

Department of World Economics

THESIS

for the Ph.D. thesis of

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**The European Union's Regional Policy and its Results in Portugal
Convergence and Divergence in Practice**

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I. Presenting the Theme and Explanation thereof

The aim of the regional policy¹ is to strengthen the economic and social cohesion ensuring the harmonic development between the Member States and the regions of the European Union. Accordingly the cohesion policy of the European Union serves the creation of cohesion by the convergence of the regions to the average. The capacity of Structural Funds to decrease the structural imbalances between the regions of the EU has already been questioned by many people in specialist literature [Martin, 1999; Puga, 2002; Hurst et al, 2000]. However, others have argued that the structural policy resembles more an income distribution policy rather than a long term sustainable development policy [Rodríguez-Pose, 2000; Boldrin – Canova, 2001].

Portugal is often mentioned to be one of the models of old cohesion countries.² However, the Portuguese regions do not share the achievements of the country uniformly. Furthermore, the development of the country was not continuous either and did not bring along the catching up of all the regions, in some cases even a certain backwardness can be noticed within a period of time. After the accession to the European Communities and during the periods of the first and the second Community Support Frameworks (in short: CSF) a considerable convergence procedure prevailed in the catching up of the Portuguese development level to the European average. With the introduction of the euro, after the millennium the economy began to stagnate and finally during the period of the third Community Support Framework diverged from the European average levels. This procedure has not reversed yet, and the Gross Domestic Product (in short: GDP) per capita in Portugal keeps being well below the average.³ All this happened in spite of the fact that Portugal – as one of the biggest beneficiaries of the European Union’s regional policy – has already been receiving structural support for almost 25 years, which would facilitate the convergence of Portugal and the cohesion within the country. During the fourth period of structural assistance – which began in 2007 – a great part of the Portuguese territory and 71,6 percent of its population still belonged under convergence objective, supporting the least developed regions [European Commission Regional Policy, 2006a].

¹ In the thesis the expressions regional policy, structural policy and cohesion policy are used as synonyms.

² Old cohesion countries (between 1993-2004): Greece, Ireland, Portugal and Spain.

³ The GDP per capita was 74,6 percent of the EU-27 average in 2007.

The two main objectives of the Community Support Frameworks are to reduce the differences in development and to create cohesion among the Member States of the European Union and within them, among the regions. In my research I have examined – through the example of Portugal – to what extent the Structural Funds have contributed to the growth of Portugal, as well as to the reduction of disparities among the levels of development of Portuguese regions.

On the basis of the above mentioned the main questions of the dissertation are the following:

1. What results and impact did the structural assistance strategy of the European Union have in Portugal in the last almost quarter century?

The first hypothesis of the research is that the structural assistance strategy of the European Union has increased the economic potential of Portugal and contributed to the growth of the country. My aim was to prove that the structural supports have provided Portugal and its regions with such advantages which could not have been realised without the structural support.

2. To what extent was the convergence of the growth levels realised between the Portuguese regions and the national average concerning the structural support?

The other hypothesis of the research was that according to the objective of the EU structural policy, as a result of the structural support the disparities between the regions decrease. Through the example of the Portuguese regions I intended to emphasize that this statement could be disproved, namely as a result of the Structural Funds disparities between the regions do not always decrease and the convergence among the regions do not always occur.

The two questions of the research are closely related to each other. Having a closer look at the results of the structural assistance in Portugal, we can also find out the development of the regions thanks to the support, to what extent they converged to the national average, and to what extent this development could be attributed to the Structural Funds both at regional and at national levels.

The dissertation consists of 7 chapters. After the introduction, chapter 1 reviews the methodology of the research, within which the objectives of the research, its frame and the

methods used. Chapter 2 analyses the measuring of the impact of Structural Funds and examines two econometric models, a further developed Portuguese model and an input-output model with regional extension. Chapter 3 deals with the theory of convergence. In this chapter I have studied the perceptions of neoclassical theory, the endogenous growth theory and the new neoclassical theory on convergence. Chapter 4 is the legal and historical pillar of the research. In this chapter I analyse the evolution of the community regional policy, its legal and integrational historical background. I analyse the different regulations related to each period, their reforms and the changes brought by the reforms starting from the formation of the policy until today. Chapter 5 demonstrates the essential features of Portugal from the regional policy point of view. Here in short the development specialties of the regions, their territorial, economic and social features are illustrated. Chapter 6 – one of the backbones of the dissertation – analyses the regional support and its results provided for Portugal from the period before the accession to date. I examine the structure and impact of each Community Support Framework, the changes between each period, the achievements reached with the support, its regional and sectoral distributions. Chapter 7 deals with the objectives of the research, namely with the impact of the structural support, as well as with the fulfilment of convergence among Portuguese regions. First in this chapter I shortly describe the development path of Portugal in relation to the EU, which puts the further subpoints into context. Afterwards I analyse the impact of the EU structural assistance on Portugal based on the models reviewed in Chapter 2. The next subpoint of chapter 7 examines the fulfilment of convergence among Portuguese regions with the help of sigma and beta convergence in the light of structural support. Finally I present the results of my own calculations on the relation between the Structural Funds and the convergence of Portuguese regions. At the end of the dissertation in the conclusions I summarise the results of the research on the basis of the various chapters and I answer the two main questions of the research. Finally on the basis of the Portuguese experiences I draw up some recommendations and proposals, which in practice could be utilised by Hungary as well, having the same geographical and population size as that of Portugal.

II. Theoretical Basis, Methods and Sources Used in Research

The Results and Impacts of Structural Funds

On the basis of the acquired information concerning the first question of my research about the results and impact of the Structural Funds I have recognized that – especially at regional level – there is no unique method to measure the impact of Structural Funds. On the one hand the methods in use can not take all the factors into account; on the other hand, in most cases they can only provide information about the impact of structural support at national level. Determining the regional impact of Structural Funds is a difficult task also because the regional distribution of the support is unknown in the majority of cases. National level Operational Programmes (in short: OP) namely could not always be divided into regional parts.

In order to assess the results and impact of Structural Funds in Portugal I used macroeconomic models. The two most frequently used models are the HERMIN and the QUEST II models. After a short review of these models I introduced the characteristics of the HERPOR model, a country specific econometric model developed for Portugal, which is of significant importance from the research point of view. To measure the impact of the Structural Funds at regional level in Portugal, an input-output model has also been elaborated and this is capable of weighing the regional impact of supports if the regional data of the variables are available.

The HERMIN model

The most well-known and widely applied modelling framework to analyse Structural Funds is HERMIN framework. It incorporates mechanisms based on Keynesian and neo-classical elements in order to measure the short run (demand side) and long run (supply side) effects. The model is based on the endogenous growth literature, to the extent that it incorporates mechanisms to capture the long-run impact of Structural Funds investments. The HERMIN framework is based on a small open economy model. One of the numerous advantages of the model is that it is capable of modelling the Structural Funds in isolation and in the context of the Single European Market and European Monetary Union as well [Bradley et al, 2004b]. The HERMIN model is a sophisticated system to measure the impact of the cohesion policy

and to analyse the various kinds of expenditure data of the structural programmes. The model uses planned and actual expenditure data, covering both ex-ante, and ex-post evaluations in case of those countries and regions which fall under Objective 1.

The HERMIN macro modelling framework was developed in order to measure the macroeconomic impact of Structural Funds at the end of the eighties in Ireland in the Economic and Social Research Institute (ESRI). The HERMIN model, which builds on the experience and revision of former macroeconomic models,⁴ can also take the limited data stock of the less developed EU Member States into account. The main objective of the Structural Funds is primarily to change the economic potential of the regions in the long run rather than to provide a short term capital injection. Accordingly the measurement of the long term impact of Structural Funds is far more important than the estimate of the demand-side effect [Bradley et al, 2004a]. The advantage of HERMIN model compared to other econometric models is precisely that it is capable of measuring the more important long term effect of the structural support besides providing information on the short term effect as well [Bradley et al, 2004b].

In the field of the model-based macroeconomic analysis the HERMIN model has been considered one of the most appropriate tools so far to quantify the effects of the Structural Funds. However, one can not exaggerate the possibilities lying in the model. When measuring the impact of Structural Funds on the economy we are inclined to neglect the fact that the economy of a country or a region is also dependent on several other political (fiscal, monetary, industrial, social, labour market) or external (developments of the world economy, oil crisis, wars) shocks. The favourable impact of Structural Funds prevails together with the above mentioned other shocks, that is why it is difficult to separate the impact of Structural Funds from other effects. The greatness of HERMIN model is precisely that it still tries to separate these effects.

The QUEST model

The QUEST model is the own macroeconomic model of the European Commission which is based on different presumptions from the HERMIN model [CEC, 1996]. On the demand side

⁴ The first model simulation, HERMES, was developed to analyse supply shocks in the seventies-eighties. This model was the predecessor of the HERMIN model and the first one applied to evaluate the impact of structural support [Tarschys, 2003].

the model relies essentially on neo-Keynesian basis and on the supply side on neo-classical basis. It can provide fewer sectorial details than the HERMIN model but it can be applied to a wider geographic area. Version II of the QUEST model has been developed to measure the economic cycle and growth of several countries and was designed to analyse the economies of the European Union and their interactions with the rest of the world, especially with the United States of America and Japan [European Commission, 2000]. In the model those stock variables which can be identified on a macroeconomic level such as physical capital, net foreign assets, money and government debt are endogenously determined and wealth effects are allowed to influence savings, production and investment decisions of private households, firms and the government. The supply side of the model was defined in a way to make the modelling of the impact of investment in infrastructure and human resources possible. In the model real interest rate and real exchange rate were defined endogenously, which gives the possibility as well that public expenditure related to Structural Funds may “crowd out” private expenditure, resulting in a lower level of total investment as a result of the structural supports [I’nt Veld, 2007].

The HERPOR model

HERMIN model is widely used in Portugal and in other EU Member States to analyse the effects of Structural Funds. The HERPOR macroeconomic model was elaborated for Portugal by improving the HERMIN model.⁵ The HERPOR model was created in order to take the demand as well as the supply side effects of the structural assistance into account in the short, middle and long run. In spite of the fact that the creation of the HERPOR model was inspired by the HERMIN model, there are lots of differences between the two, and consequently the HERPOR model reflects different results in the analysis of the impact of Structural Funds on the Portuguese economy [Dias, 2006]. In my dissertation I present the second, the latest version of the HERPOR model developed in 2005.⁶

The MODEM – input-output model with regional extension

A multisectorial model based on an input-output model was developed by the Department of Foresight and Planning of the Ministry of Environment, Spatial Planning and Regional

⁵ The first version of the HERPOR model was elaborated in 2003 by the collaborators of the Department for Foresight and Planning and by two professors of the Lisbon Technical University. This first version was used for the mid-term evaluation of the III. CSF in 2003.

⁶ The second revised and further developed version was used for the update of the mid-term evaluation of the III. CSF in 2005.

Development in order to assess the macroeconomic impacts of the structural assistance. The model was first used in 1992, since then a lot of improvements have been made, the model currently in use is MODEM 5 (Modelo Multisectorial). The regional extension of the MODEM was first completed in 2000 in response to the need for the assessment of the regional impact of the CSF III. The advantage of the model is that it enables the separation of the data and results according to sectors. The model builds on the logic that supply is determined by the final demand, the components of which – with the exception of private consumption – are exogenously determined. The application of the MODEM with regional extension is only possible if the regional data of the exogenous components of the final demand are available [Dias – Lopes, 2005]. Naturally this model also has its limitations and during its application it uses some simplifying assumptions, therefore, its result should be treated in an appropriate way.

In chapter 7.2., with the review of the above introduced models on a concrete example, the impact of the structural assistance on Portugal and on the Portuguese regions is assessed.

Convergence or Divergence among Portuguese Regions

The objective of the second question of the research is to reveal the relationship between the development of the Portuguese regions and the structural support. In this context first I examine the development of the regions compared to the national average (convergence versus divergence). In order to present the questions of convergence among the Portuguese regions I use the methodology of the project cycle management. I present the basic problem with the help of a “problem tree” and then with the help of an “objectives tree” I formulate some solutions and their conditions to solve the problem. For the analysis of the question of convergence and divergence I use the methodology of convergence. The development of the regions could be well represented with the narrowing or the widening gap between the GDP per capita of the regions and their national average, namely with convergence or divergence. At the same time, studying the European Union’s structural support used by each region we can make some conclusions about the utilization of funds and the development path of the regions. This consideration is defined on a relatively narrow manner, as the growth path of the regions is dependent on many factors other than structural support. However, in the present research I only tried to map the development path of the Portuguese regions along the structural support.

In the dissertation I present the perception of the neo-classical theory, the endogenous growth theory and the new neo-classical theory on convergence. Below I review the three types of convergence differentiated in literature.

➤ *Sigma convergence* happens if the dispersion of values of a given variable (e.g. income per capita) from the average (standard deviation) decreases within the examined period of time. The denomination comes from the area of statistics, where standard deviation⁷ is signed with sigma (σ), one of the characters of the Greek alphabet [Barradas – Lopes, 2007]. Standard deviation is the most commonly used measure of the statistical dispersion of a set of values. If lots of values of a database are close to their mean, we talk about low standard deviation, the opposite of which is high standard deviation, when lots of values of a database are far from their mean. Therefore in case of sigma convergence the values of a variable get closer to their mean, that is to say by decreasing standard deviation sigma convergence is increasing, namely the disparities between regions are decreasing.

➤ *Absolute beta convergence* occurs when all values of a variable are approaching one equilibrium value. Beta convergence is the correlation (signed with β) between the initial level of the values per capita of a variable and the growth rate of the variable [Forman, 2000]. For example beta convergence correlates the income per capita of a given year to the average annual growth rate of the income. Absolute beta convergence is possible in such a case when the less developed regions producing higher growth rates and the more developed regions producing lower growth rates converge to the same equilibrium value. Therefore in the long run the less developed regions catch up with the level of GDP per capita of the more developed regions. The perception of the absolute beta convergence stems from the neo-classical model, where the principle of decreasing rate of return, the decreasing marginal rate of return of capital and exogenous technological development are the determining conditions. The regions develop to a less extent as they grow, which leads to an equilibrium state (steady state)⁸ in the long run [Barradas – Lopes, 2007]. The definition assumes that regional economies have similar characteristics.

⁷ The standard deviation or dispersion used in statistics means the root-mean-square deviation of the values from their mean. It shows how much in average the values deviate from their mean. [Hunyadi-Mundruczó-Vita, 2000].

⁸ A steady state is such a state of equilibrium that results a long term sustainable growth besides the economic structure of the regions [Barradas – Lopes, 2007].

➤ *Conditional beta convergence* does not apply the presumption of the similarity of regional economic structures and is compatible with the natural, economic and social differences existing among regions [Barro – Sala-i-Martin, 1992]. In case of conditional beta convergence all regional economies converge to their own equilibrium value and not to a common equilibrium state.

Each type of convergence measures a deviation from the equilibrium state. As convergence increases the deviation from the equilibrium value decreases, therefore in case of convergence the value of the coefficient is always negative, that is $\beta < 0$ and $\sigma < 0$. Between the different types of convergence certain relationship might exist. For example beta convergence might exist together with sigma convergence, however, beta convergence is a necessary but not sufficient condition for sigma convergence [Young et al, 2007]. Weaker regions have to grow faster than stronger ones so that beta convergence can occur, but still the dispersion of the individual values remains, because the catching up of the regions is not guaranteed. Accordingly beta convergence might exist without sigma convergence, but the opposite situation is impossible [Ederveen et al, 2002].

In my dissertation I also do some calculations to analyse the convergence of Portuguese regions. Due to the extent of the research and the limited amount of data available I have defined the spectrum of my calculations as follows. In order to study the development of the Portuguese regions I compared the amount of EU structural support with the regional GDP per capita – best representing the development level of regions on macro level. When comparing the set of regional GDP per capita with the level of support in each region I tried to find out how the regions developed according to the structural support received i.e. what kind of relationship persists between the change of the development level of the regions and the support of Structural Funds.

III. Conclusions

My research was trying to bring the results of structural policy into a different set of lights by not only analyzing it in general, but presenting its realisation chapter by chapter through the example of a country, Portugal. The research extended the whole period of the structural support allocation to Portugal that is the detailed analysis of more than twenty years of structural support policy, through the analysis of sources and macroeconomic models. **The research tried to be a pioneer by analysing the change of pattern of development of Portuguese regions in connection with the structural support.** I have examined the existence of convergence in Portugal by several methods; beyond the analysis of beta and sigma convergence I have applied my own calculations too. The summary of the results and my conclusions are as follows.

1. The Results and Impact of Structural Support in Portugal – the First Question of the Research

The support provided by the Structural Funds has played an inevitable role in the development of Portugal, on the one hand due to the amount of the support, on the other hand due to the catalyst effect of the assistance on the economy. When examining the effectiveness of the structural support it is worth observing the composition of the financed investments. Portugal has spent a great part of the structural support on infrastructural investments, mainly on building roads, modernising railroads, upgrading the telecommunication and power supply system. These infrastructure-related supports have been well applied by the country; however **we must bear in mind that we should not put too much emphasis on infrastructural investments, because although the results might have an impressive look, they might not improve the country's long-term international competitiveness to the due extent.** The Portuguese experiences show that the long-term concentration on infrastructural investments does not realise the expected results. Considering that the infrastructural investments are affecting the transaction costs and the decision of companies about the location of their premises, the long-term supply effect on certain regions can be contradictory with the short-term effect [Martin, 1999]. It has been shown in the macroeconomic effect analysis of CSF III, that for the Portuguese economy the most effective public expenditure category was the human resource investment [Observatório do QCA III, 2007]. Rodríguez-Pose and Fratesi

also confirm that the investments in education and human research (including the expenditures for research and development) have a most positive effect on the medium-term economic growth [Rodríguez-Pose – Fratesi, 2004]. Further authors refer to the fact, that although the development of infrastructure can be advantageous in respect of the convergence between countries, it doesn't necessarily inspire the convergence of the regions inside the country [Bachtler – Gorzelak, 2007].

Based on the four old cohesion countries, more precisely on the experience of Portugal we can state that Structural Fund supports can only achieve their goals with effective institutional background and they are complemented with significant national support. Portugal's institutional framework for the regional support is centralised, controlled from Lisbon where the main decisions are made by the minister responsible for regional developments. The institutional system used for structural assistance has been built after the accession to the European Communities, which in the beginning worked rather difficult, but later on it made the use of support more efficient. Consequently for the reception and efficient use of the regional support it is essential to have an effective institutional system.

It is undeniable that the effect of Structural Funds has been significant in the last periods of support. In case of Portugal, one of the main goals of the EU regional policy, namely as a consequence of the supports the differences between the development levels of the EU countries would decrease, was not achieved. Portugal has been diverging from the EU average GDP per capita since 1999. Hypothetically thinking about the scenario, what could have happened if Portugal had not entered the European Union, therefore it would not have received regional development support, we can assume that in this case the country would not have developed at the rate it did with the help of the structural supports. The macroeconomic models estimate the results of the structural support regarding a country by comparing the data collected when receiving the supports with the data if the country had not received support. Based on the ex-post evaluation of the HERMIN model, the impact of Structural Funds in Portugal - calculated in the annual average of the CSF II period – was 3,4% of the GDP. The ex-ante evaluation of the HERMIN model during the CSF III period has estimated the annual average impact of the Structural Funds for the 6,1% of the GDP, and in the same way it had an estimate of 3,1% on the impact of GDP caused by the National Strategic Reference Framework (in short: NSRF) concerning 2015. So we can state that *ceteris paribus* the Portuguese GDP would have been smaller without the structural support

by 3,4% between 1994-1999, 6,1% between 2000-2006 and 3,1% in 2015. Despite the fact that it is difficult to scientifically prove such a hypothetical, realistically uncontrollable alternative, based upon the reasoning above we can see that under the influence of structural support Portugal has achieved a higher GDP and has developed better than otherwise. A study on the CSF III also states that beside the supports, Portugal's annual average GDP increase was estimated 2,5% in the period of 2000-2006, however, without them it would have been only 2,1%. If the national public financing had been missed, the annual average GDP increase would have only reached 1,9%, and in case of the miss of the national private financing it would have been only 1,6% [Beutel, 2002]. Besides the effect of the Structural Funds on the GDP per capita, the HERMIN model's ex-ante evaluation assesses the influence of Structural Funds on employment as significant; in the period of 2000-2006 it ascribed an annual average of 4 percent higher employment rate to the Structural Funds. **After all, even if the structural policy could not help the less developed region's catching up in every case, it was successful in not allowing the differences of the development levels to go further between the regions and the countries.**

Although the Structural Funds have in absolute terms contributed to the increase of the economic and social cohesion of Portugal, the asymmetric economic and social situation of the country still persists. The Community Support Frameworks could only partially help to increase Portugal's competitiveness. In the future it is necessary to draw such political and realisation aims into focus which would assure a sustainable innovative and competitive economic structure and the necessary highly-educated society [Magone, 2004]. In order to increase the competitiveness of the country, it is necessary to increase expenditures on research and development, to reform the education and to ensure the higher participation rate of small- and middle-enterprises. Among the challenges of the future there is the efficient use of the structural supports provided by the European Union in order to recover the previously dynamic economy of Portugal and to catch up with the European average. **Through the use of the Structural Funds of the European Union, Portugal can choose such a development trajectory towards the Union's average that provides exceptional possibilities and sources in order to decrease the regional inequalities, to develop and grow.** The cohesion policy of the European Union provides possibilities and tools for the realisation of all this. The results are mostly dependent on the factor of how much the previous periods' deficiencies can be eliminated and how Portugal can use the available resources in order to achieve its strategic goals. The programming period from 2007 onwards has the aim of specifically

supporting the development of competitiveness and human resources in Portugal. Hopefully the supports provided from the Structural Funds will live up to the expectations and lift Portugal again to the road of convergence.

Based on the source analysis and macroeconomic models used for the research of the first question, **I reckon the hypothesis of the dissertation is justified since the structural supports have allowed Portugal and its regions to gain such advantages that would not have been possible without the supports.** The consequence is that the EU Structural Funds have significantly contributed to the development of Portugal. The Structural Funds have become a pivotal part of the Portuguese economy in the last 20 years, and without them the country could not be at its present development level. The effect of supports on the cohesion and growth though is largely dependent among other things on the administrative costs, the crowding out effect of supports on the national investments, the efficiency of the spending of supports and the productivity of the supported activity, its effects on the consumption and investment [In't Veld, 2007]. In order to efficiently use the structural supports on the one hand it is necessary to have such a strategy that serves the long-term competitiveness of the country, on the other hand it is important to make those institutional, structural changes that could increase the impact of supports.

2. Convergence versus Divergence among Portuguese regions – the Second Question of the Research

It is a great challenge in the cohesion countries, including Portugal to solve the problems of the undeveloped regions in a country where – measured with a European standard – the country itself is not entirely developed. Because of this certain contradictions and tensions could arise between the objectives of national development and regional convergence [Illés, 2003]. Decision-makers have the role to seek the balance between the increase of competitiveness of the country and the catching up of the regions. According to Illés most of the countries facing this challenge – and Portugal as well – have solved this situation by emphasizing the national level economic development and attributing less importance to balancing regional disparities.

Analysing the process of convergence in Portugal, it could be ascertained that the results reached in the area of cohesion – especially with regard to the development of infrastructure and other facilities – unequivocally contributed to the satisfaction of needs existed in these areas. However these procedures did not turn back the tendency of the population to move and the inherent weakening of local and regional economic basis. The duality traditionally characterizing the Portuguese territory (coastal parts/inner parts) has become far more complex for today. From the viewpoint of territorial competitiveness there are important asymmetries among Portuguese regions. The biggest winner of the previous period concerning competitiveness is the Lisbon region (Grande Lisboa and Setúbal peninsula) as well as the central Alentejo. However lack of competitiveness could be observed in several regions (e.g.: Grande Porto, coastal part of Alentejo). From the territorial cohesion point of view the emerging, developing regions (central part of Alentejo, Algarve, Beira Interior Sul, Baixo Vouga, Médio Tejo, Pinhal Litoral) enjoyed most of the advantages, as they are mostly situated on the borderline of the traditional economic and social development of the country. Grande Lisboa, the Setúbal peninsula and Grande Porto have somewhat lost their position in respect to territorial cohesion. **There are still considerable differences among the Portuguese regions as far as competitiveness and cohesion are concerned, which means a great challenge, especially if we consider that a region is the level where the dimensions of competitiveness and cohesion overlap** [Observatório do QCA III, 2007].

The structural assistance provided by the European Union has allocated considerable resources to the Portuguese regions. From the Structural Funds, European Regional Development Fund has undoubtedly provided the biggest amount of assistance for the regions. In spite of the fact that from the 1986 accession until the millennium the development path of Portugal has converged to the European Union's average, convergence has not been distributed equally among Portuguese NUTS II regions. The regional development paths within the country were asymmetric already during that period [Torres et al, 2004]. **Although the main objective of the EU's Structural Funds is to reduce regional disparities among the regions of the Member States, currently the development of the Portuguese regions shows divergence.**

On the basis of analysing sources about the development of the Portuguese regions in view of the structural support during the last two decades I have learnt that after the accession to the European Communities disparities among the regions decreased, and both sigma and beta

convergence realized. On the basis of the sigma convergence calculations, GDP per capita of the individual regions approached the national average between 1991 and 1994, between 1994 and 1997 they diverged from the average and between 1997 and 2003 the stabilization of the values of sigma convergence could be observed. According to the calculations of the Eurostat from 2003 onwards disparities of regional GDP per capita further increased between the regions. According to the calculations on beta convergence among Portuguese NUTS III regions between 1991 and 2003 a slight beta convergence could be observed. This is also confirmed by the calculations of the MODEM macroeconomic model relative to the period 2000-2003. **Thus it can be confirmed that a slight beta convergence persists among the Portuguese regions, nevertheless the deviation of regions from their average does not decrease, so there is no sigma convergence among them. All this means that the differences between the regions have not been stabilized yet. For this reason combating divergence among the regions requires the intervention of public policy in the future as well.**

During my research I have examined the development of Portuguese regions in the light of structural support also on the basis of my own method. On the basis of the available data I have compared the levels and the change of regional GDP per capita of the individual regions between 1994 and 2005 with the support individual regions received from the second and third Community Support Framework. **The first statement originating from my own calculations is that the distribution of structural support between 1994 and 2006 did not follow closely the development level of the regions.** In some cases regions with relatively high regional GDP per capita have received considerable support, whereas regions with relatively low regional GDP per capita received less structural support. **Furthermore it could be stated as well that there is no direct correlation between the structural support provided to the individual regions and the change of regional GDP per capita.** During the periods 1994-1999 and 2000-2006 no significant trend has been observed to underpin the assumption that the regional GDP per capita approaches the national average following the extent of structural assistance. Some regions have developed remarkably in spite of the relatively low amounts of support, while the regional GDP per capita of other regions did not rise despite the relatively high regional support. Consequently on the basis of my own calculations it can be stated that the change of regional GDP does not follow clearly the extent of Structural Fund support, that is other factors (initial level of development, economic cycles, booms and busts, etc.) might influence the regions to the extent that their pure development

on the effect of the Structural Funds could not be determined. **The conclusion arises from the above mentioned that thanks exclusively to the support of Structural Funds convergence among regions does not necessarily evolve.**

It would be worth taking a closer look at the change of the classification of Portuguese regions during the periods of assistance. From the accession in 1986 until the end of CSF II in 2000 the whole territory of Portugal belonged under Objective 1 including the least developed regions. Between 2000 and 2006 out of all Portuguese regions Lisbon and Tejo valley was an exception to this rule, which received only transitional support from Objective 1 due to its higher level of development. In the current, fourth programming period out of the seven NUTS II regions of Portugal four still come under the convergence objective supporting the least developed regions of the EU. This all confirms that in spite of the considerable amount of the regional support, the regional policy of the EU did not succeed in raising the majority of Portuguese regions from the group of the least developed European regions.

It can be stated from the above mentioned that the slowing down or failing of convergence of the Portuguese regions as well as the divergence of the Portuguese economy from the European average since the millennium exist together with the high amount of support of Structural Funds. The asymmetry lying between the access to structural support and the deterioration of economic performance, proves that the efficiency of the previous procedures underlying convergence has been lost over time. Consequently the capacity of programming tasks, the strategy and guidance followed as well as the projects realised is insufficient to ensure the positive performance of the Portuguese economy and its regions as well as their structural change for the unfavourable global economic environment and conditions of competition.

Concerning the second question of my research, based on the analysis of sources, beta and sigma convergence calculations and my own calculations **I reckon the other hypothesis of the dissertation is justified, that is due to the effect of structural support convergence is not always realised, not always due to the extent and as an impact of support realised. Thus the objective of the European Union's regional policy to reduce disparities in the level of development of the regions as a result of structural support, has not been achieved in a considerable and sustainable way in case of the Portuguese regions. This could also be explained that there is still a great difference between the theory and the**

practice of the structural policy of the European Union. It can be concluded that the structural policy of the EU in Portugal is a marginal compensation of regional disparities rather than a contribution to a powerful regional change.

3. Recommendations, Suggestions with Special Regard to the Interests of Hungary

Finally based on the Portuguese experiences and solutions I try to make some general suggestions and recommendations that can be used by the Portuguese and Hungarian decision-makers during the utilization of the Structural Funds. I do this because I think that despite the differences between Portugal and Hungary there are a few factors proving the similarity of the two countries⁹ that could be used for a more efficient Hungarian support-utilization based on the Portuguese experiences.

I summarise the useful experiences in the following points:

1. For the successful use of support it is primarily important to create support strategies concentrating on a few key areas. The strategy focused on development priorities and structural problems shall be realised through well chosen and targeted operative tools and projects. It is crucial to have strategic coordination, to concentrate supports thematically and to choose the projects based on the criteria serving the strategy. To all the above still contributes the creation of continuous strategic monitoring mechanisms. In Portugal, in many cases – due to the diversified strategy – the supports have been used through too many operational interventions, so it often led to strategically inconsistent and fragmented projects. Therefore it is important to have a better coordination of activities and to provide selectivity, which could make the realisation of effective and sustainable projects possible.

2. Medium-term economic growth is best helped by concentrated supports on education and human resource (including R&D). The other important field to improve the competitiveness of companies and economy is innovation, where there is also a need for strategic coordination, integration of different levels of activities and common action. During the creation of the regional dimension of the expenditure intended for research and development and innovation attention should be attention paid to make sure that investments

⁹ The geographical size and population size of the countries, centralized regional policy guidance and 7 NUTS II regions.

would not fragment and the critical mass of investment is created. Furthermore it is important that Member States **use expenditure from the Structural Funds for infrastructural investment and development in the appropriate ration**, because although they can have spectacular results, they might not properly contribute to the improvement of the country's long term international competitiveness. Portugal has spent a big portion of the structural supports on infrastructural investment and development. In Hungary the infrastructural background is also deficient, but according to some sources in literature there should not be exclusive emphasis on infrastructural investments. These popular investments undoubtedly contribute to the reduction of the infrastructural gap between the regions, although they do not generate a dynamic economy while they could expose the region to the competition of stronger and technologically more developed companies [Rodríguez-Pose – Fratesi, 2004].

3. An institutional system capable of providing the complex tasks of strategic management is essential for the effective utilization of supports. Public administration has a special role in creating institutional capacity. Its development could be improved by the experiences gained during the management of Structural Funds: multi-annual programming, transparency, evaluation of supported activities and partnership in the decision-making and monitoring of the execution processes. Recognising the capacity flaws of the public administration, Portugal has developed the Public Administration Operational Programme during the CSF III, and also chose to improve the government efficiency as one of the strategic goals of the NSRF.

4. It can be stated based on the experiences of Portugal's catching up process to the EU-average, that without an economic policy aimed at improving productiveness and competitiveness, the process of convergence is reversible and its place is taken by divergence [Pimpão, 2003]. In order to regain the real convergence of the Portuguese economy there is a need for a development strategy that serves sustainable growth, competitiveness and productiveness. In the enlarged European Union it might be the last period of NSRF in 2007-2013 when Portugal could get significant external support to strengthen its internal growth potential [OECD, 2008]. The Member States joined the European Union in the fifth enlargement round (2004 and 2007) are offering cheaper and better trained workforce, so Portugal will need to compete with them – while having the EU's worst qualified workforce [Magone, 2004]. Accordingly through the reform of the educational system there is a chance to improve the competitiveness of Portugal. As for

external competitiveness the main problem is the lack of investments in the fields of innovation, research and technology in the Portuguese economy. Therefore in the future it will be essential to improve the productivity of the Portuguese economy, especially through the innovative approach of the private sector. The Portuguese NSRF offers an answer to the challenges standing in front of the economy and leads the utilization of supports towards the solution of economic problems.

5. When determining the support strategy it is important to make sure the existence of a proper balance between competitiveness and cohesion, therefore besides the catching up of the country and its external competitiveness we must endeavour to eliminate the internal inequalities. The Portuguese NRSF provides huge supports through the Regional Operational Programmes to develop the two most underdeveloped regions (Norte and Centro), and the amounts of support mostly follow the order of development levels of certain regions measured in 2006. The handling of regional asymmetries can be achieved through such a distribution of the structural supports that considers the sequence of development levels of different regions inside the country besides other aims (ie. support of regions which increases competitiveness).

Finally the direct advantages coming from the Structural Funds are only part of a whole. **The real long-term results of the Structural Funds are dependent on the reaction of certain regions to the challenges caused by the Single European Market.** After all the results of the structural supports should be examined through a wider horizon, and if we regard it so it can be stated that besides the other policies of the EU, structural policy is the one where Portugal already belongs to the beneficiaries. Hopefully with the use of the Portuguese experiences Hungary could also reach this state of development in the near future.

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