latter.

The “maturity” of economic science had as main effect the inclusion of the areas in its theories. The thinking trend contributing decisively to the acknowledgement of regional science was the *neoclassical* one, to which also other modern economic schools were added subsequently. Thus, the neoclassical economic theory was compelled to acknowledge the existence of a differentiated area which had specific characteristics and could offer various opportunities (specialisations, comparative advantages, etc.) to different groups or fields. The opportunities and differentiated distribution of natural and human resources in space trigger and affect, in a relatively significant proportion, options and choices of economic agents and residents with respect to the location of their activities.

In its turn, the location decision is influenced on one hand by factors such as distance and production/transport costs, access to information, innovation, knowledge, innovative networks, etc., and on the other hand by regional policies, based on principles, instruments and mechanisms leading to regional or urban hierarchies.

The strength of regional theories and approaches is the fact that they succeeded in differentiating/detaching themselves from the other theoretic aspects both through their complex, multidisciplinary character, and by the consistent contribution of economists, geographers, sociologists, etc.

The trend noticed in the recent period regarding the involvement and contribution of experts in the field is marked by the intensive use of elements of a mathematical nature, of regional models based on econometrics and statistics, which contributed to increasing its importance, both from a theoretic perspective, and in particular from a practical one.

2.1 Theories from a historical perspective

From the very beginning, the regional science attempted to provide answers to actual issues of economic life: optimum location of activities in the area, the calculus of costs corresponding to transport from one point to the other, the distance from periphery to central areas, migration and other

demographic phenomena, specialisation, agglomerations, scale economies, etc. It can be said that regional economy and acknowledging its practical importance were influenced to a large extent by the hypotheses and conclusions of the foreign trade theory.

From the viewpoint of economic development, the 20th century represented, on one hand, the continuation of the modernisation of the human society that had begun some time before and, on the other hand, it signalled the emergence of globalisation and of its effects on the general evolution. From this viewpoint, the globalisation phenomenon contributed to direct, immediate relationships between various areas of the planet at great distance from each other. Thus, economic activities were transferred to areas with cheap labour force triggering deep social mutations within the occupational structure of the respective area. Also, the presence of some natural resources in a certain region determined the transfer of financial resources, changing the traditional lifestyle and the basic functions of the state. To this aspect contributed other representatives of the classical economic thinking as well, who by the concepts formulated and by the way in which they attempted to explain certain phenomena with spatial impact have supported the shaping of the interdisciplinary and complex character of regional economy.

Already by the beginning of the 20th century, the English economist Alfred Marshall analysed and interpreted by means of external economies the advantages determined by the location of similar or complementary activities within a given area. Thereafter, Alfred Weber adds a new chapter to microeconomics, presenting location as an important element to be considered in initiating some activities, next to other traditional economic elements (prices, quantity, etc.).

The thirties represent an inflection point in the evolution of the regional development theory by the way of regarding things and approaching regional issues. Attempting to provide as fit solutions as possible for obtaining an optimum transport cost, W. Christaller elaborates the theory of central places, establishing urban hierarchies and analysing the monopoly determined by distance or location.

There are some areas in which the evolution of regional theory interfered and without which this branch of general economy would not have succeeded to ascertain itself. In this respect, the contribution of mathematics to the development of regional science cannot be disputed. Even if in an early period, which was relatively late, mathematics did not succeed to impose itself for regional analyses, subsequently, its models and

techniques could no longer be avoided. This led to the appearance of the first mathematical model of general equilibrium based on spatial/regional elements proposed by August Lösch, which contributed to elaborating the well-known general economic theory of regional development.

Up to the sixties, the main characteristics of regional theories consisted in the diversity of traditions and the variety of analyses. The theories of location saw a swift development determined by features envisaged at a certain moment by the main schools of thought and their representatives.

As of the '70s the interest in location diminished sensibly (without disappearing entirely), attention being paid to regional development and specific phenomena associated with it. New aspects emerged leading to the appearance of some consecrated concepts: industrial clusters, regional clusters, spatial agglomerations, etc. (B. Chinitz, 1961; R. Vernon, 1962; F.R. Lichtenberg, 1987).

At the world level, the theories of economic growth are completed and updated with studies and researches regarding social inequities in the development level of some regions/states of the world, which are elaborated within some trends of economic thinking:

- ❖ Keynesian approach (basic theory);
- ❖ the heterodox trend (the theory of the growth poles pertaining to Fr. Perroux);
- ❖ classical tradition trend (analysis of the industrial complex);
- ❖ analysis of international inequalities (production cycle, centre-periphery analysis);
- ❖ the works analysing regional disparities in the '60s and '70s (spatial division of labour, the researches of J. Friedmann and Stuart Holland);
- ❖ integrated models of regional development (W. Isard, M. Greenhut, 1956).

Another historical moment in the development of regional science is triggered by the emergence of economic phenomena with global impact, which affected the global level in the seventies (the global crisis, the unprecedented urbanization, the emergence and intensity of environmental protection activities). This fact influenced the manner in which regional aspects were regarded and approached: "the landscapes" in focus changed rapidly, underwent significant changes, while the analyses made by regional theoreticians tried to respond to new realities.

The regional issues become complex as of the '80s, their implications being difficult to approach and improve. It is the time when new regional

theories were focused on the role and importance of governmental institutions and interventions at spatial/territorial level and on the public policies applied at the regional or local level.

Currently, the new trends of regional theoretic approach are mainly focused on innovative, knowledge factors but, at the same time, they acknowledge the importance of location and of public interventions. The new concepts employed in regional analyses remind us of the diversified space, the stylised space, knowledge regions, intelligent regions, etc. Endogenous development turns into the main point of the new regional theories, being frequently regarded as a new way of observing and analysing economic phenomena taking place at territorial level.

In conclusion, the development of regional theories took place concomitantly with the development of the human society, following a sinuous, complex and difficult path. The new approaches emphasise the positive effect of the internal factors on regional development, triggered mainly by knowledge, innovation, technological transfer, but also by natural resources and local preferences.

2.2 Main Features

During over 50 years of development, the history of regional economy was interspersed with a relatively high number of approaches, theories and models which focused their attention on location and its specific issues. Even though, in the beginning, regional analyses had a relatively simple character (the analysis of a single region or a single sector) once the practical importance of the field was acknowledged the interpretative power of the regional theories and models increased as well. This was gradually achieved during a long period of time, with ups and downs, with criticisms and praises aiming mainly at the most important aspects that left their fingerprint on the theoretical approaches at regional level:

- ❖ *location* – is regarded as the oldest approach and interpretation of the issues at regional level in the history of economic thinking as it emerged already at the beginning of the 19th century; by this concept, the first contact of the regional science with the elements of the classic economy is made;
- ❖ *economic development* – is the favourite element of theoreticians, without which economic analyses would not have been complete. The approach to space within general development theories improved outcomes and conclusions.

In the following we present the main theories of regional economy and how they succeeded to impose themselves in a trend or other.

2.2.1 Location

Defined as a process of conscious choice of an optimum place for developing a certain economic activity, location was influenced first by the existence of natural resources and, thereafter, by the existence of knowledge/innovation but also by the presence of a certain demand or necessity. Both resources and necessities presented variable elements in time, which affected the location decision.

Among the representatives with important contributions to developing the theory of location we mention here J.H. von Thünen (location of agricultural activities), A. Weber (location of industry), T. Palandek (monopolistic competition), W. Christaller (services location), A. Lösch (the market identified as a key factor of location) G. Myrdal (the concept of circular and cumulative causality), J.R. Boudeville, W. Isard, A.O. Hirschman, J. Paelinck (polarised economic growth) a.s.o.

The first regional theories had, preponderantly, an abstract character and were perhaps too simplified, as they followed the natural path of knowledge development and adjustment to the complex process of economic, social and environmental developments, etc. Currently, these theories receive important influences from many knowledge fields (mathematics, computer science, modelling, statistics, sociology, etc.) turning more anchored into reality and much more practical.

During the development of location theories there were some milestones that played an important role in moving towards the next step of their development.

Location theories represent the focal point of regional science, their development in time being influenced by the development of some economic activities and the evolution of the human society as a whole. Most of the location theories were based on the presence of some natural resources in the region, the purpose being to minimise transportation costs, to optimise expenditures for locating specific activities in the areas where conditions provided very high profit or income.

Currently, changes in economic activities determined by globalisation, regionalisation and crisis altered the way of perceiving location and, implicitly, the factors requiring the selection of one location or other.

The basic conditions of the general balance of international trade presented in the Heckscher-Ohlin model have opened the way for more realistic interpretations. Thus, the importance of natural resources as a main location factor diminished both quantitatively and qualitatively, concomitantly with the change in the transportation conditions (transport means, infrastructure, etc.). In this context, the location of some activities should be the main focal point for both entrepreneurs (private sector), and for the government/regional authorities that can influence decisions through regulation/deregulation and regional development policies.

In conclusion, it might be said that location is no longer regarded as just a means by which companies or population can sway the optimum development of their activities, but it represents an instrument available to territorial policies through which they can influence certain development directions by targeted actions and specific measures.

2.2.2 Economic development

Economic development is another important aspect, analysed from the theoretical (and the practical, as well) viewpoint within the regional science. Conceptually, regional economic development is based on a multitude of successive quantitative and qualitative changes that contribute to reaching a high living standard and welfare.

The evolution in time of theories regarding regional development led to the initiation of some economic thinking trends that intended to analyse and interpret the growth/decline stages that took place in certain periods of progress within an area.

The evolution of the theories regarding regional development was characterised by periods when it was largely ignored, but also by stages in which the order of the day was dedicated to specific territorial issues.

The main discussions raised within some economic trends about this topic were focused mainly on the influence factors and their importance in certain stages or periods of time. Hence, it is found that regional development is both the outcome of exogenous factors but in particular of the endogenous ones, their impact being different in time and space.

From a chronological point of view, the exogenous factors were important especially in the first stages of regional growth, their effects being, however, relatively difficult to control.

In the present development stage, the importance of regional endogenous factors is great as they are influenced by the quality of existing

technologies, the regional supply (export) and demand (the capacity of collecting capital and labour force).

Development of theories regarding regional development

1. The theory of growth poles or development poles

The pioneer of this theory, François Perroux, starts from the hypothesis that a growth process does not occur all over, but to varying degrees of intensity in certain points or poles. The diffusion of growth takes place by various channels towards variable terminals of the whole economy. The way in which this theory was defined led to the idea that there are some unclear aspects regarding the definition of the growth poles (for instance, a large enterprise is not considered as a growth pole, or a steel complex is not a growth pole, but they turn into growth poles only if a system of smaller or large enterprises emerges around them).

The purpose of a growth pole is compromised if there are no transmission channels for the development (trading routes/circuits, credit systems, communication systems, transportation and warehousing infrastructure, qualified personnel, etc.). Also, the existence of a correspondence is necessary between the elements produced in the growth pole and the ones manufactured outside it. In reality, growth poles cannot function and reach the objective under conditions of isolation.

2. The theory of circular and cumulative causality

Significant contributions to the development of this theory had G. Myrdal, R. Prebisch, F. Hilgert and others. The initial hypothesis of the theoretical approach is that mobility represents a disturbing factor. Factor mobility has a limited utility in time, constituting a substitutive factor of the other factors without succeeding to compensate for the marginal productivity differences at regional level.

A good illustration of the theory results from the direction in which factors shift: a shift of the labour force towards rich regions and nations worsens the situation in the poor areas. The emigration source countries must support the training and education of some generations of emigrants. This is partially valid also nowadays, the theory having a high degree of applicability.

3. The centre-periphery theory

This theory, proposed by John Friedmann and completed by other regional theoreticians (S. Holland, G. Myrdal, etc.), is based on several hypotheses. Thus, the relations between central and peripheral areas are considered as true engines of development at regional level. Also, the main effect of the relationship is a decrease in performance from the central areas

to the peripheral ones. In conclusion, the profit is less perceived in the peripheral area while the growth in the central area is determined by export. Labour force and capital leave the periphery and tend to adjust (sometimes very difficult) to the conditions of the central area.

This theory has a large applicability nowadays, when discussions are related to convergence between centre and periphery, even though fundamental inequalities are maintained on long term. Also, the specialisation of the regions depending on the natural potential and traditions is present even today in some countries, but this no longer represents a decisive factor for development as a whole.

4. The theory of development in stages

In accordance with this theory, initiated by Walt Whitman Rostow (1975), the transition from underdevelopment to development can be described as a series of steps or stages that all countries/regions must undergo. Advanced countries, he argued, have already exceeded the “takeoff” stage towards self-sustained growth, while underdeveloped countries are still in a traditional society, or in the pre-condition stage, and must follow a series of steps to reach a sustained economic growth level.

The main ideas presented in the theory of development in stages are the following:

- national development is polarised in a first stage, and thereafter is integrated;
- at regional level, development is focused on development centres, and thereafter disseminated to the periphery;
- within urban units progressive decentralisation occurs to the benefit of peripheries.

The conclusion of the analyses is that past prosperity can be the bearer of germs for deeper decline, under new economic and technological conditions. This is visible today, in the present global crisis. The model of a development in stages, with high discrepancies at the beginning and their subsequent diminution is largely shared in current regional policies.

5. The theory of long cycles

Among the representatives of this theory we mention J. Paelinck (1970), Ph. Aydalot (1976), P. Nijkamp (2000). According to this theory, space is distributed between growth poles, attraction poles and intermediary regions. The attractiveness of a region is dependent on its capital, on infrastructure, and the stock of information. In its turn, capital depends on investments, on the state of the factors within the region, while migration as internal factor is affected by the level of wages, labour market and

attractiveness of the region. Under the restriction of some hypotheses, the evolution of a spatial system and the way in which the diffusion and retention effects are distributed in space can be illustrated.

6. *Marxist theories of regional growth* (K. Marx, D. Gordon, M. Castells, N. Smith, etc.)

According to Marxist theories, social changes and development are regarded in terms of inherent conflicts between the capitalist class and labourers. Also, imbalanced development is the geographic expression of capital contradictions; urban areas are initially developed by profit accumulation. At the same time, profits are unstable because of fixed investments and increasing competition as a result of the newly entered ones. Besides profit decrease, the area is completely abandoned by companies looking for other locations with higher profits.

These phenomena, triggered by a location change for profit, might eliminate from competition some areas that subsequently will decline.

Currently, we witness such regional processes that can be regulated or prevented through territorial policies and the measures for supporting economic activity in certain areas. These policies can stimulate regional integration within a larger capitalist system or can speed up the divergence process, as well.

7. *The theory of endogenous development*

J. Friedmann (1970), P. Nijkamp (2011), J. Paelinck (2011), D.L. Constantin (2011), etc. contributed to the development of this theory.

Endogenous development is based on the good use of local resources or traditions. The supporters of the idea regarding endogenous development are, in fact, promoters of a flexible regional economy, capable of adjusting to the external environment. This type of development generates economic growth and increased regional productivity. Under conditions of economic stability, the companies will promote long-term programmes, which ensure regional advantages. This form of regional development is opposed to the uniformity trend, by accepting the variety of cultures, social statutes, technologies and knowledge, etc.

8. *Institutional theories*

Promoted by A. Marshall (1920), J.S. Mills (1860), T. Veblen (1890), J. Kenneth Galbraith (1980), Fagg Foster (1969), Ronald Harry Coase (1937), Oliver E. Williamson (1963), these theories focus on an institutional system which presupposes a functioning mechanism based on financial resources and action rules/norms. Understanding this way of functioning determined abandoning the approach of the frictionless economic system and led to acknowledging the importance of transaction costs.

Within a society where friction costs exists, ownership or contractual rights cannot be instantly defined, monitored or transferred without spending resources (financial, human, material, etc.). Transaction costs are regarded as search or negotiation costs for using the market, similar to the administration costs within a hierarchy of private companies.

In the modern market economy, transaction costs reach very high shares estimated in some cases to be 50-60% of the net national product (E.Furubotn, R. Richter¹, 1997).

According to theoretical approaches, transaction costs and institutions that generate them are regarded as endogenous variables of the economic model. Economic and political costs are included in the transaction costs which, according to R. Coase they are of three kinds: research and information costs (cost of preparing contracts), costs related to decision-making, contract signing and monitoring costs.

2.3 Policies with territorial impact

By simplifying the image of reality, scientific theories have always intended to understand certain phenomena and further forecast them. Often, the theories were used to substantiate some future actions rendered concrete, as a rule by economic, social, and regional policies, etc.

With respect to regional policy, it managed to draw attention relatively late once the importance of the regional level increased within some alliances or unions of states, when it was noticed that there are more developed regions and less developed ones and an attempt was made to reach a balanced territorial development. Still, this fact should not be generalised: not all regional theories have contributed to developing territorial development policies.

According to H. Armstrong and J. Taylor, up to the present, there have been identified *seven main theories that, by their conclusions, proposed measures and specific actions play an important role in establishing regional policies and strategies.*

Substantiating the actions of regional policies aimed to stimulate labour force mobility, trade liberalisation and technological transfer was promoted by the neoclassic theory of economic growth. In accordance with this theory, regional output growth is the outcome of increasing mobility of

¹ Furubotn, E.; Richter, R. (1991), *The New Institutional Economics*, ISBN 3-16-14-5764-1, Die Deutsche Bibliothek.

the production factors and technology. The core objective pursued by the regional policy – diminishing regional disparities – shall be reached on long-term as a result of regional convergence and as an effect of increasing GDP per capita.

Policies for regional growth are supported and substantiated by means of the endogenous development theory which considers progress as a basic determinant of growth, while technological changes (key aspects of human capital, scale effects, spillover, research-development, supplying public services, etc.) can contribute to reaching a certain degree of convergence and to polarised cumulative growth. Recent analyses performed by experts focused on the relationships between economic growth, geography, agglomerations, and innovation-knowledge have proven that in certain regions the new growth models resemble the ones proposed for the areas of origin. The specific instruments of the regional policy promoted by means of the endogenous development theory are aimed to increase the educational level of labour force, stimulate the business environment by supporting the emergence of new companies (start-up, spin-off) and sustained knowledge dissemination.

The pronounced social character of regional policies determine some experts to take into account this character when specific measures and actions are proposed and implemented. The social capital is the common element that unites communities and contributes to reaching a high level of human welfare. These things are achieved, as a rule, by stimulating the information exchange and diminishing transaction costs, by facilitating the adoption of collective decision (an essential factor of social cohesion), by belonging to certain social groups, etc. Frequently encountered in practice, the implementation of *regional policies based on the social capital theory* focuses on the social, cultural and political impact on economic growth, as well as on cohesion and social networks. Promoted by Hilary Putnam (1993), this theory substantiated, in a certain period, the regional policy of Italy attempting to explain the large differences existing in the level of the incomes between the rich North and poor regions of the southern part. Regarded as an extra-factor of production, social capital is not taken into account by most regional policies because even if there is increased interest in it in the economic area, still the concept is much too vague and difficult to use in practice (Steven N. Durlauf, 2006).

Currently, the majority of the international trade models is based on the theories launched by Paul Krugman, which take into account economies of scale and preferences of the consumers for diversity. Thus, to achieve

regional growth, regional policies must promote and exploit optimally the attractiveness of an area.

The new economic geography (NEG) proposed and promoted by Krugman is based on the hypothesis that a region is more developed as compared with other regions as result of its capacity to attract new companies and specialised labour force and also due to the fact that it exploits efficiently the scale economies and their variety. Even though the approach is not optimistic over the effects of some regional policies, it can be said that it represents a starting point for development strategies that cannot be ignored.

Another group of *regional policies* is based on elements of *evolutionist economic geography (GEE)* focusing mainly the those processes that trigger change. From this perspective, the region turns into a complex adaptive system, the crucial factor being the outcome of knowledge. Technology is defined as a combination of knowledge and competence. Knowledge is divided into: information (data), codified knowledge (books, websites, patents, etc), and tacit knowledge (incorporated into individuals). Information and knowledge are accessible, while distance becomes less important as compared to technological progress. Both accumulation and tacit use of knowledge are influenced by geographic proximity.

Regional policies built on export-based competition models. The essential mechanism of the models is given by the fact that some regions are more competitive than others with respect to their capacity of export. The competitiveness growth model is based on the Verdoon law² (productivity is a growth function of total output). Recently, M. Porter completed the model with the idea that the strengthening of competitiveness takes place in regions that present the following elements: good conditions for the production factors, important support for developing industries, strong local demand and a competitive regional framework.

Lately, regional policies and actions focused on *innovation and knowledge*, using the concept of high-tech geographic clusters considered as a determinant factor of divergence between regions. The theories based on innovation have as a central point an important mechanism by which companies develop and obtain key competences required for rapid increase

² Verdoon law – scientific assumption based on a direct observation of the behaviour built based on the Myrdal notion (circular and cumulative causality) that has the tendency to initiate growth advantages and of supporting them alone. This represents a reaction to labour productivity and to output growth.

and success (R. Lawson, 1999). Therefore, specialised labour force that distributes and combines knowledge in a complex system plays a leading role. The regions become “knowledge regions”, increasing their attractiveness and development level. Urban regions are an example as they are characterised by dynamic workers (*creative class*) and entrepreneurs contributing to regional growth.

From this viewpoint, regional disparities can be explained as well. Some theories consider the convergence of regional disparities, while others forecast increasing divergence at regional level. Many theories allow for the differentiation of incomes depending on the regional context.

In recent analyses regarding regional differences within the EU, some of the attributes that can be correlated positively with high economic performances were identified, as follows:

- the presence in the region of a group of medium-sized towns combined with other large ones;
- human resources with secondary or higher education, preferably with moderate wages;
- good accessibility and adequate and varied services (consultancy, finance, etc.);
- institutional infrastructure and support to local authorities development strategies and partnerships;
- image of the region, the existence of a positive social climate;
- presence of a mix of industries formed by small- or medium-sized companies that promote knowledge.

2.4 New trends in regional development

Currently, the specialised literature focused on the issue of regional economies identifies three large general trends:

1. unifying various theories of location and providing a single general theory;
2. regional convergence of theories regarding development and growth;
3. connecting regional development theories and models to current territorial development policies.

With respect to the first trend, it might be said that according to the neoclassical economics, the space was regarded as homogenous, the

conditions for action being uniform and equal. Also, the factors determining the location of economic activities were mostly of a quantitative nature, transportation costs and infrastructure being the main elements taken into account on developing regional theories and models.

The changes in the new regional economic approaches show that the formulation of a single general theory of location is pursued due to the following premises:

- the emergence of some influence factors of location that are very different from the ones present and analysed in previous theories;
- the increase in the influence of intangible factors (“regional atmosphere”, local synergy, factors corresponding to government, human capital and knowledge, etc.);
- the shift from a functional approach to a cognitive one.

The second trend results from the necessity of linking regional theories with policies of regional impact. The specific elements that support the convergence of theories regarding regional development are:

- the theories have a rational and decisional character under noticeable conditions of uncertainty;
- institutional approaches to regional theory that emphasize the importance of rules and behaviours and the fact that institutions conduct transactions within the most protective governmental structures, reducing conflicts and favouring mutual advantages obtained by exchanges;
- the cognitive approach to local/regional economies and to their synergy.

All elements presented above, to which also some traditional, material or functional factors can be added, were comprised in the new concept called “*territorial capital*”, which becomes thus the focal point of the new regional theoretical approaches, having the following characteristics: existence of natural resources, social capital, public or private goods, agglomerations and externalities, networks, fixed private capital and private services, human capital, entrepreneurship, creativity, cooperation, strategies, partnerships and governing structure.

Currently, there is a general opinion that regions must develop their own levers for competing on a global international market. Thus, development strategies must take into account the link between various endogenous development processes and adopt measures and actions for

supporting them. Also, regions must understand which are the factors rendering dynamic the current *economic era*.

In periods of global crisis or recession, theories must aim to understanding and explaining the factors leading to these changes for establishing the necessary conditions for rethinking a new regional philosophy in the new era of innovations within institutional arrangements, triggered by high political interventionism.

One should not ignore that in the literature regarding regional growth in the last years special attention is paid to knowledge and entrepreneurial innovation. Thus, “knowledge regions” and “innovative cities” proposed by James Simmie³ (1997) and developed by R. Capello and P. Nijkamp (2009) emphasise the importance of education, research, and technological development as they have a fundamental role in the spatial mobility of production factors and contribute to diminishing regional disparities on long term, due to equalising productivity in the territory.

A third trend is triggered by an older intention of theoreticians to achieve the unification of approaches regarding location. Introducing the space variable and taking into account the elements pertaining to location and its factors were not present in the early evolution stages of economic thought. It can be stated that they were ignored constantly even if evidence proved to be quite different.

At the beginning of the 20th century, the modernisation and development of regional economic thinking took place, first of all from the viewpoint of location. As both economic science and other disciplines (geography, sociology, etc.) claimed this approach there was a delay in acknowledging it within the general economic science.

The first references to the location theory were realised within neoclassical economics, this contributing to a large extent to developing an analysis and interpretation mechanism of space from an economic viewpoint. In a first stage of the evolution of the location theory, the hypotheses that were built starting from the presence of some natural resources in an area (inputs – raw materials and transportation costs) did not take into account the preferences of consumers. The first theories concluded that manufacturing companies were advantaged by the location in central areas while the residents with low incomes were favoured by location at the periphery.

³ Simmie, James (2004), *Innovative Cities*, ISBN 0-203-25991-2, Taylor-Francis e-Library.

Currently, many of the initial motivations of location (transportation costs, resources, distance, etc.) can no longer be found in reality. The new approaches have a distinct interdisciplinary character, which led to appropriation or emergence of new concepts and techniques, thus increasing the practical importance of the field. The criteria taken into account for the location decision have been adapted and changed and now the emphasis is laid on innovation, knowledge, advantages provided by local/central authorities, deregulations, etc. Also, the new theoretical approaches can be based on a series of advanced mathematical instruments, required for qualitative analyses of the behaviour of dynamic non-linear systems (the bifurcation theory, the catastrophe theory, chaos theory) besides other formalised models.

2.5 Conclusions

The theories regarding regional development intended - by simplifying the image or reality - to understand certain phenomena and further forecast them. Irrespective of the place where they were developed (micro-, mezzo- or macroeconomic) these theories presented an increased interest but also stirred some criticism and comments.

The acknowledgement of the practical importance of these theories came relatively late and took place within major trends of economic thinking. Now, regional theories are regarded with high interest owing to increased and more noticeable economic phenomena of global impact, felt in particular at local/regional level.

The core elements of the regional theories were represented by *location and growth/economic development*. The location decision of an economic activity and its effects in time were analysed and debated in almost all theories developed in the field (the theory of central places, the theory of growth poles, etc.).

The theories regarding regional development are based on elements of classical or neoclassical economic thinking, some of them reformulated, others adjusted or updated.

Currently, there is wide interest in regional theories that analyse and support the importance of institutions and various bodies in promoting territorial development. Besides institutions, an important role is played by regional policies that - by the established objectives and used instruments - might affect both location and regional development (Table 1).

Table 1

New trends and characteristics of regional theories

| Trends in regional theories | Theories of regional growth | Theories of regional development |
|---|--|--|
| Much more realistic approach to phenomena and processes at regional level | Determinants of endogenous growth. Increasing importance of processes and behaviours at regional level. The new models take into account market imperfections and increasing competitiveness on long term. Technological progress, knowledge and innovation are main factors of endogenous growth. | The basic hypotheses for the success of some regional clusters, local districts, etc. Main resources of regional competitiveness are now non-material resources. Increasing the active role of regions in attaining knowledge. |
| Approaching regional theories from a dynamic perspective. | Evolutionary trajectory of non-linear interdependency of complex systems. | Agglomeration economies, economic concentrations, scale economies. |

Source: Own processing.

In conclusion, significant changes at the global level influence the way we perceive and approach spatial aspects, determining experts to formulate regional theories and build models characterised by an increased realism compared to former approaches, presenting the dynamics of regional phenomena and processes and using on large scale models and formulas of mathematical nature meant to carry out policy actions with territorial impact.

3. Regional Convergence – Theories, techniques and analysis methods

As for economic approaches, the *convergence concept* has generated a boom of scientific studies elaborated at international⁴, national⁵, sub-national⁶, and urban⁷ level as result of its increased importance.

Other studies in economics⁸, geography⁹, history¹⁰, sociology¹¹, and political science¹² have attempted to provide answers to the emergence, persistence and more noticeable spatial imbalances in the field of incomes.

The issues regarding inequalities, convergence and dynamics of spatial distribution play an important role in the present economic literature, even though the approach to these topics remains still insufficiently explored. Thus, there can be identified three types of convergence specific to some application fields: real, nominal and institutional convergence. As for Romania, in the present context of integration, all three types of convergence are of special interest, considering the broad gap with other EU Member-States.

In this chapter we confine our approach to the field to two important aspects: *revealing regional economic disparities and identifying the main convergence trends in EU-27 and Romania.*

3.1. Disparities and space

In general, the concept of *disparity* (*discrepancy, inequality, imbalance, etc.*) is used both by analysts, theoreticians, and practitioners in order to express differences identified by of some adequate mathematical techniques by means of specific indicators or indices.

Related to a certain context, the concept presents more facets, being accompanied also by other elements supporting it: convergence, polarisation, agglomeration, concentration, dispersion, etc. As a rule, the evaluation manner of the level or degree of disparity is determined by:

⁴ L. Pritchett, 1997, A. de la Fuente, 1997, D. Quah, S. Durlauf, 1999, B. Fingleton, 2003, S. Magrini, 2004 etc.

⁵ R.J. Barro, X Sala-i-Martin, 1992, A. Iancu, 2005, 2008, 2009 etc.

⁶ D. Jula, 2007, D.L. Constantin, 2008, 2009, 2010 etc.

⁷ M. Drennan, J. Lobo, 1999 etc.

⁸ P. Krugman, 2008, P. Nijkamp, 2010 etc.

⁹ H.W. Armstrong, 1995, I. Ianoş, 2011 etc.

¹⁰ A. O'Connor, 2001 etc.

¹¹ S. Sassen, 1994, D. Sandu, 2010 etc.

¹² J. Gruber, S. Gaines, 2001 etc.

- the territorial dimension according to which the relation is established (regional, sub-regional, national, over-national, etc.);
- the period of the regional analysis.

While the theoretical approaches to regional disparities tend to focus on detailed analyses of the nature of income differences within a territory during a period of time, the literature regarding convergence envisages the catching-up with the rich countries.

The role of space (territory) was relatively recent acknowledged in the literature regarding regional convergence, while older approaches to territorial imbalances were characterised by a relative silence as regards the complications at the regional level.

The analysis of regional disparities turned indeed important especially in the last two decades, and this because visible preponderantly in the increased number of empirical studies of convergence (S. Rey, M. Janikas, 2005).

The empirical studies of convergence and economic growth can be divided into two large categories:

1. *Studies for substantiating some growth theories*, which lead to building econometric equations estimated on the basis of observing the economy at various levels, including the regional one.
2. *Exploratory studies that apply innovative techniques* for generating some hypotheses related to the dynamic of the economic system.

In the following we present synthetically the main theoretic approaches that had as a main objective the analysis of the dynamic of regional imbalances and convergence.

3.2. Theoretic approaches to regional convergence

In general, the notion of convergence is frequently used within comparative economic analyses regarding economic integration with the purpose of identifying the evolutions of some entities (national, sectoral, regional) against a milestone considered as the most performing one, or at a medium level.

The studies regarding convergence have in view the way in which factors involved in a certain process (integration, globalisation, etc.) act for diminishing disparities between the analysed entities. A diminution in disparities presupposes bringing closer the values of established

performance indicators and closing the gaps in the development level of those entities.

In specialised literature (A. Iancu, 2008, 2009), three types of convergence specific to some fields of application can be identified:

1. *Real convergence* for closing the gaps between countries or regions in the development level given by the income per capita and labour productivity.
2. *Nominal convergence* applied to monetary policy for obtaining economic stability and switching to the euro.
3. *Institutional convergence* presupposes rendering the institutions compatible from the viewpoint of structures and functioning.

For Romania, all three types of convergence presented above are of special interest, taking into account the wide gap with other EU Member States. In the present study, we limit the approach area to some essential aspects of real convergence at the level of development regions (statistical or planning ones).

In general, theoretical approaches to regional convergence have focused on catching-up: less developed regions make considerable efforts to catch up with rich regions.

The main trends in the current convergence process – *agglomeration and dispersion* – are analysed and interpreted in accordance with some recent approaches of regional theory:

1. *Theory of endogenous growth* (R. Lucas, P. Romer, P. Nijkamp);
2. *New economic geography* (P. Krugman);
3. *Institutional theory* (W.R. Scott, P. Dimaggio, W. Powell).

1. *The theory of endogenous growth* focuses on the concentration degree of some economic activities as a result of the growth effect of the scale profit from investments in human capital and research-development. According to the theory, the concentration of the mentioned factors in central areas and not in the peripheral ones is the outcome of economic integration. The proposed models, including those based on innovation (Schumpeter's growth theory) considered the efficient, adjustment changes and less adjustment of optimum allocations in certain locations, being focused on integration and trade. Economic growth at regional level is based on amplifying the innovation-learning-knowledge-assimilation process corresponding to labour force. This process presents significant spatial implications up to the moment when transaction costs corresponding to

transferring knowledge elements remain very high (P. Romer, 1986; R. Lucas, 1988; L. Fontagne, M. Freudenberg, D. Ünal-Kesenci, 1999; G.M. Grossman, E. Helpman, 1991; P. Aghion, P. Howitt, 2005).

2. *The theory of the new economic geography* considers the following hypothesis: regional clusters represent the effect of agglomeration of some forces on certain fields between which important relations are established. In agreement with this theory, high transport costs protect companies on small markets. Once transportation costs decrease, an increase of competition between companies takes place and, finally, a decrease in forces dispersion. The theory emphasises in particular market integration, economies of scale, transportation costs, and local markets, promoting combined effects of economic concentration in the centre of the region with the advantages obtained on labour force market and from advanced technologies location (P. Krugman, 1991; M. Fujita, A. Venables, 1999).

3. As regards *institutional theory*, the key element of one region's development is represented by institutions that establish the technological barriers in the hierarchy of economic functions. The reason is that these institutions can control the ability of the economy to use and develop its own resources in a particular manner. Whenever the institutional capacity is unequally distributed in space, the institutional factor contributes to agglomeration of economic activities, strengthening concentration of more advanced activities in most developed areas. An important feature of these institutions is that they facilitate innovation, research-development, business support, and all these are known as "*innovative systems*" (B. Lundvall, 1992; R. Nelson, 1993).

According to the above-mentioned theoretical approaches, polarisation of economic activities represents a slow, inevitable and convergent process in terms of GDP per capita. At regional level the importance of the measures and political actions required to ensure balance between agglomeration forces and tendencies (concentration) is acknowledged.

G. Myrdal (1957) is the first to propose and promote in the regional theory the concept of circular and cumulative cause of economic processes, which explains the increase in international differences between the development level and the initial similar conditions. Capital movements, migration and commercial exchanges of goods and services perpetuate and even increase international and regional inequalities. By trade liberalisation,

less developed regions, lacking human capital and innovative technologies, are obliged to specialise in goods manufacturing, especially primary goods with inelastic demand (low elasticity) in relation to price and income. Developed regions turn into attraction poles and absorb increasingly larger quantities of capital and labour force from less developed regions.

Neoclassical theories, even if they anticipated unconditioned convergence on long term (convergence club), did not succeed in clarifying the basic conditions that might influence the diminution in regional disparities (including those in periods of crisis, recession, etc.). Despite all efforts made in the direction of reforms proposed within the integration process, still a natural, universally valid trend is found in the polarisation of processes which leads, finally, to deepening regional divergences.

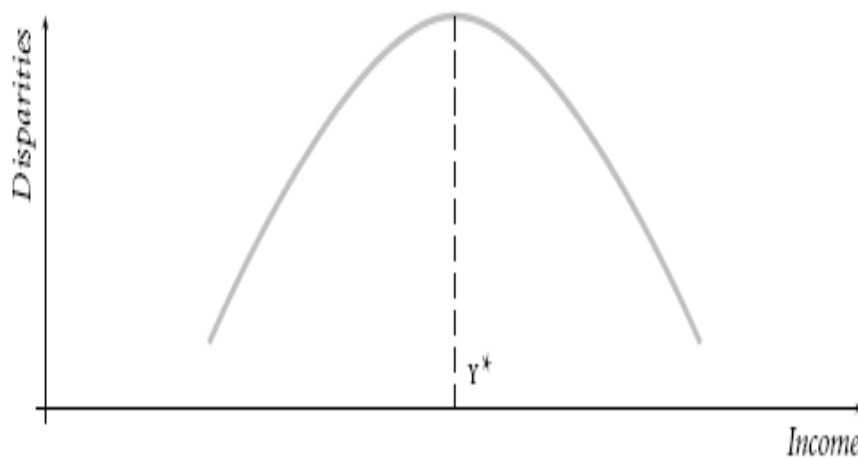
Already in 1956, J. Williamson considered that in the convergence process inter-regional relations, mobility factors and public policies interact in favour of the main agglomerations. Thus, a faster increase of growth poles (for instance, region capitals) determines a growth in the level of disparities at regional level. In a more advanced stage of development, regional disparities can be reduced at a higher aggregate level as compared to incomes. The distribution effect consists in the emergence of agglomeration diseconomies (the high cost of labour force or the congestion effect) and may continue with the growth poles. Hence, regions lagging behind in some countries can benefit from technology diffusion¹³. There are several economists who consider that New Member States can be included in the process entitled “catching-up”.

The relationships between the growth of national economies and regional imbalances can be graphically represented by a reversed U-shaped curve (Williamson’s curve)¹⁴. The New Member States of the European Union find their place on the ascending side of the curve, while old Member States are placed on the flattened side¹⁵. On the curve traced by Williamson, this category of countries show increases in regional disparities, which makes them to be represented on the left side of income Y in Figure 1.

¹³ Lackenbauer, J. (2004), *Catching-up, Regional Disparities, and EU Cohesion Policy: The Case of Hungary*, p. 5.

¹⁴ Williamson, J. (1965), “Regional inequality and the process of national development: A description of the patterns”, *Economic Development and Cultural Change*, vol. 13.

¹⁵ Prof. Dipl. Eng. František Turnovec CSc, *Regional Disparities in the EU*, www.ies.fsv.cuni.cz.



Source: Williamson, J. (1965), "Regional inequality and the process of national development: A description of the patterns", *Economic Development and Cultural Change*, vol. 13.

Figure 1. Williamson Curve

In conclusion, the new approaches to convergence at regional level focus on the following aspects:

- *Increasing importance of intangible factors* (including economic policies) as more marked regional disparities occur; also, investment associated with innovation, research, and development of human capital capacities and abilities are causes of increasing disparities between regions.
- The new approaches complete and update old methods proposed by the neoclassical theory, by *extending the area of research, of the used methods and techniques* and, in particular, by modern methods of computing and processing by means of computer science and programming.
- Also, *a more reality-anchored interpretation of regional economies* is noticed; these economies are included in the convergence process (both from the viewpoint of speed, and also from the perspective of growth rates).

In summary, it is found that from the viewpoint of theoretical approaches, regional convergence received comments and criticism alike, which contributed to the development of this field of great interest. Still, despite developments, we cannot talk yet about a magic formula to find

exactly the solution or solutions, by which convergence of some regional structures is ensured, for regions that are characterised by a high diversity both from the viewpoint of development conditions (natural, human, infrastructure, innovative structures, etc.), traditions, mentalities, and from the view point of the rates of economic growth.

3.3. Influence factors

In the last decades, and in particular after the emergence of some large areas of political and economic power, disparities and regional convergence are two concepts capturing the attention of all those interested in the process due to the following considerations:

- *From an academic perspective* – the studies regarding regional disparities and, in particular, the ones regarding convergence represent indirect methods of testing the validity of various theories and approaches to economic growth and international trade;
- *From the practical viewpoint* – knowledge about regional disparities represents a political priority in the majority of the over-national integration schemes, the more so as their persistence is considered as a negative impact factor on the integration process itself.

Regional approaches were focused preponderantly on existing disparities at the level of incomes (total and per capita GDP) attempting to provide viable answers related to the process and trends of economic growth at spatial level. From this perspective, very important is the way the territorial (series) variables and the spatial level to which reference is done are selected and processed.

The purpose of theoretic approaches is to provide answers and optimum solutions to the identified issues, irrespective of the instrument suggested and the technique used. The interest in such researches started to gain visibility after the '80s, their practical importance being correlated with the necessity of ensuring balanced development at territorial level and attaining regional convergence.

The period of time covered by the analysis of disparities is very important as territorial development differs on short term (during a cycle or as answer to a series of unexpected events) from the one on long term which is influenced by phenomena that can affect the entire capacity of regional development.

Economic development, in general, is a complex process, with different implications for one sector or other, or for one region or other, being influenced by factors of higher or lower impact. Regional development can be affected by a series of factors that we present synthetically below.

An important factor that can influence the development level of a region is the *regional specialisation degree*. Thus, it was found that by competitive advantages specialisation are obtained which in their turn determine positively the development of certain areas. Still, there are opinions according to which regional specialisation contributes to a lesser extent to the emergence of increasingly noticeable economic disparities, in particular of those in the income per capita, caused by the differences in productivity, and not necessarily in specialisation.

Another influence factor of one region's development is represented by its production *structure* (economic profile). The differences in the output structure lead to different answers and reactions both from one area to another, and even from one sector to another. For instance, if a region has a marked agricultural character, it is very probable that its development shall be affected by unexpected events (in particular natural ones), being less sensitive to cyclical changes of demand. The predominance of one or other sector can be the reason for fluctuations at macroeconomic level or at the level of other regions with dissimilar specialisations. The variations in the formation of agricultural incomes trigger changes in the demand or the consumption of other industrial activities, or in the tertiary sector.

Also, *the nature or the type of the analysed region* is a factor that contributes to regional development or to the emergence of some economic disparities. In areas which are predominant consumer industries a decline in the income level is noticed along with that in employment as an effect of the national policy objectives. On the other hand, regions specialised in the production of capital goods are more vulnerable in long periods of recession, which diminishes expectations and investment intentions.

The export is regarded as an important factor causing regional disparities, irrespective of the market which is considered (external or international). Thus, regions oriented towards export (by tradition, size or organisation form) are more vulnerable to fluctuations of demand on world market, or to international competition as compared with those oriented towards the internal market.

A source of increasingly marked territorial discrepancies is also the presence of *costs required to obtain regional output, as well as the level of*

economic efficiency. If demand decreases, the regions in which companies register low efficiency of output are faced with a series of negative phenomena, resulting from the sub-marginal position of the companies. The companies that make intensive use of the labour force tend to adapt much faster their supply to market fluctuations. Characterised by higher competitiveness, these companies can maintain or increase their market share for a longer period of time. On the other hand, over-capitalised companies shall increase competitiveness as an effect of cost pressure, being less capable to swiftly adjust to fluctuations of demand on the market.

“*The age*” or obsolescence of the industrialisation process represents, as well, an important factor leading to certain categories of more marked regional disparities. It is known that economic activities are localised in sectors favourable to free enterprise, in regions that are gradually industrialised or have a diversified structure of industry. Such regions are less affected by international factors, in particular due to the lower market share held by the respective industrial sector, but can be influenced by other industrial sectors with problems.

In the last period, a clear factor that causes regional disparities is the *innovative potential of the respective region*, by its capacity to create value added especially based on activities of research-development-innovation. This fact presupposes the existence of a local tradition linked to the innovative process or some important financial resources to support the innovative activity.

As a conclusion, the following general influence factors of a more marked development can be identified for some regions as compared to others:

- *Physical factors* – this category includes infrastructure elements that provide for accessibility to the region. A low potential of the physical factors confines the region to the “structurally disadvantaged” group; examples of this kind of regions are: mountains, insular and coastal areas, etc. Transportation networks favour, in their turn, the emergence and development of economic factors. These factors can explain the large differences between the development of Western areas and that of Eastern Europe;
- *Economic factors* – these factors are analysed and evaluated through the regional GDP indicator or of the regional GDP per capita, the unequal distribution determining the structural earmarks at regional level. The transition of the New Member States from planned economies to market economies concomitantly with the integration into the EU structures led to the creation of a new spatial

model of economic disparities in these countries. Within the socialist system, rapid industrialisation was associated with urbanisation of less developed regions and with the “dispersion” effect of growth between urban and rural areas. Moreover, the high share of employed labour force in agriculture and industry decreased dramatically, which triggered unemployment increase, migration, etc.

- *Social factors* – among these factors we can mention: quantity and quality of labour force, entrepreneurship, RDI, politically unstable environment, skilled labour force migration from less developed regions to the developed ones. The analysis of disparities for this group of factors is relatively difficult.

Identifying the factors having influence on the regional development and on diminishing economic discrepancies contributes decisively to establishing optimum measures for regional policy, and finding efficient action levers.

3.4. Indicators and analysis methods

The regional disparity analysis is based on methods and indicators that substantiate in a scientific manner the hypotheses and conclusions in spatial research. These spatial analysis methods are focused on *territorial series that are shaped from the row of values of one characteristic ordered in relation to the administrative-territorial units (ATU) to which they belong*¹⁶. The territorial series operate with complex units such as localities, towns, municipalities, counties, regions, and countries, etc.

The characteristics of the territorial series are the following:

- *Independence of terms* – the specific levels of various ATUs are not mutually conditioned; this feature allows for separate characterisation of each unit by comparing it with another unit or by including it in the total level of the series;
- *Homogeneity of the series* – all terms must have the same economic and social content, the same statistical definition of the sphere of inclusion;
- *Similitude of terms* – the existence of an identical moment of observation or registration period;

¹⁶ Novak, A. (2001), *Statistica*, ISBN 973-8258-50-2, Editura Sylvi.

- *Variability of terms* – the combination of essential factors is determined by the specific features of the entire territorial series, with the multitude of random factors that generate the differentiation from one unit to another;
- *Graphic representation* – this is made by means of cartography or a cartho-diagram on the basis of ATU maps. Each unit is represented distinctly, in accordance with the qualitative types.

Currently, the comparative analyses at territorial level and of some ATU classifications has a particular importance at the national, community and international levels from the perspective of measuring development differences between regions and formulating adequate strategies.

3.4.1. Indicators

The analysis of regional disparities by using statistical territorial analysis methods is based on a system of specific indicators¹⁷, corresponding to the nature of terms and pursued purpose.

Within the the 27 Member States the aspects of convergence led to the establishment of a set of common indicators and criteria that can contributed to a unitary vision on evaluating the impact of certain community interventions. The selected indicators for evaluating the cohesion and regional development policy are the following: GDP per capita, unemployment rate, life expectancy at birth and educational level. Their use is affected by the availability of data at sub-national (regional) level in the EU.

For obtaining a clear picture of regional performances, the use of some methods requires combining structural indicators: 1. *Indicators of physical disparities* (climate, distance from centre to periphery, accessibility and population density); 2. *indicators regarding economic disparities* (incomes, industrial activity structure, and economic perspectives, etc.); and 3. *indicators regarding social disparities* (unemployment, labour force structure, active population, qualification and living standard).

The analysis and interpretation of the above-mentioned groups of indicators provide a global picture of the existing situation at territorial level and, by comparison, a highlighting of some regional disparities.

¹⁷ In regional analyses the following groups of indicators can be encountered:

- A. absolute indicators;
- B. indices (ex.: territorial indices, relative gap, territorial concentration coefficient (Gini coefficient, Struck coefficient) and relative structure sizes;
- C. medium indicators: the medium level is represented by the arithmetic or geometric averages, the median, the module.

3.4.2. Analysis methods

In general, it can be said that regional science “borrowed” from statistics those methods that can contribute to scientific substantiation of some results. Within regional studies, the dispersion parameters (variance) are the *most used because they can synthesise in a scalable manner the information about inequalities in distribution*. This fact presupposes that each evaluation of aggregated inequalities contains information about distribution, which sometimes produces different outcomes (therefore, it is important for empirical analyses to verify the robustness of conclusions).

With respect to the analysis of regional convergence, there are several restrictions on the use of statistical techniques which are determined by the use of some non-homogenous calculation series and which can lead to unrealistic outcomes affecting the perception about the convergence trend (G. Petrakos, 2005). The alternative is to attach different values to each observation, which would reflect their relative contribution. For instance, in the case when we have as a variable the regional income (GDP), the indicator can be weighted by the population number from the respective territory. In some situations, statistical data and information can be asymmetric, which causes difficulties in computing the respective indices.

The trends presented within regional analyses are based on estimation techniques of non-parameter averages which allow for presenting some functional particularities. In this case, there is a series of advantages determined by the generalities or flexibility associated to the approached parameters.

The evaluation of regional imbalances is made by defining the statistical values corresponding to the computation formulas. From this point of view, taking into account some size differences between the territorial levels can lead to a series of conclusions regarding existing trends.

In conclusion, it can be said that there is permanent concern of the economic science for estimating and evaluating the dynamics of territorial entities, considering the existing conditions and the reported periods of time. The regional analysis models pursue in particular to explain the reasons leading to the emergence of economic and social disparities between regions and within the same region by identifying best actions for counteracting the effects of their emergence and prominence.

3.5. Conclusions

Used both by analysts, theoreticians and practitioners, the concept of disparity expresses the differences identified by means of adequate mathematical techniques using specific indicators or indices. This concept presents several facets being accompanied by other elements that support it: convergence, polarisation, agglomeration, concentration, dispersion, etc.

In general, the theoretic approaches to regional convergence have focused on the *catch-up process: less developed regions make significant efforts to catch up with rich regions*. The main identified trends within this process – agglomeration and dispersion – are analysed and interpreted within some recent regional approaches: *the theory of endogenous growth, the new economic geography and the institutional theory* (W.R. Scott, P. Dimaggio, W. Powell).

The theories regarding regional disparities and convergence indicate a relative variety of techniques and analyses that can reflect this fact. The integration of economic methods in spatial analyses highlights the effects of spatial dependence and heterogeneity on convergence. It can be stated that regional science “borrowed” from statistics techniques that can contribute to scientific substantiation of some outcomes and, in particular, to identifying the trends in the convergence process within a community of states.

4. Evaluation of public interventions at regional level. Relevant practices in some Member-States of the European Union

Within the European Union, the impact of structural funds is evaluated periodically to identify the attainment degree of the convergence objectives and the efficiency in implementing the cohesion and regional development policy.

The regional policy, assimilated in general to a public intervention at territorial level is evaluated in certain stages of implementation for learning about the whole change obtained as result of the actions and measures for attaining the established objectives (for instance, diminishing inter- and intraregional disparities, balanced economic and social development, employment, output and consumption growth, improving social, transport, environmental, tourism and education infrastructure, etc.). Irrespective of the stage to which it refers, evaluation is based on the spatial analysis techniques and methods presented in the previous chapter, its outcome being useful for improving the decisional process.

4.1 Evaluation – Typology, logical framework and indicators

Evaluation is defined by the European Union as a process of “*judging the value of a public intervention based on some explicit criteria and standards* (e.g., relevance, efficiency, sustainability, equity, etc.)”¹⁸, which contributes to achieving responsible governance by provided feedback on efficiency, efficacy and performance of public policies, organisations or programmes¹⁹. As of 1996, *evaluation at EU level becomes obligatory for all programmes financed by structural and cohesion funds*, irrespective of the reference field (regional, environment, transport, etc.) and of the moment of their implementation (ex ante, interim and ex post).

Evaluation is aimed to improve quality, effectiveness and coherence of policies financed from public funds (structural and cohesion funds), as well as of the strategy for implementing operational programmes against the objective regarding sustainable development and community directives in

¹⁸ European Commission, http://ec.europa.eu/regional_policy/sources/docgener/evaluation/evalsed/index_en.htm.

¹⁹ Public Management Service (PUMA) of OECD, *PUMA Policy Brief No. 5 – Best Practice Guidelines for Evaluation* <http://www.oecd.org/dataoecd/11/56/1902965.pdf>.

matter of environmental impact and strategic environmental assessment²⁰. In fact, the evaluation identifies the specific contribution of public policies pursuing the efficiency of limited resource allocation, establishing and reaching some clearly formulated objectives, the impact analysis, improving performances and effectiveness, and developing stakeholders' capacity in developing and implementing programmes and projects.

In general, the evaluation typology is based on several functional criteria to facilitate the selection of one form or other depending on the objectives:

- *Strategic evaluation* is used when an analysis is intended with regard to the evolution of the public policy as compared to national and community objectives.
- *Ongoing evaluation* – when monitoring is pursued during the implementation of the public policy.
- *Ex ante evaluation* – for optimising allocated resources through intervention (programme, or project) and improving the quality of the programming process as a whole, already at the beginning of the implementation. This evaluation is meant to identify disparities, development problems and potential, objectives, outcomes, quantified objectives, coherence of regional strategy, community value added, the degree of integration of priorities, conclusions of the previous programmes and the quality of implementation, monitoring, evaluation and financial management procedures.
- *Ex post evaluation* – for examining the degree of utilisation of resources, of efficacy, and efficiency of structural funds programming and the socio-economic impact by the end of the implementation period. In this stage, the factors contributing to success or failure of the public intervention are reviewed and good practice examples are identified.

Public policies financed by structural funds have a complex character, both at the sectoral and the territorial level, because they are co-financed in some cases also from national funds or private ones. In these circumstances, evaluation is a real challenge because not only the contribution of each element is analysed but also the synergy between these elements or the

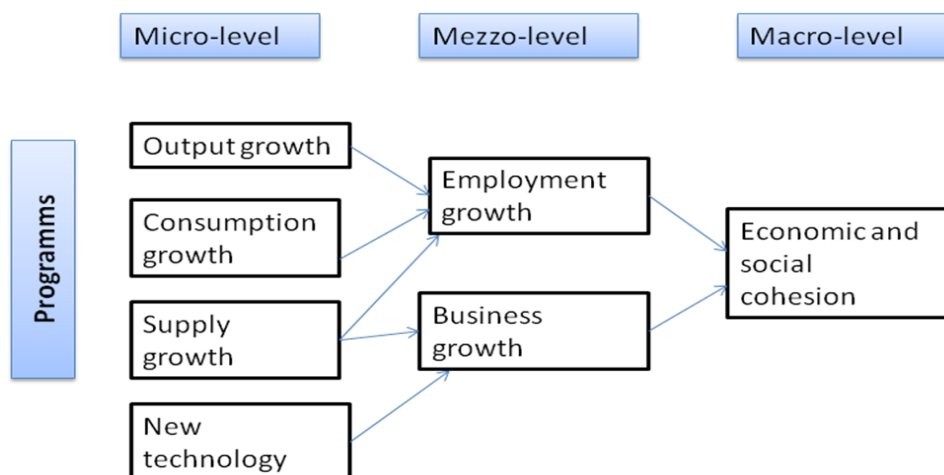
²⁰ Council Regulation (EC) no. 1083/2006 of 11 July 2006, laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) no. 1260/1999.

matrix of the cross-sectional impact. Each intervention has a certain particularity with respect to the traditional evaluation and very often a problem in combining it with other categories of intervention.

The evaluation of the public policy is affected by several factors that have an important impact on the quality of the process as a whole; the most important ones are:

1. *Decentralised management* - some public interventions promoted by regional or local agencies lead to different information to be used in evaluation;
2. *quality of evaluators* involved in the process and their independence, objectiveness, professional training level, and experience;
3. *readiness of management authorities* and of other institutional categories involved in the implementation process of public interventions based on recommendations proposed as outcome of the evaluation;
4. *financial resources involved in evaluation*.

The impact of an intervention at regional level can be found both at microeconomic level (increased production, innovativeness, etc.) and at macroeconomic level (contributions to attaining economic cohesion, etc.), as the evaluation aims to identify and quantify it (Figure 2).



Source: Kocziszky, G. (2009), *Methodology of regional development*, University of Miskolc, Faculty of Economy.

Figure 2: Estimated effects of implementing a regional development programme

Each evaluation activity implies a cognitive process (logical framework) for defining the main elements of a project and the relations between considered inputs, planned activities and expected outcomes. The logical framework can be used both during initial planning of the public intervention and in the implementation period, providing a global image of the way in which certain objectives can be reached.

In any logical framework, public interventions (or development projects) are regarded as causality links between events at various levels (inputs, activities, outputs, objectives). The relationships and the causality links at the basis of each evaluation process can be reproduced by means of the logical framework and its basic elements²¹:

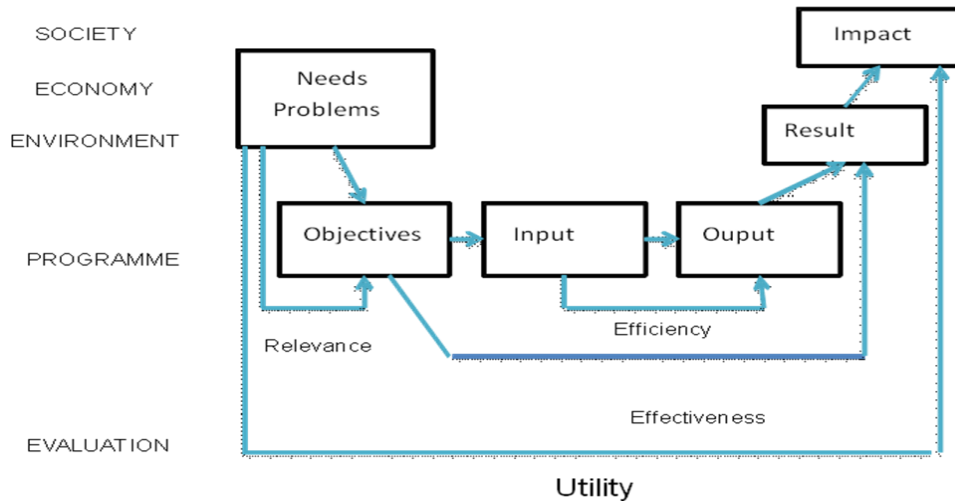
Needs → [Objectives → Inputs → Activities → Outputs →] Outcomes → Effects

The relational system between needs, objectives, inputs/outputs, outcomes and effects substantiates the evaluation of the programme impact, the notified differences being sensibly affected by the specific features of the observed field and of the corresponding economic and social issues. When the objectives set up by the programme are expressed in terms of outcomes, the efficiency can be measured as a relationship between outputs and inputs, costs and benefits, etc

Evaluation contributes to improving efficiency and effectiveness of intervention by diminishing the initial asymmetry of existing information at the level of the financer and at the level of the beneficiary from the funds or realizing the implementation.

The most important element of evaluation – the impact – can be regarded in terms of *results* (outputs – physical results) and *effects* (outcome, effects on long term on the beneficiaries) In the evaluation practice of public interventions financed from structural funds, the initial impact is known as output of implementing the programme, whereas the long-term impact is regarded as sustainable outcome in time and space. Also, the usefulness of the programme is evaluated, the way in which the outcomes meet economic and social needs, the long-term effects, etc. Depending on the impact categories considered, the objectives of the programme regarded as operational (*outputs*), specific (*results*) or general (*outcomes*) can be established (Figure 3).

²¹ Nagarajan, N.; Vanheukelen, M. (1997), *Evaluating EU Expenditure Programmes: A Guide. Ex-Post and Intermediate Evaluation*, Commission of the European Communities, Brussels, p. 25.



Source: MEANS, 1999, p. 32.

Figure 3: Logical framework of public intervention (development programme)

The indicators used in public evaluations must be consistent with several quality criteria: (1) they should overlap the needs identified by means of the programme; (2) to be simple and easy understandable (number of jobs, number of kilometres of modernised public roads, number of hospitals, etc.); (3) to show a certain balance between the indicators; (4) to present significant implications of the decisional process; and (5) to be found in national or regional statistics.

The system of indicators represents the most important instrument of evaluation, while the categories of indicators can be grouped as follows²²: *specific, generic and key indicators, context and programme indicators, resource indicators, immediate output indicators, outcome indicators, impact, relevance, efficiency, effectiveness and performance indicators*. In evaluating public policies, preponderantly resource indicators (inputs) are considered, along with output/exit indicators, and the outcome and impact ones.

For evaluating the impact and progresses registered in implementing various public policies within EU Member-States a number of key

²² European Commission (1995), *Common Guidelines for Monitoring and Evaluation*, Luxembourg, OPOCE.

indicators was established (Regulation no. 1083/2005 – Art. 37) that must meet the imposed quality criteria: Specificity, Measurability, Availability, Relevance And Timeliness (SMART). The quality of evaluations is directly influenced by the quality of existing and analysed data and information, but also by the expertise and independence of the evaluators.

4.2 Evaluation of public interventions within the European Union – Tradition and experience

This chapter includes a synthetic presentation of relevant practices in evaluating the impact of public interventions financed by European Union structural funds. Thus, experience and traditions related to evaluating public interventions are directly influenced by the volume of allocations from structural and cohesion funds.

Nowadays, evaluation of public interventions is compulsory for all Member-States because it is regarded as a correction means of possible failures identified during the implementation of local, regional and national programmes and projects.

4.2.1 Various perspectives regarding evaluation

With respect to the practice of evaluation at community level, major approach divergence is found between the Member-States as countries with an important tradition can be identified, but also States less familiar with evaluation (especially countries from South-Eastern Europe). For the countries with tradition, evaluation is regarded as an important component of public policy, and as an interactive process.

Evaluation of the impact of public interventions financed from structural funds turned obligatory during the 1989-2003 programming, period being gradually introduced in all EU Member States. Initial difficulties were caused by lack of data, indicators, and target-objectives, and system coherence monitoring, in particular at regional level.

Subsequently, many of the above-mentioned deficiencies were covered up by means of the suggestions and conclusions of the MEANS²³ programme aimed to promote a “European evaluation culture” for raising awareness about the importance of this process. The outcomes of this programme were visible as of the programming period 1994-2000, as the

²³ European Commission, *Evaluation Methods for Actions of a Structural Nature*, 1995.

Member States adopted their own regulations concerning the requirements imposed at Community level. One of these rules regards the obligation of the Member States to evaluate strategies, programmes and projects financed by structural funds in various stages of implementation, this turning into the common item of all sectoral or regional policies.

After implementing the mandatory evaluation, Member States may choose one or other evaluation type, or combine several methods, the evaluation being integrated into the entire structure of the cohesion policy (Table 2).

Table 2

Methods of evaluation of the regional policy in the European Union

| | |
|--|---|
| <p>Evaluation of contrary impacts How does a certain programme work?</p> <ul style="list-style-type: none"> • Randomised control test • Difference within the difference • Discontinuous model • Correlation methods • Essential variables | <p>Theoretic evaluation Why does a certain programme work?</p> <ul style="list-style-type: none"> • Surveys among the beneficiaries • Case studies, interviews • Realistic evaluation • Participative evaluation |
| <p>Modelling</p> <ul style="list-style-type: none"> • Macroeconomic models (HERMIN, QUEST) • Sectoral models (TRANSTOOLS) • Input and output analyses • Social accounting matrix | <p>Evaluation of alternatives</p> <ul style="list-style-type: none"> • Cost and benefit analysis • Cost effectiveness analysis • Multiple criteria analysis • Contingent evaluation |

Source: http://ec.europa.eu/regional_policy/sources/docgener/panorama/pdf/mag33/mag33_ro.pdf.

In the 2007-2013 period, the decision factors at central and regional level have more freedom in deciding what shall be evaluated and when. The important condition of this freedom is that evaluations are conceived according to their requirements, and outcomes should contribute to improving their implementation.

Experiences regarding the implementation of public interventions are influenced decisively by the quality of the evaluation process. Thus, there is clear evidence of changes in the evaluation from a static and itemised one to a more active but also compulsory one both in terms of benefits, and with respect to the answer of involved beneficiaries.

In some European Union countries there was an own perspective and way of approaching differently the evaluation of public interventions at regional level. For some Member States, there was right from the beginning an important culture of evaluating spent public funds, while for others evaluation was less important. Still, it can be noticed that where evaluation was not part of the public

policy, ad-hoc studies and analysis were made, either politically imposed or as a requirement of economic policy. In most cases, evaluation was regarded as a critical instrument for measuring the performance of the regional policy (formulation, implementation and outcomes).

Form the perspective on the evaluation process, we can identify the following groups of Member States:

- states regarding evaluation as an institutionalised part of the implementation of a policy;
- states considering evaluation as an occasional exercise;
- states regarding evaluation as a limited and irrelevant practical exercise of implementing a regional policy.

In the newly integrated EU countries, the evaluation of the programmes financed by structural funds is in an early stage, its importance being found in the resource spending efficiency.

The findings show that, in general, a positive attitude towards evaluation is shared by countries from the north-western part of the European Union. For instance, in Germany, the Netherlands, Sweden and the United Kingdom, evaluation is regarded as part of the political culture and not just as any simple department of regional policy. A similar attitude can be found also in countries like Austria and Ireland. In all these countries there is a systematic process of evaluation, as it is part of the decisional process within the regional policy (Table 3).

Table 3

Evaluation in some Member States after the EU enlargement

| ITALY | |
|--|--|
| <p>There are 15 administrative regions and five autonomous regions.</p> <p>The regional policy is implemented by:</p> <ul style="list-style-type: none"> • five ROP related to the Convergence objective • 16 Regional Operational Programmes the Regional Competitiveness and Employment objective • seven Transborder OP related to the Territorial Cooperation objective <p>The Regional Programmes are implemented under the responsibility of the regions. The Regional Government is the Management Authority. The Regions provide part of the co-financing (approx. 25%)</p> | <p style="text-align: center;"><i>Key aspects, strengths, weaknesses</i></p> <ul style="list-style-type: none"> • National authorities tend to coordinate the performance of regional governments • Specific regional interests are predominant • Project implementation is difficult when involving several regions simultaneously (for instance, for a highway or railway crossing three regions). • Their decentralized system allows for creating a small number of management units and control units that are more efficient and closer to the territory. <p style="text-align: center;"><i>Evaluation and approval of projects only at regional level</i></p> |

| SPAIN | |
|---|---|
| <p>17 autonomous communities and 19 Operational Programmes financed by ERDF both for the Convergence and for the Regional Competitiveness and Employment objective.</p> <p>Also, there are four multi-regional programmes and three CBC operational programmes.</p> <p>The Ministry of Economy and Finance through the State Sub-unit for ERDF Management is the Management Authority (MA). This Ministry is responsible for managing all programmes co-financed by the European Regional Development Fund. This MA takes into account the management and control of funds.</p> <p>In a region three authorities are involved in evaluation. The Management Authority, the Certification Authority and the Audit Authority.</p> | <p><i>Key aspects, strengths, weaknesses</i></p> <p>There are significant regional disparities. The monitoring system is still ineffective and incapable of delivering relevant information regarding results.</p> <p><i>Evaluation of regional policies</i></p> <p>The evaluation culture needs to be strengthened both within national authorities and regional authorities.</p> <p>Still there is no complete system of monitoring the indicators.</p> <p>Evaluation capacity needs to be developed.</p> |
| CZECH REPUBLIC | |
| <p>The territorial organization is formed of 14 large autonomous units, of which 13 are regions, and one is the city of Prague.</p> <p>For accessing European funds eight cohesion regions were made up of one or two autonomous regions. The institutional framework ROP ensures MA-ROP – Regional Council, the Payments and Certification Authority – Ministry of Finance, and the Audit Authority – Ministry of Finances.</p> <p>The Ministry of Regional Development is the National Coordination Authority, besides the Budget Department (decides on financing).</p> | <p><i>Key aspects, strengths, weaknesses</i></p> <p>Regional development in the Czech R. has a trans-sectoral character and a multi-sectoral nature, in this process being involved almost all ministries managing activities with territorial impact which might contribute to diminishing disparities between regions.</p> <p>Evaluation is realized by the Ministry of Regional Development in cooperation the other ministries (Ministry of Agriculture, Ministry of Industry and Trade, etc.).</p> |
| POLAND | |
| <p>From the viewpoint of administrative-territorial organization, Poland consists of 16 regions. The regional development is supported by a multi-regional programme managed at national level (integrated regional programme) by 16 Regional Operational Programmes and seven European Territorial Cooperation Programmes, and additionally a Technical Assistance Programme.</p> <p>The programmes implemented at regional level absorbed 24.6% (16 bill. Euro) of the total allocation of funds for the period 2007-2013.</p> <p>The regions are involved in implementing sectoral programmes.</p> <p>ROP, are managed by the regional authorities (25% of the funds).</p> | <p><i>Key aspects, strengths, weaknesses</i></p> <p>Structural Funds are managed by Regional Authorities in partnership with the central ones.</p> <p>The government is not involved in managing Regional Operational Programmes, only imposes the guidelines.</p> <p>The problem is the existence of low financial resources of the regional authorities.</p> <p>In the period 2007-2013 there was a new approach regarding the performance of regional programmes, that is setting up management by objectives, also by determining the minimum annual amounts certified by the EU.</p> |

Source: Evaluation of the administrative capacity of the regions in the field of regional development, Project co-financed by ERDF by ROP 2007-2013, Contract No. 61/25.02.2011, Evaluation Report (Summary December 2011).

The experiences of Member States shows that the evaluation of public interventions underwent, in time, adjustment and changing in particular as outcome of the requirements imposed by the regulations regarding the community funds. Thus, the co-financing granted by the European Union and the complexity of the evaluation have determined the Member States to expand their capacities of evaluation also to other public interventions, not only to those financed by structural funds.

As a general trend, Member States present a large variety of political approaches to evaluation, but during the last programming period a phenomenon of improving this process takes place, even if a harmonisation of evaluation cannot be discussed yet, from the organisational and methodological viewpoint.

4.2.2 Obligation of evaluating public programmes and policies

The evaluation of public interventions, in general, and of those financed by structural funds, in particular, became compulsory within the European Union as of the programming period 1998 – 2004. Thus, up to the reform of structural funds (1989), the evaluation of public interventions financed at the level of the Member States was considered as an attribute of central and regional governments, the involvement of the Commission being minimal. This fact triggered frequent controversies regarding the spending of Community public funds and its impact.

The process of building up the institutional structures required for evaluating public interventions was a relatively slow one, the highest difficulties being identified in obtaining data and information for quantifying the proposed indicators (targets), but also as result of major variations between regional statistical systems.

4.3 Conclusions

Implementing the obligation of evaluating public interventions financed by structural funds changed significantly the attitude of Member States about this process and, in particular, of the countries which did not have a minimum culture of evaluation (for instance, France, Italy, Spain, Portugal, Greece, etc.), contributing to the co-financing of the evaluation of structural funds, the Commission determines Member States to review their attitude in relation to the process.

The obligation of evaluation was regulated by various directives of the Council (EC) and working papers of the Commission²⁴, and it was established that for public interventions financed from structural and cohesion funds evaluations for different time intervals (before implementation, during, and after implementation) are required in order to that would highlight the impact and results obtained.

As a rule, evaluations of some major public interventions (for instance, certain policies or territorial or sectoral programmes) are very costly and, therefore, besides compulsory standard evaluations (ex-ante, intermediary, ex-post) one should consider in point (ad-hoc) evaluations or the financing of some institutional arrangements that would meet simultaneously the following conditions:

- to comprise departments/agencies involved in the economic development at all levels (national, regional and local);
- to be able to combine resources for evaluation with those for monitoring, but also with financing of existing expertise;
- to contribute to understanding efficiency and effectiveness of interventions of a regional (territorial) nature.

²⁴ Regulation no. 1083/2006 which substantiated the Governmental Resolution no. 457/2008 regarding the institutional framework of coordinating and managing structural instruments. Based on this GR the role and responsibilities in the field of evaluation; *Working Paper no. 1*: Indicative guidelines regarding the methods of evaluation; ex-ante evaluation are established; *Working Paper no. 2*: Indicative guidelines regarding the methods of evaluation: monitoring and evaluation indicators; *Working Paper no.3*: Methodological Paper of the Commission which provides for the guidelines regarding the calculation of public expenditures or structural expenditures for the purpose of complying with the additionality principle; *Working Paper no. 5*: Indicative guidelines regarding the evaluation methods: ongoing evaluation during the programming period.

5 Analysis of Regional Convergence at European Union Level

Within the European Union, the principle of cohesion and the reform of structural funds (1989) represent core elements that sustained permanently the balanced development at regional level. To this end, structural funds allotted for cohesion are numerous and in continuous and constant increase (practically, they doubled in real terms after 1980).

In the current programming period, the allocations corresponding to cohesion represent 374 billion euro (current prices) of which the amounts for promoting convergence²⁵ represent 81.5% of the total. Moreover, the existence of a compromise between efficiency and equity led to the idea of a possible maximisation of general growth in parallel with achieving outcomes and productivity convergence at regional level.

5.1 Regional analysis context

The analysis framework of the study consists of NUTS 2 regions, a statistical system regulated in the European Union by the Directorate of Statistics Eurostat. NUTS²⁶ (Nomenclature Units for Territorial Statistics) is a unitary statistical and public information system used to elaborate and evaluate the cohesion and regional development policy (after the '80s).

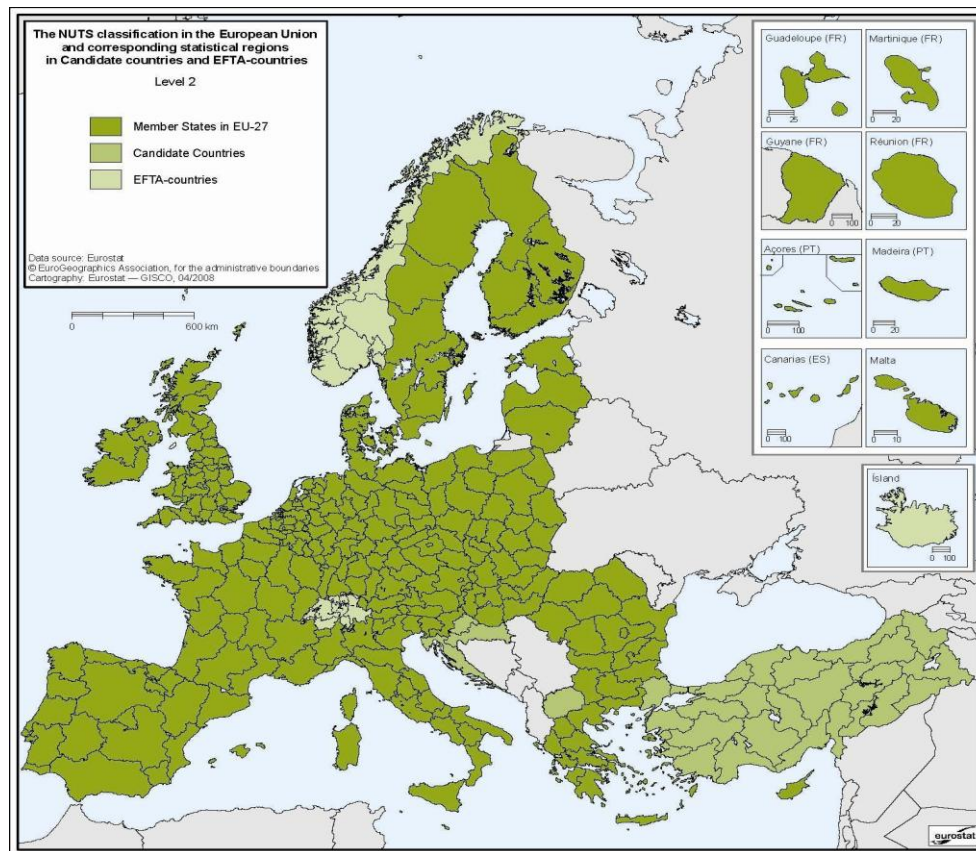
The importance of the NUTS 2 level become actually relevant after the reform of structural funds, this level turning into the backbone of designing and implementing specific actions for areas with development problems. Within the cohesion policy, the NUTS 2 regions are eligible for accessing structural funds for objective 1 considered as the most appropriate level at which community action might be taken and to which the principle of subsidiarity can be efficiently and effectively applied.

The current NUTS²⁷ system has the following structure: 27 Member States, 97 NUTS 1 regions, 271 NUTS 2 regions and 1303 NUTS 3 regions, the statistical data being available on the Internet at: <http://biblio.eui.eu/>, in the new database Cronos (source used for the present chapter) (Map 1).

²⁵ European Union, DG Regio, http://ec.europa.eu/regional_policy/policy/fonds/index_en.htm.

²⁶ The main categories of NUTS territories are: NUTS 1 – major economic and social regions, NUTS 2 – basic regions for applying regional policies and NUTS 3 – small regions for specific analyses.

²⁷ NUTS 2 regions are based on Regulation no. 1059/2003 regarding the establishment of a common classification of statistical territorial units, approved in 2003 and amended in 2006 by Regulation no. 105/2007. These regulations were amended after the 2007 accession of Romania and Bulgaria.



Source: Eurostat.

Map 1: Analysis of disparities at region level within EU-27

NUTS 2 regions have a population between 800.000 and 3 million inhabitants, the figure being different from one country to another (Germany – 38 regions NUTS 2, France – 26 regions, Italy – 20 regions).

5.2 Analysis of economic performance convergence

The analysis of regional convergence within the EU is based on of the dispersion method which can provide information on the size and evolution of GDP concentration (PPP) around the average value, for the 271 NUTS 2 regions in the period 1999-2008, completed with the graphic representation – histogram and the Lorenz-Gini curve.

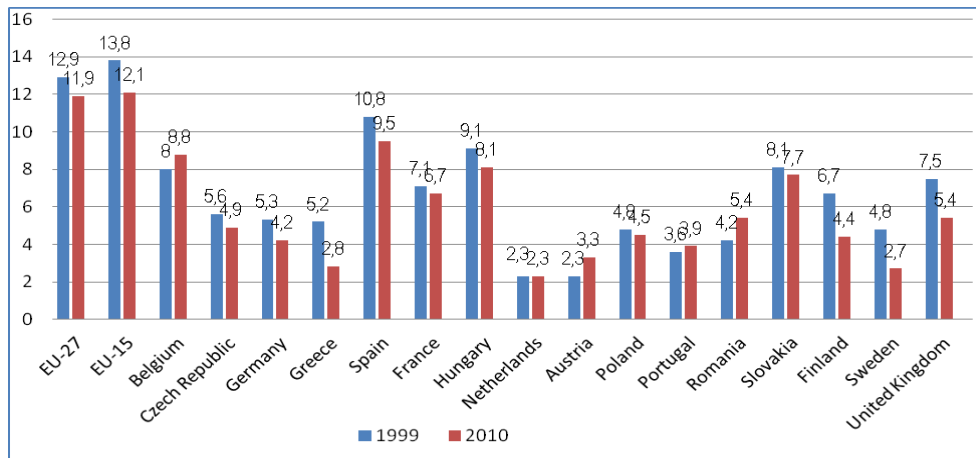
By interpreting obtained data, we found that the majority of Member States (in particular the old ones) present at regional level a decreasing trend of the *GDP dispersion value* (the dispersion decrease presupposes a convergence between the regions under analysis) the exception being given by the group of the New Member States which presented a certain growth of the indicator, as follows:

- for the entire EU, at regional level, a decrease is found in the dispersion value, from 32.4% to 27.5%, which can be translated into an increasing trend of regional convergence;
- with respect to the regions from the New Member States a divergence trend is given by an increasing dispersion: in Hungary – from 30.8% to 38.3%, in Bulgaria – from 21.9% to 37.1%;
- in Romania, there is an increase in GDP dispersion at regional level, hence a deepening of the discrepancies against the EU average, from 20.8% to 31.3%;
- also, increases in regional discrepancies were identified both in the New Member States and in those with older Community status: the Czech Republic, Slovakia, Portugal, but also the United Kingdom (from 20.4% to 24.2%);
- during the analysed period, the Netherlands registered the smallest value of GDP regional dispersion of only 11.6%, the difference against the year of reference (1999) being relatively low (only 1%), but on slight increase.

A decreasing trend of the dispersion value presupposes an increase in the convergence level among the European Union Member States: the highest decrease of regional GDP dispersion was registered by Finland, followed by Austria and Spain.

On the contrary, the increase in this indicator presupposes a decrease in convergence: the highest increase in the dispersion value was registered by Bulgaria, followed by Romania and Hungary.

The diminution of the dispersion value at EU-27 level during the period 1999-2008, by approximately 5%, indicates a clear convergence trend, strongly supported both by structural funds and cohesion ones, and by own financial efforts of each Member States, *because regional development presupposes a set of measures and resources integrated and correlated locally, regionally, nationally and at Community level* (Figure 4).

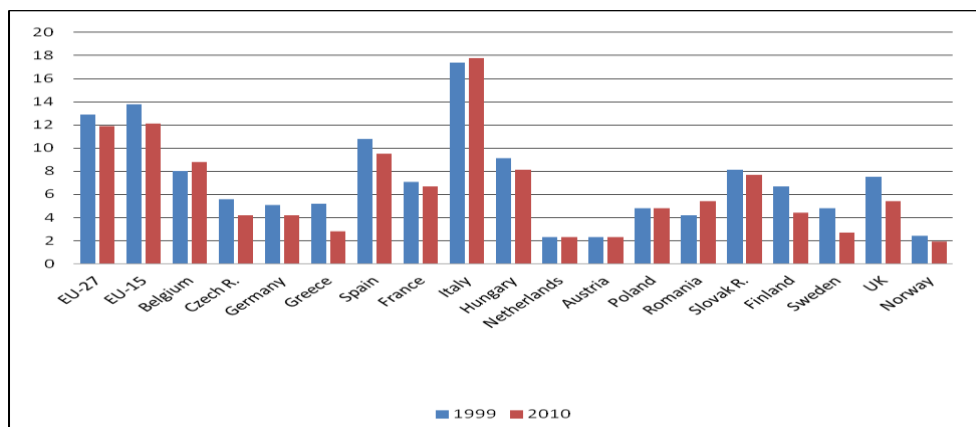


Source: Eurostat data, own calculations.

Figure 4: Evolution of regional GDP dispersion at NUTS 2 level within EU-27 (%)

A similar convergence, but on a smaller scale, is also found with respect to the *employed population dispersion* indicator, the value of which registers a relative but obvious diminishing trend by approximately 1% (calculated both for EU-27, and for EU-15).

In the Member States, the situation is as follows: the increase in employed population dispersion in Romania, Austria, Belgium, Portugal, and Italy and a decrease in the dispersion value in Germany, Finland, the United Kingdom, Greece, Spain, etc. (Figure 5).



Source: Eurostat data, own calculations.

Figure 5: Evolution of the employed population dispersion at regional level within EU-27 (1999, 2010)

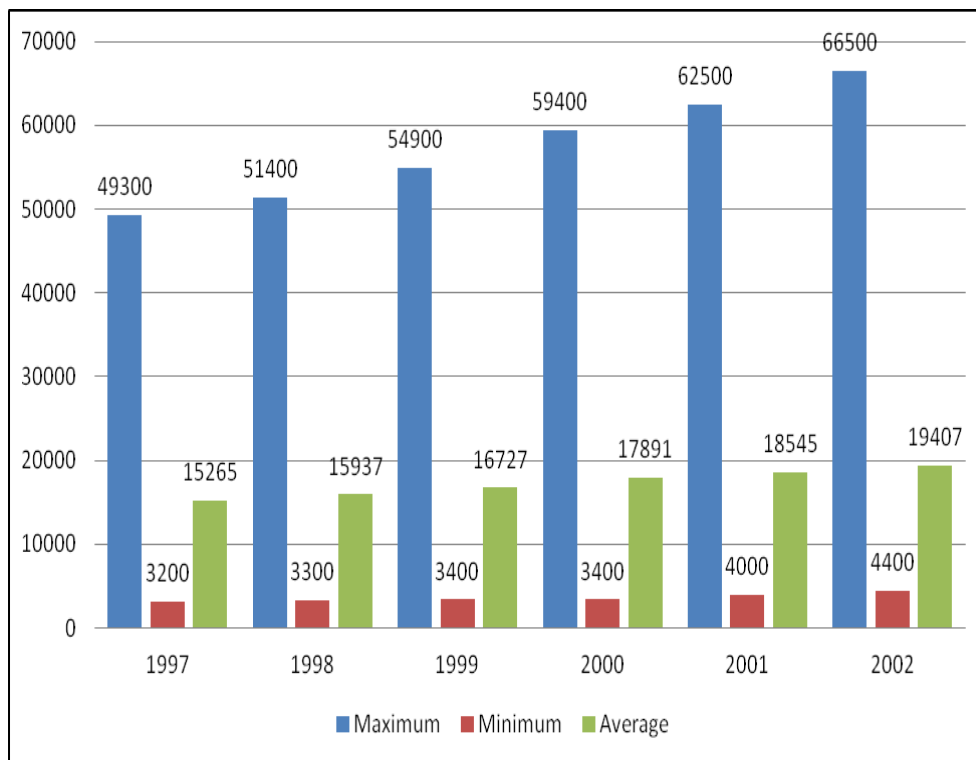
Another regional analysis technique used for evaluating the convergence trends at EU-27 level is the histogram, applied to the evolution of the GDP per capita indicator (PPP). The processing the data at the level of the NUTS 2 regions and their graphic representation resulted in some aspects which are presented hereunder.

Thus, in the year 1997, of the 271 EU regions, 145 registered a GDP per capita above the community average (53.5% of the total), while the number of regions under this average amounted to 126 (46.5% of the total). Also, the number of non-eligible regions for community assistance (over 75% of the GDP per capita average) was 202 (74.5% of the total). The average value of GDP per capita in the year was of *15.265 Euro per capita*, registered in 176 regions of the EU-27 (64.9%), while the maximum value of GDP per capita was *49.300 Euro per capita*. *The ratio of the maximum value of GDP per capita (London) to the minimum one of 3200 Euro per capita (Severozapaden) was 15:1. Out of the total number of regions, about 25% required assistance from the community funds.*

At EU-27 level, as the wealthiest regions (with the highest GDP per capita) were London (49.300 Euro per capita) and Brussels (41.100 Euro per capita). At the opposite pole, the regions with the smallest GDP per capita (of about 3200 Euro per capita) were found in Bulgaria (Severozapaden) and Romania (North-East with 3600 Euro per capita, South-Muntenia with 4300 Euro per capita, North-West with 4400 Euro per capita, South-West with 4400 Euro per capita). The number of regions which reported average values of the GDP per capita amounted to 171, *the difference between the highest and the smallest value of the GDP per capita in 1997 being 15.4 times.*

In the year 2002, by analysing the evolution of GDP per capita (PPP) an increasing trend is found in the number of regions placed above the EU-27 average (from 145 to 148 regions) concomitantly with a decrease in the number of regions below the Community average (from 126 to 123). At the same time, the number of regions supported by the cohesion policy decreased from 69 to 64 (23.6%). Both the minimum values and the maximum values of GDP per capita increased at regional level, which might be translated into an increase to a certain extent in the welfare of the inhabitants from certain regions. The wealthiest region continues to be London, while the least developed region is the one from North-East Romania.

What is noticeable during the period 1997-2002 is that the maximum value of GDP per capita increased significantly (*from 49.300 Euro per capita to 66.500 Euro per capita – an increase of 34%*) followed by an increase in the minimum value of this indicator (*from 3.200 Euro per capita to 4.400 Euro per capita – an increase by 37.5%*). The highest difference and the smallest value registered by regional GDP per capita is similar to the one recorded in the year 1997, i.e. 15 to 1 (Figure 6).

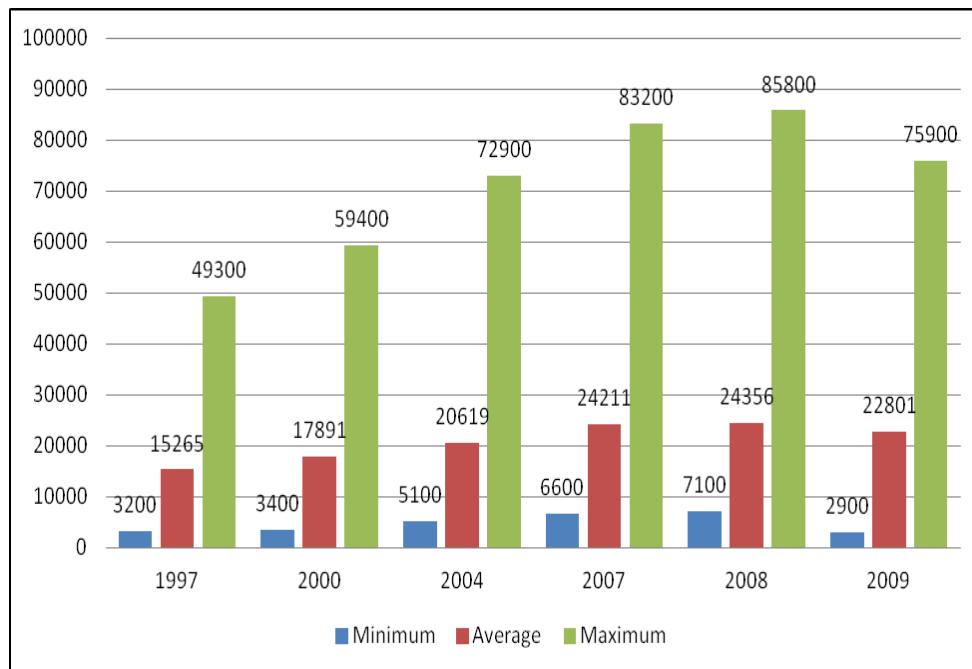


Source: Eurostat data and own calculations based on Annex 1 data.

Figure 6: Evolution of GDP per capita at regional level in EU-27, for the period 1997-2002

In 2009, out of the 271 NUTS 2 regions, the number of regions above the Community average decreased (from 145 to 136), while the number of regions under the average increased (from 126 to 135). The regional equilibrium trend was accompanied by a decreasing trend in number of very rich regions (by over 75% of the average) – from 202 to 199 – and an increase in the number of regions by less than 75% of the

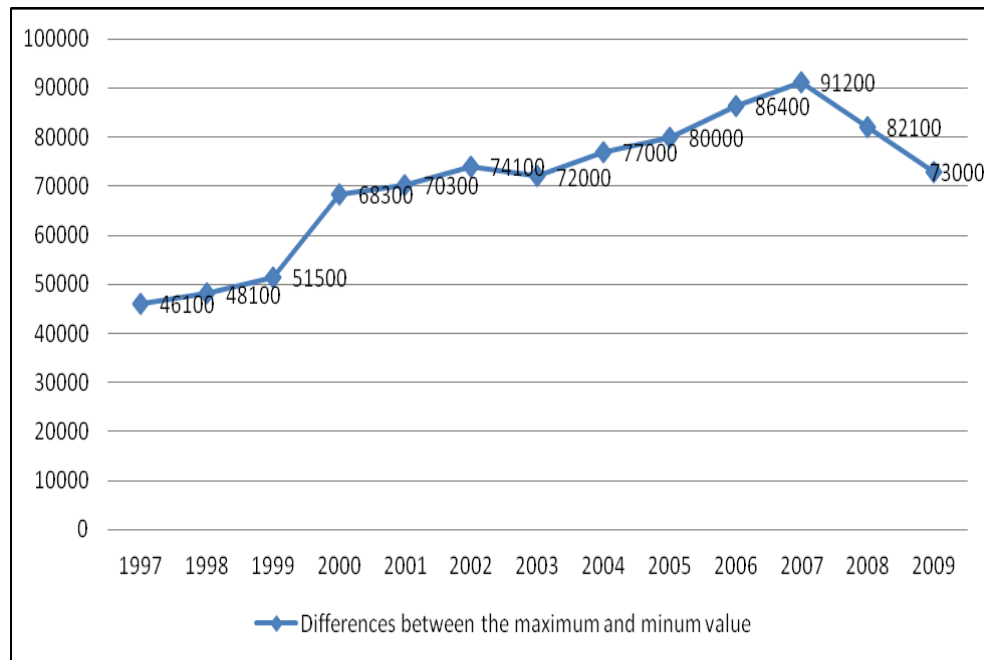
Community average (from 69 to 72). The average value of GDP per capita had an increasing trend up to the year 2008, and then the effects of the crisis at regional level resulted in a diminution of this indicator by about -6.3% (in 2009 as compared with 2008) (Figure 7).



Source: Eurostat data and own computations based on Annex 1 data.

Figure 7: Evolution of GDP per capita at regional level during the period 1997-2009 (Euro per capita)

The difference between the maximum value and the minimum one of the GDP per capita in the period 1998-2008 decreased from 15:1 to 12:1, and thereafter in the year 2009 it reached 26:1. The maximum value of regional GDP decreased by 11.5% while the minimum value of the indicator decreased by about 59%. The conclusion might be that wealthy regions coped with the consequences of the current crisis, while very poor regions registered a GDP per capita smaller than the existing one at the beginning of the period of analysis (the year 1997). Practically, the effects of the financial and economic crisis stopped the entire growth of the less developed regions during the last years. Even if the differences between the most developed and less developed regions diminished, they continue to remain very high (Figure 8).



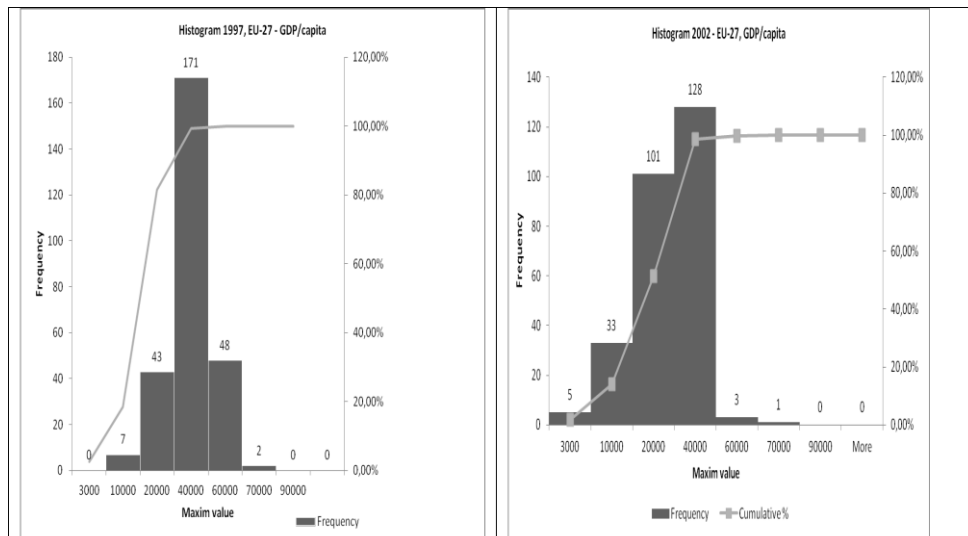
Source: Own processing based on Annex 1 data.

Figure 8: Evolution of the differences between the maximum and the minimum GDP per capita (PPP) at regional level, in EU-27, for the period 1997-2009

In the above analyses, the following trends can be identified:

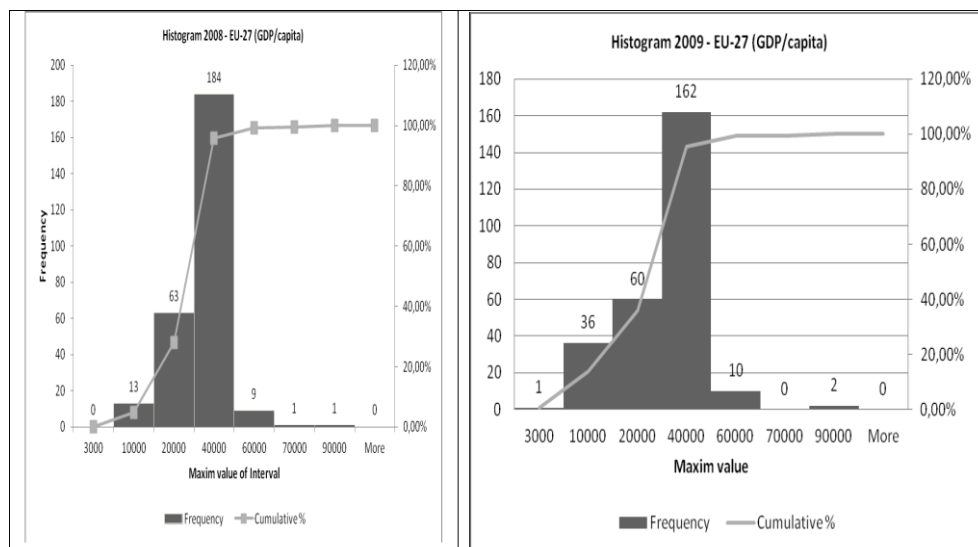
- for the value of regional GDP per capita there is an increasing trend (both of the average value, and of the maximum one) which means that, as a whole, the regional development level increased significantly;
- a decrease is noticed in the number of regions that reached a GDP per capita above the Community average (from 145 in the year 1997 to 136 in the year 2009). The ratio of the minimum GDP per capita regions to the ones with a maximum one decreased from 15 to 1 in the year 1997 to 12 to 1 (in 2008), which can be translated into the existence of a diminishing trend in discrepancies at the level of NUTS 2 regions within EU-27.

In the graphic presentations hereunder (Figure 9, Figure 10), the diminishing trend can be noticed for the differences between NUTS 2 regions within the EU-27, the number of regions being in immediate proximity to the GDP per capita average on the increase.



Source: Eurostat data and own calculations.

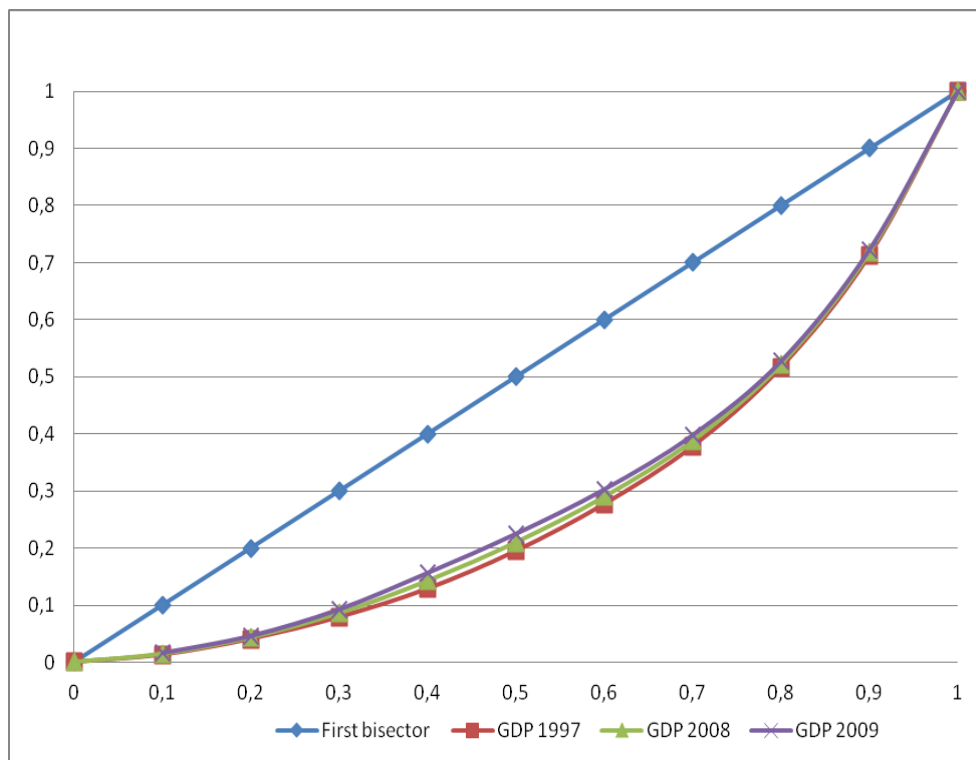
Figure 9: Histogram corresponding to the regional GDP per capita (PPP) evolution in EU-27 (1997, 2002, 2008, and 2009)



Source: Eurostat data and own calculations.

Figure 10: Histogram corresponding to the regional GDP per capita (PPP) evolution in EU-27 (1997, 2002, 2008, 2009) – (continued)

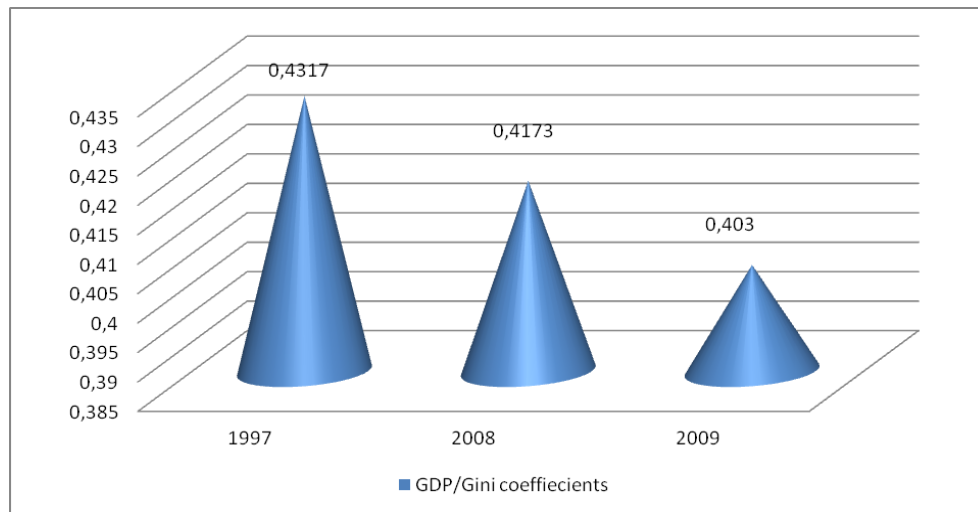
The relative convergence trend in the 271 regions within the EU-27 is supported by the value of the Lorenz-Gini concentration curve. Thus, it can be noticed that there is a slight narrowing of the Lorenz-Gini (year 2009) against the first bisector of the square area, which means a diminution in regional discrepancies, determined by a decrease in the concentration of economic performance, hence a marked trend of convergence at regional level. (Figure 11).



Source: Eurostat data and own calculations based on Annex 2 data.

Figure 11: Lorenz-Gini curve calculated for total regional GDP, within EU-27, in the period 1997-2009

Also, the Gini coefficients confirm this decreasing trend in regional level concentration of economic performance expressed by means of the GDP per capita, from of 0.431 in 1997 to 0.403 in 2009 (Figure 12).



Source: Eurostat data and own calculations based on Annex 2 data.

Figure 12: Evolution of Gini coefficients at regional level in the period 1997-2009

From the analysis of the existing data at the level of the 271 NUTS 2 regions within the European Union it results that for the last 10 years there has been a convergence trend at different “speeds” between the Member States. Still, the differences between wealthy and poor regions remain very high, in spite of the European Union efforts to balance the development at territorial level and to promote cohesion between Member States.

5.3. Conclusions

In the majority of regional studies, the analyses show territorial imbalances evaluated by econometric techniques and methods that can reflect the evolution of the main economic, social, and environmental indicators at a high relevance and accuracy degree.

The analysis of regional convergence at EU level was made by means the dispersion parameters, the histogram, the Gini coefficients and the Lorenz-Gini curve for the period 1997-2009. The results reveal that during the analysed period a slight convergence trend was found at the level of the regions within the EU Member States. Thus, the difference between the maximum and the minimum value of GDP per capita (PPP) diminished up to the year 2008 (the ratio decreased from 15:1 to 12:1). After this year, the discrepancies between very developed and the less developed regions

deepen, the main reason being the current crisis which affects especially the areas less prepared to face ongoing adjustments to the new conditions (difficulties emerging on the labour market, unemployment increase, demand decrease, etc.).

In the period 2000-2008, a decrease is noticed in the difference between the maximum and the minimum value of the GDP per capita indicator (PPP), the narrowing being obvious. Still, regional differences emerge and even higher as of 2009, in spite of national and Community efforts to counteract the globalised effects of the crisis.

6. Analysis of economic and social disparities at regional level in Romania

In Romania, the problem of economic inequalities and regional convergence represents one of the important current topics on which the attention of theoreticians but mostly of practitioners (the decisional factor) is focused. Also, in the context of the integration into the European Union structures, convergence is of particular interest taking into account the size of the gap (economic, social, infrastructure, etc.) against the European Union regions and Member States.

6.1. Regional analysis context

The regional policy in Romania is implemented by development regions, made up of counties formed by voluntary association based on a convention signed by the representatives of the county councils and of the General Council of the Bucharest Municipality, respectively.

The context of analysing disparities and economic convergence is represented by the eight development regions (statistical regions) created after the accession to the European Union (in 2007). These regions were established considering the potential functional integration criterion around some polarising centres (Iasi, Timisoara, Craiova, etc.), corresponding to the NUTS 2 system of the European Union. On setting-up the regions other criteria were taken into account as well, such as: resource complementarity, economic and social activities, functional links, etc.

The eight development regions created in accordance with the Regional Development Law no. 151/1998 (amended by Law no. 315/2004), are presented in Table 4.

Table 4

Romania's development regions

| | NUTS 2 Regions | NUTS 3 regions (counties) |
|------|----------------|---|
| RO11 | North-West | Bihor, Bistrita-Nasaud, Cluj, Maramures, Salaj, Satu-Mare |
| RO12 | Centre | Alba, Sibiu, Brasov, Covasna, Harghita, Mures |
| RO21 | North-East | Bacau, Botosani, Iasi, Neamt, Suceava, Vaslui |
| RO22 | South-East | Braila, Buzau, Constanta, Galati, Tulcea, Vrancea |
| RO31 | South Muntenia | Arges, Calarasi, Dambovita, Giurgiu, Ialomita, Prahova, Teleorman |

| | | |
|------|-----------------------|---------------------------------------|
| RO32 | Bucharest-Ilfov | Bucharest Municipality, county Ilfov |
| RO41 | South-West Oltenia | Dolj, Gorj, Mehedinti, Olt, Valcea |
| RO42 | West | Arad, Caras-Severin, Hunedoara, Timis |

Source: Eurostat.

The analysis of regional disparities in the development regions presented above during the period 2000-2010 is based on direct and derived indicators specific to some economic fields of activity.

6.2. Analysis of economic performance

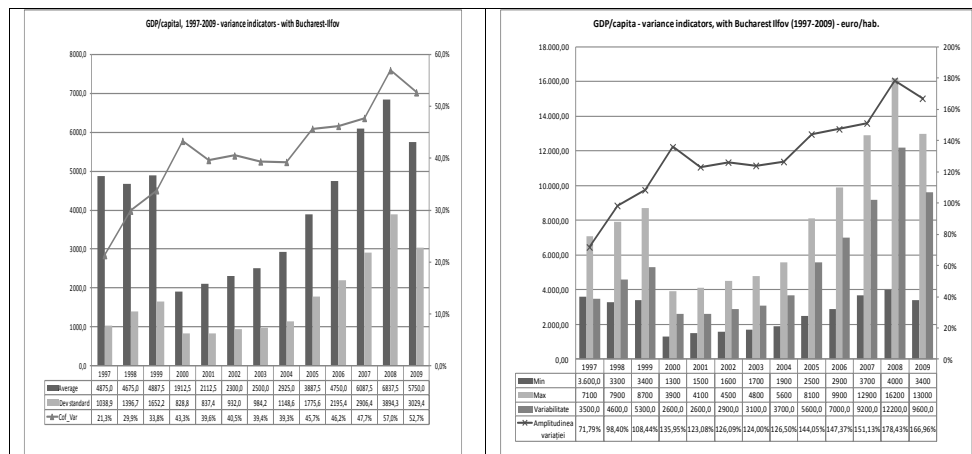
The identification of regional disparities from the perspective of economic performances was based on the dispersion (variance) method on GDP per capita (PPP) for the period 1997-2009.

As the Bucharest-Ilfov Region is placed among the most developed regions at the EU level as compared with the other regions and in particular with the North-East and South Regions, two cases were considered: “*with and without the Bucharest-Ilfov Region*”.

The analysis of the dispersion values shows the following aspects:

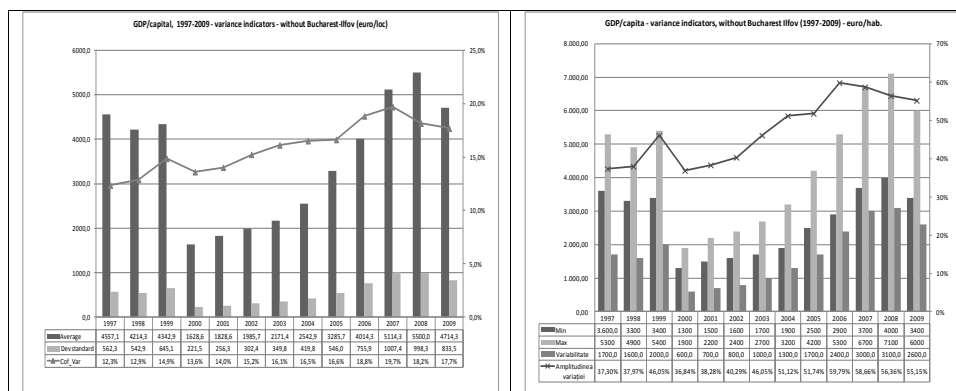
- In the “*with the Bucharest-Ilfov Region*” case, the evolution of the dispersion value of GDP per capita at regional level registered differences from minimum 4.875 Euro per capita (in the year 1997) to a maximum of 12.300 Euro per capita. Determining the maximum/minimum value of GDP per capita (PPP) reveals an increase in discrepancies at regional level from 2:1 (year 2000) to 4:1 (year 2008). The variation coefficient value increased from 21.3% to 54.1%; with respect to the last year of the analysis, the year 2009, a decrease is found for the variation from 54% to 52.7%.
- In the “*without the Bucharest-Ilfov Region*” case, a relatively low trend of variance between regions of only 2% (from 42.5% la 44.3%) is found. Also, the average value of regional GDP per capita increased from minimum 3087.5 Euro per capita (year 1997) to 8.702.5 Euro per capita (year 2008).
- With respect to the evolution of the other terms of variance – minimum/maximum value, variability and amplitude – they follow an increasing trend, which confirms the deepening of regional disparities in Romania in the level of economic performance expressed by GDP per capita (PPP). Thus, the minimum value decreased from 3.600 Euro per

capita (1997) to 3.400 Euro per capita (2009) while the maximum value increased from 7.100 Euro per capita to 13.100 Euro per capita, while the variance coefficient decreased by 0.24% during the same period. The annual growth rate of the maximum value is superior to the minimum value, so we may say that there is a deepening trend of divergence in the regional economic performance levels (Figure 13, Figure 14).



Source: own calculations based on Annex 3 data.

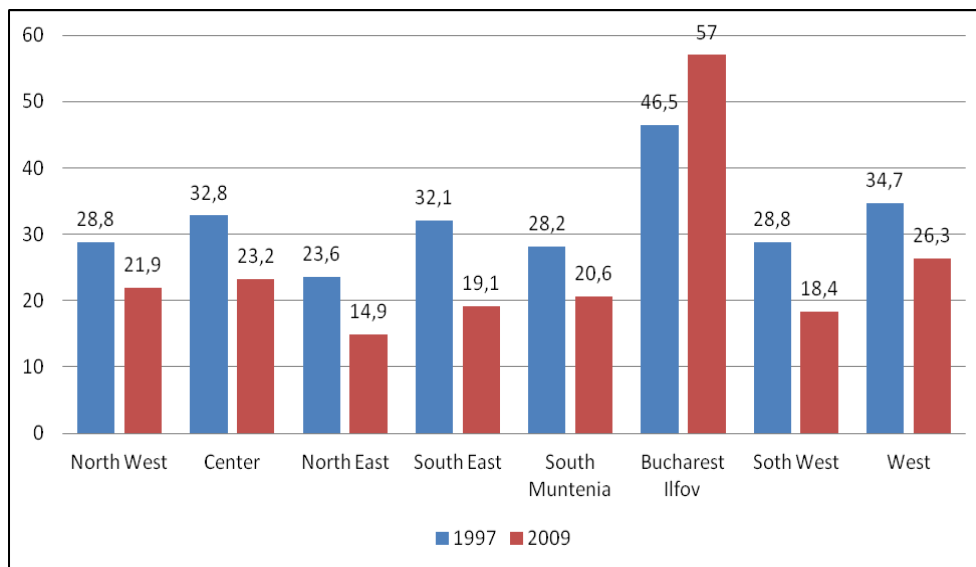
Figure 13: Variance indicators – GDP per capita at regional level, 1997-2009 (with the Bucharest-Ilfov Region)



Source: own calculations based on Annex 3 data.

Figure 14: Variance indicators – GDP per capita at regional level, 1997-2009 (without the Bucharest-Ilfov Region)

Related to the average value within EU-27, there is a greater importance of the national per capita GDP given by its increasing weight from 8.43% (1999) to approximately 25.9% in 2008 (about three times). This fact did not influence the position held by Romania within EU-27, as the country is on the second last place with respect to GDP per capita, just a little bit ahead of Bulgaria (Figure 15).

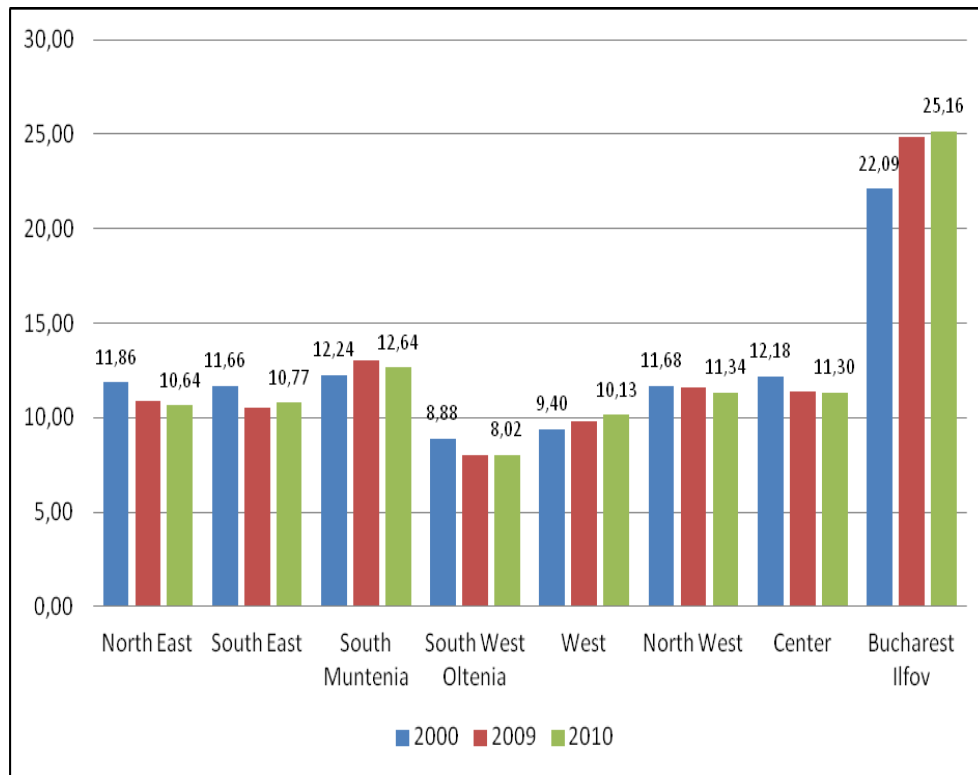


Source: Own calculations based on data from *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Figure 15: Evolution of the (regional) GDP per capita share in Romania in average GDP per capita in EU-27 for the period 1999-2008 (% in total)

The evolution of the structure by regions shows certain trends of the regional GDP weight in national GDP, as follows:

- during 2000-2009, an increase of the Bucharest-Ilfov Region in national GDP formation (from 22% to 24.82%);
- the other regions register close weights in total GDP, comprised between minimum 8.15% (South-West Region) and maximum 12.7% (South-Muntenia Region);
- also, there were regions that increased their contribution to national GDP formation: the South Muntenia, West, and Bucharest Ilfov Regions; the rest of the regions recorded decreases of the weight for the analysed indicator (Figure 16).

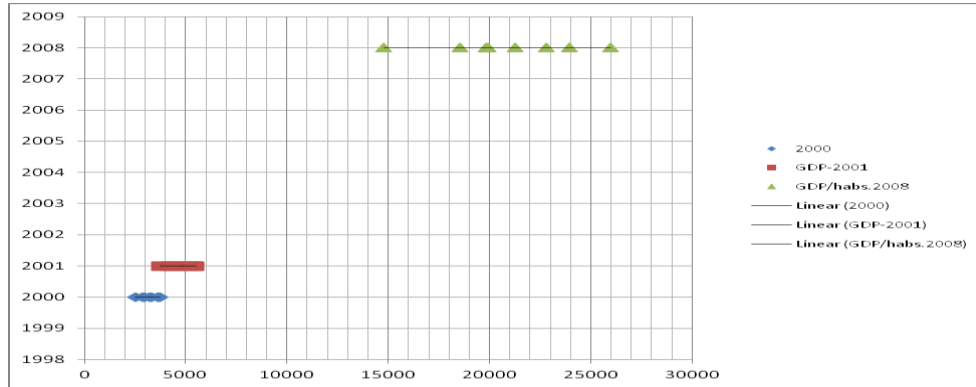


Source: Own calculations based on data from *Romania's Statistical Yearbook, 2011*, NIS, Bucharest.

Figure 16: Evolution of the regional GDP weight in total national, 2000-2009 (%)

The increase of GDP per capita in 2009 as compared with the year 2000 registered different values from one region to another, the highest being recorded in the Bucharest-Ilfov Region (3.98 times), followed by the West Region (2.39 times) and the North-West Region (2.36 times), the lowest growth being registered in the South-East (1.98 times) and North-East (2 times) Regions.

Regarding the GDP per capita trends at regional level, in the year 2000 a high concentration of values is noticed in a relatively restricted interval. Thereafter (in 2001), the concentration trend deepens and a dispersion trend emerges and continues up to 2008, the regions entering a competition and detachment of the developed ones from the poor ones. There is also a compact group of regions registering close values of GDP per capita, but with an obvious trend of dispersion between them (Figure 17).

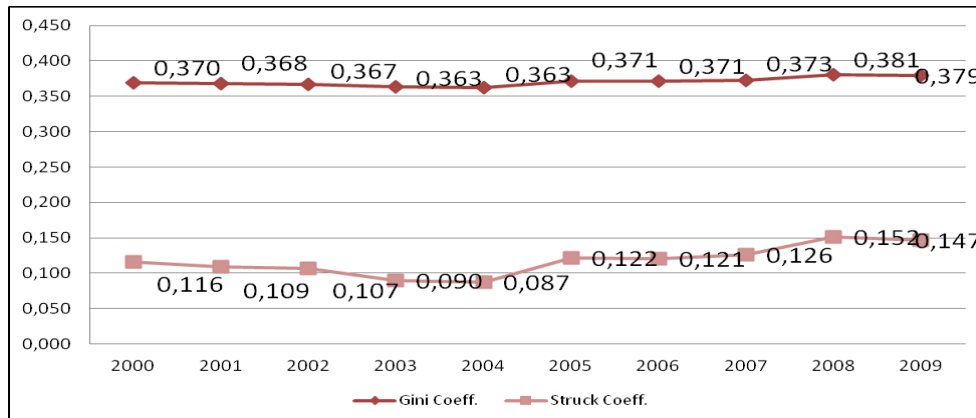


Source: Own calculations based on data from *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Figure 17: Evolution of regional GDP per capita concentration in the period 2000-2008 (Lei per capita)

This increasing trend of regional discrepancies is also confirmed by the use of the concentration method by means of the Lorenz-Gini curve: the shift of the curve corresponding to the year 2008 can be noticed against the first bisector and against the curve corresponding to the year 2000, which supports the statements presented above.

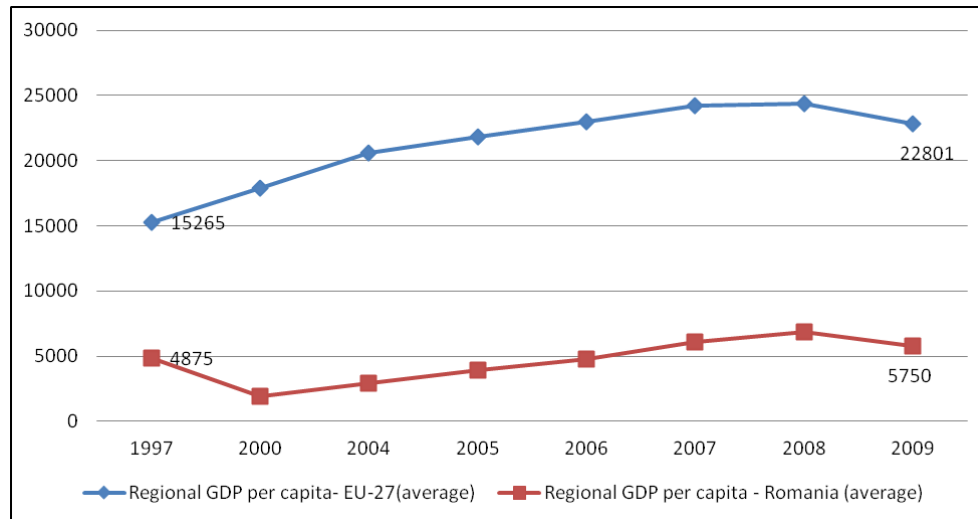
Thus we can find an important regional GDP concentration with an increasing trend: the Gini coefficient increased from 0.370 in 2000 to 0.381 in 2008, followed by a diminution to 0.379 in 2009 (Figure 18).



Source: Own calculations based on data from *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Figure 18: Evolution of the Gini-Struck coefficients calculated for total regional GDP, 2000-2009

Along with the increasing trend of the regional concentration of economic performances expressed by means of GDP per capita, a trend of relative convergence with the EU-27 average is found for this indicator, determined by the superior growth rate of the value recorded up to the year 2008 (Figure 19).



Source: Own calculations based on data from *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Figure 19: Regional convergence expressed by the GDP per capita (PPP) evolution - Romania and EU-27, 1999-2008 (Euro per capita)

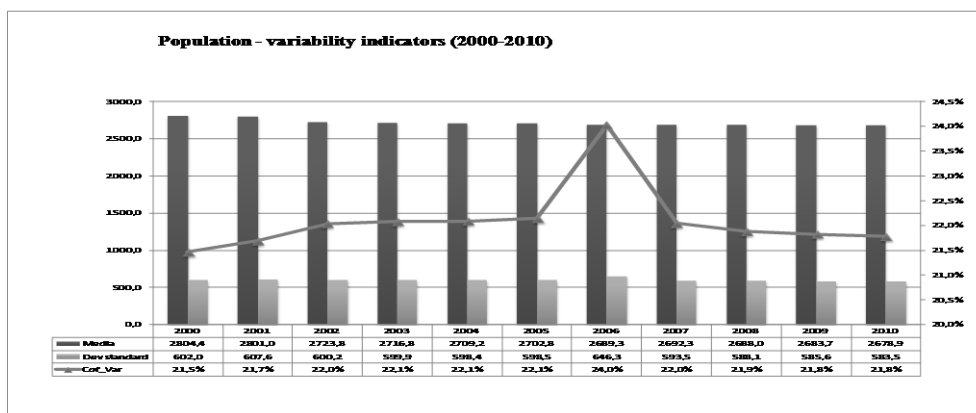
In conclusion, by analysing the regional economic performances in Romania, two major trends can be found: a first trend of a relatively easy regional convergence with the EU-27 structures, and the second one of increasing disparities between the eight NUTS 2 regions of Romania, as a result of marked economic concentration in attractive areas that can ensure a high living standard and activities of increased profitability.

6.3. Demographic regional disparities

The population of a region represents one of the most important aspects when economic development and the identification of territorial level disparities are discussed. This indicator constitutes the background for including one region in one NUTS category (1, 2 or 3) and, at the same time, the weighting criterion of some performance indicators (GDP, GVA,

SMEs, etc.). Very often, the existence of a numerous population in a region can be an advantage, provided that this population has skills characterised by a high specialisation level.

The population variability in the eight development regions in the period 2000-2010 registered a decreasing trend (-0.49%) which means that discrepancies related to this indicator tended to diminish. In the year 2010, the West Region registered a minimum population of 1.917 million inhabitants, while the maximum population of 3.7 million inhabitants was recorded in the North-East Region (Figure 20).



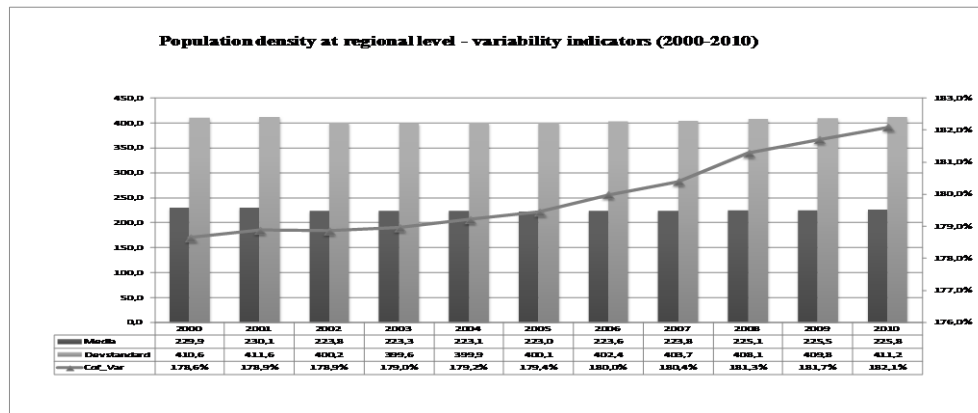
Source: own calculations based on Annex 4 data.

Figure 20: Variability indicators – Total population at regional level, 2000-2010

The variation coefficient corresponding to the year 2010 was 21.8% with a relatively small increase (+0.3%) as compared with the 2000 value, of about 26.5%. Also, the population values at regional level (minimum and maximum) are on decrease as compared with the year 2000, the variation of the indicators being relatively small during the analysed period.

The decrease in the population average at regional level (from 2.804 million inhabitants to 2.678 million inhabitants) influenced the diminution of density, in particular in rural areas or in areas that are facing restructuring problems. Thus, in the period 2000-2010, the population density decreased from 94.1 inhabitants/square km. to 89.9 inhabitants/square km.

The most important decreases in density were registered in the South-West Oltenia (-6.81%), West (-6.21%), South-Muntenia (-6%) and North-West (-4.52%) Regions. The lowest decrease in density was reported in the Bucharest-Ilfov Region, 0.22% (Figure 21).



Source: own calculations based on Annex 5 data.

Figure 21: Variability indicators – Population density at regional level, 2000-2010

As a result of the comparative analyses at regional level, the deepening of the differences can be noticed between the Bucharest-Ilfov Region and the other seven regions. Thus, the ratio of the highest population density (the year 2010 in the Bucharest-Ilfov Region, 1,242.9 inhabitants/square km.) to the smallest one was 20 to 1 (the year 2010 in the West Region, 59.8 inhabitants/square km). Related to the average population density in EU-27 (116 inhabitants/square km.), in Romania there are seven regions with a smaller value than the aforementioned, and only one is superior to it (the Bucharest-Ilfov Region).

Regarding the framing of one region in the NUTS 2 category, the limits are given by the population numbers: between 800.000 and 3 million inhabitants. These limits are not observed (were not observed even at the time of their establishment in the year 1998) by all development regions of Romania, some exceeding the maximum value set by the EU.

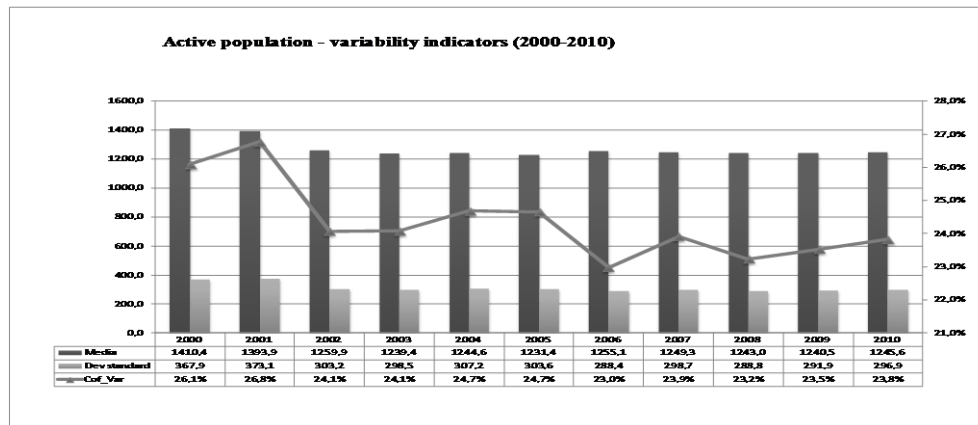
The regions with a population of over three million inhabitants are North-East (3.7 million inhabitants), and South-Muntenia (3.2 million inhabitants) and they are ranked the last within EU-27 by the GDP per capita and performance, but are placed in Top 20 NUTS 2 regions from the viewpoint of the number of inhabitants. From this perspective, we can reaffirm for the subsequent periods of programming the necessity of a territorial reorganisation on better functional bases, by increasing the number of regions, which could lead to diminishing the serviced population and a better management of the development as a whole.

6.4. Regional disparities in labour force

The analysis of disparities on the labour market was based on the indicators “active population” and “employed population” for the period 2000-2010, as they provide important information regarding the trends in labour market and its reactions to various internal or external factors.

Being closely correlated with demographic indicators, which registered dramatic decreases in the last decade, labour force, in general, and active population, in particular, have followed the same evolution of quantitative diminution (effective numerical decrease), but especially a qualitative one (by natural reduction in total population, or by the migration of well-trained labour force to more developed regions of the EU). The average annual rate of active population growth was negative (-2.36%).

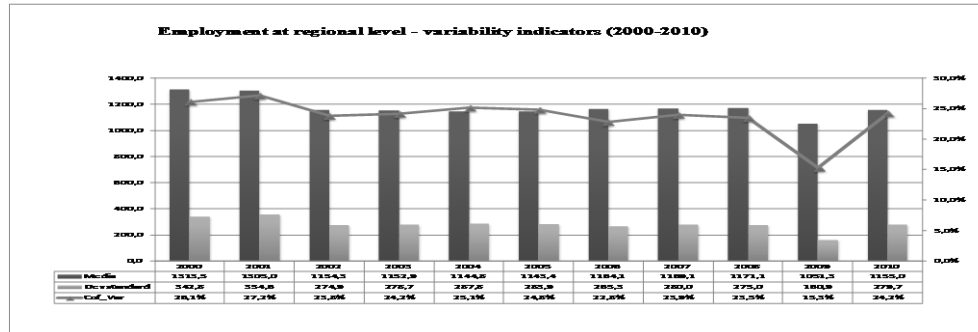
With respect to the variation of the analysed indicator, the trend was a decreasing one for most development regions (save for the Bucharest-Ilfov Region). The value of the variation coefficient registered during the analysed period recorded a decreasing trend: from 26.1% in 2000 to 23.8% in 2010 (Figure 22).



Source: own calculations based on Annex 6 data.

Figure 22: Variability indicators – Active population

The decreasing trend of the variance for employed population indicates that there is an internal migration phenomenon of labour force from one region to another, and even within the same region, which diminishes regional disparities (Figure 23).



Source: own calculations based on Annex 7 data.

Figure 23: Variability indicators – Employed population

The demographic trend given by the variance indicators confirms the decreasing evolution in number of the employed population in the eight development regions, from an average of 1.313 million employed persons in 2000 to 1.155 million in 2010. During the analysed time interval, an inflexion moment can be noticed (the year 2009) which coincides with the beginning of the crisis in Romania and with the enforcement of the measures for counteracting it.

6.5. Regional disparities in the research-development field

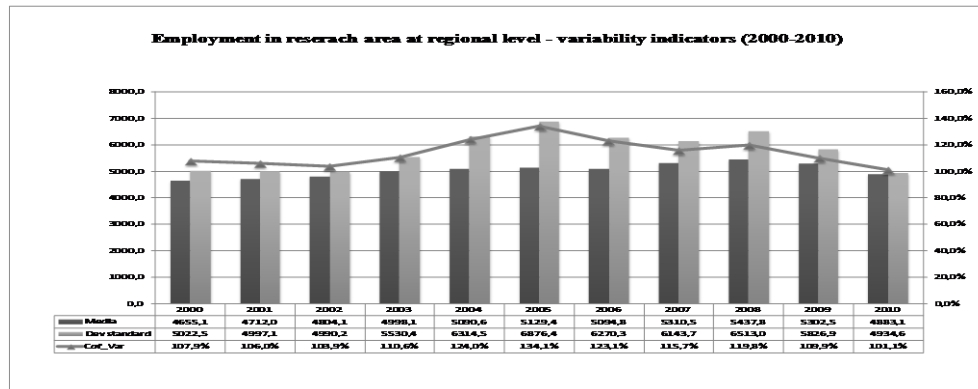
From the analysis and interpretation of some indicators specific to research-innovation information can be obtained about the development level of a region, the competitive advantages of the region as compared with other regions and what action might be taken for supporting the field regarded as an essential factor for the evolution of the knowledge-based society, nowadays.

In order to analyse regional disparities in the RDI field two indicators were selected and analysed: employees in the research-development field (number of persons) and number of innovative enterprises.

In the period 2000-2010, the annual average growth rate of the number of employees in RDI was about 1.46%, the variation coefficient following an increasing trend: from 107.9% in the year 2000 to 109.9% in the year 2009.

In the year 2010, a decreasing trend of the variation is found, the coefficient reaching 101.1%. The ratio of the maximum number of

researchers (Bucharest-Ilfov Region – 16932 researchers) to the minimum number (South-East Region – 1713 researchers) is 10 to 1 (Figure 24).



Source: Own calculations based on Annex 8 data.

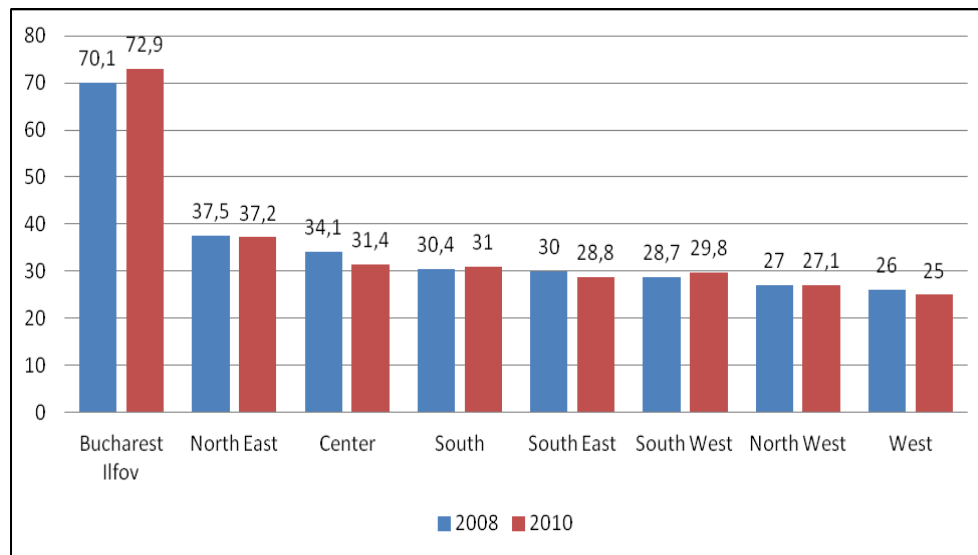
Figure 24: Variability indicators – Employees within RDI

The regional innovation degree, characterised by the indicator “number of *innovative enterprises*” is still in favour of the Bucharest-Ilfov Region, with a weight of 23.91% of the total, and the last place is held by the South-West Oltenia Region with only 4.83% of the total. The presented weights saw changes in time, grouped as follows: for the period 2006-2008 compared with 2000-2002, the number of innovative enterprises increased in some regions (for instance, in Bucureşti-Ilfov, from 21.23% to 23.91%, in the South-East Region – from 9.91% to 14.11%), while, in some other regions, this weight underwent a decreasing trend (in the Centre Region – from 19.22% to 13.18%, in the West Region - from 7.32% to 6.17%). The majority of research centres are located in the Bucharest-Ilfov Region, several of them with state-owned capital.

With respect to the innovation degree at regional level, according to a project²⁸ of a group of researchers, based on a series of specific indicators, such as the leading potential of innovation, knowledge-generating potential, innovation and system integration capacity, innovation performance and intellectual property, the following situations resulted:

²⁸ The Project “INNOREG – Computerised model and programme for determining the innovation degree at the level of the development regions” (ref. no. 92079/2008) is developed within the programme “Partnership in priority fields” promoted by the Ministry of Education, Research, Youth and Sports.

- The highest innovation degree (year 2010) is held by the Bucharest-Ilfov Region, with a value of 72.96%, on increase as compared with the year 2008, by approximately 2.85%.
- The next region placed below the Bucharest-Ilfov Region is the North-East Region, with an innovation degree of 37.19%, on decrease as compared to the year 2008.
- The region with the lowest innovation degree is the West Region (25.11%), on decrease as compared to the year 2008.
- The difference between the maximum and minimum value of the innovation degree is 3 to 1 (Figure 25).



Source: Data processing from the project “INNOREG – Computerised model and programme for determining the innovation degree at the level of development regions”.

Figure 25: Evolution of the innovation degree at regional level, 2008-2010

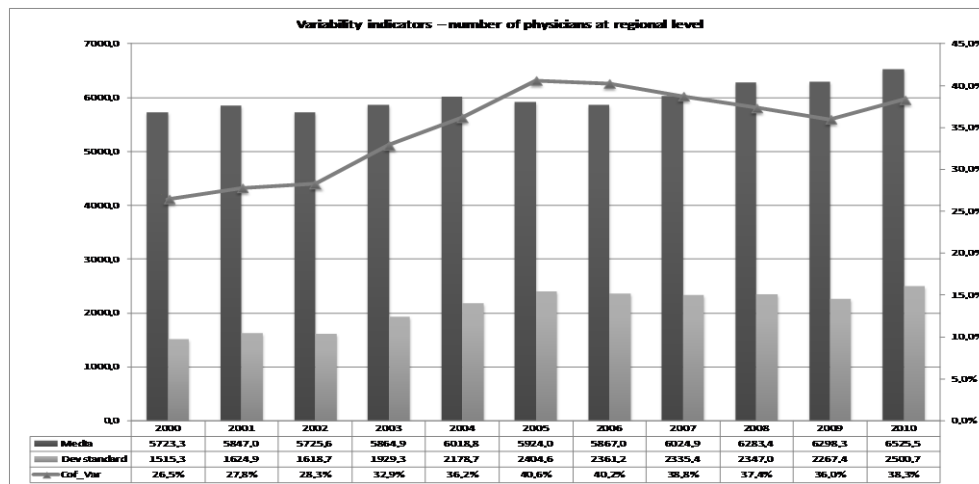
An important part of modern regional theories regarding regional disparities identify activities related to innovation as main sources of competitive advantages, but also as triggering factor for territorial economic disparities. Innovative regions gain advantages but are dependent on knowledge diffusion. There is an important mechanism by which this sector develops and generates effects. The regional policy, by its measures and actions, must take into account all these aspects when there is an intention to reduce disparities in the field of research-innovation.

6.6. Regional disparities in the health field

At regional level, the health field is a factor characterising the general development level, some specific indicators being included in the *human development index (HDI)* calculated by international institutions and bodies for revealing the living standard and welfare.

For analysing regional disparities in the field between 2000 and 2012, the indicator “*number of physicians*” was selected and its variation was computed for the eight development regions. An increase was found in the variation coefficient from 26.5% in 2000 to 38.3% in 2010, which presupposes a diminishing trend of convergence in the field of health, thus increasing territorial discrepancies.

At regional level, an increase in number of physicians by about 14% can be noticed, while the amplitude of the variation was 116.22% (year 2010). The smallest number of physicians (4.673 physicians) is found in the South-Muntenia Region, while the maximum number is found in the Bucharest-Ilfov Region - 12.184 physicians (Figure 26).



Source: own calculations based on Annex 9 data.

Figure 26: Variability indicators – Number of physicians at regional level

The variability analysis for this indicator during the reference period 2000-2010 shows an inflexion point in the period 2005-2006, when the variation coefficient reaches the value of 40.6%, and thereafter it follows a decreasing trend, up to the year 2010 when it is 38.3%.

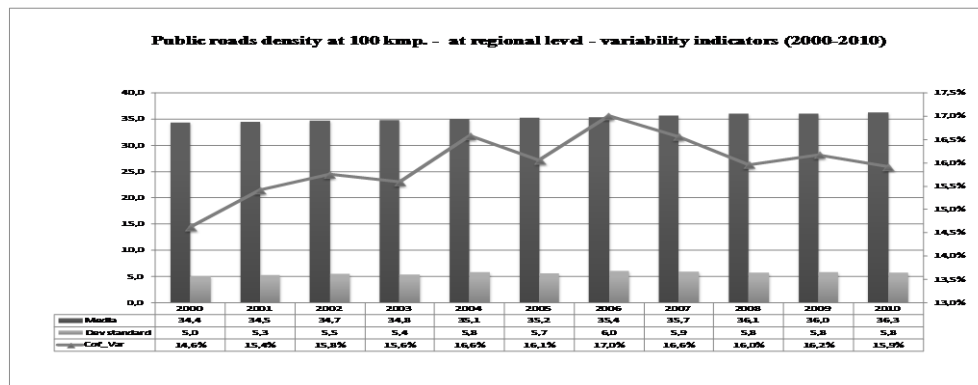
6.7. Regional disparities in infrastructure

Infrastructure, by and large, is an important indicator, which characterizes the regional accessibility degree, being considered when the attractiveness of an area is under discussion.

For analysing regional disparities in the field of infrastructure, the indicator *public roads density per 100 km²* was selected for the period 2000-2010.

Thus, the region with the most important network of public roads is Bucharest-Ilfov (48.9 km per 100 km²), followed at a large difference by the South-West and North-East Regions (37.1 km per 100 km²) and the South-Muntenia Region (36.8 km per 100 km²). At the opposite pole, the region with the poorest public road infrastructure is South-East (30.1 km per 100 km²). The annual average growth rate of the indicator *public roads density per 100 km²* is 0.59% for the analysed period.

The variation coefficient 16.2% in the year 2010, on increase against the year 2000, when it was 14.6%, hence an increase of about 1.6% (Figure 27).



Source: own calculations based on Annex 10 data.

Figure 27: Variability indicators – public roads density per 100 km², at regional level

Transport infrastructure is necessary yet not sufficient condition for regional development and competitiveness increase, an important factor that can be determinant for the location decision on economic activities, and even on some sectors. Investments in infrastructure are essential for diminishing differences between regions and, in particular, between periphery and central regions. Transport infrastructure plays an important role in diminishing regional disparities, facilitating trade and labour force

mobility. The improvement of infrastructure reduces time and transportation costs for goods and increases productivity and comparative advantages of different regions.

Most of transport infrastructure remains on the responsibility of central and local authorities (government) representing an important component of the structural and regional policy. Taking into account the fact that each region has specific needs in this field, both with respect to infrastructure and to transportation ways, it is necessary to ensure an appropriate development level in the territory and to diminish the imbalances between them, because the transport system must be regarded in a unitary manner, within a national and community network of roads.

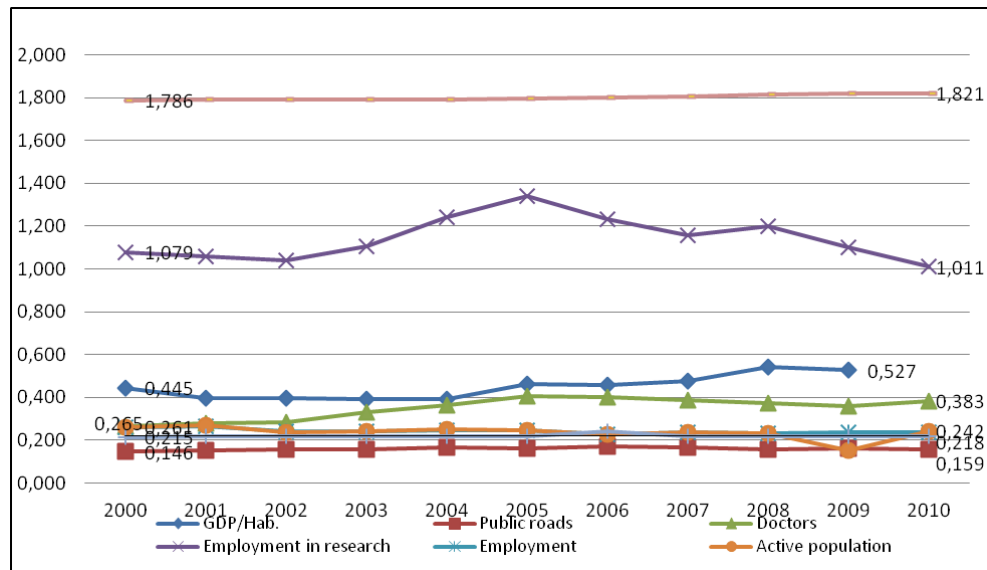
6.8. Conclusions

Romania's development regions had different rates and speeds of development in the period 2000-2010, according to the results obtained in the present chapter. Thus, the annual growth rates and the variation coefficients calculated for various activity fields were higher or smaller depending on the complexity of the internal or external phenomena that had an important impact on them.

The analysed fields at the level of the eight development regions (demography, labour force, research-development, infrastructure, health) presented different evolutions regarding their variability in the period 2000-2010.

The fields that had the highest variation in the analysed indicators are: demographic (population density at regional level), research-development (number of employees in RDI) and the general level of performance (GDP per capita). The values of the variation coefficients were comprised between the interval (1-2), with slight increasing trends for the indicator *population density* (which during the analysed period decreased from 83.3 inhabitants/km² to 79.5 inhabitants/km²) and a relative decrease in the *employees in research-development* indicator (which had an increasing evolution from 37.241 employees to 39.065 employees).

The other analysed indicators have registered relatively lower coefficients, without very high variations, with trends of slight increase in the *public roads per 100 km²*, *physicians* and *active population* indicators (Figure 28).



Source: Own calculations, based on the data presented in Annexes 3-10.

Figure 28: Evolution of the variation coefficients at regional level, in the priod 2000-2010

The evolution of the variation coefficients shows a relatively narrow distribution of the analysed fields for the eight development regions, which leads to the conclusion that there can be no discussion about a high level of economic and social disparities between them, the main disturbances being due to the Bucharest-Ilfov Region, which saw a significant general growth for the analysed period.

7. Regional Policy in Romania – Main Instrument for Diminishing Regional Disparities

Regional development should represent a priority for Romania, both from the viewpoint of pursued objectives and of involved resources (human, financial, etc.).

The essential elements of this process – regional policy and the Regional Operational Programme – are the pillars of *balanced development of all regions, by valuing the regional and local development potential, by focusing on urban growth poles and improving the infrastructure and business environment conditions.*

The foundation for enforcing regional policy consists of the eight development regions (NUTS II), and the institution managing and coordinating implementation is the Ministry of Regional Development and Tourism (established in the year 2007) by the Management Authority for ROP (Governmental Resolution no. 361/2007).

The effects of the regional policy and the impact of financial allocations from structural and national funds are found especially in the creation of new jobs and in the development of infrastructure (transport, social infrastructure, etc.), but are also visible in a broader context, in fields such as: tourism (actions for promoting the country brand, tourism promotion centres, etc.), urban development (integrated development plans), business sector (supporting micro-enterprises).

7.1. Regional policy – General presentation

By definition, regional policy embeds all activities that affect significantly the development of a region. From the perspective of public interventions, regional policy actions can turn concrete in investments in transport, health, social services, education infrastructure, in supporting the SMEs, etc.

In Romania, the regional policy represents an effect of the European Union integration process, its specific instruments (legislative, institutional, financial, etc.) being still in process of adjustment/change. The single constant of the process consists, in fact, of the eight development regions created in the year 1998 (Law no. 158/1998) amended by Law no. 315/2004) which do not have an administrative statutes, but rather planning

and statistics, directed towards identifying territorial problems, certain categories of issues and actions (differentiated by on certain indicators).

The strategic objective of the current regional policy is *diminishing the level of regional disparities, implying multiple (sectoral) actions and target-areas (priority areas, areas of industrial restructuring with growth potential, growth poles, development poles, urban centres, etc.), each of the eight development regions (save for Bucharest-Ilfov) having such areas in their structure.*

The implementation mechanism of regional policy presupposes instruments, institutions and legislative regulations that contribute to attaining the general and specific objectives established at the beginning of the programming period.

The main instrument of regional policy – the Regional Operational Programme – pursues to support balanced and sustainable territorial economic and social development of the regions, in accordance with their needs and specific resources, by focusing on urban growth poles, by improving infrastructure and business environment conditions in order to make them, in particular the lagging areas, more attractive zones for living, visiting, investment and labour.

The current institutional framework of regional policy in Romania comprises both central and regional levels, its purpose being to take major decisions within a regulated framework and to contribute to taking actions and measures with territorial impact. This system consists of the *Ministry of Regional Development and Tourism, the National Council of Regional Development, the regional development agencies, the regional development councils*. Besides the aforementioned institutions, also *strategic evaluation and correlation committees (CRESC)* consisting of representatives of the economic-social environment (at the proposal of the council for regional development, by consulting the relevant institutions, organisations and/or structures).

After the accession to the European Union and the opportunity of accessing Structural Funds intended for economic and social cohesion, within the above-mentioned institutions, bodies were created to ensure the management of allotted resources (the Management Authority for ROP and intermediary bodies created within the regional development agencies).

The allocation of national and Community resources intended for regional development is based on a set of priorities identified and

determined as a result of economic and social analyses performed within ROP: diminishing regional disparities, maximising regional potential, encouraging cooperation (Table 5). The main beneficiaries of the Regional Operational Programme are local public authorities, associations, to which, in a relatively low share, private companies (micro-enterprises) are added.

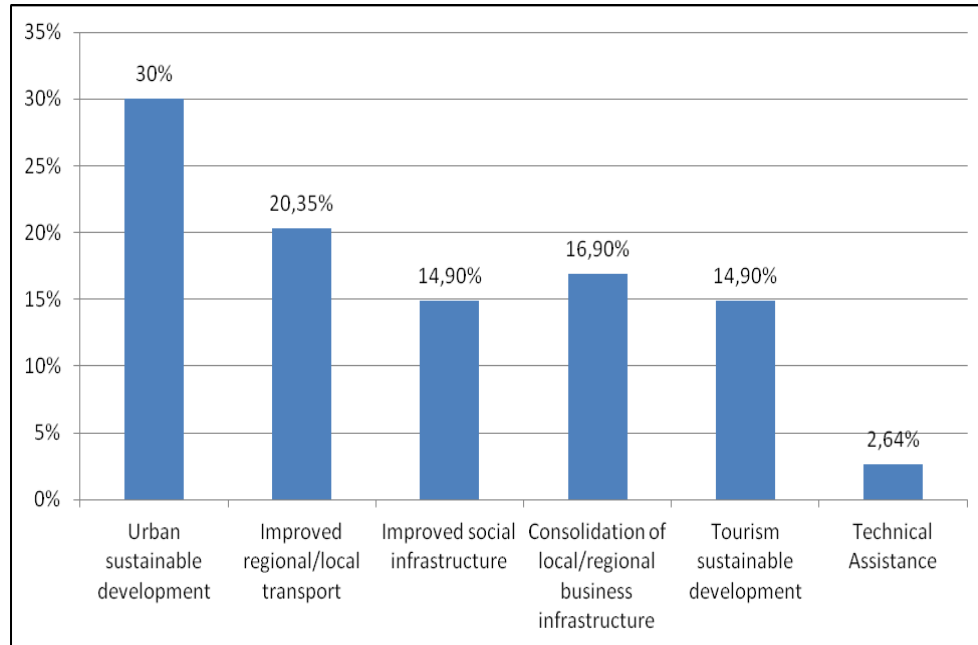
Table 5

Instruments of regional policy 2007-2013

| Central level | | Regional level | |
|---|--|---|---------------------------------|
| EU Cohesion Policy | | | |
| National Strategic Reference Framework 2007-2013 | | | |
| National Development Plan 2007-2013 | | | |
| <i>Institutions</i> | <i>Strategic Papers</i> | <i>Institutions</i> | <i>Strategic Papers</i> |
| - Ministry of Regional Development and Tourism – Management Authority for ROP Implementation - Monitoring Committee | National Strategy for Regional Development | - Regional Development Agencies - Intermediary bodies - Regional committees on strategic evaluation and correlation (CRESC) | Regional development strategies |
| | Regional Operational Programme | | Regional development plans |
| Allocated amounts (ERDF) - 3.726.021.762 Euro | | | |
| Beneficiaries: Local and central public authorities (LCPA), private sector, inter-community development associations | | | |

Source: Own processings, www.mdrt.ro.

The amounts for implementing the current regional policy allocated from Structural Funds have as a strategic objective attaining convergence at the level of the Member States of the European Union, the total value of these funds amounting to 3.72 billion euro, to which the national financing of 1.2 billion Euro is added. Up to September 2012, from the provisioned amounts for allotment to regional development about 13% were effectively spent, a relatively low absorption degree, if we take into account that for the PHARE programme, the contracting degree reached during the first years almost 97%. The main fields supported by ROP are urban development and regional infrastructure development (transport, social, education, health, business, tourism) (Figure 29).



Source: ROP 2007-2013, www.fonduri-structurale.ro and Annex 11.

Figure 29: Financial allocation by fields of ROP 2007-2013 (structural funds and national funds) - % in total allocation

Considering the development needs identified as a result of economic and social analyses within ROP, the financial allocations for the current programming period were differentiated by development fields and regions:

- *Allocation by regions* took into account the general development level evaluated by GDP per capita corrected by the population density; significant differences of allocation are between the North-East Regions (16.32% of the total) and Bucharest-Ilfov (8.86%), the rest of the regions being financed relatively on a balanced basis (with allocation differences of maximum 3.5%);
- *Allocation by priority fields* was also differentiated (urban development - 32%, transport infrastructure - 20%, social infrastructure - 15%, business environment - 16%), without a clearly defined criterion.

Related to the total GDP, financial allocations (from Structural Funds + national ones) range between 0.26% and 0.53% (Table 6).

Table 6

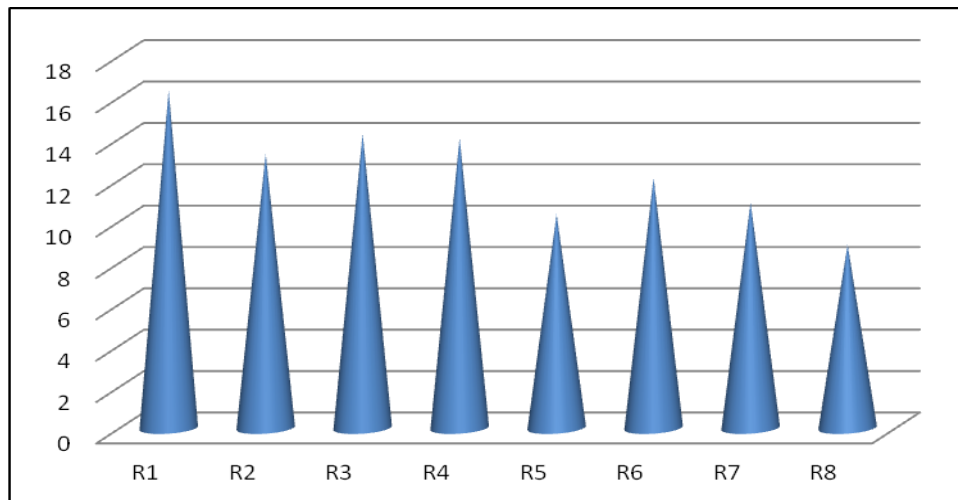
Financial allocation for ROP and share in GDP (mill. euro)

| Year | Total GDP (mill.Lei) | Exchange rate (Lei) | Total GDP (mill. Euro) | ROP allocation (mill. Euro) | Allocation in total GDP (%) |
|------|----------------------|---------------------|------------------------|-----------------------------|-----------------------------|
| 2007 | 416006.8 | 3.3 | 126062.7 | 330.17 | 0.26 |
| 2008 | 514700 | 3.7 | 139108.1 | 404.12 | 0.29 |
| 2009 | 498007.5 | 4.2 | 118573.2 | 441.13 | 0.37 |
| 2010 | 513640.8 | 4.2 | 122295.4 | 523.71 | 0.42 |
| 2011 | 544426 | 4.2 | 129625.2 | 556.77 | 0.43 |
| 2012 | 599060 | 4.4 | 136150 | 663.82 | 0.49 |
| 2013 | 659429 | 4.4 | 149870.2 | 806.26 | 0.53 |

Source : Data processing, *Projection of main macroeconomic indicators for the period 2010-2014*, www.cnp.ro, DCI POR 2007-2013, www.inforegio.ro.

Also, relating the funds allotted by ROP for the current programming period to the value of foreign investments represents 50% of the value for the year 2008²⁹ (9.5 billion euro) and from the value viewpoint is close to the one of the year 2009 (4.55 billion euro).

The main allocation criterion for Structural Funds is the gross domestic product per capita the amounts dedicated to all fields financed by ROP being consistent with the weights proportional to the indicator (Figure 30).



Source: http://www.mdpl.ro/_documente/POR/anexa_comunicat_alocare_regiuni.pdf and Annex 12.

Figure 30: Community financial allocation by ROP (%)

²⁹ Source: www.arisinvest.ro.

The financial substantiation of allocations by ROP has as a basis identifying some needs at regional level and analysis of the economic and social situation with the purpose of taking measures, actions and attaining the general and specific objectives.

In its structure, ROP contains the presentation of the current situation and the region profile, the analysis of the disparities between regions and within regions, the implementation strategy, the financial plan, the SWOT analysis, the environment analysis and the partnership process.

At the time of developing the Regional Operational Programme (2007), the analysis of the economic and social situation was difficult in particular because of the lack of some information and data on the eight development regions requested by the European Union, several of these data being estimates of the National Institute of Statistics (some data were subsequently rectified).

The statistical data on which the socio-economic analysis was based for the current Regional Operational Programme are those for the year 2005 (for GDP per capita, the reference year was 2004). We notice that, for some indicators, the values were recalculated by the European Commission (Eurostat), in particular for GDP per capita, the value of which was rectified by the *purchasing power parity*³⁰ factor (or parity power standard) a conversion factor used for calculating an alternative exchange rate between the currencies of two countries, or in a common artificial currency.

Based on the context indicators existing in the Regional Operational Programme a regional top of the economic, social, urban development level was made. The first place represents the highest indicator and the eighth position represents the lowest value (Table 7).

Table 7

Ranking of regions by the context indicators existing in ROP

| Indicators/Regions | R1 ³¹ | R2 | R3 | R4 | R5 | R6 | R7 | R8 |
|--------------------------------------|------------------|----|----|----|----|----|----|----|
| Population | 1 | 3 | 2 | 6 | 8 | 4 | 5 | 7 |
| Towns with < 20.000 inhabitants | 5 | 6 | 2 | 4 | 3 | 4 | 1 | 7 |
| Towns with 20.000-99.999 inhabitants | 2 | 6 | 2 | 5 | 3 | 4 | 1 | 7 |
| Towns with > 100.000 inhabitants | 1 | 5 | 4 | 3 | 4 | 2 | 3 | 5 |

³⁰ PPP measures the purchasing power of a currency, in an international measurement unit (as a rule, dollar) because goods and services have different prices in some countries as compared to others. When comparisons are made between different countries, the indicators such as GDP per capita are adjusted so that these differences are eliminated, and the comparison basis is unitary.

³¹ R1 – North-East Region, R2 – South-East Region, R3 – South Region, R4 – South-West Region, R5 – West Region, R6 – North-West Region, R7 – Centre Region, R8 – Bucharest-Ilfov Region.

| | | | | | | | | |
|---|-----|---|---|---|---|---|---|---|
| GDP per capita (2004) | 8 | 5 | 6 | 7 | 2 | 4 | 3 | 1 |
| Labour productivity (2004) | 8 | 5 | 6 | 7 | 3 | 4 | 2 | 1 |
| Foreign Direct Investments | 8 | 2 | 5 | 7 | 4 | 6 | 3 | 1 |
| Total SME | 5 | 4 | 6 | 8 | 7 | 2 | 3 | 1 |
| Business structures | 3 | 2 | 1 | 3 | 4 | 3 | 1 | 3 |
| Density of public roads | 2 | 8 | 4 | 3 | 6 | 5 | 7 | 1 |
| Modernised public roads in total public roads | 6 | 8 | 3 | 2 | 5 | 4 | 7 | 1 |
| Education units (state + private) | 4*) | 3 | 2 | 5 | 7 | 6 | 1 | 8 |
| Hospitals | 1 | 6 | 2 | 8 | 7 | 3 | 5 | 4 |
| Institutions supplying social services | 2 | 3 | 5 | 7 | - | 4 | 1 | 6 |
| Tourist accommodation units | 5 | 1 | 4 | 7 | 6 | 3 | 2 | 8 |

*) All pre-university educational units, both public and private (kindergartens, primary, secondary, upper-secondary, vocational, post-upper-secondary schools and higher education units).

Source: Data processing from ROP 2007-2013, www.fonduri-structurale.ro and Annex 13.

Effective, visible results of ROP implementation shall be 15.000 new jobs by the end of the year 2015 and preventing the increase in inter-regional disparities in terms of GDP per capita, in the period 2007-2013³². According to the analyses performed in the previous chapters, it was found that in Romania economic and social disparities between regions were increasing in the period 2007-2010, in parallel with a low absorption of allocated funds – only 13.96% (June 2012).

7.2. Evaluation of the impact of the Regional Operational Programme 2007-2013

Romania's integration within the European Union represented an important opportunity especially from the perspective of balanced regional development, severely affected after the '90s by industrial restructuring, chaotic privatisations and wind-up of large state-owned economic entities which supported intensely populated areas. These phenomena already presented above (and not only) have caused some regional and intra-regional disparities in terms of economic performance (GDP per capita) and deeper development differences, in particular, between urban areas and those with a more marked rural-agricultural character.

The expectations concerning the implementation of the Regional Operational Programme are determined by the fact that it will support a

³² www.mdrt.ro.

balanced increase of all areas of the country and, in particular, of the less developed ones, not as much by redistributing public resources but more by ensuring a minimum level of business, social and human capital infrastructure that would allow for economic growth in all areas³³.

In the following, the possible impact of implementing ROP 2007-2013 in Romania shall be analysed considering the programme, output and outcome indicators during the current programming period.

7.2.1. Results of previous evaluations

In Romania, the evaluation of the Regional Operational Programme 2007-2013 is, as a rule, based on the requirements of the European Commission transposed into the regulations and working papers presented in the previous chapter. Relevant for the evaluation of this programme are, mainly, the following documents:

1. The National Evaluation Strategy and
2. The Handbook of procedures for evaluating CSNR and the operational programmes in Romania 2007-2013 (www.evaled.com).

The institutions involved in the ROP evaluation are found only at central level (*top-down* evaluation), the other bodies³⁴ having only the role of enforcing the recommendations resulted from the analyses performed by the Management Authority (MA).

Within the Ministry of Regional Development and Tourism we find the Management Authority for ROP implementation which, together with the ROP Evaluation Unit, analyses the way the former is put into practice by identifying positive and negative evolutions of the process and attempting to eliminate present irregularities.

Within the ROP Management Authority we find the Coordination Committee of Evaluation and the Monitoring Committee (which approves the evaluation plans, requests ad hoc evaluations, etc.). The two committees work under the patronage of the National Coordination Committee which supervises their activity.

Also for supporting the evaluation activities of the ROP there is an Evaluation Working Group consisting of representatives of the Evaluation Unit within MA-ROP which has the role to ensure a common understanding level on the entire evaluation and implementation of all operational programmes financed by Structural Funds.

³³ ROP 2007-2013, MDLP, June 2007.

³⁴ In fact, regional development agencies and intermediary bodies.

The ROP evaluation, according to the General Regulation of the Council (EC) no. 1083/2006 (Art. 47-48) shall be developed in three stages:

1. Ex ante evaluation (realised already by the Coordination Authority of Structural Instruments in cooperation with MA-ROP and other relevant stakeholders);
2. ongoing evaluation (during the implementation period of ROP);
3. ex post evaluation (at the end of the implementation period).

Up to date, the following evaluations regarding the Regional Operational Programme have taken place:

1. *Evaluation of the administrative capacity of the regions in the field of regional development (December 2011)* for improving the administrative and capacity of the regions for preparing their role in the next programming period.
2. *Evaluation of implementing priorities and projects of ROP 2007-2013 addressed to the business environment* for better absorption of funds allocated to ROP 2007-2013 for developing the business environment and better programming after 2013.
3. *Intermediary evaluation of the Regional Operational Programme (year 2009)*. This evaluation being in an early stage of the ROP implementation did not have a significant contribution to increasing the absorption of funds allocated by the programme and aimed to balanced regional development.
4. *Ex ante evaluation of the Regional Operational Programme made in 2006*.

The most important ROP evaluations of conclusions and recommendations seems to be an ex ante evaluation of the year 2006 (in the period August–December³⁵) which pursued to optimise the allocation of financial resources and to improve the quality of the programming process. As a result of this evaluation, a series of aspects were found for which actions were requested to improve the quality of the regional programme:

1. *For future socio-economic analyses*, all elements that can contribute to regional development should be taken into account, this fact implying a complex analysis which could provide a complete picture of the actual situation (relevance increase).
2. *Improving the relationship between the objectives of regional policy and those of spatial development (territorial planning)*. The adjustment of the instruments for spatial development for using the

³⁵ Project PHARE 2004/016-772.04.03.01.06.

regional potential and better collaboration between the authorities responsible for these policies.

3. *Use of towns which are county municipalities as socio-economic development drivers* at regional level (growth poles) and anticipating some development opportunities.
4. *Resource concentrations* in the least developed regions.
5. *Tourism development* is regarded as having an important potential for improving economic growth and employment. For using this potential, is recommended the development of a regional strategy for tourism development at the beginning of ROP implementation that should include provisions for information and promotion.

Considering the above-mentioned recommendations, we find that some recommendations were already implemented, while the others should be taken into account for the next programming period.

7.2.2. *Impact on urban development*

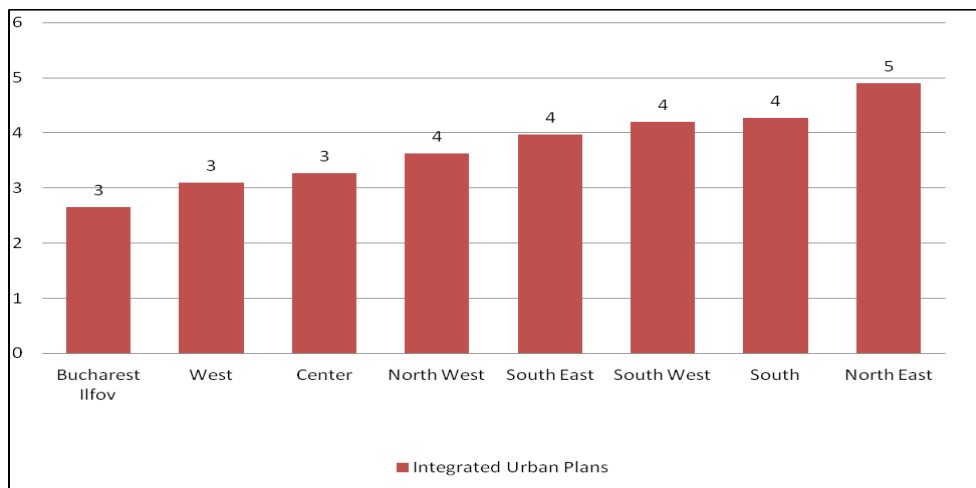
Regarded as engines of regional growth, the urban areas are supported by ROP through Structural Funds, the allocations reaching 30% of the total (from the viewpoint of ROP importance, given by the value of financial allocation, this field is on the first place).

The foreseen impact of implementing the measures initially established by ROP is an increase in the economic and social role and importance of urban centres, taking into account a polycentric approach, the final stated purpose being to stimulate the balanced development in territorial profile.

The financial allocation from Structural Funds was differentiated, the potential beneficiaries having the opportunity to develop and submit projects for solving some local development needs. There are three large categories of beneficiaries (direct beneficiaries of Community funds) who can submit integrated development plans (IDP):

- *Growth poles* - Iasi, Constanta, Ploiesti, Craiova, Timisoara, Cluj-Napoca and Brasov together with their areas of influence;
- *Urban development poles* - Arad, Baia Mare, Bacau, Braila, Galati, Deva, Oradea, Pitesti, Ramnicu-Valcea, Satu Mare, Sibiu, Suceava, Targu-Mures;
- *Urban centres* - towns and municipalities of over 10.000 inhabitants, a category in which the Bucharest Municipality was included, as well.

The amounts intended for urban development reach 1117.8 million euro (30% of the total), and they are intended for the fulfilment of 30 integrated development plans in the eight development regions. The average unitary value for an IDP is 37.26 million euro. Still, the average number of IDPs implemented within a region is different: the most of them should be for the North-East Region (Figure 31).



Source: Data from the *Applicant's Guide*, ROP, Annex 14.

Figure 31: Integrated development plans at regional level (number)

An integrated development plan should contain three categories of projects:

- (1) for improving urban infrastructure and services, including urban transportation (18 projects);
- (2) for sustainable development of the business environment (five projects);
- (3) for social infrastructure (seven projects).

Developed in partnerships between local public authorities, the individual projects contained in IDPs aim to various categories of eligible operations and actions, their main objective being to achieve sustainable urban development:

- a) Rehabilitation of urban infrastructure and improvement of urban services, including urban transportation: urban public infrastructure, transport and population mobility, world cultural patrimony (UNESCO, national and local, in the urban area);

- b) Sustainable development of the business environment;
- c) Rehabilitation of social infrastructure.

An integrated development plan contains minimum two projects from the above-mentioned categories of operations, and one of them must compulsorily refer to the rehabilitation of urban infrastructure and improvement of urban services, including urban transportation.

The integrated plans and their corresponding projects are beneficial to an urban population of about 400.000 inhabitants, the average amount allocated per inhabitant being 2.749 euro/inhabitant (Table 8).

Table 8

Impact of allocating Structural Funds for urban development

| | | Total | Average per region |
|---|------------------------|---------|--------------------|
| Inhabitants benefiting from the implementation of integrated plans of urban development | Number | 400.000 | 50000 |
| Companies setup in the regional/local growth poles | Number | 400 | 50 |
| Jobs created/maintained | Number | 1.500 | 187.5 |
| Total allocation for urban development | Mill. euro | 1391.17 | |
| Allocation per beneficiary inhabitant | Mill. euro/inhabitant | 0.003 | |
| Allocation per company | Mill. euro/company | 3.478 | |
| Allocation per job | Mill. euro/job | 0.93 | |
| Inhabitants related to a IDP | No. of inhabitants/IDP | 13333.3 | |
| Companies related to a IDP | No. of companies/IDP | 13.3 | |
| Jobs related to a IDP | No. of jobs/IDP | 50 | |

Source: Data from the Implementation-Framework Paper of ROP and Annex 14.

7.2.3. Impact on developing the regional transportation infrastructure

Transportation infrastructure is one of the traditional objectives of the regional policy and, at the same time, the central topic of many studies and theoretical and practical approaches.

By ROP, this field was allocated about 758.35 million Euro from Structural Funds (20.35% of the total allocation – second place after urban development), distributed entirely for interventions aiming at rehabilitation and modernization of some road categories (county and town ones) other than national interest roads, which are financed by the Transportation Operational Programme.

The impact of allocating Structural Funds on this field is analysed by means of physical programme indicators: kilometres of country/national roads that are rehabilitated/modernised, kilometres of ring-highways built and/or rehabilitated.

As a result of implementing ROP, about 2137 km of county and town roads shall be modernised. As regards the total value of allocations corresponding to the transportation infrastructure, one kilometre of road built/rehabilitated/modernised amounts to 0.3548 million euro.

By category of roads, the highest value of one kilometre is found in the case of county roads, amounting to 1.156 million euro. As compared to the cost regulation approved by the Ministry of Transport, i.e. 0.332 million euro/km³⁶, it results that this is very overevaluated.

With respect to the impact at regional level, each region shall benefit from Structural Funds, but in different shares, which will affect also the length of town and county roads built or modernised. Thus, the North-East Region shall build/rehabilitate about 348.76 km of roads (on the first place), the Bucharest-Ilfov Region with a length of roads of only 189.35 km being the last (Table 9).

Table 9

Impact of Structural Funds on regional infrastructure

| | North-East | South-East | South | South-West | West | North-West | Centre | Bucharest - Ilfov | Total |
|---------------------------------|------------|------------|--------|------------|--------|------------|--------|-------------------|---------|
| Roads modernised by ROP (km) | 348.76 | 283.14 | 304.11 | 299.18 | 220.96 | 258.57 | 232.93 | 189.35 | 2137.0 |
| Total public roads (km) | 13672 | 10763 | 12672 | 10838 | 10428 | 12322 | 10801 | 890 | 82386.0 |
| % of the total roads | 2.55 | 2.63 | 2.40 | 2.76 | 2.12 | 2.10 | 2.16 | 21.27 | 2.59 |
| Modernised public roads (km) | 3763 | 2537 | 4193 | 4241 | 3109 | 3028 | 3575 | 725 | 25171.0 |
| % of the total modernised roads | 9.27 | 11.16 | 7.25 | 7.05 | 7.11 | 8.54 | 6.52 | 26.12 | 8.49 |

Source: Data from *Applicant's Guide*, ROP and Annex 15.

³⁶ Resolution no. 717 of 14th July 2010 for amending and completing the Governmental Resolution no.363/2010 regarding the approval of the cost standards for investment objectives financed through public funds, a document issued by the Government of Romania, published in the Official Bulletin no. 537/2 August 2010.

If we relate the physical impact through Structural Funds to the existing situation, it can be found that the weight of the built road length in total regional roads is relatively low at general level (2.6 of the total and 8.5% of the total modernised roads), the situation by regions being the following:

1. With respect to the weight of the roads financed by European funds in total existing roads, the lowest values occur in the West Region (the smallest region by the number of counties and the covered surface), and the North-West Region, only 2.1% of the total, followed by the Centre Region (2.2%) and South (2.4%); the highest share – 21.3% - is registered by the Bucharest-Ilfov Region;
2. Roads modernised by Structural Funds in total existing roads represent 8.5% of the total, the highest weight being held by the Bucharest-Ilfov Region (26.1%), followed at a large distance by the South-East Region (11.2%), North-East Region (9.3%), North-West Region (8.5%).

Allocations from Structural Funds for modernising the road infrastructure covers to a very small extent the actual needs at regional level.

7.2.4. Impact on the development of the regional social infrastructure

The social field, consisting of the corresponding infrastructure and specific services, is an important component both of the regional national system, and of the Community one, its support contributing to increasing quality of life and promoting social inclusion.

The Structural Funds allocated by ROP have as final destination the rehabilitation, modernisation and endowment of the health services infrastructure, of the social services, and the provision of operational bases for emergency situations, and also of the educational infrastructure.

In the following, the impact for each of the above-mentioned infrastructures will be presented, an impact consisting mainly of modernisation, rehabilitation and endowment works; these are the main problems in these fields.

A. Health Services Infrastructure

The impact that ROP has on the process of regional development from this perspective is rendered concrete in building a number of 15 hospitals in the counties: Botosani and Vaslui (North-East), Buzau, Tulcea, and Vrancea (South-East), Dambovita, Ialomita and Teleorman (South-Muntenia), Gorj

and Valcea (South-West), Maramures (North-West), Satu-Mare, Salaj (North-West), Covasna (Centre), and Ilfov (Bucharest-Ilfov).

The effective impact consists in a number of 50 rehabilitated, modernised, endowed medical units, the allocated funds amounting to 173.58 million euro (ERDF), which presupposes an average expenditure of 3.471 million euro/medical unit.

By region, the impact is as follows: eight medical centres in the North-East Region, seven centres in the South-East Region, South and South-West Regions, five centres in the West and Centre Regions, six in the North-West Region, and four in Bucharest-Ilfov Region. The minimum value of an infrastructure project is 0.2 million euro, while the maximum value is 25 million euro (Table 10).

Table 10

Impact of Structural Funds on medical infrastructure

| | Allocation (mill. euro) | % of the total allocation | No. of medical units | Existing (Yearbook 2011), nos. | Existing (Yearbook 2011) % |
|---------------------|----------------------------|------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| North-East | 28.33 | 16.32 | 8 | 72 | 14.31 |
| South-East | 23.00 | 13.25 | 7 | 54 | 10.74 |
| South | 24.7 | 14.22 | 7 | 64 | 12.72 |
| South-West | 24.32 | 14.01 | 7 | 43 | 8.55 |
| West | 17.95 | 10.34 | 6 | 53 | 10.54 |
| North-West | 20.99 | 12.09 | 6 | 71 | 14.12 |
| Centre | 18.91 | 10.89 | 5 | 63 | 12.52 |
| Bucharest- Ilfov | 15.38 | 8.86 | 4 | 83 | 16.50 |
| Total | 173.58 | 100 | 50 | 503 | 100.00 |

Source: Data from *Applicant's Guide* and Annex 16.

The hospitals modernised by ROP represent 10% of the total number of hospitals existing at the national level (2010). Also, the investments in these hospitals contribute to increasing by 10% the access of inhabitants to rehabilitated/modernised/endowed medical units.

B. Social infrastructure

Another field sustained by ROP is the improvement of the *infrastructure quality for social services*, by support granted in a balanced manner throughout the country, for ensuring equal access of citizens to such

services. Thus, by ROP the co-financing of some projects of the following categories is taken into account:

- *Social centres* with multi-functional destination (with services from admittance to the centre and up to solving some specific and temporary problems, including some workshops for developing independent living habits and professional competences);
- *Investments in residential centres* that ensure accommodation services on long-term for persons in need.

Total allocations for supporting the social infrastructure amount to 99.52 million euro, of which ERDF is about 84.58 million euro.

The estimated impact of Structural Funds consists in rehabilitating/modernising 270 social centres, the average value for one social centre being 0.3658 million Euro.

The allocated funds allow for rehabilitation/modernisation of a limited number of centres at the level of each region, the most being localised in the North-East Region (44 centres), followed by the South and South-West Regions (38 centres) (Table 11).

Table 11

Impact of Structural Funds on social infrastructure

| | Allocation (mill. Euro) | % of the total allocation | Centres rehabilitated by ROP (no.) | Existing social centres - 2010 (no.) | Existing social centres -2010 (%) |
|-----------------|----------------------------|---------------------------------|--|--|---|
| North-East | 16.24 | 16.3 | 44 | 17 | 25.00 |
| South-East | 13.19 | 13.3 | 36 | 5 | 7.35 |
| South | 14.16 | 14.2 | 38 | 10 | 14.71 |
| South-West | 13.94 | 14.0 | 38 | 12 | 17.65 |
| West | 10.29 | 10.3 | 28 | 6 | 8.82 |
| North-West | 12.03 | 12.1 | 33 | 8 | 11.76 |
| Centre | 10.85 | 10.9 | 29 | 8 | 11.76 |
| Bucharest-Ilfov | 8.82 | 8.9 | 24 | 2 | 2.94 |
| Total | 99.52 | 100.0 | 270 | 68 | 100.0 |

Source: data from *Applicant's Guide*, ROP and Annex 16.

C. Infrastructure for interventions in emergency situations

The final outcome of these ROP allocations consists in improvement of the endowment with equipment for the operational bases for interventions in emergency situations. The specific objective is to diminish the

intervention time for granting qualified first aid and interventions in emergency situations.

The total of allocations is 99.5 million euro, intended for the purchase of vehicles and specific equipment in 510 mobile units for the regional and county operational bases, for interventions in emergency situations. These mobile units will finally contribute to diminishing the average intervention time from 30-45 minutes in rural areas and 20 minutes in urban areas (2005) to 12 minutes in rural areas and 8 minutes in urban areas (2015).

The distribution by regions and the effective impact of Structural Funds allocation were both based on GDP per capita and not the actual necessities of each region. Thus, most mobile units shall be endowed/modernised in the North-East Region (83 units), followed by the South (73 emergency units) and South-West (71 units) Regions. The average amount allocated from Structural Funds per mobile emergency unit is 195.137 euro/unit (Table 12).

Table 12

Impact on regional infrastructure for emergency situations

| | Allocation (mill. Euro) | % of the total | No. of units modernised/endowed by ROP |
|-----------------|----------------------------|----------------|--|
| North-East | 16.2 | 16.32 | 83 |
| South-East | 13.2 | 13.25 | 68 |
| South | 14.2 | 14.23 | 73 |
| South-West | 13.9 | 14.01 | 71 |
| West | 10.3 | 10.34 | 53 |
| North-West | 12.0 | 12.09 | 62 |
| Centre | 10.9 | 10.90 | 56 |
| Bucharest-Ilfov | 8.8 | 8.86 | 45 |
| Total | 99.5 | 100.00 | 510 |

Source: Data from the *Applicant's Guide*, ROP and Annex 16.

D. Educational infrastructure (pre-university, university and continuing vocational training)

The allocated funds are intended for improving the quality of the education infrastructure, of school endowment, of accommodation structures for students and of vocational training centres in order to ensure an educational process by European standards and increasing the participation of school population and adults in the educational process. The allocations amount to about 284.9 million euro, distributed by regions depending on the development level evaluated by the GDP per capita.

The average value of allocation for an education centre is 1.3567 million euro, the distribution by regions being as follows: most rehabilitated education centres will be in the North-East Region (34 units), followed by the South Region (30 units), South-West Region (29 units) and South East Region (28 units) (Table 13).

Table 13

Impact on regions of education infrastructure (pre-university, university and continuing training)

| | Allocation (mill. Euro) | % of the total allocation | No. of units created by ROP |
|-----------------|-------------------------|---------------------------|-----------------------------|
| North-East | 46.5 | 16.32 | 34 |
| South-East | 37.7 | 13.25 | 28 |
| South | 40.5 | 14.23 | 30 |
| South-West | 39.9 | 14.01 | 29 |
| West | 29.5 | 10.34 | 22 |
| North-West | 34.5 | 12.09 | 25 |
| Centre | 31.1 | 10.90 | 23 |
| Bucharest-Ilfov | 25.2 | 8.86 | 19 |
| Total | 284.91 | 100.00 | 210 |

Source: ROP information and data processing (*Applicant's Guide*) and Annex 16.

7.2.5. Impact on the regional business environment

One of the ROP objectives is to support the business environment by setting up business support structures, by sustaining micro-enterprises, rehabilitating polluted industrial sites which are not used and their preparation for new activities. In accordance with the data presented in Annex 17, for supporting the business environment by Axis 4 795.65 million euro are allocated, of which 644.42 million euro represent ERDF co-financing (16% of the total allocation by ROP).

The impact of Structural Funds can be evaluated on the base of the following directions: setting-up the business support infrastructure, rehabilitation of polluted sites and sustaining micro-enterprises.

Setting up business support structures

The first evaluation direction of the impact at regional level consists in creating two business structures in each region (in the Bucharest-Ilfov Region only a single region), the average amount per structure being 18.29 mill. euro (Table 14). In these business structures about 3000 jobs will be created, and the employment rate will increase by 50% after two years since the completion of the project.

Table 14

Regional impact on business structures

| | Financial allocation (mil. euro) | % of the total allocation | No. of business structures set-up by ROP |
|-----------------|---|----------------------------------|---|
| North-East | 44.78 | 16.3 | 2 |
| South-East | 36.36 | 13.3 | 2 |
| South | 39.05 | 14.2 | 2 |
| South-West | 38.44 | 14.0 | 2 |
| West | 28.37 | 10.3 | 2 |
| North-West | 33.18 | 12.1 | 2 |
| Centre | 29.91 | 10.9 | 2 |
| Bucharest-Ilfov | 24.31 | 8.9 | 1 |
| Total | 274.4 | 100.0 | 15 |

Source: Data from the *Applicant's Guide*, ROP and Annex 17.

Rehabilitation of polluted sites

With respect to the funds for the rehabilitation of polluted industrial sites which are not used and their preparation for new activities, they were redistributed to other fields financed by ROP, the impact being equal to zero. The decision of reallocating the funds was determined by a relatively low demand for financing the rehabilitation and reconversion of polluted industrial sites. Thus, out of the 200,09 million Euro allocated initially from ERDF for rehabilitation and reconversion of polluted industrial sites, about 172,85 million euro were redistributed towards other major fields of intervention.

These amounts shall be used for:

- ❖ rehabilitation, modernisation, endowment of health services infrastructure (26.65 million euro);
- ❖ sustainable development of business support structures of regional and local importance (13.31 million euro);
- ❖ supporting the development of micro-enterprises (28.47 million euro), restoration and sustainable valuation of the cultural patrimony, as well as creation/modernisation of related infrastructures (39.84 million euro);
- ❖ drawing up some creation, development, modernisation projects for the tourism infrastructure, for valuation of natural resources and increasing the quality of tourist services (64.58 million euro).

Sustaining microenterprises

Another important investment objective within ROP is supporting the development of productive and service supplying microenterprises³⁷ using the endogenous potential of the regions (natural resources, raw materials, human resources, etc.). They are supported in using new technologies and IT equipment contributing to competitiveness and productivity increase. Financing microenterprises is meant to support the continuation of the restructuring and economic turnaround processes of areas in decline, in particular of small and medium towns, because they create jobs and have the required flexibility to adjust to the requirements of a dynamic market economy.

The impact of Structural Funds consists in supporting 1500 microenterprises and creating 3000 new permanent jobs. The total value of the projects financed for supporting microenterprises (amount of eligible and non-eligible expenditures) must range between 100.000 Lei and 3.000.000 Lei. The financial allocation for the 2007-2013 period for supporting the development of microenterprises is 200.09 million euro (EFRD).

The impact of allocations differs from one region to another, the stated basic criterion being GDP per capita. Thus, most companies shall be created in the North-East Region (245 companies), followed by the South Region (213 companies) and South-West Region (210 companies). Two new jobs shall be created per microenterprise. The impact triggers an increase in the productive capacity of the microenterprises benefitting from Structural Funds (Table 15). A microenterprise shall benefit of about 133.393 euro, while the amounts intended to job creation are 66.608 Euro.

Table 15

Regional impact on microenterprises

| | Financial allocation (mill. Euro) | % of the total allocation (%) | Microenterprises (no.) | Created jobs (no.) | |
|------------|-----------------------------------|-------------------------------|------------------------|--------------------|------------------|
| | | | | | Two jobs/company |
| North-East | 32.66 | 16.3 | 245 | 490 | |
| South-East | 26.51 | 13.2 | 199 | 397 | 2 |
| South | 28.47 | 14.2 | 213 | 427 | 2 |

³⁷ Microenterprises are enterprises that have up to 9 employees and have an annual net turnover or have total assets of up to 2 million euro, Lei equivalent, in accordance with Law no. 346/2004 regarding the stimulation of SME set-up and development, with subsequent amendments and completions.

| | | | | | |
|-----------------|--------|-------|------|------|---|
| South-West | 28.03 | 14.0 | 210 | 420 | 2 |
| West | 20.69 | 10.3 | 155 | 310 | 2 |
| North-West | 24.19 | 12.1 | 181 | 363 | 2 |
| Centre | 21.81 | 10.9 | 164 | 327 | 2 |
| Bucharest-Ilfov | 17.73 | 8.9 | 133 | 266 | 2 |
| Total | 200.09 | 100.0 | 1500 | 3000 | 2 |

Source: Data from the *Applicant's Guide*, ROP and Annex 17.

7.2.6. Impact on the tourism sector at regional level

One of the fields with significant economic potential that can contribute to the regional development is tourism. The impact that this field has on the development level of a region consists, mainly, in creating jobs by putting to good use the cultural and natural patrimony specific to each area.

Tourism is supported by the Regional Operational Programme, the allocated funds amounting to about 616.77 mill. euro (15% of the total allocation) of which 558.90 million euro by EFRD contribution and 57.87 million euro national contribution.

The financing of tourism by ROP is rendered concrete mainly in restoration and sustainable valuation of the cultural patrimony projects, the creation/modernisation of related infrastructures, of the tourism infrastructure for putting to good use natural resources and increasing the quality of provided tourism services, and promoting the tourism potential for increasing Romania's attractiveness as tourist destination.

Restoration of cultural patrimony

The financing of this sub-field is within ROP by Structural Funds to which the national and private financing is added. Some objectives with important tourism potential are included in the UNESCO³⁸ patrimony, others located both in the urban and the rural areas constitute national and local (urban and rural) cultural patrimony.

The impact of structural funds consists of 100 restoration projects of the patrimony infrastructure with touristic potential and the creation of over 200 jobs, concomitantly with an increase by 5% in the tourists' number. The total value of a project ranges between a minimum value of 0.4 million euro

³⁸ The list of the UNESCO world patrimony in Romania in accordance with Resolution no. 493/2004 for approving the Methodology regarding the monitoring of historical monuments registered with the World Heritage List, Annex A, with subsequent amendments and completions.

/project and a maximum one of 2.92 million euro /project, depending on the size and complexity of the projects.

The average value of a cultural patrimony restoration project is about 2.354 million euro and the average number of created jobs per project is two.

By region, the distribution of the allocations from Structural Funds intended for this sub-field was based on the GDP per capita, most restoration projects being located in the North-East Region (16 projects), followed by the South and South-West Regions (each 14 projects) and South-East Region (13 projects) (Table 16).

Tabel 16

Structural Fund impact on cultural patrimony

| | Allocation (mill. euro) | % of the allocation | No. of financed projects | Jobs created by ROP |
|-----------------|-------------------------------|------------------------|-----------------------------|------------------------|
| North-East | 38.42 | 16.32 | 16 | 33 |
| South-East | 31.19 | 13.25 | 13 | 26 |
| South | 33.5 | 14.23 | 14 | 28 |
| South-West | 32.98 | 14.01 | 14 | 28 |
| West | 24.34 | 10.34 | 10 | 21 |
| North-West | 28.46 | 12.09 | 12 | 24 |
| Centre | 25.66 | 10.90 | 10 | 22 |
| Bucharest-Ilfov | 20.85 | 8.86 | 9 | 18 |
| Total | 235.4 | 100.00 | 100 | 200 |

Source: Data from the *Applicant's Guide*, ROP and Annex 18.

Modernisation of tourism infrastructure

The projects financed by ROP and intended for supporting tourism cover a large range of activities that can be included in the following categories:

- projects related to valuing national resources with tourist purpose;
- projects regarding the diversification of tourist services;
- projects with the main purpose to create/expand the tourist entertainment structures in view of increasing the number of tourists and sojourn duration .

The above-mentioned projects are implemented in areas with tourist potential from the urban area, in rural localities where projects with a value higher than 6.400.000 Lei are implemented and in spas (irrespective of location: rural or urban).

Financial allocation intended for these sub-field amounts to 330.019 million euro, of which 231.013 million euro from EFRD and 99 million euro by national co-financing (from private sources).

The impact of allocated funds is shown by the creation of 300 companies, 350 projects and around 800 jobs (about two jobs/project).

The amplitude of the impact is different from one region to another, and most projects are proposed for the North-East Region (57 projects) followed by the South Region (50 projects) and South-West Region (49 projects). The average value of a project is 0.66 million euro (Table 17).

Table 17

Structural Fund impact on tourism infrastructure

| | Allocation (mil. euro) | % of the allocation | Companies | Projects | Jobs created |
|-----------------|------------------------|---------------------|-----------|----------|--------------|
| North-East | 37.7 | 16.32 | 49 | 57 | 131 |
| South-East | 30.61 | 13.25 | 40 | 46 | 106 |
| South | 32.87 | 14.23 | 43 | 50 | 114 |
| South-West | 32.36 | 14.01 | 42 | 49 | 112 |
| West | 23.89 | 10.34 | 31 | 36 | 83 |
| North-West | 27.93 | 12.09 | 36 | 42 | 97 |
| Centre | 25.18 | 10.90 | 33 | 38 | 87 |
| Bucharest-Ilfov | 20.47 | 8.86 | 27 | 31 | 71 |
| Total | 231.01 | 100.00 | 300 | 350 | 800 |

Source: Data from the *Applicant's Guide*, ROP and Annex 18.

Promoting tourism potential and creating the necessary infrastructure for increasing Romania's attractiveness as a tourist destination

Promoting Romania as tourist destination presupposes a series of activities that would attract a higher number of tourists (from Romania and abroad) and would contribute to the sustainable development of tourism products. Thus, a set of objectives are established, such as:

1. Creating a positive image of Romania as tourist destination by defining and promoting the national tourism brand.
2. Developing and strengthening internal tourism by supporting the promotion of tourism products and specific marketing activities.
3. Creating national information and tourism promotion centres (CNIPT) and their endowment.

The indicative financial allocation for this field ("Promotion of tourism potential and creation of required infrastructure for increasing Romania's attractiveness as a tourist destination") is 150.356 million euro,

of which 127.803 million euro from EFRD, and 22.553 million euro from the state budget.

For creating the country brand 75 million euro are allocated, and for the creation of *national information/touristic promotion centres, including endowment* the financial allocation is about 20 million euro (of which 700.000 euro for creating an integrated and computerised system for the Romanian tourism offer).

The estimated impact consists in carrying out ten promotion campaigns for the tourism brand at national and international level, as well as ten national information centres. The impact of these actions should lead to an increase in the number of tourists visiting Romania to approximately one million.

The estimated average value of a promotion centre is about 1.93 million euro, while for a promotion campaigns of the country brand about 7.5 million euro are allotted. There is no reference value for any of the presented indicators that could contribute to a comparative analysis during the implementation of the regional programme.

7.3. Effective impact of ROP³⁹ (31st December 2011)

The evaluation of the effective impact of ROP was based on the finalised projects and the existing situation by the end of the year 2011 (the last available data therefore – source: www.acis.ro). The situation of the indicators proposed by the Regional Operational Programme show that by the end of 2011 only relatively few finalised projects were identified. The field with the least finalised projects is urban development (Axis 1 of ROP) which represents about 0.1% of the number of projects proposed to be implemented in the 2007-2013 period, followed by the restored patrimony units (1% of the total proposed indicator) and SMEs in the field of tourism (2%). The most finalised projects were in the private field (supporting microenterprises) where the achievement share of the output indicator was about 23%. These projects were implemented by microenterprises, most of them with an important financial support power, the grant amounting to 200.000 euro, and the co-financing being equal to zero.

The evaluation of the ROP implementation situation by the end of 2011 shows that local public authorities did not succeed in generating and

³⁹ The effective impact is given by the finalised projects on 31 December 2011. Source: *Annual Report on ROP Implementation* in 2011.

implementing projects of territorial impact mainly because of their complexity but also due to the scarcity of financial sources that would support beforehand the development of activities until the entry of Community funds (Table 18).

Table 18

Effective impact of ROP on 31st December 2011 – finalised projects

| <i>Finalised projects</i> | <i>Achievement degree of the outputs after five years of EU-27 integration</i> |
|---|---|
| <p><i>Urban development</i> One shelter for the elderly rehabilitated Two video supervision systems ≈ 188,000 beneficiary inhabitants 1 million euro attracted funds from the 1117.8 established in ROP</p> | None of the 30 integrated development plans was realised, only separate projects, the achievement share of the output indicator being of 0.1%. |
| <p><i>Road infrastructure</i> 293 km of modernized county roads 10.5 km of belt-highway built 15 km of rehabilitated county roads 64.8 million euro attracted EU funds</p> | ROP proposed to build 2137 km of town and county roads. Effectively about 14.9% of the output indicators proposed were build. With respect to allocation, the attracted amounts represent 8.54% of the allocation intended for the field, i.e. 758.35 million euro. The output indicator was achieved in proportion of 8.54%. |
| <p><i>Health infrastructure</i> 9 rehabilitated and equipped ambulatories 6.9 million euro attracted EU funds</p> | Out of the 50 medical units proposed for rehabilitation/modernisation effectively nine units (18%) were built. The allocated funds (173.58 million euro) were spent in proportion of 3.97%. The average value per built medical unit is 766,667 euro /unit, significantly smaller as compared with the one initially determined of 3.471 million euro. The achievement proportion of the output indicator was 3.97%. |
| <p><i>Social infrastructure</i> 22 modernised social centres 5.9 million euro attracted EU funds</p> | ROP proposed for building/modernizing 270 social but only about 8% were finalised. |
| <p><i>Emergency situation equipment</i> 40 equipped mobile units ≈ 2.5 serviced persons 5.8 million euro attracted EU funds</p> | For endowment 510 units for emergency situations were proposed, of which effectively 40 (about 8% from total) were equipped. |
| <p><i>Educational infrastructure</i> 38 rehabilitated education units ≈ 17,000 serviced students 11.9 million euro attracted EU funds</p> | ROP proposed the endowment of 210 education units, the achievement degree of this indicator being 18% (effectively rehabilitated 38 education units). |
| <p><i>Business infrastructure</i></p> | Two business centres were finalised from the 17 proposed |

| | |
|---|---|
| Two business centers 93 new jobs 7.3 million euro attracted EU funds | for building (12% of the total). With respect to the number of created jobs this indicator was achieved in a proportion of 3% (93 jobs were created). |
| <i>Microenterprises</i> 341 supported microenterprises 1,470 created jobs 29.5 million euro attracted EU funds | S341 microenterprises were created out of the 1500 proposed ones, the effective achievement of the indicator being 23%, and the number of created jobs was 1470 out of 3000 (49%). |
| <i>Cultural patrimony</i> One restored wood forest 262 million euro attracted EU funds 7.2 million euro allocated EU funds | Effectively about 1% of the proposed total were built (1 of the 100 patrimony units proposed for building/restoration). |
| <i>Tourism promotion</i> One tourism promotion project 31,515 information/ advertisement materials 133 million euro attracted EU funds | The achievement degree of the touristic entertainment projects was 3% (8 from 300). The jobs created in tourist entertainment (no.) were 82 of 800 (10%). With respect to the number of SMEs financially assisted in the field of tourist entertainment, effectively 2% of the total (8 of 350) were completed. |

Source: Data from the *Annual Implementation Report*, www.acis.ro.

The Regional Operational Programme has as a strategic indicator (programme indicator) the creation of 15,000 jobs. By the end of 2011, after five years since the EU accession, by implementing the ROP priorities about 1647 jobs were created, which represented 11% of the indicator foreseen for completion. Still, it is considered that, by the *financing contracts* concluded with the beneficiaries up to the end of 2011, the central authorities estimate to create 14,716 jobs, that is 98% of the ROP target.

7.4. Conclusions

In general, the evaluation is a process pursuing to improve the quality, efficiency and coherence of interventions based on Structural Funds, of the strategy and of the operational programmes. From the viewpoint of existing typologies, in order to evaluate interventions by Structural Funds three important categories taking into account the time of implementation are used: ex ante evaluation, intermediary and ex post evaluation. Also, the consecrated indicators used for evaluation and within the logical framework for necessities substantiation are: context and programme indicators, resource, immediate output, outcome and impact indicators, relevance indicators, along with efficiency, effectiveness and performance indicators.

Regarding the experience of the Member States in evaluation, there has been a process of adjustment and change, in particular as an outcome of the requirements imposed by the Community fund regulations. The co-financing granted by the European Union and the complexity of the evaluation have determined Member States to develop evaluation procedures also for other public interventions, not only for those financed by Structural Funds. The general trend noticed is that the Member States display a large variety of political approaches with respect to evaluation, and for the last programming period an improvement phenomenon of this process can be seen, even if harmonisation cannot yet be considered for evaluation from the organisational and methodological viewpoint.

For Romania, a Member State of the European Union since 2007, the evaluation is in an early stage and an actual evaluation culture is inexistent for interventions financed by public funds. This aspect is also valid for other New Member States that did not try an evaluation of public interventions.

Becoming very important, regional development represents one of the basic elements of the integration and the economic and social cohesion. The regional policy, by the Regional Operational Programme; might contribute to diminishing discrepancies between regions and inside them, provided that a better substantiation of decisions regarding the allocation of Structural Funds is achieved whenever needed.

The current programming exercise of the regional policy and of the financial resources showed that due to the low level of general development, the majority of allocated funds were directed towards the North-East Region, without considering the fact that this region did not have the financial capacity to support such investment.

Financial allocations by ROP were based only on the GDP per capita and less on the actual needs of each region. Also, allocations from Structural Funds aimed to modernize the infrastructure in general cover to a very small extent the actual necessities at regional level.

The main difficulties in the current ROP implementation are mainly caused by the fact that *specific regional necessities were not actually identified and the weak capacity of the regions for effective absorption of the funds* (capacity which was not taken into account at the time of ROP implementation).

For the following programming period it is necessary for the socio-economic analyses to take into account all elements that can contribute to the development of a region. This fact implies a complex analysis of all needs and, possibly, a list of priority, strategic, projects before launching the programme.

Also, the improvement of the relationships between central and local authorities, as well as the adjustment of the instruments for the maximum use of the regional potential can have a positive impact. Last but not least, action could be taken by concentrating the resources in the less developed regions, but only by ensuring some important co-financing resources.

8. Regional policy and the Europe 2020 Strategy

Currently, the public consultation regarding the regional policy and the *Europe 2020* Strategy is almost finalised, the contributions and opinions of the Member States, regions and towns being included in the working paper of the European Commission. This, according to the opinion of the representatives of the Committee of the Regions, “*would be necessary to continue developing towards a favourable policy for the Union’s objectives regarding growth and jobs, a policy to stimulate the endogenous development of the regions*”.

8.1 Premises and objectives

The premises from which the promotion of the future EU regional policy started considered the following aspects that can negatively or positively influence its implementation:

- EU population’s increase not as in effect of natural demographic growth but as an outcome of the enlargement;
- a stricter control of the migration process;
- a relative increase in the total activity rate and the RDI expenditures;
- a decreasing trend in public expenditures along with a punctual increase in energy price;
- liberalisation of international trade and a diminution in the common agricultural policy budget;
- improving coherence between innovation policies and the competitiveness ones;
- extreme presence of moderate climatic changes (+1°C) and an increase in the frequency of climatic events.

The current regional policy pursues to promote growth and full employment of labour force in the less developed regions, to strengthen regional competitiveness and territorial cooperation. Some of the established objectives have not been fully achieved during the current programming period; therefore, in the future they shall be further taken over and supported.

The proposals regarding the drafting of the regional policy 2014-2020 must take into account the current context of implementation⁴⁰, but it should

⁴⁰ http://ec.europa.eu/regional_policy/sources/docgener/studies/study_en.htm.

correctly estimate the effects of the economic and social crisis on medium and long term. The economic and financial crisis that affected all Member States in different proportions can be combated also by actions within the regional policy considered as true “salvation” solutions.

The *Europe 2020* Strategy for *smart, sustainable and inclusive growth* is based on three interrelated priorities:

- *smart growth* - by strengthening knowledge and innovation;
- *sustainable growth* - assumes the creation of an economy based on efficient, sustainable and competitive use of existing resources;
- *growth based on sustaining social inclusion* – implies the development of inhabitants’ knowledge, full employment of labour force, competence development, poverty alleviation, etc.

The key indicators proposed by the *Europe 2020* Strategy fulfil the SMART criteria being directly linked to the developments and trends in the labour market, by sustainable and social development:

1. increase in population’s employment rate (20 – 64 years) from the current level of 69% to at least 75%;
2. investments in research-development should reach 3% of the EU GDP;
3. fulfilment of the 20/20/20 objective (or 30/20/20, in case of complying with certain conditions) regarding climate changes and energy;
4. early school leaving rate below 10%, the weight of young population to graduate tertiary education of at least 40%;
5. diminishing the number of persons at risk of poverty by about 20 million.

The interdependent key targets established by the Strategy must be transposed by the Member States and Romania into specific national targets and in action guidelines by considering the economic situation of each state. Putting into practice the actions determined by the European policy depends, to a large extent, on the existence of firm political commitment, and on an efficient implementation mechanism both at EU and Member States’ level. Furthermore, for attaining the strategic objectives a set of seven flagship initiatives were proposed aiming at: innovation, education, digital society, climate changes and energy, competitiveness, labour force employment and competence training, poverty alleviation. These initiatives are accompanied by a series of legal actions, key instruments (internal market, industrial policy, EU’s economic foreign agenda) and financial instruments to increase the focus on implementing the objectives of the *Europe 2020* Strategy.

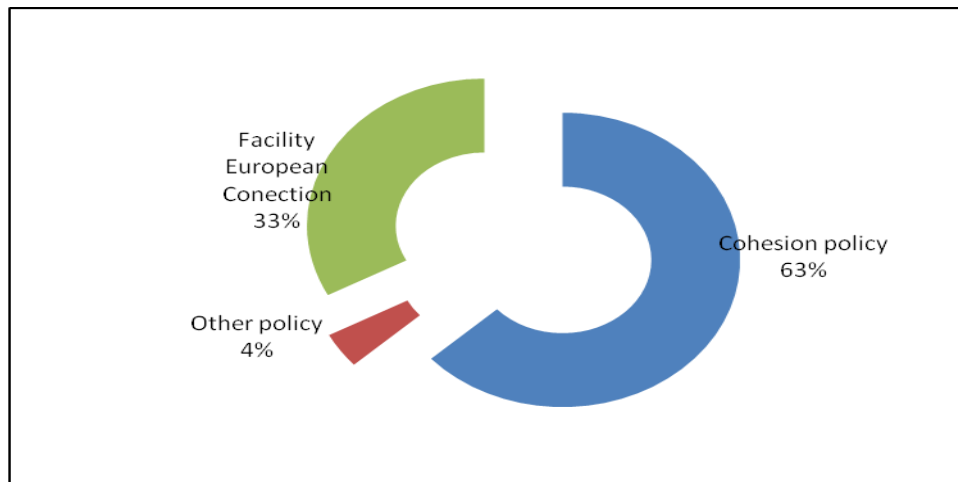
The development of the Strategy took into account possible implications on medium and long term of the financial and economic crisis, of the way budgetary and monetary policies could manage this phenomenon, and the direct support granted to the economic sector, etc.

Regarding the governing framework, the *Europe 2020* Strategy presupposes clearly defined and measurable objectives that would evaluate correctly the progress made, being organised thematically and for more exact country monitoring. In order to obtain these effects, evaluation and reporting shall be developed simultaneously on the *Europe 2020* Strategy (the structural reform component) and on the Growth and Stability Pact (the macro stability and public finance component).

The general guidelines of the *Europe 2020* Strategy were adopted at the beginning of the year 2010, as they were going to be put into practice immediately at the end of the current programming period.

8.2 Financial allocations and legislative proposals

The EU regional policy is implemented by means of Structural Funds that consist of public funds allocated from the Community budget. For the period 2014-2020 the total value of the European Union financial support by Structural and Cohesion Funds will be 376 billion (of which 40 billion for “connecting Europe” in the field of transportation, energy and ITC), representing about 33% of the European Union budget (Figure 32).



Source: http://ec.europa.eu/regional_policy/what/future/proposals_2014_2020_en.cfm.

Figure 32: Allocated budget for the cohesion policy 2014-2020 (bill. euro)

From the total amount of 336 billion Euro, the cohesion fund shall be allocated about 8.7 billion euro (value diminished by approximately 0.9 billion euro as compared with the current period), the difference going to regional and social development, which will distribute the resources depending on the development level of the respective area, as follows:

1. For less developed regions – 162.6 billion euro;
2. For developed regions – 53.1 billion euro;
3. For transition regions - 39 billion euro;
4. For territorial cooperation – 11.7 billion euro;
5. Additional allocation for ultra-periphery and Northern regions – 0.9 billion euro.

The legislative architecture of the future cohesion policy contains four important regulations, on which of the general and specific framework of implementing Community measures and actions are based:

- *General Regulation* for establishing some common provisions regarding the European Regional Development Fund (ERDF), the European Social Fund (EFS), the Cohesion Fund, The European Agricultural Rural Development Fund (EARDF), European Maritime and Fishery Fund (EMFF), as well as for determining some general provisions regarding ERDF, EFS and the Cohesion Fund;
- *three specific regulations* regarding ERDF, EFS and the Cohesion Fund;
- *two regulations regarding the European territorial cooperation* and the European Grouping for Territorial Cooperation (EGCT).

The principles applicable to Structural and Cohesion Funds are similar to the ones applicable to the current programming period (partnership, promoting equality between women and men, non-discrimination, sustainable development, compliance with EU and national legislation), to which a new principle is added: *multilevel governance*.

The regions will benefit also in the future programming period by ERDF and EFS financing, the allocations being in reverse proportion to the level of GDP per capita. Thus, the less developed regions (GDP per capita smaller than 75% of the EU-27 average) shall continue to be a priority of the cohesion policy. Regional convergence and recovery of economic and social lags shall imply sustained efforts on long term.

Another category of regions that shall receive assistance also in the future is represented by the regions in transition with a GDP per capita between 75-90% of the EU-27 average.

The regions with a high development level (GDP per capita less than 90% of the EU-27 average) shall also benefit of Community assistance for meeting the challenges of globalised competition in the knowledge-based economy and for shifting to the low-carbon emissions economy.

The transition or less developed regions shall receive an allocation from Structural Funds equal to at least two-thirds of allocation for 2007-2013.

Regarding the regional support of EFS, minimum quotas shall be established for each category of regions (25% for less developed regions, 40% for regions in transition and 52% for developed regions). This minimum global quota represents 25% of the budget allocated to the cohesion policy (84 billion euro).

The main instrument for implementing the future regional policy within the EU is represented by the European Regional Development Fund (ERDF) with a strategic objective to *strengthen economic, social and territorial cohesion in the EU by correcting existing imbalances between its regions*. ERDF supports both the regional development and the local one for achieving all thematic objectives, by establishing the following priorities:

- research, development and innovation;
- improving access to information and its quality, as well as access to communication technology;
- climate changes and shifting to a low-carbon emission economy;
- commercial support granted to SMEs;
- services of general economic interest;
- telecommunications, energy, and transport infrastructures;
- strengthening the institutional capacity and efficient public administration;
- health, education and social infrastructure;
- sustainable urban development.

The changes in the next programming period is determined by the Community interest to diminish losses or inefficient allocations from public funds (national or Structural Funds). To this end, the future regional policy shall take into account:

1. *Strengthening thematic focus* – therefore, minimum allocations shall be established for a number of priority areas. The less developed regions shall focus on a wider range of investment priorities that would reflect their higher development needs. Also, at least 50% of the ERDF funds shall be allocated to energy efficiency and renewable energy, innovation and support to SMEs.

2. *Strengthening territorial cohesion* – the future regional policy shall focus even more on sustainable urban development, that will benefit of about 5% of the ERDF resources. Urban development platforms will be promoted for consolidating capacities and experience exchange. Therefore, a list of towns shall be adopted in which integrated actions will be applied for sustainable urban development. A special attention shall be granted to areas with natural or demographic particular earmarks, as well as an additional allocation for the ultra-periphery and poorly populated regions.

8.3 Simplification – Basic characteristic of the Europe 2020 Strategy

The main characteristic of the future cohesion and regional development policy of the EU shall be *simplification (under explicit – direct or optional – form)*. The proposed simplification ways proposed by the European Commission shall be diverse, complex and be relatively easily applied, the final outcome being easy access of beneficiaries to Structural and Cohesion Funds⁴¹. We mention some of theme:

1. *Harmonising regulations regarding regional policy* and its instruments (ERDF) with other funds within the Strategic Community Framework (SCF), for instance, the Cohesion Fund (FC), the European Social Fund (ESF), the Agricultural European Rural Development Fund (EARDF) and the European Maritime and Fishery Fund (EMFF). Thus, the number of strategic documents shall be reduced to a single document at the EU level, as well as the national level for all Structural Funds;
2. *Increased flexibility in programmes organisation* - options: Member States and regions can plan allocated funds within separate operational programmes, can change the financial allocation by up to 2% by category of regions, can combine financing a project by several instruments financed at the EU level, can finance activities of horizontal technical assistance from one fund and can operate mergers between attributions of the management and certification authorities. Also, they are free to institute common monitoring committees and to organise yearly meetings for re-examination of the programmes financed by SCF.

⁴¹ *Simplification of the Cohesion Policy for the period 2014-2020*, February 2012, EC, http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/simplification_ro.pdf.

3. *Increased proportionality* – the reporting/evaluation/management/control activities shall be proportional in financial and administrative terms to the level of allotted support. The Commission and the Member State can agree not to organise a yearly re-examination meeting. Considering that the launching of programmes requires time, the first report regarding the enforcement and the documents about closing the accounts must be sent only in 2016. Applying sampling methods based on risk in case of controls performed by the management authority shall allow for a better use of resources. Also, the audit activities of the Commission shall be focused on fields of higher risk. In case of some efficient audit authorities, the Commission shall limit the auditing if the national systems of enforcement operate well. The proposal limits also the intensity of project auditing; for instance, the projects amounting to less than 100.000 euro can be audited only one time, before conclusions, and the other once a year.
4. *Legal security by clear regulations*. According to the rules established by the EU, the financing conditions for Structural Funds are determined. The diversification of financial instruments proposed for the programming period 2014-2020 shall impose standardisation for diminishing the number of rules established at the level of each Member State.
5. *Increased efficiency in achieving the objectives and facilitating the reporting*. Simplifying the procedures of reporting shall lead to diminishing administrative costs, better collection and aggregation of data, direct and operative reporting, etc.
6. *Simplifying administrative procedures for the Structural Fund beneficiaries* (for instance, diminishing the period of keeping document records from maximum ten years to five years).

Simplifying the rules and procedures by which Member States and regions accessed Structural Funds shall contribute in the future programming period to better management of the process, as a whole, and to a more visible impact on territorial development.

8.4 Conclusions

The cohesion and regional development policy promotes a harmonious development of the European Union and pursues to diminish disparities between regions and within them. Also, it promotes the growth model proposed by the *Europe 2020* Strategy, including the necessity of

meeting the societal challenges, and those related to labour force employment in the Member States and in the regions.

The current regional policy, the stated objectives of which were *convergence, competitiveness, territorial cooperation*, was affected by a series of global economic and social phenomena that influenced negatively the evolution of the cohesion process, several regions facing important structural problems. This fact determined the proposal of continuing the diminution of disparities also for the next programming period between EU states and regions, but with a higher flexibility in applying the requirements imposed by the regulations of the Structural Funds.

From the perspective of the *Europe 2020* Strategy, the regions may further receive differentiated support depending on their economic development level (GDP per capita), a clear distinction being made between “less developed” and the “more developed” regions.

With respect to the regions with a similar level of economic development, the possibility shall be given to implement support gradually, by a simplified system that will include a new intermediate category of regions. This category would contain eligible regions currently under the convergence objective, but for which the GDP per capita is higher than 75% of the European Union average.

Another aspect worth signalling is the way in which the European Social Fund (ESF) is oriented towards fulfilling the objectives of the Strategy and a better visibility of financing and impact. Also, the Cohesion Fund shall continue supporting the Member States for which the GDP per capita is below 90% of the Union’s average.

Last, but not least, the regional policy shall promote other territorial dimensions of cooperation as well (cross-border, transnational and inter-regional), but shall take into account the revision and simplification of the current provisions regarding cross-border cooperation at the external borders of the EU, as well as of the present practice regarding transnational actions financed both by ERDF and ESF.

9. A strategy model regarding regional development in Romania, applicable to the 2014-2020 programming period

Currently, the cohesion and regional development policy is widely debated as regards the substantiation of principles and objectives of the next programming period (2014-2020).

For the European Union, as a whole, the new objectives for the 2020 time horizon are based on innovation, smartness and social inclusion. Moreover, achieving the objectives of the future programming period shall be based on a credible strategy with respect to budgetary and monetary policies but also to the support granted by the governments to the economic sector, in particular to the financial sector. Strengthening the coordination of economic policies, in particular within the Euro Area, shall be able to ensure the overcoming of the current crisis and the starting up of economic growth.

In Romania, the discussions regarding a future strategy of regional development have begun, being in the stage of consultations with interested factors, with involved regional stakeholders, public or private institutions, the academic environment, etc. subsequently, the development plans shall be developed at the level of each region and the Regional Operational Programme that will both contain the general and specific objectives, the directions of actions and the implementation strategy, along with instruments, resources, etc.

The future regional development strategy shall be conceived so that funds allocated by the EU and intended for diminishing territorial economic and social imbalances shall be spent entirely with visible spatial outcomes. The main purpose should be not only effective spending of the Community funds, but also efficiency in attracting these resources.

Given the current difficult situation in which Romania turned into a net contributor to the European Union budget, failing to attract more than 14% of the allocated Structural Funds in a period of six years, a better substantiation is necessary for the implementation strategy of the regional policy, which would meet a series of clear and precise principles, objectives and viable measures.

In the following we present some general and punctual milestones that could be considered in drafting the future regional development strategy of Romania.

Premises for a new strategy model

The regional dimension and territorial issue is a relatively new aspect for Romania, being considered a topic of national interest, in particular after

the accession to the European Union. Thus, in a first stage, the institutions and mechanisms were created to ensure the implementation of the regional policy objectives and access to Structural Funds, with the purpose of achieving convergence with Community structures. The process was extended over a relatively long period of time (it started, actually, in 1995, on the occasion of developing the preparation strategy for Romania's accession to the European Union), and currently it is in a rather advanced stage from the institutional, legislative, mechanism and regional structure viewpoint, but much behind from the perspective of concrete outcomes (low absorption degree, permanent changes in institutional and political nature, delayed payment to the beneficiaries, etc.).

The regional development concept of Romania (adopted in the year 1999) is the basis of the National Regional Development Strategy and of the strategies at territorial level and pursues: diminishing regional disparities, stimulating balanced development, reviving disfavoured areas, correlating regional development with the sectoral one, and cooperation between regions. These objectives are found again in the Regional Operational Programme financed both by Structural Funds and national funds, and they are based on the strategic development priorities.

In accordance with these objectives, the general principles at national and local level were outlined (promoting market economy mechanisms at regional level, improving competitiveness and realising sustained economic growth, promoting harmonious development in the territory), to which we can add the principles of the EU Structural Funds and cohesion policy (subsidiarity, programming, partnership, additionality, co-financing, concentration, monitoring and evaluation).

For the current programming period, the European Union has allocated to the cohesion policy 336.3 billion euro for attaining the following objectives: *convergence, regional competitiveness, labour force employment and European territorial cooperation, all these being supported by Structural and Cohesion Funds.*

As an expression of the continuity in the Community policy, these objectives redefine the three priority objectives of the period 2000-2006⁴², the challenges of which shall be solved by the EU in the next years:

⁴² The objectives for the 2000-2006 period were 1: promoting development and structural adjustment of the lagging regions (this category includes, in general, the regions with a GDP per capita of at least 25% under the EU average); objective 2: supporting economic and social reconversion of areas facing difficulties of structural nature (industrial and services areas, rural areas,

- the EU population shall increase as a result of the expansion process and not as an outcome of natural demographic phenomena;
- a controlled migration increase;
- a slight increase in the total activity rate;
- the research-development expenditures shall increase, even though the technological difference between EU and USA will be maintained;
- a decreasing trend in public expenditures concomitantly with the punctual increase in the energy price;
- liberalisation of trade with other parts of the world (internationally);
- gradual diminution of the common agricultural policy budget;
- the existence of higher coherence between policies dedicated to innovation and those regarding competitiveness;
- moderate climate changes (+1°C), even though an increase will occur in the frequency of extreme climatic events at local level.

According to the *Europe 2020* Strategy, the objectives that have to be fulfilled in the future programming period are: (1) smart growth; (2) sustainable growth and (3) inclusion-favourable growth, the success of this strategy depending largely on the capacity of the regions and Member States to implement the measures established in the development plans and programmes.

Under these circumstances, we believe that it is necessary to give increased attention to regional disparities (intra- and inter-regional), not only at national, but also at Community level. In essence, the analyses performed during the elaboration of the present research paper have proven that, under conditions of a slow convergence process, at the level of Romania's development regions, certain economic and social discrepancies were maintained (and some even deepened), as most of the regions failed to meet the challenges of the accession process, and more recently, the effects of the globalised crisis. The fundamental issue is the answer to the following questions: how shall the current process of regional convergence develop at EU level and when shall the less developed regions succeed in achieving the average Community level (in relation to GDP per capita)?

All these elements should be taken into account for the future regional development strategy of Romania, to which we must add the vision

urban areas, areas depending on the fishery) and 3: supporting adjustment and modernisation policies for education, training and labour force employment.

transposed in the *Europe 2020* Strategy, and also a stringent need for changing and reforming the institutions, mechanisms, and mentalities related to the way in which this process should be approached in the next programming period.

The reform of regional policy in Romania should begin with decentralising actions at the level of local and regional public authorities (administrative and financial decentralisation) and eliminating “inconsistencies of fiscal mechanisms along with the decentralisation of administrative responsibilities of the local authorities”⁴³.

The regional development policy of Romania will be strongly influenced in the future by the status of European Union member, by the principles and objectives of the future cohesion policy and by the European model of territorial development⁴⁴. Without diminishing the importance of this aspect, I consider that the 2014-2020 regional policy should be adapted in the sense of shifting from passive implementation of the rules and objectives of the cohesion policy established by the EU to concentrating on allocating available financial resources, gradual identification of an own vision and creating an implementation mechanism, considering the new theoretical and methodological approaches to the process (for instance, the new economic geography promoted by Krugman)

In conclusion, the challenges of the future regional policy in Romania resulting from the *Europe 2020*⁴⁵ Strategy are determined by the adjustment of the objectives established at EU level to the concrete needs and conditions existing in the eight development regions, by putting to good use regional advantages and promoting local/regional interest.

⁴³ ROP 2007-2013, p. 117.

⁴⁴ The general objectives of the regional policy in Romania for the 2007-2013 period are presented in the specific documents presented and approved by the European Commission before accession: the National Development Plan 2007-2013, the National Strategic Reference Framework 2007-2013, the National Regional Development Strategy. These documents are regarded as main instruments of planning and regional development within the EU.

⁴⁵ Communication from the Commission, *Europe 2020, A strategy for smart, sustainable and inclusive growth*, COM(2010)2020, Brussels, 3.3.2010.

10. Conclusions

The theoretical and practical analyses of the present paper took into account the identification of the trends in the cohesion and regional development policy in Romania and at the level of the European Union, pursuing the evolution of convergence and of regional disparities in the post-accession period.

The theoretical aspects, the factors and phenomena contributing to the increasing importance of the regional level in substantiating decisions of spatial policy have reconfirmed the paradigm that a favourable location and an important potential of economic development represent the premises for some positive regional developments. These evolutions can be evaluated by econometric techniques and methods, which analyse the trends of the main economic, social and environmental indicators, etc., with a high degree of relevance and accuracy.

The research paper reveals that at the European Union level there is an increasing trend of regional convergence. Thus, in the 2000-2009 period, the difference between the maximum and the minimum GDP per capita (PPP) diminished (the ratio decreased from 15:1 to 12:1), the number of regions in the category with over 75% of the GDP per capita average decreased along with an increase in the GDP per capita average. Also, there is a decreasing trend in concentration, supported by a diminution in the Gini coefficient from 0.431 in the year 1997 to 0.403 in the year 2009, which can support the idea of concentration decrease at regional level in the Member States. Similarly, three particular moments are identified, which marked the changes in the GDP per capita within the EU-27 for the reporting period (1997-2009): the first moment is the period after the year 2004, when the first ten New Member States joined the EU, which triggered an increase in the number of regions below average (from 122 to 128). The second moment is that after Romania's and Bulgaria's accession, when the number of regions below the Community average increased to 137, and the third, in the year 2009, when the effects of the global crisis became visible also at the Community level.

In Romania, the development regions had, in the analysed period, different rates and speeds of evolution. Thus, the annual average rates of growth and the variation coefficients calculated for different fields of activity registered higher or smaller values, depending on the complexity of the internal or external phenomena which had an important impact on them. The analysed fields at the level of the eight development regions (demography, labour force, research-development, infrastructure, health)

have indicated different situations also regarding their variability in the period 2000-2010. The fields registering the highest variation in the analysed indicators are: demographic (population density at regional level), and research-development (number of RDI employees). The evolution of the variation coefficients show a relatively narrow distribution of the analysed fields in the eight development regions, which leads to the conclusion that we cannot discuss about a high level of economic and social disparities between them. It should be underpinned that the main disturbances are caused by the Bucharest-Ilfov Region, which underwent an important general growth during the analysed period.

As regards the new regional policy of Romania, it is strongly influenced by the status of European Union member, by the principles and objectives of the economic and social cohesion policy, by the *Europe 2020* Strategy. A possible future model of regional policy should take into account the level of the disparities between regions and within them, shifting from passive implementation of the rules and objectives of the cohesion policy established by the EU to focus on allocation of available financial resources, gradual identification of a vision and elaboration of an implementation mechanism, considering the new theoretical and methodological approaches to the process (for instance, the new economic geography promoted by Krugman).

The challenges to the future regional policy in Romania, resulting from the *Europe 2020* Strategy are determined, mainly, by adjustment of the established objectives to the concrete needs and conditions in the eight regions of development to the local interest.

Annexes

Annex 1

Basic indicators for HISTOGRAMS – GDP/Inhab. (PPS) - EU-27

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| No. of Regions | 271 | 271 | 271 | 271 | 271 | 271 | 271 | 271 | 271 | 271 | 271 | 271 | 271 |
| No. of regions above average | 145 | 143 | 140 | 146 | 145 | 148 | 143 | 144 | 139 | 136 | 132 | 130 | 136 |
| No. of regions below average | 126 | 128 | 131 | 125 | 126 | 123 | 128 | 127 | 132 | 135 | 139 | 141 | 135 |
| No. of regions below 75% average | 202 | 203 | 203 | 204 | 206 | 207 | 207 | 206 | 211 | 210 | 212 | 213 | 199 |
| No. of regions below 75% average | 69 | 68 | 68 | 67 | 65 | 64 | 64 | 65 | 60 | 61 | 59 | 58 | 72 |
| Average | 15265 | 15937 | 16727 | 17891 | 18545 | 19407 | 19691 | 20619 | 21840 | 23023 | 24211 | 24356 | 22801 |
| Max | 49300 | 51400 | 54900 | 59400 | 62500 | 66500 | 68800 | 72900 | 75900 | 80300 | 83200 | 85800 | 75900 |
| Min | 3200 | 3300 | 3400 | 3400 | 4000 | 4400 | 4700 | 5100 | 5200 | 5800 | 6600 | 7100 | 2900 |

Source: Own calculations based on EUROSTAT.

Annex 2

Concentration indicators - GDP (Mil. euro; PPS), at regional level - NUTS 2

| | Value – Structure | | | | | | |
|--------------|----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Interval | 1997 | 2008 | 2009 | | | | |
| 1-28 | 1.31% | 1.44% | 1.58% | | | | |
| 29-56 | 2.77% | 2.88% | 2.99% | | | | |
| 57-84 | 3.82% | 4.24% | 4.66% | | | | |
| 85-112 | 4.97% | 5.67% | 6.37% | | | | |
| 113-140 | 6.62% | 6.74% | 6.86% | | | | |
| 141-168 | 8.22% | 8.00% | 7.78% | | | | |
| 169-196 | 10.12% | 9.82% | 9.53% | | | | |
| 197-224 | 13.87% | 13.41% | 12.95% | | | | |
| 225-252 | 19.64% | 19.60% | 19.55% | | | | |
| 253-280 | 28.67% | 28.20% | 27.72% | | | | |
| Total | 100.00% | 100.00% | 100.00% | | | | |
| | First Bisectors | GDP 1997 | GDP 2008 | GDP 2009 | GDP 1997 | GDP 2008 | GDP 2009 |
| 0 | 0.00 | 0.00 | 0 | | 0 | 0 | 0 |
| 0.1 | 0.1 | 1.31% | 1.44% | 1.58% | 0.001 | 0.001 | 0.001 |
| 0.2 | 0.2 | 4.07% | 4.32% | 4.57% | 0.003 | 0.003 | 0.003 |
| 0.3 | 0.3 | 7.89% | 8.56% | 9.24% | 0.006 | 0.006 | 0.007 |
| 0.4 | 0.4 | 12.86% | 14.24% | 15.61% | 0.010 | 0.011 | 0.012 |
| 0.5 | 0.5 | 19.48% | 20.98% | 22.47% | 0.016 | 0.018 | 0.019 |
| 0.6 | 0.6 | 27.70% | 28.98% | 30.25% | 0.024 | 0.025 | 0.026 |
| 0.7 | 0.7 | 37.83% | 38.80% | 39.77% | 0.033 | 0.034 | 0.035 |
| 0.8 | 0.8 | 51.69% | 52.21% | 52.73% | 0.045 | 0.046 | 0.046 |
| 0.9 | 0.9 | 71.33% | 71.80% | 72.28% | 0.062 | 0.062 | 0.063 |
| 1 | 1 | 100.00% | 100.00% | 100.00% | 0.086 | 0.086 | 0.086 |
| | | | | GINI Coeff. | 43.17% | 41.73% | 40.3% |

Source: Own calculations based on EUROSTAT.

Annex 3

Variance indicators – GDP/Hab. (PPS) at regional level, in Romania, 1997-2009 (Euro/Inhab.)

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Annual Growth |
|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|---------------|
| Min | 3600 | 3300 | 3400 | 3400 | 4000 | 4400 | 4700 | 5100 | 5200 | 5800 | 6600 | 7200 | 3400 | -0.63 |
| Max | 7100 | 7900 | 8700 | 10700 | 11200 | 12100 | 13000 | 14800 | 17300 | 19800 | 23000 | 28300 | 13000 | 6.95 |
| Variability | 3500 | 4600 | 5300.0 | 7300.0 | 7200.0 | 7700.0 | 8300 | 9700 | 12100 | 14000 | 16400.0 | 21100 | 9600.0 | 11.86 |
| Average | 4875.0 | 4675.0 | 4887.5 | 5175.0 | 5737.5 | 6275.0 | 6787.5 | 7737.5 | 8250.0 | 9537.5 | 10887.5 | 12300 | 5750.0 | 1.85 |
| St. Deviation | 1038.9 | 1396.7 | 1652.2 | 2303.9 | 2291.6 | 2476.0 | 2650.8 | 3027.9 | 3817.6 | 4379.8 | 5167.6 | 6657.3 | 3029.4 | 12.63 |
| Variance Coeff. (%) | 21.3 | 29.9 | 33.8 | 44.5 | 39.9 | 39.5 | 39.1 | 39.1 | 46.3 | 45.9 | 47.5 | 54.1 | 52.7 | 10.58 |
| Amplitude variance (%) | 71.79 | 98.40 | 108.44 | 141.06 | 125.49 | 122.71 | 122.28 | 125.36 | 146.67 | 146.79 | 150.63 | 171.54 | 166.96 | 9.83 |

Source: Own calculations based on Romania's Statistical Yearbook 2011, NIS, Bucharest.

Annex 4

Variance indicators - regional population during 2000-2010, in Romania

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|------------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Min | 2041.1 | 2032.8 | 1954.7 | 1946.6 | 1939.5 | 1930.4 | 1927.2 | 1924.4 | 1925.3 | 1921.7 | 1916.9 |
| Max | 3823.49 | 3836.8 | 3743.2 | 3743.8 | 3738.6 | 3734.5 | 3732.5 | 3726.6 | 3719.1 | 3714.05 | 3707.6 |
| Variability | 1782.4 | 1804.0 | 1788.5 | 1797.2 | 1799.1 | 1804.1 | 1805.3 | 1802.2 | 1793.8 | 1792.4 | 1790.7 |
| Average | 2804.4 | 2801.0 | 2723.8 | 2716.8 | 2709.2 | 2702.8 | 2689.3 | 2692.3 | 2688.0 | 2683.7 | 2678.9 |
| Standard Deviation | 602.0 | 607.6 | 600.2 | 599.9 | 598.4 | 598.5 | 646.3 | 593.5 | 588.1 | 585.6 | 583.5 |
| Variance Coeff. | 21.5% | 21.7% | 22.0% | 22.1% | 22.1% | 22.1% | 24.0% | 22.0% | 21.9% | 21.8% | 21.8% |
| Amplitude variance (%) | 63.56% | 64.41% | 65.66% | 66.15% | 66.41% | 66.75% | 67.13% | 66.94% | 66.73% | 66.79% | 66.84% |

Source: Own calculations based on *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Annex 5

Variance indicators – density at regional level

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Min | 63.5 | 61 | 60.8 | 60.5 | 60.3 | 60.2 | 60.1 | 60.1 | 60 | 60 |
| Max | 1248.4 | 1213.8 | 1211.7 | 1212.3 | 1212.7 | 1218.9 | 1222.4 | 1234.5 | 1239.2 | 1239.2 |
| Variability | 1184.9 | 1152.8 | 1150.9 | 1151.8 | 1152.4 | 1158.7 | 1162.3 | 1174.4 | 1179.2 | 1179.2 |
| Average | 230.1 | 223.8 | 223.3 | 223.1 | 223.0 | 223.6 | 223.8 | 225.1 | 225.5 | 225.5 |
| St. deviation | 411.6 | 400.2 | 399.6 | 399.9 | 400.1 | 402.4 | 403.7 | 408.1 | 409.8 | 409.8 |
| Cof_Var | 178.9% | 178.9% | 179.0% | 179.2% | 179.4% | 180.0% | 180.4% | 181.3% | 181.7% | 181.7% |
| Amplitude variance (%) | 514.89 % | 515.19 % | 515.46 % | 516.21 % | 516.83 % | 518.29 % | 519.38 % | 521.75 % | 522.87 % | 522.87 % |

Source: Own calculations based on *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Annex 6

Variance indicators – active population

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Annual growth |
|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------|
| Min | 971 | 941 | 864 | 850 | 861 | 845 | 871 | 885 | 877 | 867 | 857 | -1.38% |
| Max | 2044 | 2032 | 1781 | 1763 | 1814 | 1790 | 1757 | 1785 | 1753 | 1773 | 1793 | -1.45% |
| Variability | 1073.0 | 1091.0 | 917.0 | 913.0 | 953.0 | 945.0 | 886.0 | 900.0 | 876.0 | 906.0 | 936.0 | -1.51% |
| Average | 1410.4 | 1393.9 | 1259.9 | 1239.4 | 1244.6 | 1231.4 | 1255.1 | 1249.3 | 1243.0 | 1240.5 | 1245.6 | -1.37% |
| St. deviation | 367.9 | 373.1 | 303.2 | 298.5 | 307.2 | 303.6 | 288.4 | 298.7 | 288.8 | 291.9 | 296.9 | -2.36% |
| Variance Coeff. | 26.1% | 26.8% | 24.1% | 24.1% | 24.7% | 24.7% | 23.0% | 23.9% | 23.2% | 23.5% | 23.8% | -1.00% |
| Amplitude Variance (%) | 76.08 % | 78.27 % | 72.78 % | 73.67 % | 76.57 % | 76.74 % | 70.59 % | 72.04 % | 70.47 % | 73.04 % | 75.14 % | -0.14% |

Source: Own calculations based on *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Annex 7

Variance indicators – employment

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Annual growth |
|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------|
| Min | 910 | 890 | 803 | 800 | 793 | 788 | 815 | 835 | 827 | 816.8 | 805 | -1.35% |
| Max | 1914 | 1919 | 1645 | 1652 | 1701 | 1688 | 1653 | 1696 | 1674 | 1220 | 1689 | -1.38% |
| Variability | 1004.0 | 1029.0 | 842.0 | 852.0 | 908.0 | 900.0 | 838.0 | 861.0 | 847.0 | 403.2 | 884.0 | -1.40% |
| Average | 1313.5 | 1305.0 | 1154.3 | 1152.9 | 1144.8 | 1143.4 | 1164.1 | 1169.1 | 1171.1 | 1051.3 | 1155.0 | -1.42% |
| St. deviation | 342.8 | 354.6 | 274.9 | 278.7 | 287.8 | 283.9 | 265.3 | 280.0 | 275.0 | 160.9 | 279.7 | -2.24% |
| Variance Coeff. | 26.1% | 27.2% | 23.8% | 24.2% | 25.1% | 24.8% | 22.8% | 23.9% | 23.5% | 15.3% | 24.2% | -0.83% |
| Amplitude Variance (%) | 76.44 % | 78.85 % | 72.95 % | 73.90 % | 79.32 % | 78.71 % | 71.99 % | 73.64 % | 72.32 % | 38.35 % | 76.54 % | 0.01% |

Source: Own calculations based on data from *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Annex 8

Variance indicators – employment in R-D

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Growth |
|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| Min | 1807 | 1674 | 1925 | 1934 | 1922 | 1855 | 1587 | 2201 | 1930 | 1865 | 1713 | -0.59% |
| Max | 16926 | 16925 | 16970 | 18590 | 20631 | 22050 | 20475 | 20360 | 21366 | 19577 | 16932 | 0.00% |
| Variability | 15119.0 | 15251.0 | 15045.0 | 16656.0 | 18709.0 | 20195.0 | 18888.0 | 18159.0 | 19436.0 | 17712.0 | 15219.0 | 0.07% |
| Average | 4655.1 | 4712.0 | 4804.1 | 4998.1 | 5090.6 | 5129.4 | 5094.8 | 5310.5 | 5437.8 | 5302.5 | 4883.1 | 0.53% |
| St. deviation | 5022.5 | 4997.1 | 4990.2 | 5530.4 | 6314.5 | 6876.4 | 6270.3 | 6143.7 | 6513.0 | 5826.9 | 4934.6 | -0.20% |
| Variance Coeff. | 107.9% | 106.0% | 103.9% | 110.6% | 124.0% | 134.1% | 123.1% | 115.7% | 119.8% | 109.9% | 101.1% | -0.72% |
| Amplitude Variance (%) | 324.78% | 323.66% | 313.17% | 333.24% | 367.52% | 393.71% | 370.73% | 341.95% | 357.43% | 334.03% | 311.67% | -0.46% |

Source: Own calculations based on Romania's Statistical Yearbook 2011, NIS, Bucharest.

Annex 9

Variance indicators – number of physicians at regional level

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Growth |
|------------------------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|--------|
| Min | 4485 | 4440 | 4352 | 4404 | 4322 | 4241 | 4189 | 4212 | 4463 | 4515 | 4600 | 0.28% |
| Max | 8800 | 9257 | 9205 | 10106 | 10872 | 11522 | 11359 | 11389 | 11588 | 11412 | 12184 | 3.68% |
| Variability | 4315.0 | 4817.0 | 4853.0 | 5702.0 | 6550.0 | 7281.0 | 7170.0 | 7177.0 | 7125.0 | 6897.0 | 7584.0 | 6.47% |
| Average | 5723.3 | 5847.0 | 5725.6 | 5864.9 | 6018.8 | 5924.0 | 5867.0 | 6024.9 | 6283.4 | 6298.3 | 6525.5 | 1.47% |
| St. deviation | 1515.3 | 1624.9 | 1618.7 | 1929.3 | 2178.7 | 2404.6 | 2361.2 | 2335.4 | 2347.0 | 2267.4 | 2500.7 | 5.72% |
| Variance Coeff. | 26.5% | 27.8% | 28.3% | 32.9% | 36.2% | 40.6% | 40.2% | 38.8% | 37.4% | 36.0% | 38.3% | 4.19% |
| Amplitude Variance (%) | 75.39 % | 82.38 % | 84.76 % | 97.22 % | 108.83 % | 122.91 % | 122.21 % | 119.12 % | 113.39 % | 109.51 % | 116.22 % | 4.93% |

Source: Own calculations based on *Romania's Statistical Yearbook 2011*, NIS, Bucharest.

Annex 10

Variance indicators – density of public infrastructure at 100 km²

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Growth |
|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Min | 29.4 | 29.6 | 29.5 | 29.7 | 29.5 | 29.9 | 29.9 | 30 | 30.7 | 30 | 30.10 | 0.26% |
| Max | 45.3 | 46.3 | 46.7 | 46.7 | 47.9 | 47.9 | 48.9 | 48.9 | 48.9 | 48.9 | 48.87 | 0.85% |
| Variability | 15.9 | 16.7 | 17.2 | 17.0 | 18.4 | 18.0 | 19.0 | 18.9 | 18.2 | 18.9 | 18.78 | 1.87% |
| Average | 34.4 | 34.5 | 34.7 | 34.8 | 35.1 | 35.2 | 35.4 | 35.7 | 36.1 | 36.0 | 36.28 | 0.59% |
| St. deviation | 5.0 | 5.3 | 5.5 | 5.4 | 5.8 | 5.7 | 6.0 | 5.9 | 5.8 | 5.8 | 5.78 | 1.54% |
| Variation Coeff. | 14.6% | 15.4% | 15.8% | 15.6% | 16.6% | 16.1% | 17.0% | 16.6% | 16.0% | 16.2% | 16% | 0.95% |
| Amplitude variance (%) | 46.20% | 48.39% | 49.55% | 48.87% | 52.44% | 51.08% | 53.67% | 52.90% | 50.49% | 52.46% | 52.00% | 1.27% |

Source: Own calculations based on Romania's Statistical Yearbook 2011, NIS, Bucharest.

Annex 11

Financial allocation ROP, in period 2007-2013 (Mil. Euro)

| Priority Axes | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Total | % in total |
|--|--------|--------|--------|--------|--------|--------|--------|---------|------------|
| 1. Urban sustainable development | 102.28 | 120.39 | 128.45 | 155.69 | 164.98 | 200.36 | 245.63 | 1117.81 | 30.0 |
| 2. Improved regional/local transport infrastructure | 67.20 | 82.25 | 89.78 | 106.59 | 113.32 | 135.11 | 164.10 | 758.35 | 20.35 |
| 3. Improved social infrastructure | 49.52 | 60.62 | 66.17 | 78.56 | 83.52 | 99.57 | 120.94 | 558.90 | 14.9 |
| 4. Consolidation of local/regional business infrastructure | 56.13 | 68.70 | 74.99 | 89.03 | 94.65 | 112.85 | 137.06 | 633.42 | 16.9 |
| 5. Tourism sustainable development | 49.53 | 60.62 | 66.17 | 78.56 | 83.52 | 99.57 | 120.94 | 558.90 | 14.9 |
| 6. Technical Assistance | 5.51 | 11.54 | 15.57 | 15.28 | 16.78 | 16.36 | 17.59 | 98.63 | 2.64 |
| Total | 330.17 | 404.12 | 441.13 | 523.71 | 556.77 | 663.82 | 806.26 | 3726.01 | 100 |

Source: Data processing from the ROP, www.fonduri-structurale.ro.

Annex 12

Financial allocation by Priority Axes and Regions, 2007-2013

| Priority Axes | | RO | NE | SE | S | SW | W | NW | C | BI |
|---|----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 100 | 16.32% | 13.25% | 14.23% | 14.01% | 10.34% | 12.09% | 10.90% | 8.86% |
| Funds allotment (ERDF and national) – Mil Euro | | | | | | | | | | |
| Urban sustainable development | ERDF | 1117.8 | 182.42 | 148.11 | 159.06 | 156.60 | 115.58 | 135.14 | 121.84 | 99.04 |
| | National | 273.36 | 44.61 | 36.22 | 38.90 | 38.30 | 28.27 | 33.05 | 29.80 | 24.22 |
| | Total | 1391.17 | 227.04 | 184.33 | 197.96 | 194.90 | 143.85 | 168.19 | 151.64 | 123.26 |
| Improved regional/local transport infrastructure | ERDF | 758.35 | 123.76 | 100.48 | 107.91 | 106.24 | 78.41 | 91.68 | 82.66 | 67.19 |
| | National | 118.35 | 19.31 | 15.68 | 16.84 | 16.58 | 12.24 | 14.31 | 12.90 | 10.49 |
| | Total | 876.71 | 143.08 | 116.16 | 124.75 | 122.83 | 90.65 | 105.99 | 95.56 | 77.68 |
| Improved social infrastructure | ERDF | 558.90 | 91.21 | 74.05 | 79.53 | 78.30 | 57.79 | 67.57 | 60.92 | 49.52 |
| | National | 98.62 | 16.09 | 13.07 | 14.03 | 13.82 | 10.20 | 11.92 | 10.75 | 8.74 |
| | Total | 657.53 | 107.31 | 87.12 | 93.57 | 92.12 | 67.99 | 79.49 | 71.67 | 58.26 |
| Consolidation of local/regional business infrastructure | ERDF | 633.42 | 103.37 | 83.93 | 90.14 | 88.74 | 65.50 | 76.58 | 69.04 | 56.12 |
| | National | 76.47 | 12.48 | 10.13 | 10.88 | 10.71 | 7.91 | 9.25 | 8.34 | 6.78 |
| | Total | 709.89 | 115.85 | 94.06 | 101.02 | 99.46 | 73.40 | 85.83 | 77.38 | 62.90 |
| Tourism sustainable development | ERDF | 558.90 | 91.21 | 74.05 | 79.53 | 78.30 | 57.79 | 67.57 | 60.92 | 49.52 |
| | National | 57.86 | 9.44 | 7.67 | 8.23 | 8.11 | 5.98 | 7.00 | 6.31 | 5.13 |
| | Total | 616.76 | 100.66 | 81.72 | 87.76 | 86.41 | 63.67 | 74.57 | 67.23 | 54.64 |
| TOTAL | FEDR | 3627.37 | 591.99 | 480.63 | 516.17 | 508.19 | 375.07 | 438.55 | 395.38 | 321.38 |
| | National | 624.66 | 101.94 | 82.77 | 88.89 | 87.51 | 64.59 | 75.52 | 68.09 | 55.34 |
| | Total | 4252.06 | 693.93 | 563.39 | 605.06 | 595.71 | 439.66 | 514.07 | 463.47 | 376.73 |

Source: Data processing from the ROP, www.fonduri-structurale.ro.

Annex 13

Context indicators – ROP- 2007-2013 (level 2005 Year)

| Indicators | UM | R1 ⁴⁶ | R2 | R3 | R4 | R5 | R6 | R7 | R8 |
|--|------------------------|------------------|---------|---------|---------|---------|---------|---------|---------|
| Urban Development | | | | | | | | | |
| Towns < 20.000 Inhab. | No. | 26 | 24 | 32 | 29 | 30 | 29 | 37 | 2 |
| Towns - 20.000-99.999 Inhab. | No. | 14 | 6 | 14 | 8 | 10 | 9 | 17 | 2 |
| Towns > 100.000 Inhab. | No. | 5 | 5 | 2 | 3 | 2 | 4 | 3 | 1 |
| Population | No. | 3734546 | 2846379 | 3329762 | 2306450 | 1930458 | 2737400 | 2530486 | 2208368 |
| Economic Development | | | | | | | | | |
| GDP/Inhab. (2004) | Euro/Hab. | 2029.3 | 2661.35 | 2447 | 2443.9 | 3363.7 | 2850.7 | 3056.9 | 5616.7 |
| Productivity (2004) - | Euro | 1811.9 | 5864.1 | 5153.4 | 4932.6 | 6979.4 | 6239.0 | 7071.8 | 11.451 |
| FDI | Mil. Euro | 292 | 1838 | 1388 | 745 | 1491 | 1257 | 1610 | 13.264 |
| Business infrastructure | No. | 2 | 3 | 11 | 2 | 1 | 2 | 11 | 2 |
| Density of public roads | Km/100 km ² | 36.3 | 30.4 | 34.8 | 35.8 | 32.1 | 34.7 | 29.9 | 47.9 |
| Public roads modernisation in total public roads | % | 25.1 | 19.4 | 29.2 | 32.4 | 26 | 27.2 | 23.8 | 52.6 |
| SMEs - total | No. | 49.078 | 53.021 | 45.964 | 32.981 | 41.594 | 60.829 | 54.539 | 102.708 |
| Education units (state+private) | No. | 1664 | 1772 | 1901 | 1321 | 1242 | 1301 | 2040 | 62 |
| Hospitals | No. | 66 | 47 | 62 | 42 | 46 | 61 | 51 | 58 |
| Social infrastructure | No. | 916 | 841 | 466 | 104 | - | 519 | 6779 | 405 |
| Tourism (no. of units) | No. | 402 | 1228 | 409 | 227 | 365 | 480 | 933 | 122 |

Source: Data processing from ROP, www.fonduri-structurale.ro.

⁴⁶ R1 – North-East Region, R2 - South-East Region, R3 - South Region, R4 – South-West Region, R5 – West Region, R6 – North-West Region, R7 – Center Region, R8 – Bucharest-Ilfov Region.

Annex 14

Estimated impact on sustainable development – urban growth poles

| Output | | Goals for 2015 |
|--|--------------------------|-----------------------|
| Implemented integrated urban development plans | no. | 30 |
| Projects for improving the urban public infrastructure | % allocated total budget | 60 |
| Projects for business environment and entrepreneurship | % allocated total budget | 15 |
| Projects for social inclusion | % allocated total budget | 25 |
| Beneficiaries (habitants) | no. | 400.000 |
| Result | UM | Goals - 2015 |
| Firms located in “urban action zone” | no. | 400 |
| Jobs created in “urban action zone” | no. | 1.500 |

Source: Data processing from the ROP, www.fonduri-structurale.ro.

Annex 15

Estimated impact on transport infrastructure

| Priority Axis 2 – Transport infrastructure | | Initial output | Out-put | Initial effects | Estimate d effects |
|---|----|----------------|---------|-----------------|--------------------|
| MDI 2.1: Rehabilitation and modernization of county roads and urban street network – including construction /rehabilitation of ring roads | | | | | |
| Length of rehabilitated/modernized county road | km | 36.009,7 | 877 | | |
| Length of rehabilitated/modernized urban streets | km | 25.696 | 411 | | |
| Length of rehabilitated /constructed by-passes | km | 0 | 219 | | |
| Length of new roads – by-passes | km | 0 | 80 | | |
| Length of ring roads (with county road status) | km | 0 | 139 | | |
| Length of rehabilitated/modernized (outside TEN – T) – urban streets | km | 0 | 411 | | |
| Traffic growth | % | | | 0 | 10 |
| Products traffic growth | % | | | 0 | 10 |

Source: Data processing from the ROP, www.fonduri-structurale.ro.

Annex 16

Estimated impact on social infrastructure

| Priority Axis 3: Improvement of social infrastructure | | Basic value - output | Out - put | Basic value effects | Estimated effects |
|--|-----------|-------------------------------|-----------|---------------------------|-----------------------------|
| MDI 3.1 Rehabilitation, modernization, development and equipping of health infrastructure | | | | | |
| Rehabilitated/modernized/equipped medical units | no. | 0 | 53 | | |
| Person benefiting from the rehabilitated/modernized/equipped infrastructure | no./daily | | | 0 | 30.000 |
| MDI 3.2: Rehabilitation, modernisation and equipping of the health services infrastructure | | | | | |
| Rehabilitation/modernisation/equipping of social centres | no. | 0 | 270 | | |
| Persons – beneficiaries of social infrastructure | no. | | | 0 | 10.000 |
| MDI 3.3: Improving the equipments of the operational units for public safety interventions in emergency situations | | | | | |
| Mobile units for emergency situations | no. | 0 | 510 | | |
| Response-time of mobil units in rural area – emergency infrastructure | min. | Up to 30-45 min. – Rural area | | Up to 12 min.- rural area | |
| Response-time of mobil units in urban area – emergency infrastructure | min. | | | Up to 20 min.- urban area | Up to 8 min.- in urban area |
| MDI 3.4: Rehabilitation, modernization, development and equipping of pre–university, university education and continuous vocational training infrastructure. | | | | | |
| Rehabilitation, modernization, development and equipping of pre–university units | no. | 0 | 130 | | |
| Rehabilitation, modernization, development and equipping of pre–university campus | no. | 0 | 30 | | |
| Rehabilitation, modernization, development and equipping of continuous vocational training infrastructure | no. | 0 | 35 | | |
| Pre-university centres - Rehabilitation, modernization, development and equipping | no. | 0 | 160 | | |
| University centres - Rehabilitation, modernization, development and equipping | no. | 0 | 15 | | |
| Pupils – beneficiaries of preuniversity infrastructure | no. | | | 0 | 40.000 |
| Disadvantaged pupils – beneficiaries of pre-university infrastructure | no. | | | 0 | 5000 |
| Beneficiaries of continuous vocational training infrastructure | no. | | | 0 | 3000 |
| Students – beneficiaries of university campus | no. | | | 0 | 2000 |
| Pupils/students – beneficiaries of rehabilitation/modernisation university infrastructure | no. | | | 0 | 2000 |
| Persons-beneficiaries of continuous vocational training infrastructure | no. | | | 0 | 3000 |

Source: Data processing from the, ROP, www.fonduri-structurale.ro.

Annex 17

Estimated impact on regional and local business environment

| Priority Axis 4: Strengthening the regional and local business environment | | | Out-put | Estimated effect |
|--|-----|---|----------------|-------------------------|
| MDI 4.1. Development of sustainable business support structures of regional and local importance | | | | |
| Business support structures assisted | no. | 0 | 17 | |
| MDI 4.2. Rehabilitation of unused polluted industrial sites and preparation for new activities | | | | |
| Unused polluted industrial sites rehabilitated and prepared for new economic activities | Ha | 0 | 75 | |
| New jobs created in the supported business structures | no. | | | 1000 |
| MDI 4.3. Support for developing micro-enterprises | | | | |
| Micro-enterprises supported | no. | 0 | 1500 | |
| New jobs created in micro-enterprises | no. | | | 3000 |

Source: Data processing from the ROP, www.fonduri-structurale.ro.

Annex 18

Estimated impact on regional tourism

| Priority Axis 5: Sustainable development and promotion of tourism | | | Output | | Estimated effect |
|--|-----|---|---------------|---|-------------------------|
| MDI 5.1: Restoration and sustainable valorization of cultural heritage and creation/ modernization of related infrastructure | | | | | |
| Tourism projects | no. | 0 | 100 | | |
| New jobs created/maintained | no. | | | 0 | 200 |
| MDI 5.2: Creation, development, modernization of the tourism infrastructure for sustainable valorization of natural resources and for increasing the quality of tourism services | | | | | |
| Projects in tourism | no. | 0 | 300 | | |
| SMEs supported | no. | 0 | 350 | | |
| Number of tourists | no. | | | 0 | 400000 |
| Overnight staying | no. | | | 0 | 800000 |
| Jobs created / saved at the end of project implementation | no. | | | 0 | 800 |
| DMI 5.3: Promoting the tourism potential and building the needed infrastructure in order to increase Romania's attractivity as tourist destination | | | | | |
| Promotional campaigns for advertising the tourism brand at national and international level | no. | 0 | 10 | | |
| National Tourism Information and Promotion Centres supported | no. | 0 | 100 | | |
| Tourists visiting the Information and Promotion Centres | no. | | | 0 | 2,5 mil. |
| Website visitors | no. | | | 0 | 1,5 mil. |

Source: Data processing from the ROP, www.fonduri-structurale.ro.

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