DETERMINANTS OF THE EUROPEAN FUNDS ABSORPTION 2007-2013 IN EUROPEAN UNION MEMBER STATES

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Abstract

Our study investigates the determinants of the absorption performance of the European funds 2007-2013 among the 28 Member States, based on the rates of absorption available at the end of 2013. The average of absorption EU funds rate at the European Union is 60.11 percent at the end of 2013. We found the new EU member (Croatia, Romania and Bulgaria) have registered the lowest rates of European funds absorption. The estimation findings demonstrate that by and large the good public governance has a positive impact on the absorption of EU funds. We used the score of good public governance designed by World Governance Indicators (2013) as it is presented on the six dimensions of governance. Five of the six hypotheses regarding the impact of each of the six dimensions of governance on the performance of the absorption's rate are accepted. The governance's variable that explains most of the variation in absorption rate of EU funds is Voice and Accountability (which explain 20.9 percent in total variance of absorption rate). It is followed by Good Rule of Law (which explain 17.91 percent in total variance), Control of Corruption (explaining 17.91 percent in total variance), Government effectiveness (with 12,64 percent explaining the total variance) and on the last place are situated Good Regulatory Quality (with 11.74 percent). Furthermore, our results reveal a positive but insignificant impact of financial growth (express by lnGDP) on the absorption of EU funds.

Keywords: European funds, absorption, governance, government effectiveness, regulatory quality, rule of law, control of corruption.

1. Introduction

Between 2007 and 2013, the EU cohesion policy was reformed in order to better meet the objectives set at Lisbon and Gothenburg (competitive economy based on knowledge, research and technological development, sustainable development, employment). Following this reform, the policy was based on three instruments (European Regional Development Fund, European Social Fund and Cohesion Fund) and two complementary actions (European Fund for Agriculture and Rural Development and the European Fisheries Fund).

These key factors are designed to reduce disparities in economic development between various regions of the European Union, with emphasis on knowledge and innovation, the provision of more and better employment resources, cooperation between regions and their conversion in attractive places to invest and to work.

In its new format, the cohesion policy has three objectives: Convergence (supporting regions which stagnated in terms of economic development), Regional Competitiveness and Employment (supporting regions other than those economically undeveloped in order to achieve the Lisbon Agenda's targets) and European Territorial Cooperation (promoting a balanced development of the whole community by encouraging cooperation and exchange of best practice between EU regions). The last objective will be focused on three axes of action, namely: cross-border, transnational and inter-regional cooperation.

The absorption of funds by Member States is differentiated from one country to another, due to a variety of factors acting in each country's economy. By investigating the literature on the absorption of EU structural funds, Zaman & Georgescu (2009) identified a lack of an adequate conceptual framework and confined concerns of researchers to find methods of managing these funds.

Consequently, our study intends to respond to some current and acute needs and to explain the level of funds absorption by European Union Member States for the 2007-2013 period. If for the first EU funds installment in 2000-2006, there were sufficient studies conducted to analyze the absorption performances, for the second EU funds installment in 2007- 2013, the studies are relatively few, due to the novelty of data.

Another original element in our study consists in explaining the degree of funds absorption based on the Worldwide Governance Indicators' criteria (WGI) according to which the countries are ranked based on six aspects of "good governance". Numerous studies bring into question this indicator either for the desire to make improvements or to criticize it, either for using it for various empirical studies as an estimating indicator for a "good governance" of a country's economy (Bota-Avram, 2014; Bovaird and Löffler, 2003; Kaufmann, Kraay and Zoido-Lobatón (1999); Kaufmann and Kraay, 2008; Thomas, 2009; Van de Walle, 2006; Hood, Dixon and Beeston, 2008). However, there were fewer studies identified to use WGI as an explanatory variable for the funds absorption degree by Member States, including Tosun's study (2014) which aimed the analysis of the funds' degree of absorption for the 2000-2006 period.

Our paper aims to deepen and continue the research conducted by Tosun (2014) on the absorption of regional funds for the first grant installment in 2000-2006.

This article is structured as follows. The next section (Section 2) is dedicated to a review of literature on which we base the working hypotheses. Here we highlight the role of public governance (Section 2.1) and the role of financial absorption capacity (Section 2.2) on the performance absorption of UE funds. The Section 3 is dedicated to design the used methodology. The Section 4 reveals the empirical findings and the discussion on the obtained results. The article closes with a discussion of the main findings.

2. Literature review and assessing the hypotheses

Various studies focus on the explaining method of the funds allocations' causes in the EU countries (Bouvet and Dall'Erba, 2010; Bachtler and Ferry, 2013; Dellmuth, 2011; Dellmuth and Stoffel, 2012; Kemmerling and Bodenstein, 2006; KPMG, 2013; Grecu, 2009; Tomova et al., 2013; Tosun, 2014; Zaman and Georgescu, 2009). The studies mentioned above have identified numerous explanatory factors of the funds absorption degree, as follows: the institutional and administrative structures' capacity, inter-institutional coordination, bureaucracy, the existence of a coherent long-term vision of the authorities, the member countries' socio-economic development, the national resources' availability for financing projects, public-private partnerships' efficiency, staff qualifications. Grecu (2009) identified and analyzed the existing obstacles in accessing European funds such as: bureaucracy, lack of decentralization, cumbersome regulations and long procedures cause a very low capacity to absorb EU funds.

2.1 The role of public governance

The countries' accession to the EU has highlighted the importance of *"good practices" in public governance* as key elements in explaining the degree of compliance with the provisions required for the European Union Member States. At first, the studies were devoted to issues like Europeanization and thereafter they focused on public governance structures able to accelerate the Europeanization process (Dimitrova, 2002; Falkner, G. and Treib, 2008; Grabble, 2001; Goetz, 2001; Pridham, 2008; Tosun, 2011;)

Numerous projects launched by the European Commission were focused on developing the public governance of the member countries and on the adoption of "good practices" even before accession (for the adoption and implementation of the acquis communitaire) as a priority to create the adequate framework for implementing cohesion and convergence policies.

Goetz (2001) raised the issue of the necessity for massive restructuring in the CEE post-communist countries' administration. From the EU's accession perspective, the following measures are aimed: objectives' development; the conceptualization of current institutional arrangements; and the decisive actor constellations that are thought to shape administrative trajectories.

The key objective of a "good governance" is not to build a modern bureaucracy for future member states but to enable these countries to act as effective players in the EU's multi-level governance system (Lippert et al. 2001).

One year later, Dimitrova (2002) highlighted that the greater the administrative or government capacity, the better are the EU's laws implemented by Member States. The absence of common EU rules and norms as well as the adoption of administrative preferential reforms lead to a sharp variation in administrative institution-building's success.

In order for the Member States to attract European funds as a process of insuring the social and economic cohesion, the existence of *administrative structures* as key elements for successful public governance is required.

When defining these administrative structures, Zaman and Georgescu (2009) preferred the term "administrative capacity" which is defined as "the ability and qualification of central and local authorities to prepare programs and appropriate and timely projects, to decide on them, to ensure coordination of the partners involved, to comply with administrative and reporting requirements, to fund and monitor the programs and projects' implementation, to avoid irregularities". Dimitrova (2002) also mentioned the term "administrative capacity" when talking about the 'institution-building' process which is defined as "the creation of institutions necessary for the adoption and implementation of the acquis communitaire". Bosie and Puică (2011) defined the administrative capacity of European funds absorption as "the capacity building in local government and civil society in order to design and implement development projects".

Tosun (2014) though, prefers the term "government capacity" instead of "administrative capacity" because he implies that it better reflects the characteristics of the measure that will be employed in the operationalization of the variable.

In conformity with the European Commission's recommendations and with the best practices from EU Member States, the golden rule is that the smaller the number of institutions involved at different levels of governance (sectorial and regional), the greater the possibility of the new member countries to have a higher degree of European funds absorption (Horvath, 2005).

Regardless of descriptor, the investigated studies revealed a direct and a very close connection between "administrative capacity" or "government capacity" of the member countries in attracting European funds (Horvath, 2005; Milio, 2007, Zaman and Georgescu, 2009; Bachtler et al., 2013, Tosun, 2014).

Another key element of a successful governance is the *decentralization* which consists in the transfer of responsibilities, powers and authority to local administrative institutions, and "depending on the type of transferred responsibilities, decentralization can be of three types: political, administrative and financial", defined as follows (Scutaru, 2007, p. 479):

✓   The political decentralization represents ,,the permanent possibility of the people to influence governmental and public authorities' decisions, on a national but especially on a local level by granting the citizens increased power";
✓   The administrative decentralization represents "the transfer of the responsibilities to provide public services from the central government to the local government authorities or to organizations which operate in partnership with the government or independently";
✓   The financial decentralization concerns "the local financial resources' allocation by the local administration according to the existing priorities".

The local authorities' sphere in developing their own strategies, and funds' allocation for these strategies is limited as "a direct link between the obtained funds and the desired activities often doesn't exist on a local extent"(Horváth and Jácint, 2010, p. 75).

Through decentralization transparency, accountability and resource allocation promotion is expected (Rodríguez-Pose and Kroijer, 2009, p.391).

Many studies were focused on identifying the extent to which decentralization determined the funds allocation in EU member states (Hooghe and Marks, 2001; Keating and Hooghe, 2006; Milio, 2007;Tosun, 2014) and on its positive or negative impact. For example, Tosun (2014) concluded that political decentralization didn't have any impact on absorbing funds but on the other hand the fiscal decentralization did. Such a negative impact was found by Rodríguez-Pose and Kroijer (2009) in his study.

Therefore, the following hypothesis can be stated:

H1: Greater "good governance" conducts to a higher percentage of EU funds absorption.

2.2 The role of financial absorption capacity

Financial absorption capacity can be defined as "the ability to co-finance the programs and projects supported by the EU, to plan and guarantee these national contributions in multi-annual budgets, and to collect contributions from the partners involved in various programs and projects" (Zaman and Georgescu, 2009). The ability to co-finance programs and projects supported by the EU is a requirement for structural funds absorption (European Parliament, 2011, p. 14).

The EU member states' financial absorption capacity is actually represented by various indicators of financial growth among which we can mention gross domestic product (GDP) (Tosun,2014). The findings of Tosun (2014) highlighted that Member States with high income levels were less likely to maximize the European Regional Development Fund's (ERDF) 2000–2006. Moreover, he found that new Member States generally had higher absorption rates than old Member States.

Based on all of the facts mentioned above, we intend to test the following hypothesis:

H2: Greater financial growth conducts to a higher percentage of EU funds absorption

3. Methodology and data

3.1 Measuring the dependent variable: EU funds absorption

According to Cartwright and Batory (2012) the implementation of the structural funds involves the selection, application, monitoring and evaluation of the projects.

In our study we will use the European Commission' view which are referring on rate *of funds absorption (RA)* defining as the percentage of allocations calculated as a relation between the paid value (Paid) and the decided value (Decided) of fund's amount as it is shown in the Table 1 presented below:

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[1] The European Union (EU) was founded on 1 November 1993 with 12 Member States. Their number has grown to the present 28 through a series of enlargements:
- ✓**EU-12** (1 November 1993 - 31 December 1994): Belgium (BE), Denmark (DK), France (FR), Germany (DE), Greece (EL), Ireland (IE), Italy (IT), Luxembourg (LU), Netherlands (NL), Portugal (PT), Spain (ES) and United Kingdom (UK)
- ✓**EU-15** (1 January 1995 - 30 April 2004): EU 12 + Austria (AT), Finland (FI) and Sweden (SE)
- ✓**EU-25** (1 May 2004 - 31 December 2006): EU 15 + Cyprus (CY), Czech Republic (CZ), Estonia (EE), Hungary (HU), Latvia (LV), Lithuania (LT), Malta (MT), Poland (PL), Slovakia (SK) and Slovenia (SI)
- ✓**EU-27** (1 January 2007 - 30 June 2013): EU 25 + Bulgaria (BG) and Romania (RO)

EU-28 (from 1 July 2013): EU-27 + Croatia (HR)

Table 1: Financial execution of structural funds 2007-2013

Membes State[1]	Payd out (Payd/Decided %)	Member State	Payd out (Payd/Decided %)
1.AUSTRIA (AUT)	64.93%	15.ITALY (ITA)	48.42%
2.BELGIUM (BEL)	58.37%	16.LATVIA (LVA)	65.46%
3. BULGARIA (BGR)	48.33%	17.LITHUANIA (LTU)	77.89%
4.CROATIA (HRV)	18.27%	18.LUXEMBOURG (LUX)	63.31%
5.CYPRUS (CYP)	52.67%	19.MALTA (MLT)	48.69%
6.CZECH REPUBLIC (CZE)	48.88%	20.NETHERLANDS (NLD)	61.64%
7.DENMARK (DNK)	54.41%	21.POLAND (POL)	66.66%
8.ESTONIA (EST)	78.31%	22.PORTUGAL (PRT)	78.24%
9.FINLAND (FIN)	65.85%	23.ROMANIA (ROM)	36.72%
10.FRANCE (FRA)	56.35%	24.SLOVAK REPUBLIC (SVK)	48.04%
11.GERMANY (DEU)	68.94%	25.SLOVENIA (SVN)	61.92%
12.GREECE (GRC)	69.14%	26.SPAIN (ESP)	61.8%
13.HUNGARY (HUN)	5.52%	27.SWEDEN (SWE)	68.69%
14.IRELAND (IRL)	67.69%	28. UNITED KINGDOM (GBR)	56.38%

Source: Report of European Commission, 2013

3.2. Selecting the independent variables

3.2.1. World governance indicator (WGI)

In order to test the first hypothesis *H1: Greater "good governance" conducts to a higher percentage of EU funds absorption* we have to set up a proxy for "good governance".

Which would be the best good public governance estimates? As it results from the previous chapters, public governance is characterized by various aspects such as "administrative" or "government capacity", "decentralization" (political, fiscal or financial) designed to promote transparency, accountability and resource allocation.

Many authors agree that it is difficult to define the concept of "governance" or to quantify it through a single indicator or a combination of indicators that can provide all governance dimensions (Andrews, 2008; Bachtler et al., 2013; Bota-Avram, 2014; Horvath, 2005; Klijn, 2008; Kaufmann and Kraay, 2008; Milio, 2007; Tosun, 2014).
Andrews (2008) considers that it is difficult to attain "a one-best-way" governance model mainly because of the differences that characterize effective governance models, such as the German model, which is different from the Swedish, British and American ones.

Despite the difficulties of defining and measuring governance, Kaufmann and Kraay (2008) highlighted "the importance of a capable state to operate under the rule of law" and Klijn (2008) emphasized the ability of the political and social system to coordinate conflicts and issues between dependent actors in order to solve societal problems.

In the World Bank's view (2013) the Governance consists of "the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of the citizens and of the state for the institutions that govern economic and social interactions among them".

Given the growing interest of academics and policy makers on issues related to governance, the researchers have expressed their concerns related to the elaboration of governance scores, taking into account different public governance dimensions (Kaufmann, Kraay and Mastruzzi, 2010; Bovaird and Löffler, 2003; Van de Walle, 2006; Hood, Dixon & Beeston, 2008).

In order to explain the EU funds absorption, Horvath (2005) calculated a public governance score for member states. However, this score cannot be applied to all member states, but only to 5 of them, namely Czech Republic, Estonia, Hungary, Slovakia and Slovenia. Later on, Milio (2007) and Bachtler et al. (2013) had similar attempts of creating public governance scores which were supposed to establish an explanatory relation with the degree of funds allocation, but likewise the latter, these scores were limited only to a few countries within the European Union.
In the attempt to identify data with governance scores available for a large number of countries, we focused at the score determined by the World Bank Group (2013), namely the *Worldwide Governance Indicators (WGI)* which reports aggregate and individual governance indicators for 215 economies between 1996 and 2012, for six dimensions of governance: Voice and Accountability; Political Stability and Absence of Violence; Government Effectiveness; Regulatory Quality; Rule of Law; Control of Corruption.

WGI scores' foundation is based on information compilation and synthesis from 32 existing public data sources which report views and experiences related to the quality of different governance methods shared by citizens, entrepreneurs, and experts from the public, private and NGOs worldwide.

Worldwide Governance Indicators (WGI) are produced by Daniel Kaufmann (Revenue Watch and Brookings Institution), Aart Kraay (World Bank Development Research Group) and Massimo Mastruzzi (World Bank Institute) (See Kaufmann, et al., 2010)

Despite the fact that Kaufmann et al. (2010) themselves recognize the imprecision of these aggregate indicators, their usefulness cannot be denied at least for a few reasons. First, using this set of governance "clusters" the comparisons for a much larger sample of countries is allowed. Secondly, all these six governance indicators are designed to incorporate the major key coordinates of a major governance system despite the possibility that other indicators, including other relevant governance features, could be found. Last, but not least, the ability to use these indicators in conducting statistical tests based on cross-country empirical studies is a major advantage.

In conclusion, we chose in our study the Worldwide Governance Indicators (WGI) indicator as an explanatory variable for the EU funds allocation rate. The choice of this indicator as an estimate for "governance" or "good governance" is justified by the many benefits mentioned above but also by the fact that it was used in several quantitative analyses (Bota-Avram, 2014; Dimitrova 2001, Tosun, 2014).

WGI se can be elaborated on the six governance dimensions presented below (The World Bank Group, 2013):
1.**Voice and Accountability (VA**) which captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.
2. **Political Stability and Absence of Violence (PV)** reflects the measures of perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.
3. Government Effectiveness (GE) captures perceptions of the public services and civil services' quality and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
4. Regulatory Quality (RQ) captures perceptions of the government's ability to formulate and implement sound policies and regulations that permit and promote private sector development.
5. Rule of Law (RL) captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
6. Control of Corruption (CC) capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

Each component range from approximately -2.5 (weak) to 2.5 (strong) governance performance.

Based on the 6 governance components defined above, the *H1: Greater "good governance" conducts to a higher percentage of EU funds absorption* hypothesis can be divided into other alternative hypotheses as follows:

H1.1: Good Voice and Accountability (VA) conduct to a higher degree of funds absorption (AF)?
H1.2: Good Political Stability and Absence of Violence (PSN) conduct to a higher degree of funds absorption (AF) ?
H1.3: Good Government Effectiveness (GE) conducts to a higher degree of funds absorption (AF)?
H1.4: Good Regulatory Quality (RQ) conducts to a higher degree of funds absorption (AF)?
H1.5: Good Rule of Law (RL) conducts to a higher degree of funds absorption (AF)?
H1.6: Good Control of Corruption (CC) conducts to a higher degree of funds absorption (AF)?

3.2.2. Gross Domestic Product

In order to test the second hypothesis *H2: Greater economic and financial growth conducts to a higher percentage of EU funds absorption* we have to set up a proxy for financial growth.

Investigating the literature in the field of economic and financial growth we found the following used proxy variables: Gross Domestic Product (GDP) in current USD; Initial real GDP per capita, GDP growth rate, GDP per capita growth rate, Logarithm of real GDP, Investment or International trade (or export). For our purpose, we will consider that the most appropriate proxy for the economic and financial growth consists in Gross Domestic product expressed by ln(GDP). The decision of using these indicators was based on their utility in multiple studies as well as the facility of accessing the data.

3.3. Sample and data

Our study was conducted on a sample consisting in the EU member countries, which at the time was of 28 states.

The data refers to the period 2007-2013 (the allocation period of the second installment of funds for the EU member states) and is collected as follows:

✓   Rate of absorption UE funds (AF) are provided by the European Commission [2] ;
✓   World governance indicators (WGI) are collected from World Bank[3] ;
✓   GDP (in current US$) are provided by World Bank[4] .

4. Results and discussion

4.1 Descriptive statistics

Firstly, we are focused on analyzing the UE absorption rate for the UE Member State, as it can be seen in the Table 1. We found that the newest European Union Member States (Bulgaria, Romania and Croatia) have registered the lowest rates of European funds absorption. The lowest rate of absorption was recorded by Croatia (18.27 percent), given the fact that it became an EU member only on July 1st 2013. The runner-up is Romania, with a percentage of EU funds absorption of 36.72 percent, considering that Romania joined the EU on January 1st 2007. Bulgaria, however, despite the fact that it joined the EU concomitant with Romania, it recorded a European funds absorption percentage increased by over 10 percent compared to Romania (about 48.33percent).

In contrast, the country with the highest degree of funds absorption is Portugal, then Estonia and Lithuania (with approximately 78 percent) followed by Greece, Germany and Sweden (approximately 69 percent) and Poland, Ireland and Latvia with a percentage around 67-68 percent.

However, Member States still have the opportunity to improve these results according to the 'N+2 Rule' which give the possibility to the countries to spend the money allocated for the previous period for two years more (up the end of 2015). As exception, the 'N+3 Rule' are available only for Slovacia and Romania (European Comission, 2013).

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[2] Data are available on the website http://insideurope.eu/ accessed on September 2014
[3]World governance indicators (WGI) available at http://info.worldbank.org/governance/wgi/index.aspx#home, accessed on September 2014
[4] http://data.worldbank.org/indicator/ , accessed on September 2014

The comparative performances of the new and old Members States for the period 2007-2013 reveals the opposite results as the researchers reveal regarding the first grant installment in 2000-2006.Therefore, according with the survey of Tosun (2014), the new Member States' absorption performance was better than that of the old Member States, for the period of allocation 2000-2006.

Our findings for the period 2007-2013 correspond much better to expectations (highlighted by economic theory) and we will explain them in terms of explanatory variables considered significant in the economic literature (here we use the role of public governance and the role of financial absorption capacity).

Second, at the beginning of any data analysis it is essential to check the data by using summary statistics for variables. We are used a good guide (Cameron and Trivedy, 2009) that explains how an econometrics computer package, Stata, to perform regression analysis. All variables have the expected range. A summary statistics are presented in table 2.

Table 2. Summary statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
AF	28	60.11714	16.38631	18.27	78.31
VA	28	1.110357	0.335167	0 .43	1.6
PSN	28	0.7460714	0.4031665	-0.24	1.42
GE	28	1.126429	0.6189191	-0.31	2.17
RQ	28	1.221071	0.4096461	0.5	1.88
RL	28	0.9582143	0.5171722	-0.08	1.64
CC	28	0.9967857	0.8472835	-0.24	2.46
LNGDP	28	5.03e+11	9.42e+11	8761.131	3.46e+12

The average of absorption EU funds rate at the European Union is 60.11 percent at the end of 2013 The absorption EU funds rates range between a minimum of 18.27 percent (for Croatia) and a maximum of 78.31 percent (for Estonia).

The average of Voice and Accountability (VA) is 1.11, with a minimum value of 0.43 (recorded by Romania) and a maximum value of 1.6 (recorded by Sweden). The average of Political Stability and Absence of Violence (PSN) at the level of European member's States is 0.74, with a minimum of -0.24 (registered for Spain) and a maximum of 1.42 (registered for Luxembourg and Finland). The average of Government effectiveness (GE) at the level of European Member's States is 1.12, with a minimum of -0.31 (registered for Romania) and a maximum of 2.17 (registered for Denmark). The regulatory quality (RQ) has an average of 1.22 and the variable range between a minimum of 0.5 (recorded by Croatia) and a maximum of 1.88 (recorded again by Denmark). The average of Rule of Law (RL) is 0.95 with a minimum of -0.08 (registered by Bulgaria) and a maximum of 1.64 (registered again by Denmark). The last governance variable, namely Control of Corruption (CC) has an average of 0.99 among the Member's State with a minimum of -0.24 and a maximum of 2.46 (registered by the same previous countries, namely Bulgaria and respectively Denmark).

Based on those presented above, we note that Bulgaria and Romania are remarked by registered two minimum scores for the governance variables. In opposite, Denmark is distinguished by the largest maximum scores (in number of four).

4.2 Testing the hypotheses

Further, we test each of the hypotheses: H1.1, H1.2, H1.3, H1.4, H1.5, H1.6 and H2. Table 3 presents the correlation matrix. It can be useful to investigate pairwise correlations of the dependent variables and key regressor variables by using the correlation matrix.

We find that the correlation between the dependent variable AF and independent variables (VA,PSN, GE, RQ, RL, CC and lnGDP) is small (below 0.46). This means that each independent variable considered separately, explain the small variation of the dependent variable. Also in Table 3 we see a high correlation between the independent variables.

Table 3. Correlation Matrix.

```
         |    AF      VA     PSN     GE     RQ      RL     CC    lnGDP
---------+-------------------------------------------------------------------------------
     AF |  1.0000
     VA |  0.4572  1.0000
    PSN |  0.1485  0.6100  1.0000
     GE |  0.3556  0.9314  0.6160  1.0000
     RQ |  0.3426  0.9171  0.5634  0.8990  1.0000
     RL |  0.4233  0.9595  0.5757  0.9524  0.9329  1.0000
     CC |  0.3722  0.9515  0.5737  0.9524  0.9098  0.9524  1.0000
  lnGDP |  0.0788  0.1961  -0.1155  0.1374  0.1558  0.1887  0.1728  1.0000
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Source: own calculations

Going to testing the hypothesis *H1.1: Good Voice and Accountability (VA) conduct to a higher degree of funds absorption (AF)?* we compute the Table 4 which contains a regression model where the dependent variable is AF and the independent variable is VA. Voice and accountability generally reveals together the freedom of expression, freedom of association and a free media, therefore it is expecting to have a positive impact on the absorption fund rate. Our results validate the economic theory so the hypothesis H1.1 is accepted. There is a positive relationship between VA and AF and the regressor VA is statistically significant (p-value = 0.009 at the 0.05 significant level). By increasing with one unit the Voice and Accountability score, the absorption funds rate will increase by 22.35 percent. At the same time, 20.09 percent of the variation of AF is explained by the variable VA (R-squared=0.2090).

Tabelul 4. Linear regression (AF dependent variable, VA independent variable)

```
                                        Number of obs =     28
                                         F( 1,   26) =   7.97
                                         Prob > F     = 0.0090
                                         R-squared    = 0.2090
                                         Root MSE     = 14.851

      -----------------------------------------------------------------------------
              |            Robust
        AF |    Coef.    Std. Err.     t     P>|t|     [95% Conf. Interval]
      --------+--------------------------------------------------------------------
        VA |  22.35162  7.915082    2.82   0.009     6.08194   38.62131
      _cons |  32.37886  10.81927    2.99   0.006    10.13953   54.61819
      -----------------------------------------------------------------------------
```

Source: own calculation

For testing the hypothesis *H1.2: Good Political Stability and Absence of Violence (PSN) conduct to a higher degree of funds absorption(AF) ?* we compute the Table 5 with summary of regression model where PSN is independent variable. The low level of correlation coefficient (0.1485) in Table 3 affects the quality of the model. The regressor's coefficient sign is positive but regressor PSN is statistical insignificance at the 0.05 level (p-value = 0.271). Therefore, we found a positive but insignificant relationship between Political stability and Absence of violence and the degree of funds absorption therefore the hypothesis H1.2 are rejected.

Tabelul 5. Linear regression (AF-dependent variable, PSN- independent variable)

```
                              Number of obs =     28
                               F( 1,  26) =   1.26
                               Prob > F    = 0.2710
                               R-squared   = 0.0220
                               Root MSE    = 16.513

       --------------------------------------------------------------------
            |             Robust
        AF |    Coef.    Std. Err.     t    P>|t|    [95% Conf. Interval]
       -------------+------------------------------------------------------
       PSN |  6.035132   5.36663    1.12  0.271   -4.996135    17.0664
      _cons |  52.6945   6.072105   8.68  0.000    40.21311   65.17589
       --------------------------------------------------------------------
```

Source: own calculations

For testing the hypothesis *H1.3: Good Government Effectiveness (GE) conducts to a higher degree of funds absorption (AF)?* we have the results on the Table 6 which contains the regression model between AF and GE. Analyzing the data from the Table 6 it is found that the hypothesis H1.3 is accepted. The sign and the significance level of the coefficient regressor GE match to expectations. There is a positive relationship between GE and AF and the regressor GE is statistically significant (p-value = 0.02 at the 0.05 significant level). By increasing with one unit the Government Effectiveness score, the absorption funds rate will increase by 9.41 percent.

Government Effectiveness variable explains 12.64 percent of the variation of absorption funds rate. Government effectiveness generally reflects the perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures. We found out that the better Government Effectiveness the higher degree of funds absorption is carried out. Our results are in line with the findings focused on the absorption of structural funds obtained by Bachtler et al. (2013) and Tosun (2014).

Tabelul 6. Linear regression (AF-dependent variable, GE- independent variable)

```
                              Number of obs =     28
                               F( 1,  26) =   6.15
                               Prob > F    = 0.0200
                               R-squared   = 0.1264
                               Root MSE    = 15.607

       -----------------------------------------------------------------------------
            |             Robust
        AF |    Coef.    Std. Err.      t     P>|t|    [95% Conf. Interval]
       -------------+-----------------------------------------------------------
        GE |  9.414103   3.797296    2.48   0.020    1.608649   17.21956
      _cons |  46.59283   6.713155   6.94   0.000    32.79374   60.39191
       -----------------------------------------------------------------------------
```

Source: own calculations

In order to test the hypothesis *H1.4: Good Regulatory Quality (RQ) conducts to a higher degree of funds absorption (AF)?* we analyze the Table 7 and found that the hypothesis is accepted. A positive relationship between the Regulatory Quality and the level of absorption funds is found. The regressor RQ is statistically significant different from zero at the 0.056 level. Regulatory quality (RQ) reveals the perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. By increasing with one unit the Regulatory quality score, the absorption funds rate will increase by 13.7 percent. Regulatory Quality also explains 11.74 percent of total variance of absorption funds.

Tabelul 7. Linear regression (AF-dependent variable, RQ- independent variable)

```
                              Number of obs =     28
                                F( 1,   26) =   4.00
                                Prob > F     = 0.0560
                                R-squared    = 0.1174
                                Root MSE     = 15.688

        --------------------------------------------------------------------
              |               Robust
          AF |    Coef.    Std. Err.      t     P>|t|    [95% Conf. Interval]
        ------+-------------------------------------------------------------
          RQ |  13.7062   6.852804    2.00   0.056   -.3799398   27.79234
        _cons |  40.46089  10.47049    3.86   0.001    18.9385    61.98328
        --------------------------------------------------------------------
```

Source: own calculations

The results of testing the hypothesis *H1.5: Good Rule of Law (RL) conducts to a higher degree of EU funds absorption?* are presented in the Table 8. We found out that the hypothesis H1.5 is accepted. The sign of the variable's coefficient is positive. Rule of law captures perceptions of the extent to which people have confidence in the rules of society (also including the confidence in the police, and the courts, as well as the likelihood of crime and violence). By increasing with one unit the Rule of Law score, the absorption funds rate will increase by 13.41 percent. Rule of Law variable explains a higher percent of 17.91 in total variance of absorption funds reflecting an important impact that the confidence in the rules of society on the absorption funds rate has ($R^2 = 0.1791$).

Tabelul 8. Linear regression (AF-dependent variable, RL- independent variable)

```
                              Number of obs =     28
                                F( 1,   26) =   7.96
                                Prob > F     = 0.0090
                                R-squared    = 0.1791
                                Root MSE     = 15.129

        ---------------------------------------------------------------------
              |               Robust
          AF |    Coef.    Std. Err.      t     P>|t|    [95% Conf. Interval]
        ------+--------------------------------------------------------------
          RL |  13.41052   4.752017    2.82   0.009    3.642609   23.17843
        _cons |  44.34699   6.810444    6.51   0.000   30.34792   58.34606
        ---------------------------------------------------------------------
```

Source: own calculations

Going to the hypothesis *H1.6: Good Control of Corruption (CC) conducts to a higher degree of EU funds absorption (AF)?* we have Table 9 which summary showing the regression model of AF and CC. We found out that the hypothesis H1.6 is also accepted. There is a positive relationship between Control of Corruption and the absorption funds rate and the regressor CC is statistically significant different from zero at the 0.05 level (p-value = 0.037). By increasing with one unit the Control of Corruption score, the absorption funds rate will increase by 7.19 percent. Control of corruption variable explains 13.85 percent of total absorption funds rate variance ($R^2 = 0.1385$).

Tabelul 9.   Linear regression (AF-dependent variable, CC- independent variable)

```
                          Number of obs  =     28
                            F( 1,   26)  =   4.85
                            Prob > F      = 0.0367
                            R-squared    = 0.1385
                            Root MSE      = 15.499

 --------------------------------------------------------------------------------------
             |             Robust
         AF |    Coef.    Std. Err.     t     P>|t|    [95% Conf. Interval]
 -------------+------------------------------------------------------------------------
         CC |  7.198229   3.268533    2.20   0.037    .4796631    13.91679
      _cons |  50.02205   5.763777    8.68   0.000    38.17444    61.86966
 --------------------------------------------------------------------------------------
```

Source: own calculations

Further, we expect that the well-developed countries to have also a high percent of EU funds absorption. That why we are going to test the last hypothesis *H2: Greater financial growth conducts to a higher percentage of EU funds absorption?* for our data. According to Table 10, hypothesis H2 is rejected at the significant level of 0.05. The p-value for lnGDP is 0.498 much higher than 0.05 level. The value of R-squared also means that the impact of variable lnGDP on the AF variable is insignificant (R-squared =0.0062). Our results reveal some positive impact of financial growth (estimated by lnGDP) on the absorption funds rate but it is not statistically significant.

Our results are partially in line with the expectations extracted from the economic theory but also from the European Parliament's (2011, p. 14) judgment according to which the ability to co-finance projects is important for the absorption performance. The coefficient of lnGDP is positive but is not significant at 0.05 significance level. Comparing with other results of explaining funds absorption, we can found a positive evolution in this relationship over time. We argue this, citing the study of Tosun (2014) who even found a negative relationship between these two variables, meaning that Member States with high income levels were less likely to maximize the absorption of their European funds installment 2000-2006. Our results are much closer to the theoretical approach reflecting at least a positive impact even if it is insignificant.

Tabelul 10. Linear regression (AF-dependent variable, lnGDP- independent variable)

```
                          Number of obs. =     28
                            F( 0,   26) =   0.0
                            Prob > F     =   0.0
                            R-squared    = 0.0062
                            Root MSE     = 16.647

 --------------------------------------------------------------------------------------
             |             Robust
         AF |    Coef.    Std. Err.     t     P>|t|    [95% Conf. Interval]
 -------------+------------------------------------------------------------------------
      lnGDP | 1.37e-12   1.99e-12    0.69   0.498   -2.73e-12    5.47e-12
      _cons | 56.50751   3.830826   14.75   0.000    48.63314    64.38189
 --------------------------------------------------------------------------------------
```

Source: own calculations

As a final observation, it would be interesting to study validity, overall, the hypothesis H1. According to the correlation matrix, the correlation coefficients between the independent variables are high. This approach does not allow simultaneous influence of independent variables on the dependent variable variation.

5. Conclusions

Our study investigates the determinants of the absorption performance of the European funds 2007-2013 among the 28 Member States, based on the rate of absorption available at the end of 2013. The average of absorption EU funds rate at the European Union is 60.11 percent at the end of 2013. We found the new EU member states have registered the lowest rates of European funds absorption (Croatia- 18.27 percent, Romania- 36.72 percent, Bulgaria- 48.33 percent). In contrast, the countries with the highest degree of funds absorption are Portugal, Estonia and Lithuania - 78 percent, Greece, Germany and Sweden – about 69 percent and Poland, Ireland and Latvia – about 67-68 percent. Our results conducted for the period 2007-2013 correspond better to the theoretical and their explanation is based on the positive evolution of the factors that come to explain these results.

To this end, we tested two main hypotheses, one concerning the extent to which the performances of public governance leads to a high degree of EU absorption and the other refers to the extent that the financial capacity of a country leads to a better assimilation of EU funds.

The first main hypothesis is divided in six sub-hypotheses corresponding to secondary components of "good governance" as they are designed and evaluated by the World Governance Indicators (2013). Five of the six sub-hypotheses are accepted at a significant level of 0.05, respectively H1.1, H1.3, H.14., H 1.5 and H 1.6. This means that in majority (at 83.percent) the good public governance conduct to a good absorption of EU funds. The governance' s variable that explain most the variation of absorption funds rate is Voice and Accountability (VA) (which explain 20.9 percent from total variation of absorption funds rate).
It is followed by Good Rule of Law (RL) (which explain 17.91 percent), Control of Corruption (CC) (explaining 17.91 percent), Government effectiveness (GE) (with 12, 64 percent) and Good Regulatory Quality (RQ) (with 11.74 percent). Only one hypothesis referring to performance of governance on absorption fund rate, respectively H1.2 is rejected. It refers to the Political Stability and Absence of Violence (PSN) that seems to not matter for the performance of funds absorption.

The second tested hypothesis concerns the degree to which the country's financial growth is important for a better absorption rate funds. Although our results reveal some positive impact of financial growth on the absorption funds rate, it is not statistically significant, therefore the hypothesis H2 are rejected.

Comparing with previous studies focused on explaining the performance of the absorption funds rate, our study bring added value to the literature at least due to three reasons *First,* the study is very actual, referring to the most recent ended period of UE allocation funds, 2007-2013.

Second, comparing with the previous studies, our study intend to explain the performance of UE fund absorption by the public governance, by using all six dimensions of governance: Voice and Accountability; Political Stability and Absence of Violence; Government Effectiveness; Regulatory Quality; Rule of Law; Control of Corruption. Such an approach is less common in the scientific literature regarding the analyzing the performance of UE funds absorption.
Third, our study conducted for the allocation period 20007-2013 reveals results closer to the economic theory than those found in studies on the performances of funds absorption for the period 2000-2006. Such a result would be those that our research reveals that the new Member States generally had lower absorption rates than old Member States for the period 2007-2013 compared to opposite results for the period 2000-2006 (highlighted by Tosun, 2014). Another finding which is close to economic theory consist in fact that our study found a positive impact (but insignificant) between the financial growth of a country and the absorption funds rate. Opposite to the economic theory, similar studies conducted for the period 2000-2006 found a negative impact (Tosun, 2014).

Among the limits of our research we can invoke the period of financial execution of UE funds 2007-2013 which actually is not fully completed, due to extensions granted by the European Commission to Member States, up to the end of 2015 and even of 2016 (for Slovakia and Romania) to spend money in EU funds allocated for the period 2007 – 2013. Thereby, similar further research will focus on the coverage of such limits.

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