

# EVALUATION OF THE STRUCTURAL FUNDS ABSORPTION RATE BY MEANS OF THE HERMIN MODEL

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*The main objective of this article is to highlight the main method that could quantify the impact of the structural funds on the Gross Domestic Product. I also presented the regional disparities situation and the European funds absorption rate. The HERMIN model has been designed considering the evolution of macro-variables throughout transition and pre-accession process, as well as out of the need to analyze the gradual alignment of Romania's economic policies to those of EU. The fact that, initially, the HERMIN model was designed for the European Union's less developed economies represented the cornerstone in choosing it, as it was the case for Romania, too. However, the quantitative evaluation must always be accompanied by a qualitative evaluation, in order to comprise factors which cannot be measured by the econometrical modeling. For this purpose, when the results of econometrical model based evaluation are used, it is important to be aware of the fact that models simplify reality, no matter the impressive mathematical calculations they employ.*

*Also, we must not omit the fact that Romania's major development needs and the current economic context imperatively demand a high as possible level of structural funds absorption, as well as their efficient use, meant to generate a significant impact at a national, regional and local level.*

*One of the main instruments employed to sustain economic growth, while also reducing disparities between regions is represented by the structural funds. These funds, consisting in financial contributions of the member states, according to their level of development, are redistributed in compliance with an extremely complex regulating and procedural frame, to those EU states of regions which are fallen behind from a social and economical development perspective*

*Nevertheless, when absorption capacity of a member state is evaluated, the used percentage from the allocated funds is not the only monitored indicator, but also the effects they have generated in that state's economy. This analysis is imperative because at this moment, Romania is facing one of the lowest absorption rate.*

*Keywords: Hermin model, Structural Funds, Absorption rate, Regional disparities, Regional development*

*O: Economic Development, Technological Change, and Growth; M: Business Administration and Business Economics; Marketing; Accounting*

## **1. Introduction**

At present, Europe is faced with a difficult mission, to exit a deep crisis and to decrease the unemployment and poverty, while performing, in the same time, the transition to a dynamic and competitive economy. In order to achieve this ambitious goal, rapid actions on multiple fronts are required, reason for which The European Council has adopted the Europe 2020 Strategy.

Its key objective is intelligent, inclusive and sustainable growth. Even more than its predecessor – The Lisbon Strategy – Europe 2020 aims to achieve this objective by emphasizing the need for innovation, employment and social inclusion, as well as a vigorous reaction to the set objectives concerning the environment and climatic changes.

The European Union's economic and social cohesion policy must be regarded as an integral part of the Lisbon Strategy (adopted by the European Council from Lisbon in March 2000 for a 10

year period) which aimed to transform Europe by the year 2010, “the most dynamic and competitive knowledge based economy”.

The cohesion policy is also playing a decisive role in this difficult period, by significantly contributing to growth and prosperity throughout the entire Union, while also reducing over time the economic, social and territorial disparities. The objectives of the cohesion policy, also included in the Europe 2020 Strategy refer to the support offered to underdeveloped EU regions in order to reduce the development gap between them and the other EU regions, to counteracting low productivity and economic growth stagnation throughout the European Union by formulating political initiatives meant to be taken over by the member states, to the coordination of EU policies, to the approach of social aspects such as population ageing and environment issues.

One of the main instruments employed to sustain economic growth, while also reducing disparities between regions is represented by the structural funds. These funds, consisting in financial contributions of the member states, according to their level of development, are redistributed in compliance with an extremely complex regulating and procedural frame, to those EU states of regions which are fallen behind from a social and economical development perspective.

## 2. Regional Disparities

There has been much debate, often justified, regarding the low rate of the European structural funds absorption, having direct influence on the regions’ uneven development. The most recent Eurostat report regarding the development regions’ evolution reveals that in Top 10 regions whose inhabitants have the highest purchasing power, 8 are regions of European capitals. Thus, the first place is held by the Inner London inhabitants, with a purchasing power of 343% (85 800 EURO) compared to the European average (25 100 EURO). They are followed, in order, by The Great Duchy of Luxembourg – 279% (70 029 EURO), Bruxelles – Belgium – 216% (54 216 EURO), Groningen – The Netherlands – 198% (49 698 EURO), Hamburg – Germany – 188% (47 188 EURO) and Prague – The Czech Republic – 172% (43 172 EURO). Among the 40 regions that present a purchasing power of over 125% compared to the European Union average, 10 were from Germany, 5 from the Netherlands, 4 from Austria and The United Kingdom respectively, 3 from Spain and Italy respectively, 2 from Belgium and Finland respectively and one from Denmark, Ireland, France, Slovakia, Sweden and Luxembourg. The eight poorest regions in Europe are all from Bulgaria and Romania. Thus, the poorest region is Severozapaden from Bulgaria with 28% (7 028 EURO) compared with the European average, followed by the North-East Region from Romania with 29% (7 279 EURO), Severen tsentralen and Yuzhen tsentralen, both from Bulgaria, with 30% 97 530 EURO).

In Romania, the regions’ top presents itself as follows:

Region	GDP per capita, EURO	UE27 average %
North East	7 200	29%
South-West Oltenia	9 100	36%
South-East	9 700	39%
South – Muntenia	9 800	39%
North-West	10 400	41%
Center	11 200	45%
West	12 700	51%
Bucharest – Ilfov	28 300	113%

Source: Eurostat

Six regions from Romania are in the “top” 20 poorest regions in the European Union (EU), according to the level of GDP per capita (as calculated according to the purchasing power parity); the “record” belongs to the North-East Region (Suceava, Botosani, Iasi, Neamt, Bacau, Vaslui counties) with a level of only 29% compared to the European average. As one could easily predict, the exact opposite position is held by the capital, the Bucharest-Ilfov Region which presents a GDP per capita level of 113%. Nevertheless, the value the national level reaches doesn't even represent half of the European average. These disparities are not something of a novelty and are proof that there is neither a balanced development policy in the regions, nor a coherent strategy so far as the authorities as concerned. In order to balance the income at a region level, the funding of the programs implemented by means of European funds, as well as Government money should be exclusively concentrated on those parts of Romania that are regarded as underdeveloped.

According to the 2007 - 2013 Financial Perspective, the entire territory of Romania was subject to the “Convergence” Objective, as the GDP per capita in the development regions was below 75% compared to the European average. Also, Romania was eligible to the Cohesion Fund (mainly focused on infrastructure and environment), as the GDP was below 90% compared to the European Union average.

Starting from the aforementioned aspects we aim to highlight the European funds absorption rate and the main method through which the effects of structural funds on Romania's economic evolution could be quantified and through which the main factors that negatively influence the absorption rate could be identified.

### **3. Structural Funds Absorption Rate**

The absorption of the structural and cohesion funds represents one of top priorities for the public administration, companies, farmers and non-governmental organizations. The absorption rate represents the rate at which a country is capable to effectively and efficiently spend the financial resources allocated from the European Funds.

The substantial allocation of funds from the European Union for the period 2007 – 2013, mounting at approximately 20 billion EURO must be optimally used, as it represents a key source for the short, medium and long term development of the Romanian economy and society. Moreover, considering the current economic environment, in which developing countries find difficulties in gaining access to financing on international markets, but also the non-reimbursable aspect of these structural funds, they represent a central element of the budget sustainability, in terms of investment strategy. Romania cannot afford to waste this great opportunity to modernize.

Achieving the objective of at least 90% of the allocation available for Romania is virtually unattainable. At the end of 2008, the status of the Operational Programs' implementation was dramatic, especially in some of the most suggestive chapters: closing of financing contracts with the beneficiaries and the amount of payments towards beneficiaries. For this reason, a set of measures was adopted, concerning the following aspects: improvement and simplification of applicant guides, more flexibility for the financing access criteria, reduction of requirements concerning the documentation demanded for the financing file submission, increase as to double the maximum pre-financing threshold, improvement of legislation regarding public acquisition etc. These conditions led to a visibly accelerated level of absorption throughout the year 2009.

At the end of 2010, in spite of a positive evolution of some progress indicators such as the number of submitted projects, approved projects and signed financing contracts, an extremely low level of structural instruments was being recorded (as calculated based on the reimbursements received from the European Commission), more precisely, 1.9% of the EU allocation for 2007 – 2013. This situation notably contrasted with the absorption level of the EU allocation for 2007 – 2013 (approximately 42.7% on 31 December 2010) and with the internal

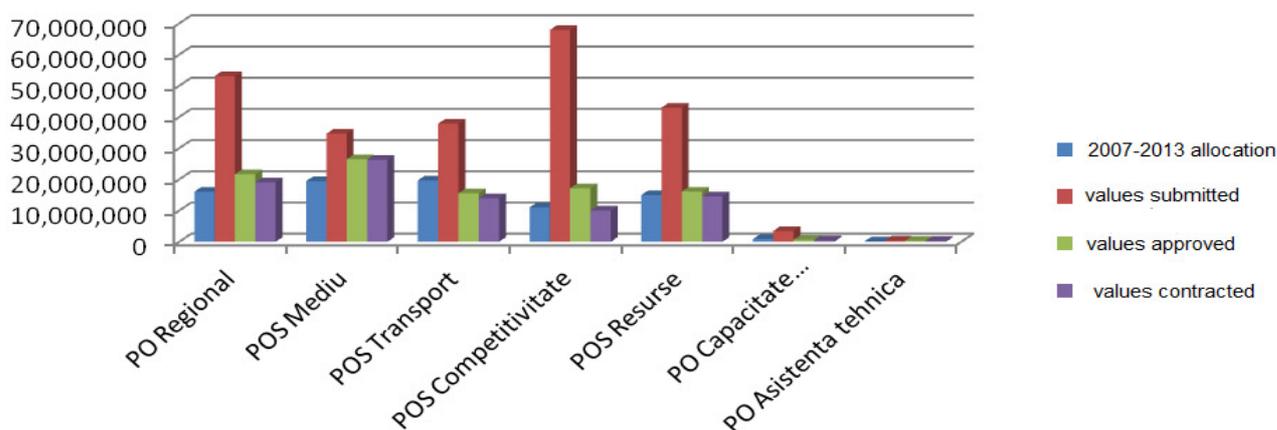
payments towards beneficiaries (pre-financings and reimbursements) amounting to 1.73 billion EURO (approximately 19% of the EU allocation for 2007 – 2013).

Considering the unsatisfactory status of the structural and cohesion funds absorption and aiming to accelerate the implementation of the Operational Programs, the Ministry for European Affairs (MAEur) elaborated and subjected to Government approval “The Priority Measures Plan for consolidating the Structural and Cohesion Funds Absorption Capacity” (PMP). This document aims to provide solutions to the problems and deficiencies that have the greatest impact in affecting the implementation of structural and cohesion funds and comprises measures which are structured in 7 main guidelines: the project cycle management, realized by the organisms responsible with implementing the operational programs; financial regulations regarding the management of Operational Programs (PO) and projects; public acquisition procedures and acquisition contracts; approach of the audit and control activities; the influence of institutions and of procedures outside the scope of the structural instruments management on the projects’ evaluation, closing and implementation process; to provide the structures responsible with PO implementation with an adequate administrative capabilities.

On a medium term, the PMP implementation must lead to avoiding the phase out of substantial funds on the date of 31 December 2013 (when there is the highest phase out risk), and, on the long term, to creating the necessary conditions to achieve the target commonly agreed upon through the National Strategic Reference Framework 2007 – 2013, more precisely absorption of at least 90% of the structural and cohesion funds allocated to Romania.

On the date of 30 November 2011, as presented in Chart no. 1, the total number of projects submitted for financing within the 7 Operational Programs was over 31 172, mounting to a total of 240,5 billion Lei (approximately 56 billion EURO). Of the total number of projects submitted to approval, only a number of 9 823, mounting to a total of 97.9 billion Lei had their financing approved (approximately 22.7 billion EURO, of which 14.1 billion EURO EU contribution, resulting in an approximately 74% of the EU allocation for 2007 – 2013). There has also been a considerable progress in implementation, regarding the number of contracts/ financing decisions concluded with the beneficiaries. Until 30 November 2011, of the 9 823 submitted projects, there were 7 255 signed contracts, with an eligible value of approximately 66.1 billion Lei (15.3 billion EURO, of which the EU contribution mounts to approximately 12.2 billion EURO), representing around 63% of the EU allocation for 2007 – 2013. However, the total payments towards beneficiaries, representing pre-financings and reimbursements (except for VAT refund), mounted to only 13 billion Lei (3 billion EURO). The internal payments of EU funds represent 14.72% of the EU allocation for 2007 – 2013.

Chart no. 1 EU allocation for 2007 – 2013 vs. the value of the submitted/ approved/ contracted projects until 30 November 2011



Source: [www.fonduri-structurale.ro](http://www.fonduri-structurale.ro) – personal interpretation

At the beginning of 2012, an advanced stage has been reached, considering that approximately 67% of the funds allocated to Romania through all Operational Programs (PO) have been contracted. Although priorities at a national level aimed at obtaining an as high as possible level of the projects' submission, approval and contract closing, favoring efficiency to the detriment of the eligibility and the submitted projects' quality, the absorption rate (internal payments), also calculated for all the Operational Programs, is of only 15.60%.

Nevertheless, the new strategy forced an emphasis on absorption and implementation. For this purpose, the responsible authorities declared that, by the end of 2012, they intended to reach an external/ actual absorption rate (payments from EU) of 20% - 25% (considering that, at the end of February 2012 it had reached 6.3% compared to 5.5% at the end of December 2011) and a contracting rate of 90% minimum. The main objective is to avoid phase out by absorption of 8.6 billion EURO by the end of 2013.

#### **4. Evaluation by means of the Hermin model**

The HERMIN model is used in several EU member states in order to estimate the impact of the structural and cohesion funds on the national economies, but also to analyze the comparative evolution of the financial transfers necessary to the development of the Euro-regions. The HERMIN model had been adapted in Romania since 1998 and its more recent variant, developed by the European Center for Economic Modeling is entitled HEROM.

The European Structural Funds, as had been proved by the experience of the member states which joined EU in the '80s (cohesion states, Spain, Portugal, Greece and Ireland), have had a powerful impact on the European Union's economies which they had been transferred to. Moreover, the way they were absorbed and their different distribution, according to their destination, for infrastructure or human capital development or directly for economic actions, had a distinct impact in each of the recipient member states.

The Hermin model is estimated to reflect the impact of the cohesion policy, namely the effect of the structural funds on the GDP and employment rate, but also their contribution to the regional development and disparities reduction. The Hermin model is an annual multi-sector model and it includes the processing industry (goods tradable on external markets), market services (goods non-tradable on external markets), agriculture and the government services (non-market).

The structure of the model can best be regarded as consisting in three main blocks: one for the offer, which is distinctly detailed for each of the four sectors, one for the absorption and one for the income distribution. Consequently, the HERMIN model is designed as a multi-sector macroeconomic representation of the national economy, it is a medium scaled empirical model, entirely written in a structural form, it is a dynamic model, based on Keynesian principles.

The economy is influenced by the cohesion policy thorough a combination of offer and demand channels. The effects of short term demand occur as a consequence of political decisions to increase the income and expenses related to the initiatives of the cohesion policy. These effects will propagate in all the internal consumption components (e.g. total investments, private consumption, imports etc.) and in the internal output and national income components. Still, we must limit ourselves to the analysis of short term effects, but rather turn our attention to the long term influences of the cohesion policy, of stimulating the potential offer. Thus, on long term, it is important to consider a quantitative estimation of Community Aid Framework's (CSC) macro economical impact in 2007 – 2013.

The advantage of using this type of model resides in the possibility to quantify the CSC effects on the economy, not only by simply adding the effects. This model is a structural one, constructed on micro economical bases: the side related to the offer includes incorporating the main mechanisms through which the Structural and Cohesion funds influence the productive

potential (direct externalities on the output). Some indirect externalities of the production factors (capital and workforce) are also included.

As the labor market plays an important role in transmitting the policy's mechanisms, a special attention was paid to modeling this sector, by considering the wage policies and labor market regulations (financial aspects etc.) which influence the result of wage negotiations and indicators such as employment rate and workforce participation rate. Special attention is paid to the impact of the cohesion policy on the level of qualification in different sectors and on the human capital's level of education and development. The results of the Hermin model for the year 2010 reveal that the effect on the rate of employment, compared to a no cohesion policy scenario is of +750 000 people (Regional Policy Evaluation, 2010).

The injection of structural funds will lead, at the end of the time frame for the current budgetary exercise in 2013, to a 15% higher GDP, which is the equivalent of a superior annual growth rate of 2%, in case of a total structural funds absorption. As a result, in 2020, the investments will be approximately 20% larger due to the impact of the structural funds, corresponding to an annual growth differential of 0.95%.

As a consequence, a re-estimation of the model so that it considers an absorption rate close to the one in Romania is a necessity, and the results thus obtained must represent a starting point in creating a coherent strategy to attract structural funds.

## **5. Conclusions**

Within this article, we have tried to highlight, starting from the regional disparities situation and the European funds absorption rate, the main model through which the impact of the structural funds on the Gross Domestic Product could be quantified.

The HERMIN model has been designed considering the evolution of macro-variables throughout transition and pre-accession process, as well as out of the need to analyze the gradual alignment of Romania's economic policies to those of EU. The fact that, initially, the HERMIN model was designed for the European Union's less developed economies represented the cornerstone in choosing it, as it was the case for Romania, too. However, the quantitative evaluation must always be accompanied by a qualitative evaluation, in order to comprise factors which cannot be measured by the econometrical modeling. For this purpose, when the results of econometrical model based evaluation are used, it is important to be aware of the fact that models simplify reality, no matter the impressive mathematical calculations they employ.

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