How does the country's economic performance affect the EU Structural and Cohesion fund absorption rate?

By

Polina Plamenova Petkova

Thesis

Submitted to
KDI School of Public Policy and Management
in partial fulfillment of the requirements
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Committee in Charge:

Professor Kang, Younguck, Supervisor

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ABSTRACT

How does the country's economic performance affect the EU Structural and Cohesion fund absorption rate?

The purpose of this study was to investigate if GDP per capita of each EU member state has a determinative influence on the country's ability to use financial resources from the EU Structural funds. In order to scientifically analyze this relationship I used descriptive methods for literature and empirical data study combined with a quantitative analysis in form of a fixed effects model. As a result of the study several observations occurred. First the EU fund absorption rate is significantly influenced by its economic performance and hence by its financial capacity. Second the absorption capacity has inherent complications and inherent problems e.g. measurement, monitoring and time discrepancies between countries.

Based on the findings I recommend an extension of the conducted study which will involve statistics from current and future periods as well as additional key factors such as transparency, corruption. Thereupon a redefinition and precise execution and implementation of the EU financial instruments will be possible, which will increase funding efficiency and efficacy.

ACKNOWLEDGEMENTS

First of all I would like to thank Professor Younguck KANG for the supervision of this research projects, for his patience and great advisory. Additionally I would like to thank Professor Taejong KIM for being part of my research committee. Herewith I also would like to thank Anthony Gathogo for the moral and technical support through the realization of this project.

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Introduction

The EU is one of the strongest economies in the world with superior economic performance of 23% of world's GDP[1] (IMF, 2009) and the most advanced integration process of the 21st century. Today the EU has 27 members which share common economic and social policies, legal acts and supranational institutions. For example The European Council designs the Regional policy, which after approval from the European Parliament and European Commission, have to be implemented in each country. These policies are a result of big efforts to balance the development on the Old Continent, which the countries put since the 1940's of the last century.

After The Second World War the leading European countries created the European communities and declared it to be the "first step in the federation of Europe"[2].Since then the Communities began to grow and with the new member states new problems aroused. While many regions reported rapid growth other on the other hand faced economic decline and stagnation, which created interregional disparities and gaps between countries. Since development and improvement of the Communities wellbeing has been the main target of its members, a so called Regional policy has been created and developed through the years until today. Currently it has become the policy to which the EU dedicates more than 50% of its budget. The Regional policy is applied in each country and supported through the European Structural and Cohesion funds, which are the key financial instruments to achieve improved regional welfare.

Although the Regional policy implementation provides visible socioeconomic benefits in form of transfers to poorer regions for all new members, for various reasons, it

[1] GDP per capita in PPP

[2] "Declaration of 9 May 1950". European Commission. http://europa.eu/abc/symbols/9-may/decl_en.htm Retrieved 5 November 28, 2010.

still remains a topic of heavy debates in the academic as well as in the political arena. The effectiveness of the Structural and Cohesion fund are an object of extensive analysis and continue being discussed until today without having a clear answer whether they deliver the desired results or not.

Since 2004 when ten (+2 in 2007) new countries from economically weaker CEE region entered the Union the terms of Absorption capacity and absorption rate have drawn the specialists attention. These two terms refer to the country's ability to withdraw financial resources from the EU funds. In other words, the interest of authors has turned towards the final amount of money each country is able to inject to its economy. Low administrative capability to process projects was defined as a main reason and limit for high EU Fund absorption rate. Several Studies already analyze and discuss how to improve the administrative performance nevertheless no tangible results are available until now.

The first available study on absorption capacity was conducted in 1998 by Holzman and Herve, who analyzed the structure and major factors that influence the processes within the EU funds. Later on in 2004 Horvath and Maier in their study "*Absorption problems and the EU Structural Funds; Some aspects regarding administrative absorption capacity in the Czech Republic, Estonia, Hungary, Slovakia and Slovenia"* developed the concept into a more consistent framework and applied it reflecting problems that occurred in some CEE countries. Future authors refer to the later research results and relate the mentioned factors and issues to specific regional characteristics. Despite of that, none of the above mentioned authors used detailed quantitative models in order to generalize the existing trends and relationships. They searched for a solution from a microeconomic perspective how to raise the absorption rate without analyzing the possible macroeconomic forces influencing the absorption capacity of a country.

Therefore I provide a basic general model on a possible determinative relationship

between a countries economic performance (GDP per capita) as an independent variable and its absorption rate as a dependent variable. A Fixed effects model will be applied to find out the influence of the macroeconomic variable on the cumulated performance measuring term of absorption rate. Should such determination become the result of this study numerous important conclusions about further steps in Fund proceeding and management can be made, based on expanded studies involving more sophisticated and detailed analysis.

Generally speaking, if the country's GDP determines the ability of a country to use resources from the EU Structural and Cohesion fund, the concept of the complete EU development policy may have to be revised. In case the model does not verify a strong relationship between the variables the studies of absorption improvement may have to be again concentrated on ex post management.

In order to capture the role of the EU fund absorption rate I begin this paper with an overview of the theoretical basis and foundations of the European concept of regional development, which provides basic knowledge to understand the policy. In chapter two I provide a synopsis of the present EU as a sophisticated economic integration including its Regional policy and the concept of regional development. This is followed by a summary and discussion about the European Structural and Cohesion funds as financial instruments of the policy. Before delivering the quantitative analysis she extensively introduces the topic of EU fund absorption rate, including the drawback aspects and the inherent problems in the EU measurement concept. The mentioned model Fixed effects model will be presented in detail in the last chapter- chapter four. I analyze the relationship between GDP per capita and EU fund payment rate of 25 member states for the years of 2004, 2007, 2008 and 2011 using a STATA 10 Software.

Finally after modeling the discussed relationship I conclude the main points and findings of this study.

I. Theoretical background of the European Regional policy

Before emphasizing the EU regional policy and its implementation instruments it is necessary to clarify the origin of the European regional development concept. It evolved during the last 50years under the influence of multiple regional and growth theories.

The following figure visualizes the key stages for development of the Regional economics, which were driven by growing local and interregional problems mainly in Europe and the USA.

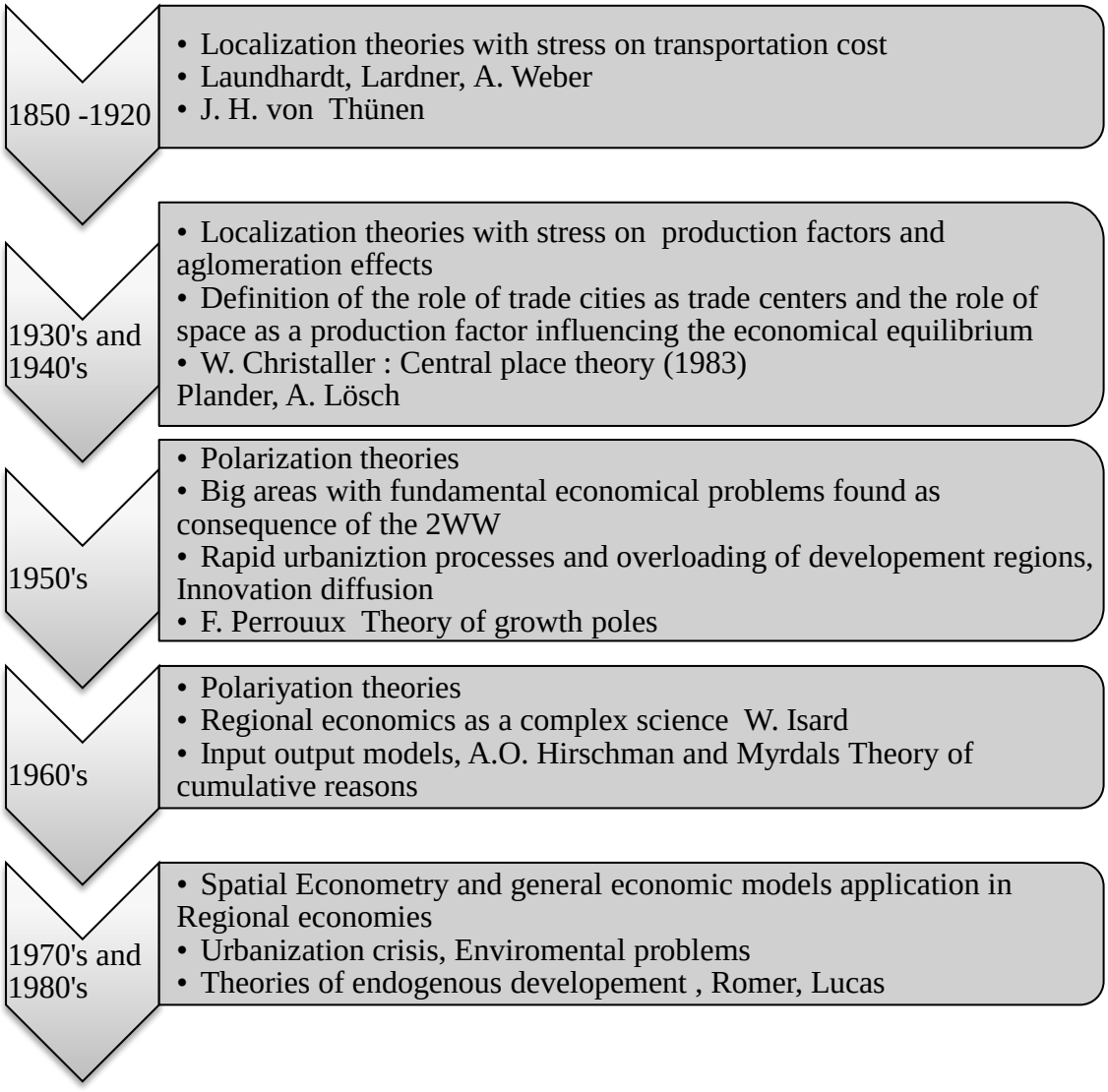

Figure 1: Impulses for the development of Regional economics, Source: J. Macháček, 2009

Although the European regional development concept is part of regional economics and studies, there are several important regional and growth models, which determined its current form since the 1950's: neoclassical, Keynesian, neomarxistic, neoliberal and institutional approach. (Nedomlelová, 2008,)[3].

"Using a higher rate of abstractness it is possible to narrow the view onto two basic directions. The first comes out of the neoclassical and neoliberal paradigm. The regional approach highlights the natural convergence tendencies in the development of regions in the long run. The regional disparities are regarded as the result of natural development which arises from particularity of regions. Regional differences are understood as a possible impulse towards activation of "own (regional) forces". This approach refuses the state interventions." (Nedomlelová, 2008, p.4) The neoclassical approach helps us to understand the objectives of the EU regional policy and the origin of the idea to invest in human capital, business opportunities and environment protection as primer drives of sustainable development.

"The second approach, the divergence theory, comes out of the Keynesian (post- and neokeynesian) and neomarxist economic theory. The substance of regional differences is in the market economy itself. According to this theoretical approach the market is not able to regulate itself. This leads to economic imbalance resulting in social sphere in the economically weak regions. The approach explains the necessity of state intervenes in economy." (Nedomlelová, 2008, p.4,5). Herewith the strong EU interventions through regulations, standards, redistributive mechanisms and subsidies can be explained.

"The oldest theories of regional development, better the forerunner, are localization

[3] Due to volume limitations of this work the theories will be discussed partly with stress on neoclassical and Keynesian approaches. For a more detailed background of the European regional policies I refer to Nedomlelová, Iva. "Selected Models of Economic Growth versus the Theory of Regional Development." Technical University of Liberec, Ministry for Regional Development, (2008).

theories which belong to neoclassical theories of regional development. The theories appear in the 17th and 18th century. The top of the oldest theoretical approaches is the study by J. H. von Thünen from 1826. The localization theories are the works by A. Weber, A. Marshall, W. Christaller (*theory of central places*) and A. Lősch. W. Isard, the founder of regional science, follows them." (Nedomlelová, 2008, p.5)

"In 1964 G. H. Borts a L. Stein tried to explain the regional economic growth using the one sector model of economic growth. The model develops the Cobb-Douglas production function which explains the relationship between the product and the capital stock, labor and technological progress." (Nedomlelová, 2008, p.5)

"After the conclusions of theoretical models and empirical studies did not match, the representatives of neoclassical approach deduced basic recommendation for regional economic policy. These recommendations were oriented on increasing the mobility of production factors, mainly the mobility of labor force. (Nedomlelová, 2008, p.6)

Later on "in the 90s, P. Krugman, B. W. Arthur continued the growth accounting theory introduced by R. Sollow in the 50s of the twentieth century. R. Barro and X. Sla-i-Martin continued with the new theory of growth." (Nedomlelová, 2008, p.6)The last two authors have a key role in the future definition of neoliberal Theories of trade.

"The theory of regional growth in the framework of the Keynesian approach developed in several directions." (Nedomlelová, 2008, p.6) At the beginning F. Perroux defined his Theory of growth poles, based on the concept of determinative roles of growth, development and innovation poles. Additionally G. Myrdal created the Theory of cumulative reasons, where he assumes that some regions naturally have more rapid growth than others, based on cumulating cause effect processes. Myrdal's model justifies government

interventions with the main objective of redistribution and consumption reallocation. (Nedomlelová, 2008).

In a whole the current European Regional development policy reflects characteristics from all mentioned theories. The most visible influence might be seen in the strong Keynesian interventionist state approach validating the developed systems of tax, subsidies and redistribution between regions. Additionally the key role of institutions in the EU growth concept has been proven by several theoretical and empirical studies where I refer to Rodríguez-Pose, Andrés. "Do institutions matter for regional development in the EU?".

Having an overview of the theoretical background of EU regional development concept an important question arises: Is the theory reflected by reality? In particular it is important to find out the effect of such interventions on the national economies and the range of EU regional development policy implementation effectiveness. Although several authors question the real positive effect of EU Funding on economies and countries development and growth, results delivered by other studies proof the opposite: EU funding improves a countries economic performance.

Critics attack the fact, that rapid expand of a country's government abilities to co-finance projects and absorb Structural and Cohesion fund sources determines the successful realization of EU regional policy. Most of drawback countries recently entered the EU in 2004 and 2007 face the problem of low capacity and disability to use "such large-scale transfers in a productive way" (Reszkető, 2010). G.Georgescu (2008) gives a more detailed explanation about a paradox situation when the mentioned disadvantaged regions, with the largest need for transfers, report the lowest absorption rates. It is a result of low

administrative capacity, only. Hence the low EU fund absorption rate[4] causes regional policy failure.

Herve and Holzmann (1997) as well as the EU consultants and experts raise questions if the Socioeconomic cohesion between regions takes place at all. They attack the weak points of EU regional policy (e.d. complexity and high level of abstract in RP nature) and its implementation. The term of "absorption rate" has many limitations too, which will be discussed in the next chapters., Equally important is the issue of evaluation has to be mentioned which can be delivered ex-post only for the reason of the differences in international timing in measurements of performance and difficulties caused by the n+3 rule. Even though the questions about the above mentioned issues are important when judging the efficacy of EU regional policy, the purpose of this paper is not to discuss the influence of the complex Cohesion policy on country's development, but the overall impact of EU funds as financial instruments and transfer mechanisms.

In order to justify the efficacy of EU transfers I present evidence about a study based on an I-O model (Petkova, 2010). Its outcome proofs the negative influence of a low EU fund absorption rate and government expenditures on a countries' output, so that we can explain the significant role of the EU financial instruments in the process of stimulating economic growth of regions with low performance. On the example of Bulgaria P.Petkova shows that low absorption rate prevents Bulgaria to grow and generate maximized output. Only 20% of possible increases in industries performance can be reached if only 26% of EU fund resources are injected into the economy (Petkova, 2010). To sum up, the model visualizes that redistribution processes in form of governmental support and spending injected into a countries economy stimulate the growth of particular industries (Petkova, 2010).

[4] Absorption rate: the term will be defined in the following chapter

II. The EU Regional Policy and Structural Funds: the New Way for Prosperity and Growth

Over 500Million[5] (EUROSTAT, 2010) live in the 97 divergent NUTS I regions[6], which have differences in performance, conditions, advantages and disadvantages. In order to lessen the gap between the countries, close cooperation is required, so that the Union, in reality, becomes an area of freedom, security and justice with the strongest economical force in the world. As mentioned in the previous chapter, in order to realize its target the EU defined several policies and instruments to implement it. One is the European regional development policy, with the main objective of lessening the substantial economical disparities among regions, which in its biggest extreme vary from 26% of the EU27[7] GDP average in the region of Severozapaden in Bulgaria (Eurostat, 2010), to 334% of the average in Inner London in the United Kingdom (Eurostat, 2010) . In addition, the EU created the Structural and Cohesion funds to support the underdeveloped regions. These funds are the key financial instruments to reduce regional disparities in terms of income, wealth and opportunities.

The accumulation of economies and the observing of basic rules and principles defined in the Lisbon treaty and its antecessor treaties determine the success in the development of the regions separately and of the EU as a whole. One of the basic key principle is for instance the principle of solidarity among member states determines the

[5] 501,1 Million in January 2010 (EUROSTAT,2010)

[6] NUTS I: major socio-economic regions within 1 country. The current NUTS classification valid from 1 January 2008 until 31 December 2011 lists 97 regions at NUTS 1, 271 regions at NUTS 2 and 1303 regions at NUTS 3 level. Regions in the context of EU are defined as NUTS: Nomenclature of Territorial Units for Statistics (NUTS). For more detailed information http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=16527185&RdoSearch=CONTAIN&TxtSearch=NUTS&CboTheme=&IntCurrentPage=1

[7] EU27- EU with 27 members

distribution of income between prosperity and poor regions, which is one of the tools of achieving social and economic cohesion between them.

Beyond those basic principles the EU stimulates its member's development through supranational policies and financial instruments for their implementation. One of the most important policies is the Regional development and cohesion policy, which encourages the weak member's growth through support from the Structural and Cohesion funds and national budgets.

"Since the Rome Treaty of 1957, one of the main tasks of the Community has been to promote a harmonious development of economic activities" (Petzold, 2008) through the Regional policy. In 1975 the first financial instrument ERDF[8] was established with the key objective of supporting underdeveloped regions. Later on as the EU grew, new difficulties arose and solutions were required. Economies started changing their structures, inter and intraregional development differences began to grow and grew faster than expected. Some regions experienced economic and social development boost such as in Northern Italy, Western Germany, others began to stagnate such as industrial areas in the so called BENELUX[9] countries or regions Southern Italy.

Therefore the ESF[10] and Cohesion fund[11] were formed as financial instruments to support the Regional policy implementation. After they went through several regulatory, functional and organizational changes in the 80's and 90's, the European Structural funds

[8] ERDF: "European Regional Development Fund, is currently the largest. Since 1975 it has provided support for the creation of infrastructure and productive job-creating investment, mainly for businesses" (European Union, 2010)

[9] BENELUX: Belgium, Netherlands, Luxembourg

[10] ESF: "European Social Fund set up in 1958, contributes to the integration into working life of the unemployed and disadvantaged sections of the population, mainly by funding training measures. Although its primary function was to upgrade human resources capital and later in the 80"s became a Structural fund." (European Union,2010)

[11] In order to speed up economic, social and territorial convergence, the European Union set up a Cohesion Fund in 1994. "The purpose of the Cohesion Fund is to grant financing to environment and transport infrastructure projects. "(European Union, 2010)

became the key financial instruments to implement the Cohesion policy until the final changes in 2004[12] defined the current policy and its instruments. For the present planning period of 2007-2013 the Structural and Cohesion funds deliver resources to boost the economic, social and territorial cohesion between developed and lagging regions using three guiding objectives : 1. Convergence; 2. Regional competitiveness and employment; 3. European territorial cooperation.

In overall the EU is financing projects and activities, which will increase the convergence between regions, increase the local competitiveness through enabling it's potential and initiate building strong across country cooperation in various arias such as social activities, business and science.

In order to be able to financially enhance the mentioned activities a large supranational budget is required. In the same way the EU regional policy was defined and adopted for the period of 2007-2013, the EU budget was approved in the amount of €862 Billion (European Union, 2007) [13] with the purpose of "improving the life of the EU's citizens and communities"(European Union, 2010).

On one side expenditures for the present period will be realized in the area of sustainable growth and cohesion for growth and employment, where the biggest investments are represented by the Cohesion policy (SF and CF) (European Union, 2006). On the other side these will be financed through income[14] from national contributions (79%), TOR [15](14%),

[12] In 2004 fundamental regulations were made in order to adjust the policy and its instruments to the widely divergent EU territory, which was caused by the entry of 10 additional member countries. In 2006 further changes were defined to adopt the policy for the needs accruing after the entry of Bulgaria and Romania in 2007.

[13] In 2007 the EU defined the budget with expenditures over €975 Billion (in current prices) for a sever year period, or in other words 1.5% of EU GNI.(European Union, 2007)

[14] For detailed information find under http://ec.europa.eu/budget/anim/where_did_eu_funds_come_from/2007-2013/index_en.htm

[15] Traditional Own Resources such as agricultural duties, sugar levies and customs duties (European commission, 2010) more under http://ec.europa.eu/budget/anim/where_did_eu_funds_come_from/2007-2013/index_en.htm .

surplus from previous year (1,6%) ,surplus from external aid guarantee fund (0.7%) and other resources (4.6%) (European commission, 2010). It is important to mention that the exact annual amount dedicated to the specific financed areas (agriculture, Cohesion policy, rural development etc.) are approved each year by the EC and EP and so vary from the previous one (European Council, 2005). Annually this amount is modified by the European Commission, which has to reflect the needs of each country for the next years, based on the results from the previous period.

Basically the EU budget can be better characterized as a financial framework or limit up to which the EU can use within a certain period of time e.g. 2007-2013. Additionally each country has a limit based on its ability to withdraw money and on its need for investment support. Basically the EU budget can be better characterized as a financial framework or limit up to which the EU can use within a certain period of time e.g. 2007-2013. Within the EU limit each country has an individual limit based on its ability to withdraw money and on its need for investment support. Country limits are usually fixed and are not extended after reaching a limit. In case a limit was not reached, the money left from the current year can be used in the following year. This time based transfer is limited by planning periods of the EU.[16] "The EU budget never runs a deficit, never builds up debt and only spends what it receives. It is always balanced "(EC, 2011).

Briefly, the EU budget is a multiyear budget or a maximal possible amount of resources, which can be used within the EU policies. These also reflect the current importance and needs within the Union's policies by being adjusted according to the actual economic development of each member state.

[16] Support in form of International grants and packages which for example were provided to Greece as an action to prevent state bankruptcy are not counted into the EU budget.

In general, the overarching priorities for the Structural funds are determined at the EU level and then transformed into national priorities by the member states and regions. "At the supranational level the overarching priorities are established in the Community Strategic Guidelines (CSG). These set the framework for all actions that can be taken using the funds including the total financial framework for each country to spend on the particular objectives. Within this framework, every member state develops its own National Strategic Reference Framework (NSRF)"(European Parliament, 2009,25). The NSRF sets out the priorities for the respective member state, taking specific national policies into account (European Parliament, 2009, 25). Finally, Operational Programmes[17] for the separate region within the member state are drawn up in accordance with the respective NSRF, reflecting the needs of each individual region. Following this process a total amount of €382.1 billion (EC, 2010) was allocated for the Cohesion policy. In particular 81.7% will be spent on the Convergence objective, 15.8% on Regional competitiveness and employment objective and 2.4% on Territorial co-operation objective (European Union, 2007).

In order to understand how the transaction system between the EU level and the national level take place this paper has to provide an explanation of the "withdrawal" rules and principles. In other words "regions eligible for funding from the SF[18] are those, whose GDP per capita in the period 2000-2002 is less than 75% of the EU 25 average (European council, 2005). Among other regions all the territory of Bulgaria, Estonia, Latvia and part of

[17] "The Structural funds only supplement national or regional financing. This means that no programmes are ever totally covered by the European budget, and that there is always national co-financing from either the public or the private sector." (Daman, 2001)

"Financing of the programmes is based on a system of budgetary commitments and payments. The commitments actually represent a "financial contract" between the Commission and the Member State, for the allocation of European funds to the programmes. At this stage, there is therefore no "physical movement" of funds. The commitments are paid in annual installments, and the first installment is made when the Commission approves the assistance." European Union, 2007). Subsequent installments are committed, at the latest, on 30 April of each year."(Daman, 2001)

[18] ERDF and ESF

the territory in Germany (east), France, and United Kingdom (European Union, 2006) are eligible for funding through ERDF and ESF. Likewise only member states with GNI per capita in the period 2001-2003 less than 90% of the EU 25 average are eligible for funding through the Cohesion fund (European council, 2005). Again the whole territory of Bulgaria and Romania including other regions fulfill this criterion.

In the same way as GDP criterion determines funding authorization, a second criterion plays a key role while applying for support from the Funds. Each of them co finances projects in specific areas. The ERDF, for example, provides sources for projects improving investment productivity, infrastructure and SME[19] development. ESF is designed to help employment promotion and human resources quality increase. Finally, the CF is the fund, through which projects for better infrastructure and environment with high investment costs are financed (European Union, 2010). Hence the total "mix" of areas the EU SF and CF support reflect the key factors for economic growth and welfare, business environment, human resources and infrastructure.

The way the EU supports weak socioeconomic regions can be defined as an international redistribution in form of transfers. Each country is duty-bound to contribute to the EU budget annually up to 1.24% of total GNI and can receive up to 4% of its GDP (Zeman, 2009) without the obligation of paying any interest. The financial support from the EU is a form of subsidy or grant per project to the countries, which have to co-financing responsibility.

Having an overview of the theoretical background of EU regional development concept an important question arises: Is the theory reflected by reality? In particular it is important to find out the effect of such interventions on the national economies and the range of EU regional development policy implementation effectiveness. Although several authors

[19] SME: Small and Middle sized Enterprises

question the real positive effect of EU Funding on economies and countries development and growth, results delivered by other studies proof the opposite: EU funding improves a countries economic performance.

Critics attack the fact, that rapid expand of a country's government abilities to co-finance projects and absorb Structural and Cohesion fund sources determines the successful realization of EU regional policy. Most of drawback countries recently entered the EU in 2004 and 2007 face the problem of low capacity and disability to use "such large-scale transfers in a productive way" (Reszkető, 2010). G.Georgescu (2008) gives a more detailed explanation about a paradox situation when the mentioned disadvantaged regions, with the largest need for transfers, report the lowest absorption rates. It is a result of low administrative capacity, only. Hence the low EU fund absorption rate[20] causes regional policy failure.

Herve and Holzmann (1997) as well as the EU consultants and experts raise questions if the Socioeconomic cohesion between regions takes place at all. They attack the weak points of EU regional policy (e.g. complexity and high level of abstract in RP nature) and its implementation. The term of "absorption rate" has many limitations too, which will be discussed in the next chapters., Equally important is the issue of evaluation has to be mentioned which can be delivered ex-post only for the reason of the differences in international timing in measurements of performance and difficulties caused by the n+3 rule.
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on an I-O model (Petkova, 2010). Its outcome proofs the negative influence of a low EU fund absorption rate and government expenditures on a countries' output, so that we can explain the significant role of the EU financial instruments in the process of stimulating economic growth of regions with low performance. On the example of Bulgaria P.Petkova shows that low absorption rate prevents Bulgaria to grow and generate maximized output. Only 20% of possible increases in industries performance can be reached if only 26% of EU fund resources are injected into the economy (Petkova, 2010). To sum up, the model visualizes that redistribution processes in form of governmental support and spending injected into a countries economy stimulate the growth of particular industries (Petkova, 2010).

III. EU Structural and Cohesion Funds Absorption Capacity

> *"An introspection of the literature regarding the absorption of EU structural funds reveals a lack of adequate conceptual framework while the topic of better ways to manage these funds is less addressed. As the explanation could not be related to the lack of interest in studying such a problem, the reasons are essentially linked to its relative novelty, to the difficulties in assessing the impact of structural funds on the convergence of EU countries in the long term, to construction of appropriate indicators, including for the measurement of the absorption capacity."(Georgescu, 2008).*

In general the absorption capacity, most often, is understood as the extent to which a member state including all involved shareholders is able to spend financial resources allocated from the structural funds with the goal of increasing socioeconomic development. Thereupon absorption rate is the actual amount of resources being spent out of the assigned total available sum. (European Committee, 2008)

The Commission formed this term as an indicator to measure effective and efficient usage of external investment support. In other words absorption capacity (rate) reflects the amount of resources a country has spent out of the maximum (4% of the national GDP) allocated for the respective country. (Wostner, 2008) For instance the absorption rate of the EU 27 on 30 September 2009 averages on 27% (Eurocativ, 2010), which means that the eligible EU members allocated only 27% of the available funds. Generally speaking the term absorption rate serves as a comparable single number indicator for measuring and evaluating countries performance in allocating resources from the EU Structural and Cohesion funds.

Besides the absolute amount of Funds spend, the absorption capacity as a concept contains qualitative variables, which have explanatory power about main forces and factors influencing the countries successful allocation of transfers. In fact "absorption capacity in its turn can be determined by three main factors, namely macro-economic situation, the co-financing situation and the administrative capacity:

- ✓ *Macroeconomic absorption capacity* can be defined and measured in terms of GDP;(Boeckhout et al., 2002) **오류! 참조 원본을 찾을 수 없습니다.**
- ✓ *Financial absorption capacity* can be defined as the ability to co-finance EU supported programmes and projects, to plan and guarantee these national contributions in multi-annual budgets, and to collect these contributions from several partners interested in a programme or project;(Boeckhout et al., 2002)
- ✓ *Administrative capacity* can be defined as the ability and skill of central and local authorities to prepare suitable plans, programmes and projects in due time, to decide on programmes and projects, to arrange the co-ordination among principal partners, to cope with the administrative and reporting requirements, and to finance and supervise implementation properly, avoiding irregularities as

far as possible." (Boeckhout et al., 2002)

Taking into account the above stated definition in general the specialists and analysts believe that the administrative capacity has the strongest and most powerful influence on a countries overall absorption rate and ability to use international support. Besides the empirical evidence several reasons give explanation for that.

There is a consensus that the problems of absorption capacity depend heavily on institutional factors. The process of EU funding is a very complicated and administratively extremely challenging, especially for disadvantaged regions that need the largest support. Paradoxally, these regions face the biggest difficulties in the absorption of the Funds because of administrative capacity shortage. (Zaman, Georgescu, 2008)Mainly small municipalities with lack of qualified staff and know how fail in the highly complex processing of project admissions.

In addition other problems referring to programming, to institutional building and to administrative capacity development, slow down the procedures. Operational programs designed on national and regional level and local strategies often are not harmonized and contain incompatible goals. Bulgaria as an example of contradicting document often faces the problem of incompatibility of ecological projects for conservation of National parks and targets of increasing tourism activities in remote areas, which often include the protected National parks.

Finally, the issue of low financial capacity is a constraint to absorb and receive financial resources from the Structural and Cohesion funds. At this point it is possible to understand the draw backs of the *additionality* principles, which the EU regional policy is based on.

The EU provides funding in the amount of up to 90%[21] of the total project cost. The limitation here is the low national budgets, which in fact are the barrier to use the Fund resources. The size of these budgets depends, besides on other input items, mainly on income tax collected, which is also strongly related to the country's GDP. In simple terms, for the reason that countries have limited resources they cannot co-finance their development projects, even in the cases when they have to provide the minimum amount[22] for the realization. However in reality applicants have to supply nearly 100% of the cost, which the EU returns after a project has reached a certain stage. As a consequence the number of financially capable applicants decreases drastically, together with the overall absorption rate.

At this point it is necessary to mention the role of national and international financial institutions- banks. They have indirect influence of countries success in the process of absorption of EU funds. They have indirect influence of countries success in the process of absorption of EU funds. First they have a crucial impact as many applicants refer to loans which are used as so called own resources when applying for grants. Should banks have a restrictive policy and limit lending provision to only strong firms, as a result SMEs, especially those in the agriculture sector are strongly disadvantaged and disabled to access EU money. Second the heights of the interest rates[23] of those banks play a similar role. High interest rates on lending for financing regional policy projects also build a barrier for realization. Therefore the EU has established a solution of such problems in 1958. In other words the EU investment bank "raises considerable sums of money on the capital markets for

[21] The range of support differs from project to project and depending under which objective the project will be categorized

[22] 10% of total project cost.

[23] National central banks are not supposed to influence interest rates in order to respect EU regional policies, as it may have a significant effect on the whole economy including unexpected side effects. Additionally such intervention favoring only one supranational defined policy may put other policies in a disadvantaged position. With this object Central banks are also supposed to keep their neutrality to state and Union policies and keep their decision independence including abstraction of external influences/

the purpose of lending it to the Member States[24].” (European committee, 2008)

Financial institutions seem to be important actors in the process of accessing EU funds as well as other institutions and players. The following chapter will illustrate their roles, with the intention to clarify each single shareholder’s influence on a countries EU fund absorption rate.

Many actors build a complex shareholder group that in each country strongly influences the absorption rate of EU funds. They affect the process depending from the range of their responsibilities. For instance from the supranational perspective EU commission, EU auditors and other countries municipalities and organizations influence each countries performance in absorbing EU resources. The Regional and Cohesion policy defined for the whole Union as a union directly affects every single member, as it has to be included in national plans and as well implemented and monitored. When a country such as Bulgaria or Romania is obligated to include regional development aspects, which are absolutely new policy area, they need a certain period of time to gain experience, which automatically leads to lower absorption rate[25]. Other countries municipalities influence each other through benchmarking in local strategy development, project realization and knowledge sharing, which positively influences their success rate.

In the same way the Fund absorption level is affected by shareholders active in the national economy. NGOs, municipalities, private and public actors bear the responsibility for project planning and implementation. To explain the private actors, NGOs and municipalities plan and realize projects. Besides them the governmental institutions form legal and beaurocratic framework in order to create a clear implementation and monitoring project flow.

[24] “Priority is given to projects for developing less-developed regions. “(European committee, 2008)

[25] Due to higher failure rate based on lack of know- how and routine

In case all steps are well planned and put into action each of those shareholders will positively contribute for the whole regions development through EU Structural and Cohesion fund.

While this is true in the theoretical and highly optimistic level, in reality nearly all shareholders are a bigger burden for the applicants then their tool to success. National institutions responsible for operational programs, define controversial frameworks and legal acts, which confuse and disable applicants in their actions. Municipalities, due to lack of independence or financial abilities concentrate more on daily activities then on strategic planning, which results in miserable project coordination and support. Generally speaking the shareholders- policy makers, third parties and applicants are those who have the responsibility to improve their performance so that the visions and strategies on the EU level are productively realized.

Absorption capacity, as defined in the previous chapters is a revolutionary measuring variable, which enables relatively comparable evaluation of countries performance in dealing with Structural and Cohesion funds. Although the single number provides understandable and clear information about the complex process of receiving and allocating external financial aid, the absorption capacity as it is constructed now has several limitations and is strongly criticized. Even though the EU funds absorption capacity is still used as an overall evaluation factor and for that reason it has to be studied in order to correct drawbacks and to minimize disadvantages.

The biggest problem related to the absorption capacity is the so called n+2 and n+3 rule, which refers to the budgetary commitments relating to the OP and each objective (see

chapter Strategic and Cohesion funds)[26]. Generally speaking countries can use the resources from funds for a certain planning period 2 respectively 3 years after the new period started. Consequently it means that the overall absorption capacity can be evaluated ex post only, especially the aspects of the financial capacity (Horvat, Maier,2004). In practice these results in the fact, that new member states[27] can be evaluated only due to the usage of pre-accession funds, which have different conditions than the Structural and Cohesion funds. On top of that the Regional Policies and the EU strategies constantly change, including priorities and objectives. For these reasons at the end effect, new members' absorption rate cannot be directly compared with the rate of old member states and between the planning periods themselves.

In addition to that a problem arises from the fact that the EU has not defined rules for reporting the annual absorption rate and its measurement. Each country still has the freedom to declare how much they have used from a different perspective. Therefore" it is more relevant and reliable to compare the progress of individual Member States with the EU average. Caution should be exercised when making direct comparisons between Member States as although the Commission requested data corresponding to how the situation stood on 30 September 2009, some Member States chose to send data extracted on other dates. Differences of several months could influence the volume of allocations made to a particular

[26] "The Commission commits the first annual proportion before the adoption of the operational programme. Afterwards, it commits the proportions by 30 April of each year, at the latest. Automatic decommitment**:** A portion of the budgetary commitment is automatically decommitted by the Commission if it has not been used or if no payment application has been received by the end of the second year following that of the budgetary commitment (n+2)more information available in Articles 31§2 and 32§2of Council regulation (EC)No.1260/1999 of June 1999 laying down general provisions on the Structural funds

For Bulgaria, the Czech Republic, Estonia, Greece, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovenia and Slovakia, the deadline is set for the end of the third year (n+3) between 2007 and 2010, under their operational programmes." (EU,2010)

[27] 12 countries which entered the EU in 2004(Czech Republic, Estonia, Greece, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Slovenia, Slovakia) and 2007 (Bulgaria, Romania), which represents 44% of total members (EC, 2010)

sector. Concepts and practices of project selection also vary between Member States, with particular regional and national procedures playing an important role in selection."(EC, 2010)

Another crucial problem arises when judging the AC between countries through the years. Besides that measurement and time framework are not standardized, the EU has not yet defined a monitoring rule according to which the statistical data about the fund implementation screening. The consequence of this is that in each country a different statistics can be created. In some these are made by the statistical offices (Czech Republic) in other by for the EU funding the responsible ministry (Bulgaria) or agency or by the regions themselves.

IV. Fixed effect model-does GDP determine the absorption rate?

When analyzing the issue of correlation between the EU fund absorption rate and economic performance I considered applying regressive analysis. When taking in account the characteristics of the variables a fixed effects model with a dummy variable was chosen. The reason is that a "simple regression equation likely suffers from omitted variable problems."(Wooldridge, 2006) By obtaining multiple observations about each country and looking at the effect of GDP within each EU member across time, we have removed the effect of omitted variable bias.

There are factors and predictors that influence the absorption capacity and are difficult to observe or quantify. In each country these factors may vary significantly. "One of the best available methodologies is to use fixed effect model for the analysis. It makes possible to analyze units over time, thus providing multiple observations on each individual sample."(Hsiao, 1989). As Hsiao mentions it is the more suitable method to analyze variables changing in time than using "conventional multi sectional or time series data sets to overcome missing or unobserved variables" (Akin, 2005). For that reason the unobserved

factors affecting the dependent variable (absorption capacity) in the panel data will be viewed as of "consisting of two types: those that are constant and those that vary over time." (Wooldridge, 2006).

A fixed effect model will examine the interdependency between two variables: economic performance as a dependent and absorption rate as independent variable so that the reverse relationship between these variables can be explained. Studies report positive influence on a countries' economic performance achieved through implementation of EU regional policy and financing of development projects with resources from the EU Structural and Cohesion fund. Several regional theories emphasize on multiplying effect of investment on GDP. Here I will test if the multiplying effect creates a closed cycle. In other words, I will prove if the process is completed by a determinative relationship between GDP and absorption rate?

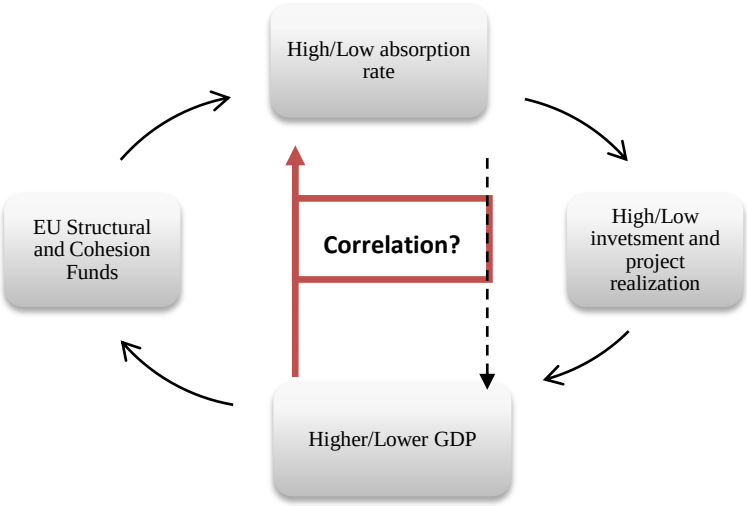


Figure 2: Direction of determinative relationship, Source: author

In the first place the data set has to be defined. EUROSTAT, the official EU statistics agency delivers all needed data about GDP of all 27 European Union members[28]. According

28 GDP per capita in Euro for the years of 2004, 2007, 2008 and 2011, when the latest data are based on estimations. http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes

to the EU regulations each member is obligated to report statistics it's about socioeconomic performance following the standardized procedures, measurement methods and time periods. Nevertheless due to the limitations and the problems inherent in the absorption rate, the variable of "absorption rate" is not easily estimable, which limits the range of the model. Therefore data for only four periods were available.

Additionally, it is necessary to mention, that this study will examine only 25 EU members. The reason is that the newest members: Bulgaria and Romania entered the EU in 2007 first. Before the entry they received benefits from the Pre accession funds. As the mechanism and structure of the pre-accession funds differ from the Structural funds these two variables are not comparable. Hence, Bulgaria and Romania will be excluded from the study in order to remain its consistency.

Namely the sample for the applied fixed effect model covers 25 European Union member countries over the period of 2004-2011. A Period of four years was selected, where the data were available for all countries, in order to create a balanced panel. The figures for national GDP per capita[29] were obtained from EUROSTAT, whereas the latest numbers for the year of 2011 are based on estimations, because they are not available yet for all countries. The data about EU fund absorption rate were retrieved from several EU Institutions such as the European Commission and Court of auditors[30]. The absorption capacity retrieved from the mentioned sources therefore is a percentage of all allocated resources which were in fact spent in the economy of each country.

After the data set is explained it is important to look back to the process of how the

[29] GDP per capita in EURO in current prices retrieved 21.02.2012 from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_gdp_c&lang=en

[30] Absorption capacity retrieved from the latest AC report and the 17th, 18th, 19th, 20 the and 21st ANNUAL REPORTS ON IMPLEMENTATION OF THE STRUCTURAL FUNDS issued by the European Commission, retrieved 21.02.2012 from www.ec.europa.eu

model was selected Several models were taken in consideration: simple regression, fixed or random effect model or Hausman specification test. All analyses were tested and after a theoretical and empirical proof was delivered, I chose the Fixed effect model.

Firstly regression and the Hausman test were taken in consideration. "The Hausman specification test is a very general test and can be used if two models could be used for the same question. In our example we have the fixed and the random effects model. Both models will be consistent estimator but we assume that the random effects estimator is more efficient e.g. uses less degrees of freedom. The null hypothesis tells us pretty much the same while the alternative is that only the fixed effect model is consistent. If we reject the Null we cannot use the random effects model." (Parlow, 2010) According to Baum[31] (2006) the problematic side of the Hausman test is that it tends to reject the random effects model very often and does not provide reliable results if the data sample is very small.

Secondly the Random and Fixed effect were evaluated. "Random effects assume that the entity's error term is not correlated with the predictors which allows for time-invariant variables to play a role as explanatory variables. In random effects models you need to specify those individual characteristics that may or may not influence the predictor variables. The problem with this is that some variables may not be available therefore leading to omitted variable bias in the model. RE allows generalizing the inferences beyond the sample used in the model." (Torres-Reyna, 2011)

"The fixed effect model assumes that individual country heterogeneity is captured by the intercept term. This means every country gets its own intercept μi while the slope coefficients are the same. The fixed effect model is also known as least square dummy variable estimator (LSDV) because we assign pretty much a dummy to every

31 Chapter 8 in Baum, Christopher F. An Introduction to Modern Econometrics Using Stata. Texas: Stata Press, 2006.

country."(Parlow, 2010)

Therefore after evaluating the advantages and weaknesses of each model, the Fixed effect model was chosen as the most suitable one. Nevertheless assumptions needed to me made in order to be able to minimize the influence of the inherent drawbacks of the absorption capacity. In particular their function is to limit the errors in the model. The following study will be based on several assumptions, which is necessary in order to limit the errors in the model. These are:

- ✓ Equal distribution of EU fund resources through the years (strongest assumption). The exact number in case of absorption rate unavailability will be calculated in two possible ways. First, the paid out funds/ number of years of the respective planning period will be weighted to the number of projects supported. Second, a wages average of absorption rates available for each objective in case at least 60% of all eligible programs for the country deliver a monitored absorption rate statistics will represent the overall countries' absorption rate.
- ✓ Simultaneous rate measurement and rate report between countries
- ✓ Corruption level, Administrative capacity and Project distribution between private and public subjects has no influence on the variables.

After discussing the basic starting points of the study it is now time to move on to the casual analysis. The analysis using the fixed effect model will be based on the following equation:

$$Y_{it} = \beta_1 X_{it} + \ldots + \beta_k X_{kt} + \alpha_i + e_{it}$$

Respectively

$$\mathbf{AbCap_{it}} = \boldsymbol{\beta_1 GDPCAP_{it}} + \boldsymbol{\alpha_i} + \boldsymbol{u_{it}}$$

Where:

- ✓ αi (i=1….n) is the unknown intercept for each entity (n entity-specific interce pts);
- ✓ AbCapit is the dependent variable (DV) where i = entity and t = time. i.e. Ab sorption capacity;
- ✓ GDPCAPit represents one independent variable (IV) in this case GDP per Ca pita;
- ✓ β1 is the coefficient for GDP per Cap;
- ✓ uit is the error term.[32]

"The key insight is that if the unobserved variable does not change over time, then any changes in the dependent variable must be due to influences other than these fixed characteristics " (Stok and Watson, 2003, p.289-290). "Fixed-effects will not work well with data for which within-cluster variation is minimal or for slow changing variables over time." (Torres-Reyna, 2011)

Absorption Rate	**Fixed effect**	**Random effect**	**Hausman**
GDPCAP	-0.00314* **(B)**	0.000550**	
	(-2.50)	(2.62)	
Intercept	147.1***	57.02***	
	(4.77)	(9.57)	
N	104	104	
rho	0.755 **(C)**	0	
F	6.236		
Prob > F	0.0147 **(A)**		
Wald chi2(1)		6.840	
Prob > chi2		0.0089	0.0029 **(D)**
chi2(1)			8.86

Table 1: Analysis Results, t statistics in parentheses * p < 0.05, ** p < 0.01, *** p < 0.001

32 Fixed-effects will not work well with data for which within-cluster variation is minimal or for slow changing variables over time.

Observations:

- ✓ (A) The F-test given by Prob > F in table above shows whether all the coefficients in t he model are different than zero. The resulting value of the variable should be < 0.05 i n order for the model to be termed as suitable. Thus, as Prob > F = 0.0147 < 0.05 the a pplication of a Fixed effect model in this case is accurate and appropriate.
- ✓ (B) The coefficients for the fixed effect model imply that the absorption rate decrease s when GDP changes. However, in Random effect model-Interpretation of the coeffici ents is not explicit and is quite tricky, since they include both the within-entity and bet ween-entity effects.[33] (Torres-Reyna, 2011)

$$rho = \frac{(sigma\_u)^2}{(sigma\_u)^2 + (sigma\_e)^2}$$

- ✓ T-statistics tests the hypothesis that each coefficient is different from null. To reject th is, the t-value has to be higher than 1.96 (for a 95% confidence). "It is a joint test to se e if the dummies for all years are equal to 0, if they are then no time fixed effects are needed."(Torres-Reyna, 2011) Hence, our t-test shows that GDP per capita has a sign ificant influence on absorption rate. That is the higher the t-value the higher the releva nce of the variable under considerations.
- ✓ (C) The interclass correlation captures the variance due to differences within the panel s. In this case it equals 75.5%, meaning that 75,5% of the variance is due to difference s within the panels.
- ✓ (D) Prob>chi2 is < 0.05 (i.e. significant) then we can apply the fixed effects model as it will be more efficient than the Hausman model. The result of Prob>chi2=***0.0029***< 0. 05 definitely confirms the suitability of the Fixed effect model for a study with the use

33 I will not concentrate on the Random effect model since it is not the core of this analysis

d data set.

- ✓ (F) The Random effect model delivers a positive coefficient, which implies that the ex planatory variable (GDP) dominates its variation over time and the fixed effect elimin ates the GDP cross countries effect.

Based on the observations from the conducted tests it is clear I can be confident in using the fixed effect model for analyzing the interdependency between GDP per capita and the EU fund absorption rate thru countries and thru time. Additionally the tests proved a strong determinative relationship between GDP per capita of a country and it's absorption rate. The negative correlation reflects that an increase of GDP per capita by one unit may decrease the absorption capacity by 0,03%. In other words a higher GDP declines the ability to receive financial support from EU structural funds.

There are several options how to explain the output of the analysis.

First the negative relationship between the two variables may be caused by the fact that the EU fund payments are not equally distributed during the years. Each planning period[34] has a very high application rate and low payment rate. Then after a vast number of applications have been approved a higher payment rate will follow. Finally at the end of each period which is the last 1,5 years the payment rate may decline for the reason of exhaustion or block[35] of resources. Coupled with the highly complicated process of subsidy approval the misbalance between the allocated resources and their concentration during the years creates a barrier to monitor the relationship between economic performance and fund payment rate.

In brief the reason, why the absorption rate is difficult to be positioned in a

34 now 6 years e.g. 2007-2013

35 Payments are blocked due to monitoring problems, lack of transparency or other reasons which limit the execution of projects, which was the case of Bulgaria in 2008.

relationship with GDP, is the fact that in contrast to the relatively constant development of GDP through time, the absorption rate has a cyclical development path. Here it should be mentioned that GDP also has a certain cyclical development path, nevertheless the absorption rate changes every 6 years due administrative interventions. GDP on the other hand is not influenced by any artificially set planning periods.

Then specialists such as Horvath claim that the Absorption is mainly determined by the administrative capacity. No one until now has studied the financial capacity (budgetary capacity to co-finance projects) and its relevancy towards the EU fund payment rate. Yet, I believe, that the conducted study extended to other factors such as the mentioned transparency level in each country and modified with a weighted time variable, will result in findings important for the development of the EU policy.

With the current study I confirmed Horwath's claim that it will be problematic to study the relationship between financial capacity and payment rate and that a good study will be possible at least after the planning period of 2007-2013 elapsed. Additionally constructive analysis will be possible if fund payment rates for the current and following period of 2014-2020 are available. These will provide data for a study, which will be able to create a generalizing theory, based on empirical tests.

The future study should involve final data of economic performance through the years which will include also data about the current financial crisis and its influence on the implementation of the European Structural funds. After all, it will be also possible to take systematic consideration of the cyclical development of both factors GDP per capita and EU structural fund absorption rate.

In order to understand why exactly I study the relationship between implementation of the Structural funds and economic performance, it is important to restate the role of the structural funds. These are a subsidy which is injected into the economy.

Using the Keynessian approach we can also see interdependence between GDP and the absorption capacity. Should we follow the principle of the Keynessian multiplicator an $\Delta Y=1/\Delta G$, so according to $Y= C+I+G+T+NX$ the injection of subventions by the government through the EU funding has to have positive effects on the national income and therefore raise the tax level, which on the other hand is used for further investment into the economy. The theory states a clear interdependence between GDP and the public interventions. Nevertheless it does not consider factors which are difficult to quantify such as corruption, which is the main barrier for receiving financial support from the EU. When the funding is limited by the low absorption rate, as a consequence of such negative factors, the level of G is much lower and a significant part of GDP is not being generated in the next period.

Again this new very important opportunity for further analysis arises. Since the corruption level in countries is measured by several global organizations e.g. transparency International, it might be suitable to integrate it as another variable in the quantity analysis. The implication for policy maker will be that before investing in any kind of development, or at least parallel with these investments, corruption and activities which create inefficiency should be limited. A very good proof is the fact that the European countries with lower corruption level such as Denmark, Germany, Sweden, which also receive resources from the SF report significantly higher absorption rate. The conclusion of that might be that corruption level including inefficiency creating activities as well as the national income are the most important factors, taken from the financial capacity point of view, which influence the ability of a country to absorb EU money.

The last way how to explain the analysis results is to consider the option that in

times of cyclical changes in the economy the EU funds may be used as stimulus for the economy and that the investments shift from the private to the public sector. In particular the negative coefficient may imply that the absorption capacity of the countries with lower GDP increases when GDP declines especially in years of crisis or recession as we can see. The fact, that still multiple governments in the EU have other than liberal policies, favors this hypothesis. As a good example the still ongoing crisis which started n 2008 can be used to illustrate this. Many governments used the EU funds as an option to stimulate the economy during this period. Among others Bulgaria, Romania and Poland as well, still, concentrate on infrastructural projects, which on one hand are legitimate for EU funding and on the other hand create jobs and a strong business network structure. Therefore a declining GDP can positively influence the EU fund spending and expand the absorption capacity.

Finally it is necessary to comment the methodological aspect of the findings. The results of the analysis imply that the data set is not long enough, meaning that the variation of the explanatory variable exceeds its variation over time. GDP is available for 25 countries within 4 years only. As a result the random effect model produces a positive coefficient and the effect of GDP cross countries is eliminated when taking the fixed effects in account. Therefore in order to conduct this study with larger explanatory power more data for the absorption rate are needed, optimally for each year for a period of time of at least 15 years.

With this in mind the lesson for the EU fund authority will be that a simple provision of financial support will not have the result of lowering differences between countries as long as other factors create a barrier for them to fully utilize them.

Summary

The aim of this study is to explore the existence and range of determinative relationship between the EU Fund absorption rate and the economic performance of the European Union countries. In fact I examine the way how GDP per capita of 25 EU members influences their real ability to inject financial resources from the EU Structural funds to their local economies financial resources.

I am using a fixed effects model for the analysis of the effects between the variables across time. Data from two planning periods 1999-2006 and 2007-2013 are used, where each period is represented by statistics for two years. Therefore the influence of GDP per capita (independent variable) on the fund payment rate in 2004,2007,2008 and 2011 has been tested.

As a result of the panel data analysis a very important finding occurs. Namely it turns out that GDP per capita significantly influences the real amount of money a country has in fact injected into the economy. The economic performance of a country defines its ability to co-finance projects, which will be also funded by the EU Structural funds. In this case the higher GDP the higher is the national budget, through which infrastructure of all kinds are financed (e.g. highways, water cleaning stations, power plants). Likewise low income limits the ability to invest in public infrastructure, which on the other hand limits development.

In addition the study confirmed the claim of several authors like Becker (2007) and Georgescu (2008), who emphasize on the importance of administrative capacity. I also discovered that the absorption capacity of a country is strongly determined by factors such as processes, operations and monitoring of the EU fund transactions, especially after a project has been approved. Therefore the financial capacity combined with the administrative capacity of a country determines its overall ability to utilize supranational aid.

Additionally I would like to point out that this study has a great potential to reveal key findings, which will lead to important directions for the EU Funding optimizing. As a result the goals of decreasing regional differences in wealth between countries can be reached with higher efficacy and efficiency. Nevertheless this optimistic belief can be proofed after additional analyses and studies, which combine both a theoretical and highly empirical approach.

For instance, I recommend an extension and modification of the study by addition of variables which will examine the influence of transparency and corruption on the EU fund payment rate. If a strong relationship between GDP, payment rate and corruption occurs then the significant hint for the EU policy makers will arise. In deed EU policies will have to be redesigned with major focus different than the local economy stimulation. The EU will have to focus on efficiency lost prevention instead. In other words money will have to be allocated in a way which will limit corruption on one side and rise transparency on the other side. Consequently such actions enable the potential of an economy to fully use and implement EU money so that it creates wealth, which is the biggest goal of the regional policy.

With attention to the findings I of this paper recommend to the EU to extend the field of study in order understand better how the funding works, what is its influence in the economy and how the economy determines the absorption capacity of each member. Logically a better understanding will lead to a opportunity to optimize the implementation and measurement processes and so reducing inefficiency and loss of resources. In the case of the EU Structural funds reducing inefficiency will mean real implementation of more than 50% of the EU budget, an amount that approximately equals to the annual GDP of Austria, Argentina, South Africa or the United Arab Emirates.

Glossary

AR: Absorption Rapacity, EU Fund Payment Rate

CF: Cohesion Fund

EC: European Commission

EP: European Parliament

ERDF: European Regional Development Fund

ESF: European Social Fund

EU: European Union

EU27: European Union with 27 Member Countries

GDP: Gross Domestic Product

NSRF: National Strategic Reference Framework

NUTS: Nomenclature of Territorial Units for Statistics

OP: Operational Programme

SF: Structural Funds

SME: Small and Middle sized Enterprises

TOR: Traditional Own Resources

APPENDICES

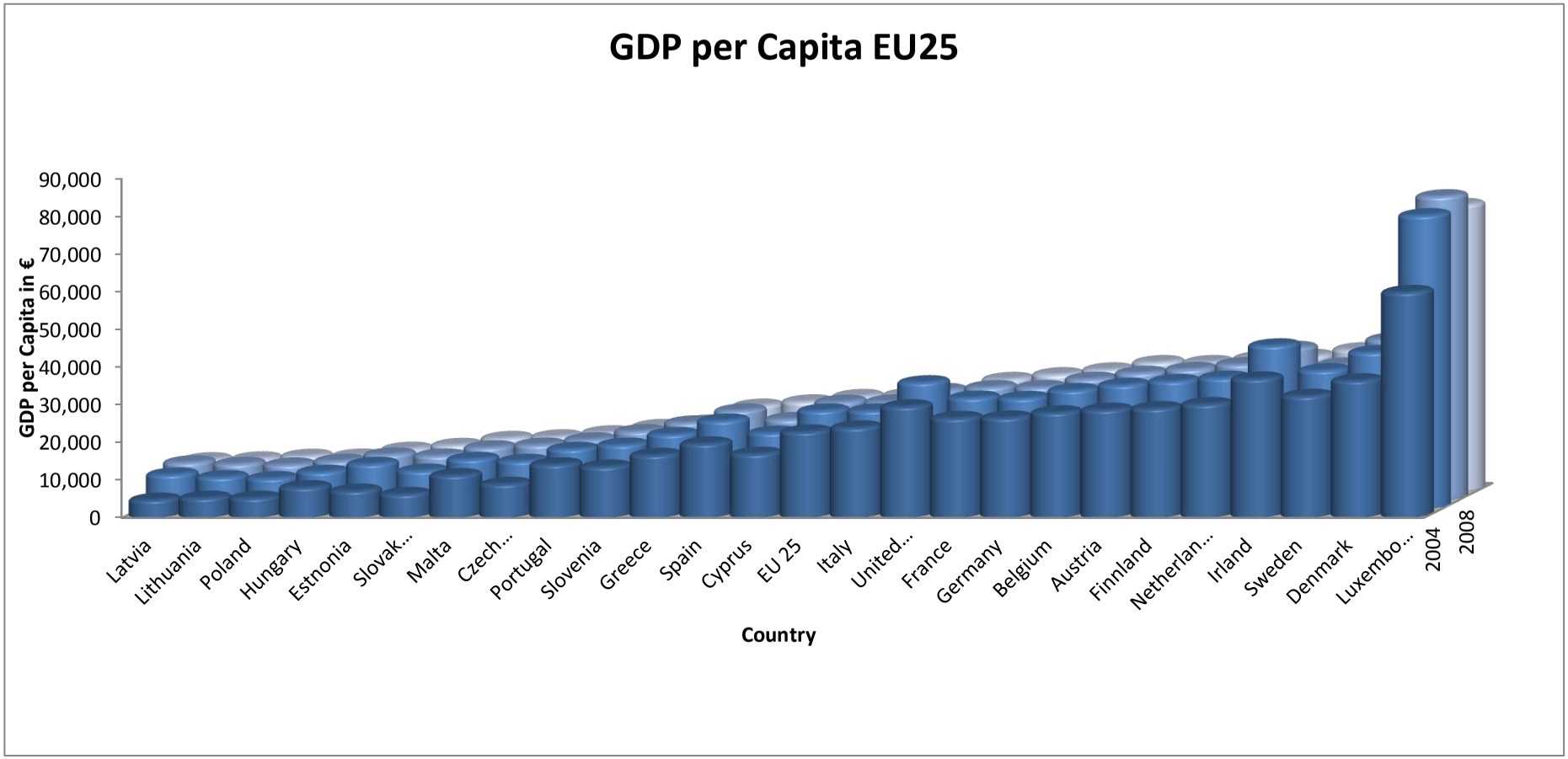
Appendix 1: Data set: GDP per Capita and EU Fund Absorption Rate for EU25

Country /Year	Absorption rate (%)				GDP per capita (€)			
	2004	2007	2008	2011	2004	2007	2008	2011[36]
Latvia	40	73	96	36	4 800	9 200	10 100	8 588
Lithuania	42	66	87	48	5 300	8 500	9 700	8 827
Poland	43	55	87	37	5 300	8 200	9 500	9 518
Hungary	43	63	80	35	8 100	9 900	10 500	9 564
Estonia	41	87	95	42	7 200	12 000	12 200	11 404
Slovak Republic	42	57	88	28	6 300	10 200	11 900	12 410
Malta	40	75	94	27	11 300	13 300	14 100	14 267
Czech Republic	42	70	87	26	9 000	12 800	14 800	14 684
Portugal	101	73	81	38	14 200	16 000	16 200	15 760
Slovenia	42	65	87	37	13 600	17 100	18 400	17 444
Greece	57	70	87	35	16 700	19 900	20 700	18 674
Spain	208	84	78	37	19 700	23 500	23 900	22 855
Cyprus	28	60	82	37	17 000	20 300	21 600	23 978
EU 25	**84**	**74**	**87**	**37**	**22 900**	**26 200**	**26 200**	**25 383**
Italy	93	79	88	22	24 000	26 200	26 300	25 708
United Kingdom	88	76	84	39	29 600	33 700	29 300	26 307
France	93	82	89	35	26 500	29 600	30 100	29 937
Germany	96	99	92	41	26 600	29 500	30 100	31 196
Belgium	98	60	87	32	28 000	31 600	32 299	32 478
Austria	99	75	95	39	28 700	33 000	33 900	34 423
Finland	106	82	89	41	29 100	34 000	34 900	34 438
Netherlands	72	81	86	34	30 200	34 900	36 200	35 501
Ireland	185	79	91	48	37 000	43 500	40 500	36 073
Sweden	117	87	92	47	32 400	36 900	36 100	37 836
Denmark	101	74	84	38	36 500	41 700	42 800	41 300
Luxembourg	181	69	83	41	60 000	78 100	80 800	76 195

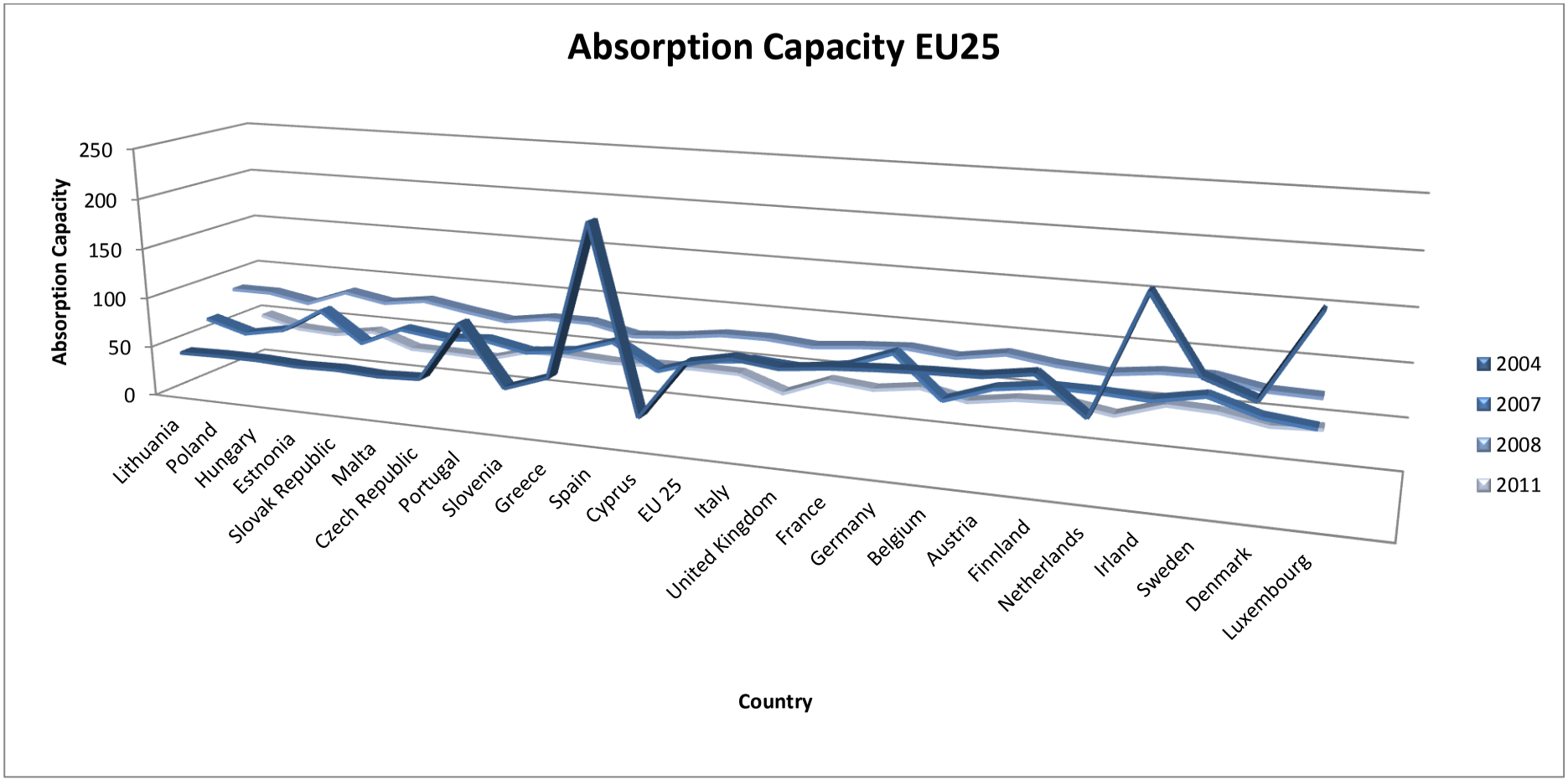
Table 1: Absorption Capacity and GDP per Capita in EU25 in 2004, 2007, 2008, 2011, Source: European Commission and Eurostat

[36] Estimation

Appendix 2: graph GDP per Capita of EU 25



Appendix 3: graph EU Fund absorption rate in EU 25



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