EVOLUTIONS IN IMPLEMENTING STRUCTURAL AND COHESION FUNDS IN CENTRAL AND EASTERN EUROPE DURING 2007-2014 PERIOD.

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Abstract: *For the purposes of the research for doctoral thesis, this article refers to the following 10 EU Member States, which cover the Central and Eastern Europe: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia.The selection was made taking in consideration the appropriate similarities and differences in living standards, population, development orientations and EU Structural and Cohesion Funds allocations. Looking forward, it can be stated that this countries had an estimated share of available European funding, ranging from almost a tenth to approximately a quarter of their annual Gross Domestic Product. A comparison of the absorption rates during the 2007-2014 period can be critical towards reconsidering some theories of potential cohesion impact and reflecting them in current Eurostat statistics. It may be useful to acknowledge that most of the problems in contracting and disbursement of European funding occurred in every of the 10 Member States, nevertheless it cannot be held an underestimation of absorption capacities between the top and the tail countries, whereas some of the related countries (i.e. the 2004 EU accession countries) had more time and some experience in adjusting wrong or insufficient focus on absorption capacity. It is a well known fact that contracting of European Structural and Cohesion Funds started only in 2008 and reached a reasonable level in 2009, while payments tended to lag by a further year. By the end of 2014 most of the 10 Member States had the performance of reaching or overtaking the full contracting ratio, but payment ratios were situated much lower.The absorption process lies in the responsibility of each Member State. According to Hapenciuc et al (2013), the European Comission grants funds, proportional to each state's GDP, but the institutional system, the procedures, the capacity of the beneficiaries to contract the necessary co-financing are all elements in which national authorities have a decisive role.*

Keywords: Structural; Cohesion; funds; contracting; payment; certification.

JEL classification: F63; O19; O52; O57.

1. Introduction

If it would be necessary to lay down the benefits of Structural and Cohesion Funds in a scientific manner, the first rising question in mind would be: how have they contributed to the overall development of the economy of each of the 10 EU Member States analyzed in this article? At a short glance, it can be stated that these funds are not generating external debt and they are similar to foreign direct investments, but at the same time, a bit different: because of the co-financing mechanisms, they are rather stimulating public investments – most visible in tangible transport infrastructure, environmental protection, renovation of historical heritage, the re-development of cities, and extended urbanisation in terms of sewerage water systems, waste management, etc (KPMG, 2015).

On the other hand, these investments have also focused towards human development, decrease of unemployment and creation of non-governmental organisations. According to KPMG (2015), investments were also set on developing IT systems in public administrations, in order to provide population with modern communication technologies, as we will see later in this article.

Moreover, Romania and the other 9 Member States have gone through a significant reduction in foreign direct investment, as, KPMG (2015) estimated, investors have been

moving away from emerging markets to rapidly developing economies such as the BRIC countries – Brazil, Russia, India and China.

2. Comparisons regarding allocation, contracting, payments and European Commission certification of EU Structural and Cohesion Funds

As it can be observed in Table 1, during the 2007 – 2013 programming period extended by an year, beneficiaries from the Member States signed contracts totalling 181.7 billion EUR and 131.3 billion EUR, had been disbursed.

Table 1: Cohesion data in 10 EU Member States during 2007-2014 period

Country	Population (mill.)	Annual GDP (Bill.€)	Allocated Grants (Bill.€)	EU funds per GDP (%)	Contracted Grants (Bill.€)	Paid Grants (Bill.€)	Certified Grants (Bill.€)
Bulgaria	7.2	42.00	6.67	15.9%	7.7	5.1	4.3
Czech R	10.51	154.94	26.30	17.0%	25.2	18.1	17.2
Estonia	1.32	19.53	3.40	17.4%	3.3	3.0	2.8
Hungary	9.88	103.30	24.92	24.1%	28.0	21.7	-
Latvia	1.99	24.06	4.53	18.8%	4.8	3.9	3.7
Lithuania	2.94	36.29	6.78	18.7%	6.8	6.0	5.8
Poland	38.48	403.08	67.19	16.7%	68.2	52.5	54.0
Romania	19.95	150.66	19.18	12.7%	20.3	10.0	8.6
Slovakia	5.42	75.21	11.65	5.5%	13.1	7.6	5.4
Slovenia	2.06	37.25	4.10	11.0%	4.3	3.4	3.1
Total	-	-	174.72	-	181.7	131.3	104.9

Source: Own representation based on KPMG (2015)

Furthermore, analyzing the annual evolution of contracting ratios from Table 2, it can be observed that Bulgaria, Hungary and Slovakia had remarkable results in achieving a gradually uprising annual contracting ratio, ranging from 112% to 115%. At the other end, lower but quite good contracting ratios were reported in Czech Republic and Estonia.

Table 2: Contracting ratio evolution in 10 EU Member States during 2007-2014

Country	Contracting ratio (%) / Year							(Bill.€)
	2008	2009	2010	2011	2012	2013	2014	2014
Bulgaria	6%	22%	35%	62%	98%	112%	115%	7.7
Czech R	18%	31%	55%	74%	83%	92%	96%	25.2
Estonia	12%	58%	73%	86%	91%	96%	98%	3.3
Hungary	20%	38%	51%	64%	82%	106%	112%	28.0
Latvia	9%	44%	73%	84%	95%	97%	105%	4.8
Lithuania	6%	40%	64%	77%	90%	99%	100%	6.8
Poland	4%	24%	56%	69%	82%	95%	102%	68.2
Romania	6%	16%	43%	67%	79%	94%	106%	20.3
Slovakia	4%	26%	53%	64%	75%	98%	112%	13.1
Slovenia	19%	35%	49%	61%	72%	93%	104%	4.3

Source: Own representation based on KPMG (2015)

Table 3 shows quite a different situation when it comes to disbursement of EU funds to beneficiaries. Countries like Lithuania, Estonia and Hungary show a real level of effectiveness of EU funds absorption. The biggest gap between contracted and paid grants are observed in Romania and Slovakia.

Table 3: Payment ratio evolution in 10 EU Member States during 2007-2014

Country	Payment ratio (%)							(Bill.€)
	2008	2009	2010	2011	2012	2013	2014	2014
Bulgaria	-	3%	10%	19%	34%	54%	77%	5.1
Czech R	-	9%	26%	40%	52%	64%	69%	18.1
Estonia	1%	13%	27%	42%	59%	77%	87%	3.0
Hungary	-	9%	16%	28%	42%	62%	87%	21.7

Latvia	3%	15%	29%	43%	57%	70%	86%	3.9
Lithuania	3%	15%	29%	44%	59%	74%	88%	6.0
Poland	-	5%	17%	31%	48%	64%	78%	52.5
Romania	1%	3%	9%	15%	22%	37%	52%	10.0
Slovakia	-	5%	14%	25%	38%	53%	65%	7.6
Slovenia	5%	16%	28%	39%	50%	62%	83%	3.4

Source: Own representation based on KPMG (2015)

As we observe in Table 4, there is a lot to catching-up when it comes to certifying the eligible spending out of the total disbursed funds. It may be also true that the European Comission audit actions are also lagging behind schedule, so it is possible to see some future improvements from this point of view.

Table 4: European Commission certification ratio evolution in 10 EU Member States during 2007-2014

Country	**European Comission certification ratio (%)**							**(Bill.€)**
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2014**
Bulgaria	-	1%	7%	16%	29%	49%	64%	4.3
Czech R	-	3%	13%	21%	35%	48%	65%	17.2
Estonia	-	11%	23%	38%	52%	71%	84%	2.8
Hungary	-	-	-	-	-	-	-	-
Latvia	-	7%	15%	27%	42%	55%	81%	3.7
Lithuania	-	-	-	-	-	65%	86%	5.8
Poland	-	1%	4%	7%	11%	15%	80%	54.0
Romania	-	1%	2%	6%	11%	27%	45%	8.6
Slovakia	-	1%	9%	18%	31%	42%	47%	5.4
Slovenia	-	5%	18%	31%	44%	59%	77%	3.1

Source: Own representation based on KPMG (2015)

It is also important to know the theoretical approach of the purposes of the Structural and Cohesion Funds, in order to shape some measurable results of their implementation.
From the definition given by KPMG (2015), the European Regional Development Fund (ERDF) aims to promote economic and social cohesion by addressing main regional imbalances and participating in the development and conversion of regions, while ensuring synergy with assistance from other Structural Funds. Such actions may include: investments which contributes to creating sustainable jobs, investments in infrastructure, support for local and regional investments (small and medium sized enterprises, research and development, information society, etc), financial instruments, investments in education and health.
From the same point of view of KPMG (2015), the purpose of the Cohesion Fund is to co-fund actions in the field of environment and transport infrastructure of common interest with a view to promote economic and social cohesion and solidarity among Member States. Such actions may include: investments in major infrastructure projects and major environmental projects, support for renewable energy, investments in sustainable transport.
Also, KPMG (2015) describes the goal of the European Social Fund as to reduce differences in prosperity and living standards across EU Member States and regions. Such actions may include: improving human resources, increasing the adaptability of workers, enterprises and entrepreneurs, improving social inclusion.
The following table shows detailed implementation statistics for each of the Structural and Cohesion fund in Central and Eastern Europe.

Table 5: Breakdown by country on ERDF, CF, ESF allocated, contracted and paid grants during 2007-2014

Country	European Regional Development Fund (ERDF)			Cohesion Fund (CF)			European Social Fund (ESF)		
	Available budget (Bill.€)	Contracting ratio	Payment ratio	Available budget (Bill.€)	Contracting ratio	Payment ratio	Available budget (Bill.€)	Contracting ratio	Payment ratio
Bulgaria	3.15	107%	76%	2.28	132%	75%	1.18	106%	84%
Czech R	13.71	100%	71%	8.82	86%	66%	3.77	104%	69%
Estonia	1.86	97%	85%	1.15	100%	90%	0.39	98%	90%
Hungary	12.65	112%	88%	8.64	117%	86%	3.63	103%	84%
Latvia	2.41	107%	86%	1.54	99%	79%	0.58	111%	103%
Lithuania	3.44	100%	86%	2.31	99%	88%	1.03	101%	93%
Poland	34.79	101%	78%	22.39	101%	74%	10.01	105%	88%
Romania	8.97	109%	51%	6.52	93%	49%	3.68	121%	59%
Slovakia	6.19	113%	68%	3.90	107%	60%	1.56	122%	67%
Slovenia	1.93	103%	91%	1.41	109%	68%	0.76	98%	89%

Source: Own representation based on KPMG (2015)

After consulting these statistics, it is necessary to explain why the annual evolutions of the contracting and payment rates are so different from one country to another. The next selection of examples was chosen randomly, in order to understand that each Member State has confronted with such problems at a given moment and to raise the awareness of the risks or sanctions that can occur where Structural and Cohesion Funds are incorrectly used or reimbursed.

3. Member States problems in contracting and disbursement of EU funds

In Bulgaria, in 2014, the payments under Operational Programme (OP) Environment were suspended and the payments under Operational Programme (OP) Regional Development were interrupted (KPMG, 2015). The suspension of payments occurred also to Romania in 2012, within the Operational Programme (OP) Development of Human Resources. The Czech Republic was also in a similar situation, having repeated suspension of payments for some programmes, because of the lack of transparency in public tender procurement (KPMG, 2015). Severe problems related to public procurement were also reported in Slovakia.

Different problems were identified in Estonia during the 2007-2013 programming period, where after consistent investments made in infrastructure, it was observed that rural areas are still lagging behind in terms of development (KPMG, 2015). But the same issue can be witnessed in Romania or Bulgaria.

Lithuania is another example of misuse of European funds when it comes to implementing projects for local and urban expansion, by miscalculation of full exploitation possibilities of a given area (KPMG, 2015). This kind of unnecessary or wasting investments have also been observed in Romania.

Countries like Poland or Hungary were more preoccupied to improve the system of distribution of EU funds.

In Romania, the main problems can be materialised in late launch of calls for proposals and delays in the submission and evaluation process of disbursement claims (KPMG, 2015). Bulgaria and Slovakia faced similar types of problems regarding delays in starting and implementation of operational programmes.

One of the key problems in Slovenia is the implementation of EU funds policy in the Information System (KPMG, 2015). Data supplied from the managing authority were inadequate and in some cases inaccurate.

4. Potential impact of EU Structural and Cohesion Funds

The EU uses about one third of the EU budget to run Cohesion Policy with the objective of reducing disparities between the levels of development of the various regions and the least favoured regions.

According to Marzinotto (2012), economists use the expression σ-convergence (sigma-convergence) to indicate that income is distributed more equally across regions (or countries) compared with the past.

Marzinotto (2012) also states that economists use the term β-convergence (beta-convergence) to describe the catching-up process whereby poor regions (or countries) grow faster than rich ones to approach the common income level.

Absorption capacity can be defined, according to the most accepted reviews, as the extent to which a state is able to fully spend the allocated financial resources from the EU funds in an efficient way. In a more advanced manner, the absorption capacity can be split into 3 dimensions: the macroeconomic absorption capacity (related to GDP), the financial absorption capacity (related to co-financing) and the administrative absorption capacity (related to organising) (Albulescu et al, 2013).

First of all, among the 10 Member States it can be stated that the annual increase in contracting and payments reflected in Table 2 and Table 3 meant a large increase in government spending, in particular in government investment.

The annual growing rates of contracting lead to productivity and to a gradual increase in output of the final goods sector: this phenomenon can mean, on one side, that it reduced the profit requirements for intermediate producers and, on the other side, it encouraged the entry of new firms (Varga et al, 2009).

Employment effect was slightly negative from 2008 to 2013 in the 10 Member States. Due to gross domestic products turning positive, the first signs of labour market improvements occured towards the end of 2013 and this pattern continued in 2014 as the employment rate increased (Eurostat, 2015).

Finally, the GDP effect for the 10 EU Member States can be assumed as being positive: despite their substantially contributions to the EU budget, even if relatively smaller absorption rates were registered. In 2015, GDP deccelerated significantly in the Czech Republic and Romania in the first quarter. Estonia and Lithuania returned to expansion in the second quarter (Eurostat, 2015).

Other authors are less optimistic. According to certain studies, the Structural and Cohesion funds may stimulate the GDP growth in the Central and Eastern Europe countries by 0.7% annually, while some econometric models indicate increase by a little over 0.1% (Zaman, 2009).

The literature on the effectiveness of EU funds is mixed. According to Varga et al (2009), a macroeconomic model may find that the funds are effective in enhancing economic growth and trigger significant output gains in the long run due to sizeable productivity improvements. From the point of view of Tomova et al (2013), the econometric strand of models is more inconclusive. One reason for the mixed results is that the set of countries and periods of study vary significantly between papers. The shorter time series for the new member states, the endogeneity problems, the difficulties in identifying impacts, particularly in isolating structural funds effects from other macro-economic measures and other noise, as well as the relatively small amounts of EU funds compared with national expenditures make it difficult to establish conclusive econometric results on their macroeconomic effectiveness (Tomova et al, 2013).

5. Indicators of the output of Structural and Cohesion Funds

Following the discussions about the potential measurement of the impact of Structural and Cohesion funds uppon the individual economies of the Member States, it is worth showing an explicit comparison of the output generated through such investments, during 2007-2013 programming period, such as: number of jobs created, number of start-ups

supported, kilometers of reconstructed or new roads, kilometers of reconstructed or new railroads, statistics of participation in European Social Fund funded projects, number of inhabitants beneficiaries of water projects or waste water projects, square kilometers of rehabilitated areas.

But before showing the breakdown on countries, it is necessary to explain each indicator's way of measurement, in order to better understand the impact of such outputs into the real economy.

What do we understand by the number of jobs created? Gross direct jobs created, full time equivalents (FTE): A new working position created (did not exist before) as a direct result of project completion (workers employed to implement the project are not counted). The position needs to be filled (vacant posts are not counted) and increase the total number of jobs in the organisation (Cohesion Data, 2015).

By number of start-ups supported we understand the number of enterprises created receiving financial aid or assistance (consultancy, guidance, etc.) from Structural Funds. The created enterprise did not exist one year before the project started. The legal form of enterprise may be various (self-employed persons, partnerships, etc.) (Cohesion Data, 2015).

If we refer to reconstructed roads we are pointing towards the length of roads where the capacity or quality of the road (including safety standards) was improved. In the case of new roads, we refer to the length of roads constructed by the project where no road existed before or the capacity and quality of the previously existing local/secondary road is significantly improved to reach a higher classification (e.g. national road or equivalent) (Cohesion Data, 2015).

When it comes to talk about reconstructed railroads, capacity and quality stand in matters of electrification, developing single track railroad into double track, increasing the possible speed on the track or ensuring compatibility. If we refer to new railroads, then we talk about the length of railroads constructed by the project where no railroad existed before, including railroad developed along a Trans European Network (TEN) corridor (Cohesion Data, 2015).

Waste water projects are to be measured by number of persons (in population equivalent) whose wastewater is transported to wastewater treatment plants through wastewater transportation network as a result of increased waste water treatment/transportation capacity built by the project, and who were previously not connected (Cohesion Data, 2015).

The same explanation goes for water projects, which are to be measured by number of persons provided with drinking water through the drinking water transportation network as a result of increased drinking water production/transportation capacity built by the project, and who were previously not connected. It includes reconstruction projects but excludes projects aiming to create/improve irrigation systems (Cohesion Data, 2015).

By rehabilitated areas we understand the surface of contaminated or derelict land (in square kilometres) made available for economic (except agriculture) or community activities (Cohesion Data, 2015).

Broadband access projects aim to increase the number of persons who can access the internet with a download speed of at least 256 Kbit/sec and who did not have access before at all or only had more limited access. The capacity to access must be a direct result of the assistance (Cohesion Data, 2015).

The difficulties of assessing the impact of Structural and Cohesion funds comes when analyzing the statistics of participation in ESF-funded projects, which are provided annually by the EU Member States. Despite some measurable results, the definition and application of indicators is not necessarily uniform, so comparisons across different countries (or even operational programmes within the same country) will not always be conclusive (Cohesion Data, 2015).

Table 5: Structural and Cohesion funds output indicators as 31 Dec 2013

Country	Bulgaria	CzechR	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Slovakia	Slovenia
Jobs created	4514	33250	9125	92936	2082	4291	65449	25193	3923	5307
Start-ups supported		6		2059	908		1581	106	124	17
Reconstructed Roads (km)	730	1267	205	2237	548	1369	6312	1436	1392	4
New roads (km)	223	292	70	443			1594	162	72	3
Reconstructed Railroads (km)	164	301		179		40	332		62	73
New railroads (km)	17	292		20			2			
Water projects population		340321	9158		398245		206745		4150	193128
Wastewater projects population		459266	11064	200000	64463	63214	393967		13883	114936
Rehabilitated areas (km2)		86		338		2	1			
Broadband access (population)				72382	25977		573490			73316

Source: Own representation based on Cohesion data, 2015

6. In conclusion

Slow absorption rate is not an issue that concerns only Romania, many of the analyzed Member States have encountered the same problem. The selected 10 Member States must concentrate their efforts in finalising the implementation of project contracted during the 2007-2013 period by the end of 2015.

There is evidence of positive impact of Structural and Cohesion Funds on economic growth; at the same time, several studies find the opposite or a weak positive effect (Albulescu et al, 2013). The impact of investments on economic convergence cannot be very easily identified: the effects are generated in time.

Marzinotto (2012) also states that it is possible that Structural Funds do not fully realize their potential either because they are not efficiently allocated or are badly managed or are used for the wrong investments, or a combination of all three.

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