Analysing the Employment and Growth Effects of European Structural Funds in 2007-2013: Policy Implications and Recommendations

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Abstract

The European Union's Cohesion Policy continues to remain under scrutiny; there is a growing amount of empirical research which explores its effectiveness and efficiency. This thesis focuses on the 2007-2013 programming period and explores the employment and growth effects of the Convergence Objective funding. It attempts to answer the research question whether or not Convergence Objective positively affected employment and growth rates in the recipient regions. The research tests the hypothesis that the employment and growth effects of the Cohesion funding have been limited due to the absorption capacity problems experienced by the EU regions. In order to evaluate the effects of the structural funding, the study employs regression analysis. Based on the analysis of regression estimates, the study concludes that the structural funding has been an insignificant variable in promoting growth and employment in the given period due to a multiplicity of factors. It argues that the lack of absorption capacity has been a key impediment in the effective implementation of the structural funding and provides policy recommendations to promote better implementation and performance.

List of Abbreviations:

EC - European Commission

EU - European Union

MS - Member States

CEE - Central and Eastern Europe

ERDF- European Regional Development Fund

CS- Cohesion Fund

SMEs - Small and Medium-sized Enterprises

R&D - Research and Development

ESF - European Social Fund

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Introduction

"Man's endeavour and political aspiration is to try to develop a balanced territory."

Jacques Delors, President of the European Commission 1985-1995

The Regional Policy of the European Union (EU), also referred as Cohesion Policy, aims to reduce economic, social and territorial disparities among EU regions as well as promote economic growth and prosperity across EU member states. The Structural Funds which EU regions receive under Cohesion Policy are one of the most important instruments for achieving regional convergence. They were introduced in 1988 as a mechanism to implement key principles such as focusing on the poorest and most backward regions, multi-annual programming, strategic orientation of investments, and involvement of regional and local partners. Recent years saw some changes in the rules and structures of implementation. In the 2007-2013 programming period, they were simplified and transparency and communication became top priorities while growth and jobs were put under stronger focus (European Commission 2015). In this period, Cohesion Policy cost €348 billion, featuring as the second largest item in the EU budget after agriculture.

Through a complex legal framework supported by various instruments, the EU funding is allocated to member states and their regions according to their level of development.[1] Taking the abovementioned into consideration, it becomes interesting to explore what effects Cohesion funding has had on employment and growth after spending unprecedented amount of financial

[1] There are two Structural Funds, European Regional Development Fund (ERDF) and European Social Fund (ESF) as well as the Cohesion Fund (CF) under Cohesion Policy.

resources on three different Cohesion policy objectives: Convergence, Regional Competitiveness and Employment and Territorial Cooperation.

There is a growing amount of academic literature on the Cohesion Policy, but most of these studies focus on 2000-2006 or earlier programming periods. They do not reach a consensus on effects of the structural funding as some studies find the policy to be successful, while others emphasize its drawbacks. Since 2007-2013 programming period ended less than 2 years ago (some of the programmes are still running), many of its aspects including the effectiveness of structural funds remain unexplored. This study aims to contribute to the Cohesion Policy literature by undertaking a narrow approach to the policy. It focuses only on the Convergence Objective, which works to promote employment and growth in the member states and accounted for 81.5 % of the structural funding in 2007-2013 period.

The thesis attempts to answer the research question *whether or not Convergence Objective positively affected employment and growth rates in the recipient regions*. Accordingly, employment and growth in the recipient regions is the dependent variable, while the Convergence Objective funding represents an independent variable. The study also has an explanatory variable which is the absorption capacity of the regions. The hypothesis which will be tested throughout the research is that the *employment and growth effects of the Cohesion Policy have been limited due to the absorption capacity problems experience by the recipient regions.* Therefore, the purpose of the study is twofold: firstly, it explores the implementation of Convergence Objective funding and its effects on growth and employment in the recipient regions in the 2007-2013 period; secondly, it analyses the factors which lower the absorption capacity in the European regions and claims that the effectiveness of the funding is limited due to the issues related to absorption.

This thesis aims to contribute to the increasing amount of Cohesion Policy literature in academia with its approach to understanding how effectively Cohesion funding works. It

explores the implementation of the Convergence funding in the recipient European regions and analyses their impact on growth and employment in order to determine how effectively the EU budget is spent in this regard. Furthermore, it contributes to identification of the existing problems in implementation of funding in regards with efficiency and effectiveness; more specifically, it discusses the role of the absorption capacity in limiting the effectiveness of the allocated financial resources. The efficient and effective implementation of the structural funding is an important pre-condition for the improvement of socio-economic indicators and generating growth. Lastly, it contributes to the improvement of performance of the funding by making multiple policy recommendations.

The proposed research applies both, qualitative and quantitative research methods. It uses data from various national and EU reports as well as other secondary empirical literature. Using various datasets from Eurostat database, the study conducts a regression analysis in order to determine how much of a variety in the employment and growth rates may be explained by the structural funding.

The thesis proceeds as follows. First chapter of the thesis delves into various data sources in order to specify a research problem and highlight existing literature gaps. Second chapter provides a literature review which will be a synthesis of the relevant literature on Cohesion Policy, structural funds, absorption capacity as well as regional employment and growth; Third chapter discusses research methodology. Fourth chapter applies regression analysis to the research problem. Fifth chapter analyses the lack of absorption capacity in the EU regions and identifies impending factors. The last section draws conclusions and makes policy recommendations.

1. Problem Specification and Research Puzzle

Over the last two decades numerous academic studies have been produced on the European Union's Cohesion policy along with all the evaluations conducted by the European Commission and annual national reports submitted by the Member States. In academia, studies analyse its various aspects such as effectiveness, management, programming, and implementation of the structural funds as well as efficiency of the funding, however "there is no consensus about the impact of cohesion policy" (Ederveen at al. 2003, 31). This thesis contributes to the Cohesion Policy literature by focusing on the structural funding and its effects on the employment and growth in the European regions;

Cohesion policy funding is intended to modernise national and regional economies through the support which is provided to innovation and job creation in SMEs, R&D, labour markets and human capital; the funds aim to build key network infrastructures, protect the environment, promote social inclusion and build administrative capacity of the funded regions (Eur-Lex 2011). In the general provisions of the ERDF, ESF and Cohesion Funds, it's indicated that achieving the effectiveness and efficiency of the funds implementation is very crucial. The issue of effectiveness is connected to the core goals which Convergence Objective aims to achieve: increasing employment and growth. Effective implementation of the policy has become more important because of the global economic crisis, as "it ensures continued public investment in the context of fiscal consolidation in many Member States" (European Commission 2013, 2).

According to the European Commission, "the areas eligible for the convergence objective combine the regions eligible on a regional criteria basis (GDP <75 % of the EU average) and

Member States who are eligible for the Cohesion Fund on a national criteria basis (GNI < 90 % of the EU average)" (European Commission 2007, 13).

Table 1. European Commission, Cohesion Policy Guide 2007

Eligibility for the convergence objective				
	2000–06		2007–13	
Objective 1	NUTS 2 regions whose per capita gross domestic product (GDP) is less than 75 % of the Community average.		No change Tapering transitional support up to 2013 for regions who would have been eligible for the convergence objective if the threshold had remained 75 % of the average GDP of the EU-15 and not the EU-25.	Convergence
	Transitional support for regions and areas which were eligible for regionalised objectives for the period 1994–99, but in 2000–06 are no longer eligible for Objective 1 (phasing-out)		Corresponds to the transitional support of the regional competitiveness and employment objective (see p. 18)	
Cohesion Fund	Member States whose per capita gross national income (GNI) is below 90 % of the Community average		No change Tapering transitional support for Member States who would have been eligible for the Cohesion Fund objective if the threshold had remained 90 % of the average GNI of EU-15 and not EU-25	

In its 2005 programmatic report, the European Commission emphasized the need to stimulate the growth potential in order to achieve and maintain high growth rates across European regions. It also highlighted "unprecedented increase in disparities within the enlarged Union" (European Commission 2005, 8-9) and acknowledged that it would take long-term efforts to reduce them; it saw the new growth objective as a "contribution to the competitiveness of the whole Union" (Ibid). In the 2007-2013 programming period, there has been stronger emphasis on creating jobs and promoting growth, which brought the Convergence Objective in the centre of the attention. This thesis aims to take a narrow approach to the evaluation of the effects of Cohesion Policy and concentrate on the Convergence Objective and its funding effects.

According to Opritescu (2012) "one of the main instruments employed to sustain economic growth, while also reducing disparities between regions is represented by the structural funds" (Opritescu 2012, 333). These funds represent a financial contribution given to member states according to their level of development; and they are redistributed "in compliance with an extremely complex regulating and procedural frame, to those EU states of regions which are fallen behind from a social and economic development perspective" (Ibid).

Most of the NUTS 2 level regions which receive Convergence Objective funding are the poorest regions in Europe; therefore, the funding is assumed to have a positive impact because "structural funds represent a key source for the short, medium and long term development" (Opritescu 2012, 334). At the end of the 2007-2013 programming period, the European Commission produced various evaluation reports where it emphasized achievements in regards with core indicators (direct outputs of the implementation, such as km of new reconstructed roads, number of waste projects, number of education projects, jobs created for men and women, etc.). These figures indicate increasing convergence in the European regions but they do not reflect the objectives of programmes or the policy as a whole. Objectives are reflected in result indicators - that are programme specific and cannot therefore be aggregated - and the qualitative comments provided by Member States in annual implementation reports and strategic reports (European Commission 2013, 19). According to the EC strategic report on program implementation, "implementation has accelerated making important contributions to many areas necessary for sustaining growth and creating jobs" (European Commission 2013, 2). Additionally, the report points out that there is evidence which show progress towards the initial program objectives (Ibid). In recent national reports most member states have indicated that structural funds play a very important role in increasing employment (also containing unemployment), promoting the modernization of the education systems and strengthening the labour market through various reforms (European Commission 2013, 5).

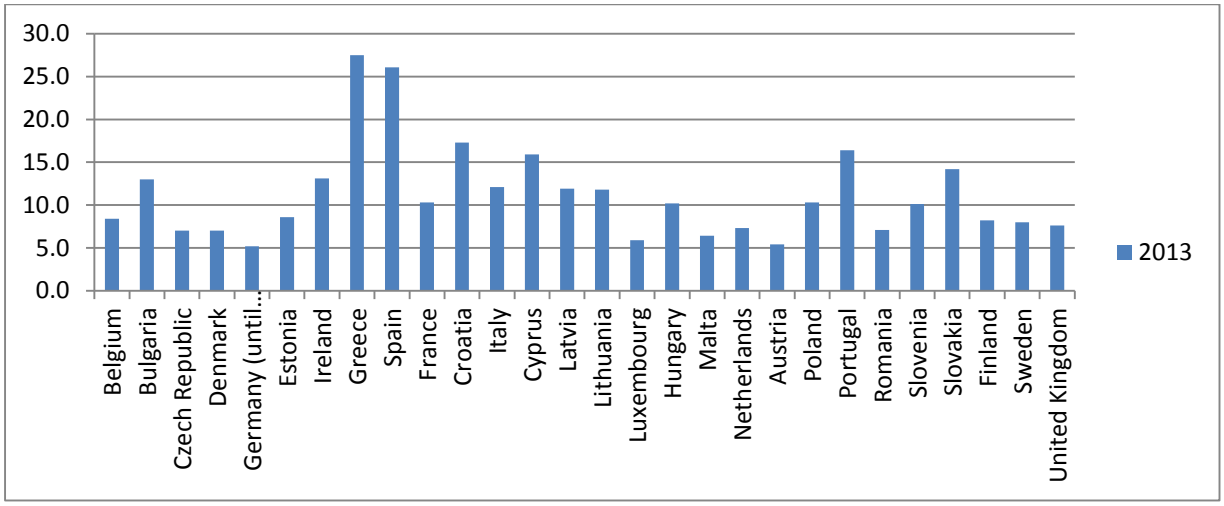
From the public policy perspective, the Cohesion Policy as a second most expensive item in the EU budget should be extensively studied in order to determine effects its funding has on the recipient regions. The core indicators mentioned above are not sufficient to show how effectively and efficiently the policy was implemented. According to Opritescu, "when absorption capacity of a member state is evaluated, the used percentage from the allocated funds is not the only monitored indicator, but also the effects they have generated in that state's economy" (Opritescu 2012, 332).

If one observes the socio-economic indicators of the EU regions, it will become apparent that instead of convergence, there is great divergence among regions. The datasets show that unemployment rates have risen since 2007 in almost every EU member country, creating even larger disparity among countries. European Commission Strategic Report 2013 indicates that in the course of five years (2007-2012) 6 million jobs were lost and that unemployment increased to 10.8 % in January 2013 compared to 8.1 % in January 2009. It also discusses divergence among countries located in the North and South of the Eurozone and the biggest ever gaps in the unemployment rates. For example, in 2013 Germany's and Austria's unemployment rates were 5.2 % and 5.4 % respectively, while in Spain it reached 26.1 % and 27.5 % in Greece.

The data also shows that there is disparity between EU-15 and new member states; unemployment rates are higher in the states which joined EU in 2004 or after. Krueger (2011) has already written about existing socio-economic gaps between new and old member states stating that the regions with the highest per capita GDP are mostly in Western Europe and Scandinavia, while the weaker regions are concentrated in the southern, south-western and south-eastern periphery of the Union, mostly in the new Member States. The Eurostat database also shows disparity among EU member states in terms of Real GDP per capita. For example,

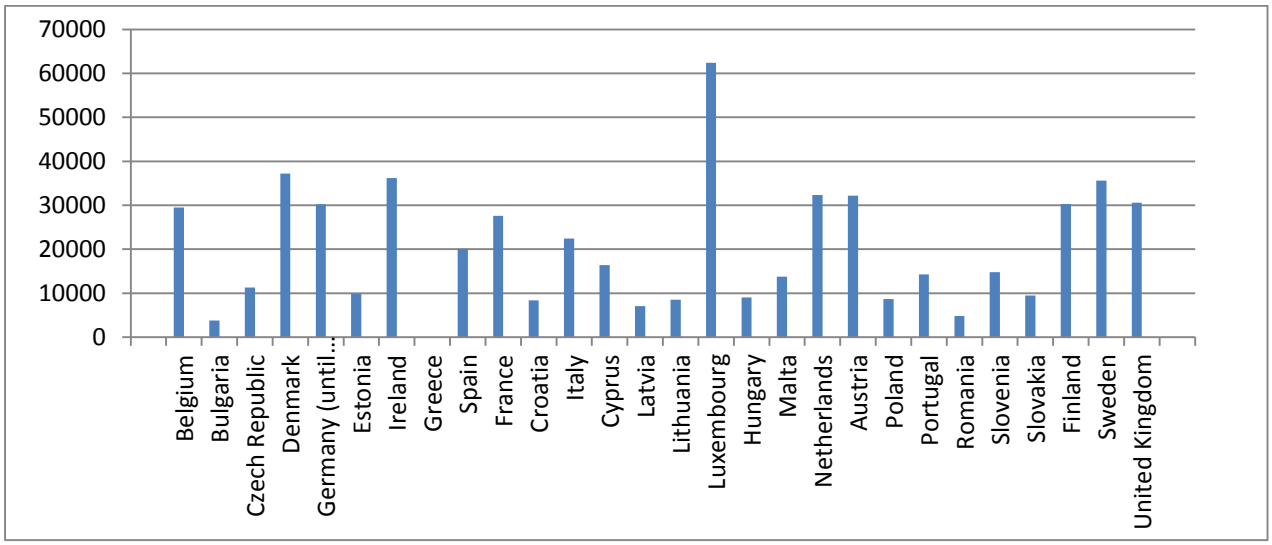
in 2013, GDP per capita of Poland was € 9,600, while in Luxembourg it amounted € 62, 400. In Bulgaria, it equalled € 3, 800 and in Belgium, € 29, 500.

Table 2. Unemployment Rates in the EU member States in 2013; Source: Eurostat



Similar to unemployment rates, there is divergence between EU-15 and new member states in terms of GDP per capita as well. Since this data is from 2013, the year when the 2007-2013 programming period ended, positive impact of the structural funding becomes questionable to some degree. Therefore, it is interesting to study what effects structural funds had on the European regions and to what extent they promoted prosperity and growth.

Table 3. Real GDP Per Capita in the EU Member States in 2013; Source: Eurostat



When dealing with the question of effectiveness, one should also focus on the issue of efficiency or analyse not only what effects structural funds had on the European regions, but also how efficiently they were implemented. According to European Commission, at the end of 2011, cohesion programmes "had contributed more than EUR 8.9 billion (4.4% of the total ERDF) to financial instruments for enterprises, of which more than EUR 3.6 billion (40%) had been paid to enterprises" (European Commission 2013, 5). This means that the absorption capacity of (some) of the member states have not been sufficient. The Commission indicated that if the countries which have low absorption capacity do not mobilise the available EU funds promptly, a significant volume of them will be lost and the intended objectives not achieved (Ibid). The lack of absorption capacity represents a considerable problem, which has been analysed in various academic studies as well.

Various authors (Georgescu and Zaman 2009) have indicated that EU countries experience problems with the absorption of funds. It's paradoxical, but the poorest, most disadvantaged regions which are in the greatest need for funding, have greatest difficulties in absorption (Katsarova 2013, 4). The report issued by KPMG in 2012 underlines the existing disparities across new member states showing great variety in absorption rates of the Structural funds. KPMG explains that important factor in indicating the real level of the effectiveness and efficiency EU funds management is the difference between the contracted grants and paid grants. The smaller the difference between these two factors, the more efficient EU fund management is in terms of real distribution (KPMG 2012, 13). Data shows that the member states greatly differ in terms of the absorption rates. For example, Estonia is the leader in terms of distribution of EU funds with only a 19 % difference between contracted grants and paid grants. Lithuania (25%) also achieved good results. The biggest differences contracted grants and paid grants can be observed in Bulgaria (58%) and Romania (57%) (KPMG 2013).

As mentioned above, this study intends to contribute to Cohesion Policy literature by exploring the 2007-2013 program period and analysing the effects of the structural funds. The reason why 2007-2013 period is chosen is due to the fact, that there is limited empirical literature produced which would analyse this programming period; this study takes a narrow approach to the policy and analyse it not as a whole, but only its first, Convergence Objective, which aims to increase employment and growth in the fund-recipient regions.

The aim of the study is twofold: firstly, it attempts to evaluate the Cohesion Policy's Convergence (previously Objective 1) Objective and its employment and growth effects on European regions in the 2007-2013 programming period; secondly, it will explore the efficiency of the funds implementation and identify the reasons why countries experience problems with the absorption of funds.

The study will attempt to answer a research question which is formulated as follows: *How has Convergence Objective funding affected employment and growth in the European regions?* The research will attempt to test the hypothesis that the *employment and growth effects of the Cohesion Policy have been limited due to the absorption capacity problems experienced by the EU regions.* In order to prove the mentioned hypothesis, the study will a) conduct a regression analysis to determine the relationship between the structural funds and the employment and growth rates in the EU regions and b) provide the overview of the main factors which lower the absorption capacity and their implications for the performance of the structural funds.

The research will provide an interesting contribution to the Cohesion policy literature for multiple reasons. First, due to the fact that 2007-2013 programming period has recently ended (some of its programs are still on-going), there are not many empirical evaluations available which would evaluate effectiveness of its implementation in this specific period; the research

studies Convergence Objective specifically and analyse the effects of its funding on the European regions;

Second, it will be interesting to explore the performance of the Convergence Objective funds in the light of the global economic crisis. The crisis hit the European economies in 2008 exacerbating the process of sustaining economic growth and reducing disparities among regions. By this time, several programmes had been performing well in terms of sustaining economic growth at a relatively high rate; however, the global recession and later, the financial crisis significantly reduced GDP, caused job losses and mounted unemployment in the EU member states (European Commission 2014). Taking the negative effects of the global economic crisis into consideration, the study will investigate if structural funds still managed to promote growth and employment in the EU in 2007-2013 programming period.

Third, if we look at this policy area from the Public Policy perspective, it becomes very interesting to explore the impact of the structural funding; in the 2007-2013 programming period, there has been the highest concentration ever of resources on the poorest Member States and regions. This study will contribute to understanding whether this funding contributes to the prosperity of the EU countries or it's a waste of financial resources.

2. Literature Review

Over the past two decades, the Cohesion Policy has been placed under increasing scrutiny. A vast amount of empirical literature has been produced which evaluates the effectiveness of the Cohesion Policy focusing on the impact of structural funds on European economies, governance and development. Most of this literature focuses on the 2000-2006 or earlier programming periods; the growing amount of studies which concern more recent periods are also available. The purpose of this section is overview the mentioned literature based on its relevance to regional unemployment and growth, the impact of the implementation of structural funds and absorption capacity.

2.1 Regional Unemployment and Growth Theories

Unemployment should be analysed through the macroeconomics lens as building various macro-economic models allows exploring labour-force dynamics and determining the natural rate of unemployment. Macroeconomists assume that the labour force is fixed and analyse the transition of individuals between employment and unemployment. The natural rate of unemployment is determined through rates of job separation and job finding (Mankiw 2003, 156-157). Certain public policies aim to decrease frictional unemployment rates, which is the time it takes workers to find another job. Cohesion policy may be considered as a policy designed to reduce frictional unemployment as it directly makes funds available for the creation of jobs. Another reason which causes unemployment is wage rigidity, which happens when wages don't adjust until labour supply equals labour demand and which causes structural unemployment. The workers cannot find jobs because simply, the supply of labour is more than demand. The rates of unemployment may differ in different groups within the population

i.e youth unemployment rates are usually higher than older labour force ones (Mankiw 2003, 161-168).

The review of theory on economic growth should be started with the Solow growth model, which shows that in the long run, an economy's rate of saving determines the size of its capital stock and thus its level of production; The higher the rate of saving, the higher the stock of capital and the higher the level of output. In the Solow model, an increase in the rate of savings causes a period of rapid growth, but eventually that growth slows as the new steady state is reached (Mankew 2010). Various determinants of growth include human capital, tourism, investment, etc. When measuring growth, one could look at GVA (Gross Value Added) rates, or real GDP which measures growth without the effects of inflation and is satisfactory (OECD Observer 2005).

2.2 Implementation of the Structural Funds in the European Regions

There is a great amount of research which empirically analyses the implementation of structural funds; the findings differ. Some studies deal with the effects of the structural funding on the member states, suggesting the empowerment effect the structural and cohesion funds have had on local and regional actors and their capacities (Bachtler and McMaster 2006), while other studies point out existing institutional deficiencies and limited administrative capacities of local actors (Kalman 2002, Herve and Holzmann 1998). Institutional and administrative capacities are increasingly discussed in relation with the problems in the structural funds implementation (Herve and Holzmann 1998), specifically, low absorption rates. Researchers indicate that inefficient implementation is caused by various institutional factors, countries political systems (whether a country is federal or central) (Katsarova 2013), understaffing issues in the civil service which causes delays in contracting, lack of analytical capacity,

incomplete and inadequate planning, poor institutional framework, etc. (Kalman 2002, 33). There is an increasing amount of literature which analyses Cohesion policy implementation through the principal-agent model. Different studies (Bloom Hansen 2005, Bachtler 2010) have identified various implementation problems through the lens of the mentioned model.

Various authors analyse the patterns of the implementation. Baum and Marek (2008) indicate the importance of the partnership principle during the implementation, while others focus on the variance across member states in terms of implementation. McCaster and Bachtler (2005) found that there is a considerable variation in the organization of structural funding across member states. They also find variance in terms of involvement of regions which is caused by multiple programming stages, uncertainty in planning, and absence of a common model of implementation (Bachtler and McCaster 2007). Marchante and Ortega (2010) have explored the issue of the efficiency of the implementation of the funding. By using a unit cost analysis of the Operational Program's output and result indicators as well as by the comparative study of the completion costs and the processes of tendering and contract-awarding, they have found that "the financial dimension of the operations is directly related to efficiency" (Marchante and Ortega 2010, 208). The authors have also identified various factors which lead to the differences in the efficiency rates. The European Commission also publishes various reports concerning the efficiency implementation of the Cohesion funding. In recent report, it has highlighted the ability of the policy to adapt to changing "changing circumstances and to respond effectively to the crisis" (European Commission 2013, 2). In order to increase efficiency and effectiveness, the Commission proposed major changes for the 2014-2020 period to many issues such as: concentration of resources, focus on results, reliable reporting against common indicators, a performance framework and evaluation (Ibid).

2.3 The Impact of Structural Funding on the European Regions

When it comes to analysing the impact of the structural funding on the performance of the European regions, scholars and academic researchers cannot achieve a consensus. There are studies which indicate that the funding positively affects the regions (Becker et al. 2010), while other studies don't find enough supporting evidence to agree with this claim (Wostner and Slander 2009). Studies conducted before the 2007-2013 program period have shown, that "EU regional support has a significant and positive impact on the growth performance of European regions" and, hence, contributes to greater equality in productivity and income in Europe (Cappelen et al. 2003). Tosun (2014) evaluates the absorption performance of EU member states with regard to the European Regional Development Fund's (ERDF) 2000-2006 programming period and indicates existing positive relationship between ERDF absorption and government capacity. Ileana and Flavia (2012) investigate the relationship between the structural funds and the real convergence of the new member states. They don't find any significant evidence which shows that structural funds lead to a faster real convergence process. Additionally, they question the effectiveness of the cohesion policy (Ileana and Flavia 2012). Authors (Cappelen et al. 2003) also emphasize that economic effects of the structural funding are stronger in more developed regions and impact largely depends on the receptiveness of the receiving regions. They highlight the evidence that "support is least efficient where it is most needed" and suggest that growth in poorer regions is greatly hampered by an unfavourable industrial structure (dominated by agriculture) and lack of R&D capabilities. They underline the need of the policies which will improve the competence of the regions, facilitate structural change and increase R&D capabilities (Cappelen et al. 2003, 640-641). Rodriguez-Pose and Fratesi (2004) analyse the impact of the Structural Funds allocated to Objective 1 regions and conclude that EU is still far away from achieving convergence; they question the capacity of the development funds allocated to poor regions to deliver sustainable economic growth. They

hypothesize, that the lack of convergence experience by the EU regions may be due to unbalanced structure of the regional development strategies financed by European funds.

Becker et al. (2010, 2012) analyse Objective 1 Structural Funds transfers of the European Commission to regions of EU member states below a certain income level by way of a regression discontinuity design with systematically heterogeneous treatment effects. They have found that only about 30% and 21% of the regions those with sufficient human capital and good-enough governance are able to turn transfers into economic growth and investment. According to Zaman and Georgescu (2009), the possible economic effects of structural funds, which are analysed through econometric models reveal that there is ambiguity in literature, as "some studies report a positive impact, others a non-significant one or even a negative one" (Zaman and Georgescu 2009, 140); They further add that some studies indicate that "the structural funds could boost GDP growth in the CEE countries by 0.7 percent annually, while some econometric models do not indicate more than 0.1 percent" (Ibid).

2.4 Absorption Capacity and Structural Funds Implementation

Absorption capacity represents the extent to which a country is capable of effectively and efficiently spending its Structural Funds allocation, and is expressed in percentage of the total allocation (Sumpikova 2004). According to Osterloh, the concept has three dimensions: 1) macroeconomic absorption capacity 2) Administrative absorption capacity 3) Financial absorption capacity (ability of the regions to co-finance the projects) (Osterloh 2010, 80). Efficient implementation of the funds is closely related to the absorption capacity of the member states; Different studies emphasize the existence of a connection between low absorption and different levels of development in the EU regions (Opritescu 2012). Various researchers (Katsarova 2013, Opritescu 2012) have already indicated the paradoxical

relationship between the absorption capacity and the economic conditions of the recipient regions; the research shows, that the most disadvantaged regions absorb the least amount of funds. Milio (2007) explores why some regions are still unable to spent allocated resource even though they have been funded for 16 years and attempts to find the ways to explain differences in regional performances through administrative capacity. She identifies the low administrative capacity of regional governments along with other factors as a main problem which leads to the variation in Structural Funds implementation. Various researchers argue that different challenges associated with the absorption of EU Structural Funds are related to the complex system of implementation, management and control at EU, national and sub-national levels. Namely, 1) persistently high levels of financial irregularities 2) The administrative burden of financial control and audit 3) allocating tasks between EU authorities and member states (Davies et al. 2008). The Commission has identified some additional factors which delayed the absorption of funds in the 2007-13 period. Those include "the late start of programmes due to the extension of the previous period, an underlying lack (or even decline) in administrative capacity, the challenges in preparing major infrastructure projects and obtaining Commission approval, changes in EU legislation, inconsistent political ownership (changes in national and regional governments, changes to institutions) and the effects of national sectoral reforms" (Katsarova 2013, 4)

Kalman (2011) emphasizes the importance of the project-generation and administration capacity and underlines the lack of them in the regions; she provides reference to her interviews which reinforced the notion that "EU fund applications indeed involve heavy bureaucracy and preparations need considerable time and budget efforts" (Kalman 2011, 10). The lack of administrative capacity may also limit the involvement of the regions in the implementation processes. McCaster and Novotny state that the limited role of the regions may be even beneficial. According to them even in countries with comparatively stronger regions, "the

administration of highly complex EU Funds could easily overload regional administrations undermining what authority they have" (McCaster, Novotny 2005, 9) Recent European Commission's Strategic report (2013) on programme implementation points out difficulties in the implementation of Cohesion policy and measures for dealing with them. The reduction of national co-financing is named as one of the anti-crisis measures in order to facilitate absorption process of structural funds by new member states. According to the report, "the effect of lower national public co-financing is to reduce the total programme investment volumes by around EUR 15.5 billion" and "to take pressure away from national budgets at time of crisis" (European Commission 2013, 5). The report names "administrative capacity, the challenges in preparing major infrastructure projects and obtaining Commission approval, changes in legislation, inconsistent political ownership (changes in national and regional government, changes to institutions) and the effects of national sectoral reforms" as other implementation challenges (Ibid).

According to Blom-hansen (2005), EU control mechanisms are weak and the goals formulated at the EU level are likely to change in the implementation process "in order to suit the preferences of the implementing actors at the national level". He suggests the principal–agent framework as an alternative approach to the implementation process because this will uncover serious implementation problems (Blom-hansen 2005). The mentioned mechanisms are otherwise known as conditionalites. Various studies question the strength of these mechanisms and consider it unable to address the issues with institutional and administrative problems which causes absorption capacity. The conditionalities often don't achieve the initial goal, therefore they are amended. Regardless the modification of several national regulations in 2009 and 2010 in line with EU legislative amendments and other national prioritization principles (KPMG 2011), in several new member states the absorption capacity remained low. McMaster and Novotny point out that greater implementation control might cause problems for the

member states, as it's usually related with programme management and delivery, partnership and cooperation, and monitoring and evaluation (McMaster, Novotny 2005, 5).

3. Research Methodology

3.1 Qualitative Methodology

This section provides a description of the methods used throughout the research. It excludes the conceptualization since background concepts have been defined in the literature review. The study employs dependent, independent and explanatory variables. The relationship between the independent (structural funding) and the dependent (employment and growth) variables is referred to as causality in social research. In order to demonstrate the causal effect, the study has proposed a hypothesis, which is "a conjectured relationship between two phenomena" (Van Evera 1997, 9). The study suggests that due to the problems with the absorption capacity, the effects of the structural funding on employment and growth have been limited. It should be indicated, that "limited" is not used as a negative term and it does not imply non-existence of positive influence. Taking the fact into consideration that European economies were hit by the global economic crisis in the given period of time, slow decrease in employment and growth rates can also be considered as success.

Since this hypothesis assumes a causal relationship, it may be regarded as a causal hypothesis. The realized causal effect of the given hypotheses is the lack of effectiveness of the structural funding. However, there is a fundamental problem of causal inference in every research, which means that no matter how accurately the variables are defined, and conceptualized, one may never be certain about causal inference (King et al, 1994). One of the limitations of the study from the methodological perspective can be that it does not include control cases, or case studies of some European regions in order to verify the observed effects.

3.2 Quantitative Methodology

Besides the qualitative methods, the thesis also utilizes the quantitative methodology. More specifically, the effects of the Convergence Objective funding on the recipient regions are analysed by building multivariate regression models. Regression analysis predicts the values of a continuously distributed dependent variable from an independent, or explanatory variable (Marsh and Elliott 2008). This method is designed to explore relationships between multiple independent variables and one dependent variable and allows their individual analysis. Therefore, using regression analysis will allow controlling for various socio-economic and demographic indicators which affect regional employment and growth over time. This thesis will use ordinary least squared (or just, linear) regression.

- The regression equation is written as $Y = a + bX + e$ where **Y** is the value of the Dependent variable (Y), what is being predicted or explained; **X** is the value of the Independent variable (X), what is predicting or explaining the value of Y;
- **The sample intercept** is represented by the symbol ***a*** (It's a constant), **the slope** by ***b*** (how much Y changes for each one-unit change in X) and **the error term** by ***e*** *(*It's the error term in predicting the value of Y, given the value of X and is not displayed in most regression equations) (Meier et al. 2012).

In order to justify the choice of linear regression, two points should be mentioned. First, although there is growing amount of empirical research which applies regression analysis using panel models, it should be indicated that with the data which this research analyses, panel models cannot be used. It's because used datasets don't include the amount of funds, rather the funding status. The regions receive funding for already pre-determined period of time (which does not change), therefore funding status could be used as a variable. The panel model would not be able to use Convergence Objective funding as a variable. Second, logistic regression

could not be used instead of linear one either, because the dependent variable of this research does not have a value of 0 or 1.

Throughout the literature on regional employment and growth, various factors are identified which affect employment and growth rates. This study makes an attempt to investigate the correlation between receiving the structural funding and employment and growth rates in the recipient regions. The datasets which were compiled for the research purposes were found on Eurostat website, which is statistical office of the European Union situated in Luxembourg. It provides the EU with statistics at European level that enable comparisons between countries and regions. As mentioned already, the main purpose of the regression analysis is to determine causal relationship between funding and change in unemployment rates and not investigate what affected regional unemployment.

The study identifies two dependent variables: employment rate and GDP per capita. The first variable will be used for studying the change in employment, as for GDP it will be used to measure the growth. The study does not use GVA (Gross Value Added) because the datasets of Eurostat had a lot of missing data for the NUTS 2 level regions and it would bias the regression estimates.

Dependent Variables	Definition
Employment Rate	Percent of currently employed people in the labour force
GDP Per Capita	Gross domestic product divided by the number of people

Independent Variables	Definition
Number of Population	Amount of people living in the corresponding region
Household Income	Average household income
Tertiary Education	Number of people with tertiary education
Participation Rate	Percentage of economically active population
Funding Status	Status =1 if the region received funding and 0, if it did not.
Tourism	Number of arrivals at tourist accommodation establishments

During the regression analysis, the following null and alternative hypotheses will be tested:

- H0: There is no significant relationship between the Convergence Objective and the employment rates in the EU regions
- H1: There is a significant relationship between the Convergence Objective and the employment rates in the EU regions

- H0: There is no significant relationship between the Convergence Objective and growth rates in the EU regions
- H1: There is a significant relationship between the Convergence Objective and growth rates in the EU regions

The models have several limitations. First, they don't correspond to the assumption of zero spatial auto-regression as employment and growth in the same NUTS 2 region are not independent from each other; there will always be some degree to which they are interdependent. Secondly, it should be indicated that the models below might experience omitted variable bias. There can be many other factors which positively influence employment and growth in the EU regions, such as other EU funding, technologic developments, industrial activities, etc. Thirdly, there is some missing data in the datasets which were compiled for the regression purposes. This missing date might bias the regression estimates.

4. Regression Analysis

This section presents and analyses the regression estimates of the various models which were built in order to examine the relationship between the structural funding and the rates of employment and growth.

4.1 Employment Rates

The table below shows regression estimates for three different models built to examine relationship between various potential predictors, including the funding status and the rate of employment in the European regions. The estimates are presented for three years: 2007, 2010 and 2013 in order to explore the impact of the funding in the beginning, in the middle and in the end of the programming period. The cases in the regression analysis are all European regions which received funding under Convergence Objective from 2007 to 2013 excluding the regions of Croatia. The country joined the European Union in 2012, therefore it would not be reasonable to include its regions in the analysis. As it was mentioned before, in the methodology section, the analysis includes funding status and not funding levels, due to the unavailability of funding data. If the region received the funding, it is recoded as 1, otherwise – 0.

Analysis of the Regression Estimates for 2007

Funding Status, Population, Tertiary Education, Household Income, GDP, Tourism and Participation Rate were used in a linear regression analysis in order to predict the change in employment in the European regions. Since analysis was performed for three different years, the presented models include or exclude various predictors depending on the year. In a multiple regression, it's the model which should be analyzed while variable should be treated as just predictors combined in such a way that the sum of the squared residuals of the model is

minimized. Therefore, it's the particular combination of the explanatory variables which maximizes prediction in the multiple regression analysis.

Table 1. Models for Employment Rates

		Model 1		Model 2		Model 3	
Year	**Independent variable**	***B***	***p*-Value**	***B***	***p*-Value**	***B***	***p*-Value**
2007	Funding Status	*-2.606*	**.658**	*-306.052*	**.015**	*-313.465*	**.009**
	Population	*-1.591E-6*	.548				
	Tertiary	*1.064*	.001	*-1.266*	.862		
	Household	*.001*	.039	*-.040*	.000	*-.041*	.000
	GDP	*2.913E-7*	.995	*.010*	.000	*.010*	.000
	Tourism	*-4.285E-6*	.002				
	Participation Rate	*.933*	.000				
	F	*35700.063*	.000	*71.396*	.000	*98.424*	.000
	R Squared	*.999*		*.536*		*.540*	
2010	Funding Status	*-23.590*	**.077**	*-11.511*	**.873**	*145.236*	**.035**
	Population	*-4.269E-7*	.950				
	Tertiary	*-2.283*	.001	*-21.628*	.000		
	Household	*.001*	.415	*-.009*	.015	*-.012*	.003
	GDP	*.001*	.000	*.012*	.000	*.009*	.000
	Tourism	*-1.656E-5*	.000			*9.784E-5*	.000
	Participation Rate	*.857*	.000				
	F	*7281.377*	.000	*345.873*	.000	*337.316*	.000
	R Squared	*.994*		*.806*		*.803*	
2013	Funding Status	*-7.799*	**.714**	*-9.333*	**.621**		
	Population	*-1.625E-5*	.143				
	Tertiary	*(-3.354)*	.003	*-1.696*	.054		
	Household						
	GDP	*.002*	.000	*.001*	.000		
	Tourism	*-6.837E-6*	.142				
	Participation Rate	*.818*	.000	*.797*	.000		
	F	*3646.681*	.000	*6875.167*	.000		
	R Squared	*.988*		*.988*			

2007 year Model I is statistically significant ($p<0.05$) and explains 99.9 % variance in the employment (adjusted R = .999). In this analysis, adjusted R values are analyzed because we have relatively large number of cases and small amount of predictors. In 2007, Tertiary Education, Tourism, Household Income and Participation rate are statistically significantly correlated with employment, indicating that the regions where the rates of these indicators were

high, reported higher rates of employment. However, the model shows that the Convergence funding has not contributed to the employment as it is not statistically significant (p>0.05).

Model 2 and Model 3 (in 2007) show that all these variables represent good combinations together, because when Participation Rate, Tourism and Population are excluded from the model , the value of adjusted R squared becomes around 53 %, which means that only 53% of the variance in employment is explained by the remaining variables. The positive aspect of the Models 2 and 3 is that the funding status became statistically significant, although remained negatively correlated with the employment. This should not be understood that higher rates of funding causes lower rates of employment. First of all, in this analysis the funding status is included as a variable and not the levels of funding; secondly, we are looking at the change in the employment i.e either increase or slower decrease. The negative value of the B coefficient of the funding may translate into decrease in employment rates in the recipient regions regardless the provision of the funding.

***Analysis of the Regression Estimates for* 2010**

According to the Table 1, it's understood that the weighted combination of the predictor variables explained approximately 99.4 % of the employment, which is very high. Household Income and Population did not contribute to the model as their p values were more than 0.05; Convergence funding did not contribute either, however it's value is close to be significant (p=.077). In Model 2, the exclusion of the Household Income, Tourism and Participation rate from the list of predictors decreased the value of R squared to around 80%. The funding status remained insignificant and negatively correlated with employment. In model 3, Funding Status, GDP, Household Income and Tourism explained around 80% of variance in employment. All these variables were statistically significant; the funding status, according to this model, was positively and statistically significantly correlated with employment.

***Analysis of the Regression Estimates for* 2013**

In 2013, the first prediction model has proven appropriate and statistically significant (F=*3646.681, p<0.01)* explaining a very high amount - 98.8 % of variance of employment. Even though the variables created a good combination to contribute to the model, in the first model only Tertiary Education, GDP and Participation Rate were statistically significant. Population, Tourism and Funding did not contribute to the model. The funding status was insignificant and negatively correlated with the employment. In Model 2, Convergence funding remained statistically insignificant and negatively correlated with the employment (p= .621). It's interesting because according to general logic, after providing the structural funds to the regions, employment rates should increase. The negative correlations may be caused by various factors, such as a) regardless the provision of the funding, the employment levels significantly dropped due to the economic crisis b) the regions which receive the funding are the poorest in Europe, therefore one should not expect absolutely positive impact from the funding, as socio-economic recovery may take more than just a few years.

4.2 Growth Rates

Table below shows the regression estimates for the growth rates in the European regions measured by GDP per capita. As mentioned already, one of the limitations of this analysis is that GVA (Gross Value Added) could not have been used because of a lot of missing data in the Eurostat database (which would bias the regression estimates eventually). However, a straightforward approach may be used: by looking at the GDP per capita we can still estimate the growth across the European regions. Accordingly, the dependent variable has been GDP per capita in the presented models.

		Model 1		Model 2	
Year	***Independent variable***	***B***	***p-Value***	***B***	***p-Value***
2010	Funding Status	*-30958.683*	(0.10)	*-12860.409*	(.033)
	Population			*.028*	.000
	Tertiary	*2689.957*	.000	*2065.636*	.000
	Household	*1.031*	.101	*.727*	.025
	Tourism				
	Unemployment	*200.936*	.838		
	F	*14.156*	.000	*283.348*	.000
	R Squared	*.138*		*.777*	
2013	Funding Status	*-9117.176*	.126	*-11105.804*	.065
	Population	*.018*	.000	*.018*	.000
	Tertiary	*1234.044*	.000	*1203.749*	.000
	Household	--	--		
	Tourism	*.011*	.000	*.011*	.000
	Unemployment rate	*-1125.840*	.001		
	F	*320.754*	.000	*386.756*	.000
	R Squared	*.856*			

Analysis of Regression Estimates

In order to predict growth rates, two different models have been created for 2010 and 2013 years, in total four regression models. The analysis has used the combination of Funding Status, Population, Tertiary Education, Household Income, Tourism and Unemployment rates as a set of predictors of GDP. Tertiary Education is used as one of the indicators of human capital. In 2010, model 1 shows that Population and Tourism are very good predictors of the growth, as when they are excluded from the model, the value of the R squared become around 13 %, which means that only 13 % of the change in GDP is explained by the remaining variables. Although, it should be indicated that the model is statistically significant ($F= 14.156$, $p<0.01$). The funding status is negatively but statistically significantly correlated with GDP ($p<0.05$).

In 2013, Household Income was excluded from the analysis because of the lack of data for the given year. All of the remaining variables contribute to the model besides the funding status. It

is negatively and statistically insignificantly correlated with GDP according to the model. The combination of the variables seem to be a good fit to the model, as it's statistically significant (F= *3646.68, p<0.01*) and explains 85 % change in the GDP.

4.3 Summary

The analysis of the regression estimates during given three years shows that the funding status remained statistically insignificant most of the times. Since it represents the most important variable for the purpose of this study, it's crucial to determine several possibilities why it remained insignificant in the presented models. Its negative correlation with employment and growth in multiple occasions, as well as its insignificance may be understood in multiple ways: 1) the provision of the funding was insignificant because of the global economic crisis; it does not matter whether a region received a funding or not, the crisis decreased employment and growth rates throughout the whole EU. 2) The funding was provided to the poorest regions, with GDP < 75 % of the EU average, which means that the funding could not have had positive impacts very quickly as these regions experience greatest struggles with rising unemployment and growth 3) The study used only the funding status not the funding levels for the analysis, therefore it's difficult to determine the true effects of the funding. If the data on the amounts of funding given to the regions was available, it would be possible to explore whether or not more funding leads to higher employment and growth rates. 4) As mentioned already above, this analysis explored the existing change in the employment, as long as the rates don't decrease very quickly and dramatically, it may still be considered that the funding has had a limited but positive impact.

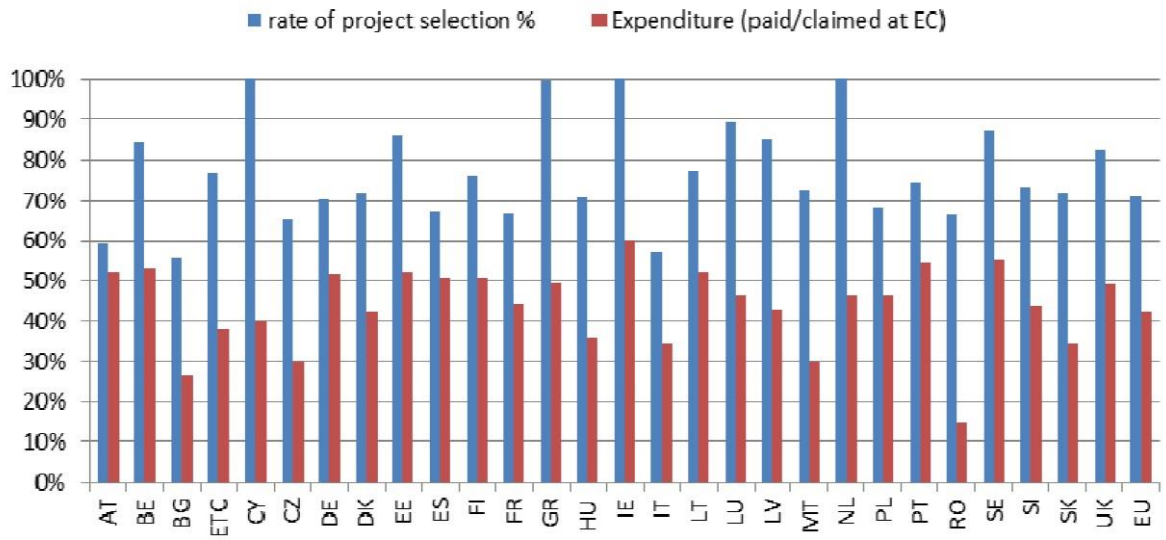
5. Implementation of the Structural Funds and Absorption Capacity

Based on the analysis of the regression estimates presented in the previous section, it has been concluded that the impact of the structural funding has mostly been insignificant variable in promoting growth and employment in the European regions. This proves the first part of the main hypothesis which says the impact of the funding has been limited; in this section, various arguments will be provided which explain why this might have happened.

Previous chapters have highlighted that stronger regions tend to receive more funds because they have better administrative and financial capacities, while poor regions struggle with absorption. The lack of absorption capacity can be decisive in the matter of effectiveness and efficiency of the structural funding. A very important dimension of effectiveness can be cost-effectiveness which can be expressed in terms of the programme's absorption rate of funds and implementation progress (European Commission 2003, 41). Opritescu (2012) has stated that there is a direct link between the low absorption and the uneven development of EU regions. Absorption capacity shows the ability of the states to fully spend the allocated resources in an effective and efficient way and is expressed in percentage of the total allocation. Researchers (Osterloh 2010, Sumpikova et al. 2004) connect it with three main factors: macro-economic capacity, financial capacity and administrative capacity of the regions. According to Opritescu, "the absorption of the structural and cohesion funds represents one of top priorities for the public administration, companies, farmers and non-governmental organizations" (Opritescu 2012, 333).

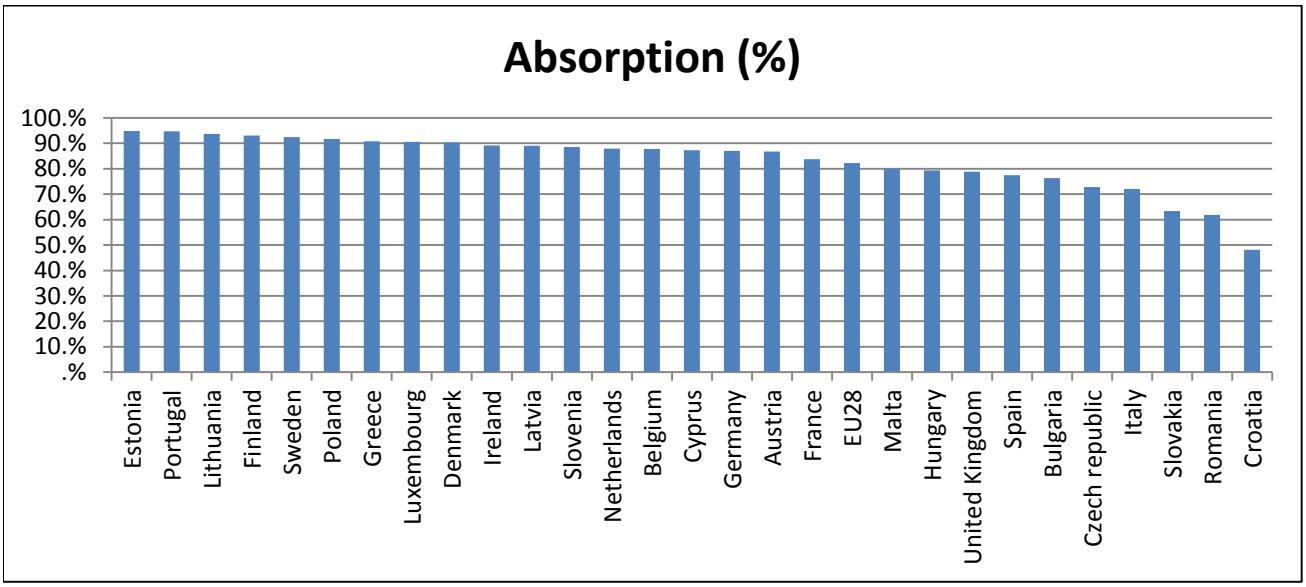
This thesis argues that the employment and growth effects of the structural funding have been limited due to the absorption capacity problems experienced by the European regions. The Convergence funding is provided to the poorest regions which are mostly located in the new

member states. The chart below shows the rate of project selection and the rate of expenditure which has been paid out to the regions in the 2007-2013 programming period. It's apparent that most of the countries have low absorption rates, especially the new members.



The absorption rates in 2007-2013 show that even though some new member states have successfully managed to absorb the funds, the others have not. For example, Estonia and Lithuania enjoy very high (above 90 %) absorption rates, when absorption in Romania and Slovakia remains the lowest.

Table 1. Cohesion Data website



The absorption of the structural funds covers different stages, such as programming, funds allocation and payments (Cace et al. 2009, 17). According to Katsarova (2013) various challenges associated with the absorption of EU Structural Funds are related to the complex system of implementation, management and control at EU, national and sub-national levels.

In order to prove the importance of absorption capacity for the effectiveness of the funding, various arguments will be provided below; they will provide the information what factors may have caused low absorption rates in the recipient regions. In the 2007-2013 programming period, member states experienced various economic downturns; besides, most of the recipient regions lack administrative and financial capacity to manage and operate the programmes. One more factor which this study analyses is the European Commission and its conditionalities to promote the absorption. The study argues that they may actually play a role of an impediment in absorption instead of being a catalyst.

5.1 Macroeconomic and Financial Factors

In the 2007-2013 programming period, one of the most important factors which lowered the absorption capacity in the EU regions has definitely been the global economic crisis. According to the European Commission, "the crisis affected the implementation of the programmes in most Member states according States to varying degrees and there were differing responses to it in terms of the way that funding was deployed" (European Commission 2014, 10). The implementation pace has been slowed down for two reasons: first, economic struggle brought uncertainty to markets, therefore the demand for the investment support by enterprises has been diminished; second, public authorities did not have financial capacity to co-finance the projects, which caused reduction in the absorption of the EU funding. The Commission has increased its share of co-financing, however investment has been reduced regardless this measures (European Commission 2014, 10).

Another way how economic crisis may affect the absorption capacity is due to the administrative rules of the European Commission. The structural funds which are transferred to regions should be no more than 3.8 % of the countries' GDP in the period 2007-2013 (Katsarova 2013). This rule not only makes the funding vary from country to country, it causes funding to be diminished during the crisis because GDP of the countries usually decreases or even becomes negative. Besides, if GDP decreases, government revenue also decreases which reduces the national co-financing ratio. National co-financing may also be reduced because of the fact that during economic crisis governments have higher expenses than usual (Tatulescu and Patruti 2014, 66)

5.2 Administrative Factors

Administrative capacity of the regions is a very important factor when it comes to the absorption of the funding. According to Katsarova, absorption capacity is usually positively correlated to the ability of central and regional authorities to prepare consistent multi-annual plans, to cope with the substantial amount of administrative work, and, finally, to finance and supervise implementation, avoiding fraud, clientelism and corruption (Katsarova 2013). Various studies (Milio 2007) have already found that administrative capacity can explain differences in regional performances. Milio indicates, that in order to maintain positive administrative performances, political stability is also very important, because "it allows for continuity and coherence in administrative actions (Milio 2007). European regions differ in terms of experience with implementing projects, organization of the intermediate bodies, capacity of the staff, etc. therefore their administrative capacity differs. Another factor which causes problems with the absorption is the role of the managing authorities, who neither participate actively in the implementation process nor delegate both responsibilities and

powers. According to Davies et al. (2008), lack of administrative capacity may also cause high levels of financial irregularities because they are the results of the formal or administrative errors. The European Court of Auditors and the European Parliament criticize the implementation process of the structural funds which puts a pressure on the Commission and member states to improve management and control systems; eventually, this leads to high administrative costs and burden (Davies et al. 2008, 9). The authors also indicate that "various challenges associated with the management and control of structural funds resources are due to the complexity of a system which involves multiple authorities at EU, member state and sub-national levels" (Ibid). Becker et al. (2012) highlight that human capital and quality of institutions may be used as two dimensions of absorptive capacity when measuring the effects of the transfers.

5.3 Conditionalities of the European Commission

Another important factor which this thesis argues could limit the absorption capacity is the conditionalities of the European Commission imposed on the member states. There are currently three conditionalities in place. Two of them were introduced during the 2000-2006 period as parts of the incentive and control system, when the Commission put greater responsibility on the member states in terms of implementation. The first, decommitment rule allows the EC to take away the allocated funding if it's not spent within two years while the second, performance reserve, awards good performance with more funding. Along with these two conditionalities, the third, "earmarking" conditionality was put in action in the 2007-2013 period in order to align the sectoral composition of spending and the EU's "Lisbon Agenda" (Bachtler and Ferry 2013, 4-5). Throughout the funding periods, these conditionalities have proved themselves not to be always beneficial for the member states. In the cases of Romania

and Slovakia, the Commission had to amend the regulation and give these countries more time to fulfil their commitments, which is in accordance with Blom-Hansen's (2005) claim that EU control mechanisms are not strong enough and often they suit the preferences of the participating actors in the implementation process. Through the initiative of the European Council, the Commission allowed Romania and Slovakia to submit expenditure claims up to the end of 2014 (instead of 2013) for the 2011 commitment and up to closure (instead of 2014) for the 2012 commitment. This way the risk of decommitment of funds has been reduced.

This study argues that the conditionalities are not only weak when used as control mechanisms, but they also lower overall effectiveness of the funds implementation. Previous studies (Bachtler and Ferry 2013) have already analysed the conditionalities and their effectiveness as a control mechanism through principal-agent problem lens. The findings have revealed that the decommitment rule is the most effective, the performance reserve is weaker and earmarking is only partially effective (Bachtler and Ferry 2013).

Bauer (2006) has argued that EU long-term policies are increasingly scrutinized as to their performance which puts pressure on the Commission to get involved in the supervision of the implementation process (Bachtler and Ferry 2013, 12). Below, some arguments will be provided which state why the EC involvement in the form of imposing conditionalities may actually do harm, rather benefit the EU regions' absorption capacity.

The first conditionality under discussion is the Decommittment Rule, which was introduced in the Article 31.2 of Regulation 1260/1999:

> *"The Commission shall automatically decommit any part of a commitment which has not been settled by the payment on account or for which it has not receive an acceptable payment application, as defined in Article 32(3), by the end of the second year following the year of commitment".*

Bacttler and Ferry (2013) indicate the inability of member states to weaken this conditionality which is also combined with its high credibility, criticality, and predictable and transparent application and assume that it is very effective in improving the financial absorption. However,

one point which should be taken into consideration is the quality of spending which this kind of commitment encourages. This rule may have a negative effect on the performance and effectiveness of the implemented programs in a way that it may encourage inconsiderate spending just to fulfil the commitment. The principal-agent model can explain some variance in terms of implementation and consequences of conditionalities. Kalman (2002) suggests, that the funding might incentivize some countries to choose slower pace of development in order to receive funds for a longer period of time; some countries might decide to spend all the resources regardless the quality of projects and their ability to promote growth in order to avoid the cuts in funding (Kalman 2002, 34).

Conclusions and Policy Recommendations

The purpose of this thesis was to analyse the impact of the European structural funds on the employment and growth in the European regions in 2007-2013 programming period. In order to evaluate the employment and growth effects of the Convergence funding, the regression analysis was conducted; the thesis also explored the implementation of the funding and identified factors which lead to the lack of effectiveness. The major findings of the thesis are the following:

In the 2007-2013 programming period, the employment and growth effects of the structural funding have been limited.

According to the various regression models which were built for 2007, 2010 and 2013 years, in order to explore the relationship between the structural funds and the employment and growth rates in the recipient regions, the impact of the funding has been mostly insignificant. However, it should be noted that this kind of results was expected taking the implementation period into consideration. In 2007-2013, the global economic crisis has had a negative effect on various economic indicators in the EU, therefore it may be considered as one of the factors which led to the lack of effectiveness of the structural funds. The findings of the regression analysis may be used to challenge the European Commission's evaluations that there is a clear and growing evidence of Cohesion programmes delivering across member states.

The low absorption capacity is one of the most important factors which limit the impact of the European Structural funding in the recipient regions

The thesis has argued that the lack of effectiveness of the structural funding is due to the absorption capacity factor. In most cases, especially in the new member states, recipient regions lack administrative and financial resources to co-finance, manage and implement the

programmes through the funding. The global economic crisis has decreased the revenue of the governments, and accordingly reduced the rate of national co-financing. Besides, the impact of the funding has diminished because of the economic downturns and jobs lost during the crisis. My findings are complimentary to the recent works of Becker et al. (2010, 2012) which indicate the heterogeneity of recipient regions in terms of absorption of funding is important. According to their conclusions, funding is insignificant in regions with a low level of absorption (i.e regions which lack human capital and administrative capacity) while it's more significant in regions with higher absorption rates (stronger regions which perform better on these two indicators).

The EC Conditionalities may be an impediment for the absorption capacity rather a catalyst.

The thesis analysed the role of the conditionalities of the European Commission not as a mechanism for promoting absorption (which has already been analysed by various studies) but as an impediment in the absorption process. It argues that absorption issue may encourage inefficient spending and cause worsening the quality of the projects; on the other hand, it may also cause overspending for the sake of being rewarded extra funding.

Policy Recommendations

This thesis has provided a contribution to the Cohesion Policy literature by analysing the effects of the structural funding on employment and growth in the recipient regions. It's very important to analyse the effectiveness of Cohesion Policy as its budget amounts to billions of Euros, therefore it's subject to accountability. In this section, the thesis will provide several policy recommendations based on the major research findings. These recommendations aim to contribute to the improvement of the policy performance. The recommendations are the following:

- It's necessary to conduct more research and analyse the effects of the structural funding empirically in order to determine whether or not it actually works. Additionally, some of the Cohesion data which is not available now, should become accessible for researchers. For example, the data about the amount of funding each regions receives under Cohesion policy. The availability of the mentioned data promotes transparency and accountability in the EU institutions;
- It's advisable to involve all the relevant actors at national, regional and local level in the implementation process from the very beginning of the operational programmes in order to enable them to work closely and match their needs.
- Although the Cohesion Policy has shown some degree of flexibility, more simplicity and flexibility of the rules and procedures is necessary at the national and local levels. Simplification of the procedures could lead to higher absorption of the funding as it would make funds easily accessible; additionally, flexibility of the procedures will lead to increased efficiency, effectiveness and fewer financial irregularities;
- The administrative capacity of the regions needs to be improved. Various researches, including this study have indicated how negatively the lack of administrative capacity affects the absorption rates of the structural funding; Capacity building in the recipient

regions and increasing their administrative capabilities could lead to less administrative burden and increased efficiency.

- In order to increase the absorption rates, reduction in the national co-financing is also necessary. Often, when the economic recession occurs, governments have to cut down the public spending; This study highlighted that one of the reasons why absorption remained low in the 2007-2013 period was inability of governments to allocate financial resources for the national co-financing.
- Empirical analysis of the structural funds allocation reveals that the rules of the funds allocation should be revised. The regions where GDP per capita is less than 80% of the EU average should be considered more or less the same in economic terms as those with 75%. However, according to the EU rules, only regions with GDP per capita of 75 % (or less) of the EU average are eligible for the Convergence funding.
- Another important issue which should be taken into consideration is that more funds do not necessarily lead to more growth. Therefore, conditionalities which promote fast absorption should also be revised. According to various researches, often local governments swiftly spend the allocated funds without focusing on the quality of projects or their benefits for growth in fear that the unconsumed funds will be taken away (decommitted). The European Commission should reconsider imposing the decommitment rule on poorly performing regions because their low administrative capacities and lack of human capital will not allow them to absorb funds equally effectively and efficiently as stronger regions.

Appendix

2007 year – Model 1

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000[a]	.999	.999	32.721

a. Predictors: (Constant), Funding Status, Population, Tertiary Education, Household Income, Gross Domestic Product, Tourism, Participation Rate

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	267551495.2	7	38221642.17	35700.063	.000[b]
	Residual	253739.869	237	1070.632		
	Total	267805235.1	244			

a. Dependent Variable: value

b. Predictors: (Constant), Funding Status, Population, Tertiary Education, Household Income, Gross Domestic Product, Tourism, Participation Rate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-28.403	9.252		-3.070	.002
	Household Income	.001	.000	.006	2.081	.039
	Population	-1.591E-6	.000	-.004	-.601	.548
	Tourism	-4.285E-6	.000	-.012	-3.066	.002
	Tertiary Education	1.064	.324	.009	3.283	.001
	Participation Rate	.933	.006	1.011	165.731	.000
	Gross Domestic Product	2.913E-7	.000	.000	.007	.995
	Funding Status	-2.606	5.871	-.001	-.444	.658

2007 Year – Model 3

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.735[a]	.540	.534	711.943

a. Predictors: (Constant), Funding Status, Gross Domestic Product, Household Income

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	149663027.9	3	49887675.97	98.424	.000[b]
	Residual	127729510.3	252	506863.136		
	Total	277392538.2	255			

a. Dependent Variable: value

b. Predictors: (Constant), Funding Status, Gross Domestic Product, Household Income

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1193.817	129.064		9.250	.000
	Household Income	-.041	.007	-.303	-5.730	.000
	Gross Domestic Product	.010	.001	.777	16.384	.000
	Funding Status	-313.465	118.762	-.134	-2.639	.009

2010 Year – Model 1

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.997[a]	.994	.994	86.138

a. Predictors: (Constant), Participation Rate, Household Income, Tertiary Education, Funding Status, Tourism, Gross Domestic Product, Population

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	378179308.5	7	54025615.50	7281.377	.000[b]
	Residual	2374303.106	320	7419.697		
	Total	380553611.6	327			

a. Dependent Variable: value

b. Predictors: (Constant), Participation Rate, Household Income, Tertiary Education, Funding Status, Tourism, Gross Domestic Product, Population

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	75.079	23.851		3.148	.002
	Household Income	.001	.001	.004	.816	.415
	Gross Domestic Product	.001	.000	.095	8.113	.000
	Funding Status	-23.590	13.276	-.009	-1.777	.077
	Population	-4.269E-7	.000	-.001	-.062	.950
	Tourism	-1.656E-5	.000	-.047	-4.874	.000
	Tertiary Education	-2.283	.690	-.018	-3.309	.001
	Participation Rate	.857	.015	.955	55.734	.000

2010 Year – Model 2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899[a]	.809	.806	473.557

a. Predictors: (Constant), Tertiary Education, Household Income, Gross Domestic Product, Funding Status

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	310256625.9	4	77564156.48	345.873	.000[b]
	Residual	73331864.21	327	224256.465		
	Total	383588490.1	331			

a. Dependent Variable: value

b. Predictors: (Constant), Tertiary Education, Household Income, Gross Domestic Product, Funding Status

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1052.676	118.308		8.898	.000
	Household Income	-.009	.004	-.061	-2.436	.015
	Gross Domestic Product	.012	.000	.948	36.238	.000
	Funding Status	-11.511	71.700	-.004	-.161	.873
	Tertiary Education	-21.628	3.604	-.166	-6.001	.000

2010 Year - Model 3

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898[a]	.806	.803	477.150

a. Predictors: (Constant), Gross Domestic Product, Household Income, Funding Status, Tourism

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	307190401.4	4	76797600.35	337.316	.000[b]
	Residual	73993567.41	325	227672.515		
	Total	381183968.8	329			

a. Dependent Variable: value

b. Predictors: (Constant), Gross Domestic Product, Household Income, Funding Status, Tourism

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	469.450	74.796		6.276	.000
	Funding Status	145.236	68.451	.055	2.122	.035
	Household Income	-.012	.004	-.076	-2.988	.003
	Tourism	9.784E-5	.000	.278	5.566	.000
	Gross Domestic Product	.009	.001	.668	13.287	.000

2013 – Model 1

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.994[a]	.988	.988	137.014

a. Predictors: (Constant), Population, Tertiary Education, Funding Status, Tourism, Gross Domestic Product, Participation Rate

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	410753178.0	6	68458863.00	3646.681	.000[b]
	Residual	4993598.267	266	18772.926		
	Total	415746776.3	272			

a. Dependent Variable: value

b. Predictors: (Constant), Population, Tertiary Education, Funding Status, Tourism, Gross Domestic Product, Participation Rate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	112.578	34.462		3.267	.001
	Funding Status	-7.799	21.248	-.003	-.367	.714
	Tourism	-6.837E-6	.000	-.021	-1.471	.142
	Tertiary Education	-3.354	1.101	-.023	-3.047	.003
	Participation Rate	.818	.025	.920	32.793	.000
	Gross Domestic Product	.002	.000	.144	7.905	.000
	Population	-1.625E-5	.000	-.039	-1.468	.143

2013- Model 2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.994[a]	.988	.988	129.292

a. Predictors: (Constant), Gross Domestic Product, Tertiary Education, Funding Status, Participation Rate

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	459711091.7	4	114927772.9	6875.167	.000[b]
	Residual	5482966.486	328	16716.361		
	Total	465194058.2	332			

a. Dependent Variable: value

b. Predictors: (Constant), Gross Domestic Product, Tertiary Education, Funding Status, Participation Rate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	66.939	28.778		2.326	.021
	Funding Status	-9.333	18.844	-.003	-.495	.621
	Tertiary Education	-1.696	.876	-.013	-1.936	.054
	Participation Rate	.797	.012	.894	64.797	.000
	Gross Domestic Product	.001	.000	.112	7.840	.000

Growth Model 1, 2010

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.385[a]	.148	.138	77651.476

a. Predictors: (Constant), Tertiary Education, Unemployment rate, Household Income, Funding Status

b. Dependent Variable: Gross Domestic Product

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.414E+11	4	8.536E+10	14.156	.000[b]
	Residual	1.960E+12	325	6029751718		
	Total	2.301E+12	329			

a. Dependent Variable: Gross Domestic Product

b. Predictors: (Constant), Tertiary Education, Unemployment rate, Household Income, Funding Status

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-18076.683	21029.299		-.860	.391
	Household Income	1.031	.628	.086	1.642	.101
	Funding Status	-30958.683	11986.013	-.152	-2.583	.010
	Unemployment rate	200.936	983.795	.011	.204	.838
	Tertiary Education	2689.957	572.700	.267	4.697	.000

Growth Model 2, 2010

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.882[a]	.777	.774	39770.019

a. Predictors: (Constant), Population, Household Income, Tertiary Education, Funding Status

b. Dependent Variable: Gross Domestic Product

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.793E+12	4	4.482E+11	283.348	.000[b]
	Residual	5.140E+11	325	1581654439		
	Total	2.307E+12	329			

a. Dependent Variable: Gross Domestic Product

b. Predictors: (Constant), Population, Household Income, Tertiary Education, Funding Status

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-69919.784	10095.411		-6.926	.000
	Household Income	.727	.323	.061	2.253	.025
	Funding Status	-12860.409	5993.443	-.063	-2.146	.033
	Tertiary Education	2065.636	294.039	.204	7.025	.000
	Population	.028	.001	.804	30.283	.000

Growth Model 1, 2013

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926[a]	.858	.856	38339.612

a. Predictors: (Constant), Tourism, Unemployment rate, Tertiary Education, Funding Status, Population

b. Dependent Variable: Gross Domestic Product

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.357E+12	5	4.715E+11	320.754	.000[b]
	Residual	3.895E+11	265	1469925879		
	Total	2.747E+12	270			

a. Dependent Variable: Gross Domestic Product

b. Predictors: (Constant), Tourism, Unemployment rate, Tertiary Education, Funding Status, Population

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-28049.626	9925.530		-2.826	.005
	Funding Status	-9117.176	5936.915	-.040	-1.536	.126
	Tertiary Education	1234.044	299.721	.104	4.117	.000
	Population	.018	.001	.528	12.724	.000
	Unemployment rate	-1125.840	325.030	-.081	-3.464	.001
	Tourism	.011	.001	.403	9.409	.000

Growth Model 2, 2013

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.923[a]	.852	.850	38977.958

a. Predictors: (Constant), Tertiary Education, Population, Funding Status, Tourism

b. Dependent Variable: Gross Domestic Product

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.350E+12	4	5.876E+11	386.736	.000[b]
	Residual	4.072E+11	268	1519281239		
	Total	2.757E+12	272			

a. Dependent Variable: Gross Domestic Product

b. Predictors: (Constant), Tertiary Education, Population, Funding Status, Tourism

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-40160.796	9443.962		-4.253	.000
	Funding Status	-11105.804	6001.390	-.048	-1.851	.065
	Tourism	.011	.001	.418	9.647	.000
	Population	.018	.001	.516	12.266	.000
	Tertiary Education	1203.749	304.053	.101	3.959	.000

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