
SUPPORTING INNOVATIVE SMES AS A DRIVER FOR GDP GROWTH IN THE EUROPEAN UNION

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Abstract

The results of the GDP of the last years take into account two major events, the first of which is Romania's integration into the European Union on January 1, 2007, and the second important event is the official triggering of the economic-financial crisis on October 1, 2008. If the first event foresaw a period of constant economic growth and lasting according to the model of the older members of the EU (such as the example of Spain, extremely used in Romania in 2007), the economic and financial crisis has intervened on the Romanian economy since the end of 2008 and has continued virulent. In 2009, managing to cancel largely the potential growth due to European funds. Thus, between 2007 and 2013 (2015), the question often arose whether or not from our membership of the European Union Romania benefited from the point of view of European funding. As we will see below, if by 2012, Romania was a net contributor to the budget of the European Union, starting with 2013, Romania became a beneficiary of these funds.

As a member of the European Union, in the Multiannual Financial Framework 2007 - 2013, Romania had to learn the lesson of European funds and especially of their co-financing obligations (as well as government) but also at the level of the final beneficiaries that were most often needed. In turn, to ensure the co-financing of European projects. As in Romania, the financing in the form of loan is still majority, the bankability of the European projects thus becomes a decisive factor for the good absorption of the European funds that we will see that it has an increasing share in the GDP, provided it is reached.

Keywords: *Gross Domestic Product, innovation, SMEs, European funds, investments*

JEL Classification: E22, O 31

Introduction

The multiannual financial framework translates the priorities of the European Union into financial terms, setting the maximum annual amounts that the EU can spend in different policy areas, over a period of seven years. By defining which areas of the EU should invest more or less in the period

2014-2020, the multiannual financial framework is an expression of political priorities as well as a budget planning tool. The intense negotiations carried out by the EU institutions regarding the MFF agreement 2014-2020 led to the approval of a global ceiling of € 960 billion in commitment credits and € 908 billion for payment credits. This budget is 3.5%, respectively 3.7%, lower than in the 2007-2013 MFF. This discipline reflects the compromise agreed in two and a half years by the EU institutions, between EU growth investment policy and the budgetary pressure that Member States have faced at national level.

Literature review

Akçomaka and ter Weel (2009) analyzed the correlation between capital, innovations and economic growth. Anghel, Carp, Bunea and Mirea (2018) carried out an analysis of the Gross Domestic Product by resources, uses and properties. Anghel, Anghelache and Dumitrescu (2016) studied a number of financial solutions to support innovative small and medium-sized enterprises. Anghelache, Avram, Bunea and Mirea (2019) highlighted that accessing European funds should be a priority for Romania. Anghelache, Soare and Dumitrescu (2016) analyzed the possibility of using an IT&C platform in projects funded by EU funds. Anghelache, Dumitrescu and Soare (2015) studied the main factors influencing GDP. Dachs and Pyka (2010) addressed a number of issues regarding the internationalization of innovation. Farole, Rodríguez-Pose and Storper (2011) dealt with elements of cohesion policy in the U.E. Hernández-Cánovas and Martínez-Solano (2010) investigated methods of financing SMEs in the continental European banking system. Lima and Cardenete (2007) conducted an analysis of the effects of European funds on the regional economy. Onetti, Zucchella, Jones and McDougall-Covin (2012) studied the innovation-entrepreneurship relationship. Tosun (2014) studied elements regarding the absorption of regional funds.

Research methodology, data, results and discussions

The allocations of European Structural and Cohesion Funds for Romania between 2007 and 2013 amounted to 19.2 billion euros and co-financing of 4.5 billion euros. The absorption rate of the European funds for the programming period 2007 - 2013 (2015) stood at 73%. Unfortunately, Romania is in the last place with a difference of 43% between the degree of contracting and the degree of absorption (being surpassed only by Croatia, the country that joined the EU much later). Comparison of the absorption rate in Central and Eastern Europe shows that Romania was at the end of 2015 at the last place. The performers of the group were Lithuania, Latvia and

Estonia, which exceeded the previous performances of Poland, which suffered some rectifications due to the illegality of certain public procurement. Among the measures taken by the leading countries in absorption, we can list the budgetary allocations for co-financing and pre-financing (for both SMEs and public authorities), special programs for the less developed areas.

In Romania, among the causes that led to the lowest absorption rate, we mention the unfavorable macroeconomic context and the legislative barriers. As can be seen from the table below, the macroeconomic context was in the period 2009 - 2015 under the sign of the economic and financial crisis that led to the decline of the Gross Domestic Product in the first years. The budgetary policies taken during the period 2009 - 2011 were some restrictive ones that cumulated with the VAT increase, the depreciation of the national currency and the tightening of the credit conditions had negative effects on the whole macroeconomic context. As legislative barriers we mention the absence of coherent national strategies, the exaggerated number of opinions from other institutions, restrictions on hiring staff, unclear in the public procurement process, lack of rules for applying some laws.

The stage of absorption of operational programs in the period 2007 - 2013

Figure no. 1

Stadiul absorbției pentru Programele Operaționale 2007 - 2013
la data de 29 februarie 2016

Programe Operaționale 2007-2013	Alocare 2007-2013	Avans încasat de la CE pentru perioada 2007-2013	Declarații de cheltuieli transmise la CE (rata de absorbție curentă)		Rambursări de la CE (rata de absorbție efectivă)		Rata sumelor încasate de la CE (cu avans)
			Valoare	%	Valoare	%	%
	1	2	3	$4=(3/1)*100$	5	$6=(5/1)*100$	$7=(2+5/1)*100$
POS CCE	2.536.646.054	229.879.390	1.921.495.382	75,75	1.498.392.916	59,07	68,13
PDAT	170.237.790	15.321.401	157.529.290	90,79	123.801.091	72,72	81,72
POS MEDIU	4.412.470.138	520.775.940	2.735.368.461	61,99	2.555.947.260	57,93	49,78
POR	3.966.021.762	335.341.959	2.534.841.696	63,91	2.534.846.902	63,91	72,37
POS DRU	3.476.144.996	451.898.849	1.894.810.402	54,51	1.712.351.257	49,26	62,26
POS T	4.288.134.778	525.615.535	2.686.323.663	62,65	2.620.878.885	61,12	73,38
PODCA	206.002.622	27.040.341	187.726.405	90,25	170.562.150	82,00	95,00
TOTAL	19.057.658.140	2.105.874.015	12.098.095.299	63,48	11.216.780.462	58,86	49,91

Source: Ministry of European Funds

In the case of Romania, almost all the operational programs were launched with great delay, at the end of 2008, respectively 2009. Due to the lack of co-financing, the beneficiaries introduced very frequent reimbursement

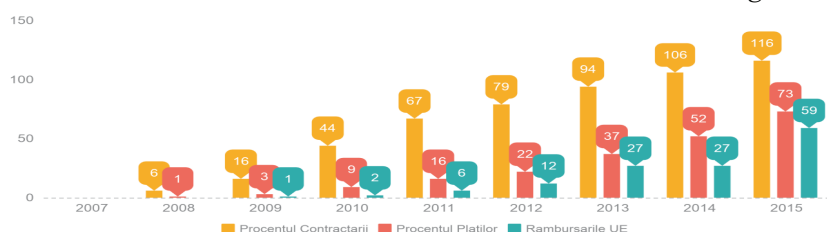
requests and low values, which led to delays in the process. implementation. Problems arose for the beneficiaries and from the point of view of the public procurement process, little respected by the latter and regarding the lack of experience in the field of European project management.

On the part of the Managing Authorities, the lack of experts was perhaps the main reason for delaying the evaluations. Also the legislative changes, as was the case of the green certificates for POSCCE, have led to the blocking of many projects submitted or even in the implementation stage.

At the level of the Managing Authorities, the following causes may explain the low absorption rate: the non-stimulatory salary of the administrative apparatus involved followed by a large fluctuation of personnel, guides and methodologies with unclear provisions, the coordination between programs and projects, the low efficiency of the technical assistance, the excessive bureaucracy, the mechanism of solving the defective appeals, the post-monitoring insufficient and the heavy functioning of the SMIS - CNSR. From the point of view of the Beneficiaries, the low absorption rate had as causes an immature consultancy market, a weak expertise in project development, lack of private co-financing, changes in technical solutions, contractual problems in the field of public procurement. Effects of the aforementioned problems consist of the appearance of malfunctions and delays in the stages of preparation, launch, evaluation, selection, contracting, implementation and reimbursement; financial difficulties of the Managing Authorities and of the Beneficiaries, termination of contracts, abandonment of the projects to be implemented, systemic financial corrections, reduced approval of the projects, measures to suspend payments from the European Commission.

Implementation of the 2007 - 2015 MFF in Romania

Figure no. 2



Data source: NIS, Ministry of European Funds; data processed by the authors

As shown in the Figure above, the evolution of absorption during the programming period 2007 - 2013 (2015) shows that in the first years, 2007, 2008, 2009, 2010, the amounts absorbed were insignificant, which is justified by the fact

that the first two years were allocated to the programming and launch of the first calls for projects. Starting with 2012, there is a revival in the field of European funds, reaching the end of 2015 at an absorption of 59% (amounts actually received from the European Commission compared to the 63.31% amounts requested by Romania). Only since 2013, Romania had a net beneficiary position in relation to the budget of the European Union. The final data officially published by the Ministry of European Funds together with the Ministry of Finance indicate in February 2016 that the absorption at the level of 2017 was 78%.

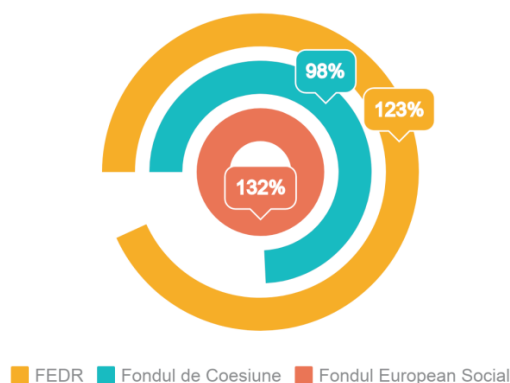
Among the efficient measures taken by Romania since 2012, we mention the reduction of the period of analysis of the reimbursement requests from 45 days to 20 days; the allocation of funds from the state budget arising from privatizations for the Managing Authorities that had the programs suspended by the European Commission; introducing an alternative to the reimbursement request, namely the useful payment request for those who did not have the cash required to make payments; simplifying the public procurement procedure.

At the end of 2015, the indicators at the main targets level were presented as follows: for the transport infrastructure, the rehabilitated railway was 127 km compared to the proposed target of 209 km; the new road infrastructure TEN-T was 312 km compared to 372 km, the rehabilitated road infrastructure TEN-T was 289 km compared to 302 km; the rehabilitated county road infrastructure was 1667km compared to 877 km and the rehabilitated city road infrastructure was 198 km compared to 325km. In the category of environmental investments, 107 compared to 200 wastewater treatment plants were realized / rehabilitated; 32 renewable energy projects compared to 30; 312 compared to 430 localities with new water / water systems and only 1 integrated waste management system compared to 37 proposed to be implemented. For the social infrastructure, 58 medical units were rehabilitated compared to 62; 172 social centers compared to 223; from which 47,853 people out of 10,000 benefited and 93,399 people out of 40,000 benefited from the rehabilitated pre-university educational infrastructure. The territorial development carried out 94 integrated urban development plans compared to 30 proposed ones; 352 urban development projects compared to 60 and 8,203,338 beneficiaries for PIDU projects compared to 400,000 proposed. Human Capital Development created 41,514 new jobs compared to 38,500; trained 256,668 education staff against the target of 75,000; attracted 72,901 vulnerable persons in the specific programs as against 13.00 and ensured the participation in the integrated programs of 122,017 unemployed as against the proposed 65.00. Increased competitiveness was supported by microenterprises 1976 compared to 1500; assisted 2729 SMEs compared to 2000; hosted in

the rehabilitated tourism structures 989,300 tourists compared to 400,000 and contracted 233 tourism projects compared to 221.

Contracting on the three types of funds in Romania 2007-2015

Figure no. 3



Data source: Ministry of European Funds; data processed by the authors

From the point of view of the European funds decommitment, all the national operational programs worked well except the Sectoral Operational Program Human Resources Development, which at the end of 2015 had 94 million euro disengaged. For the year 2016, according to the new rule approved by $n + 3$, the probable amount to disengage on the programs SOP Transport, SOP Environment, Regional OP, SOP Competitiveness, OP Technical Assistance, SOP Human Resources Development and OP Administrative Capacity Development would be 2296 million Of euro.

The European funds have had an important contribution to the evolution of the Gross Domestic Product of Romania, estimating a 10% increase of the latter in the period of 7 years of their effective use 2009 - 2015. Practically compared to the situation in which there was no would have used the European funds allocated to Romania after joining the European Union, at present Romania has benefited from membership in the European club through a 10% increase in GDP related to the European Financial Framework 2007 - 2013 (effectively used between 2009 - 2015 according to the rule $n + 2$). This contribution is visible especially after 2012, which showed an increase of GDP due to European funds of 3%, which subsequently increases to 6.7% in 2014 and reaches 10 in 2015.

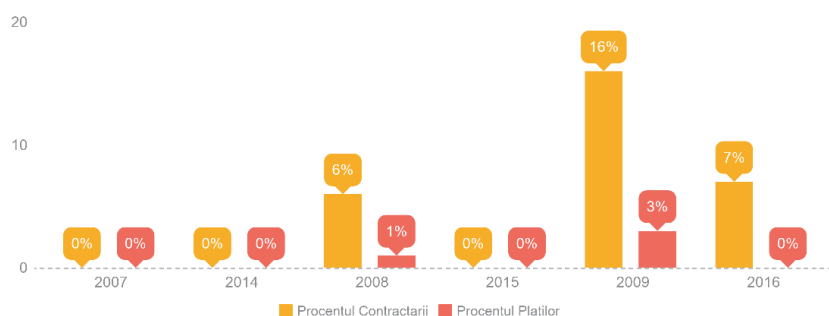
From the point of view of investments made in Romania during the same period (2009 - 2015), those made using European funds are estimated

at 24% of the total investments made at national level. The investments in the major areas of intervention at 31.12.2015 were presented as follows: transport - 30%; average - 23%; labor market - 12%; business environment - 11%; research - 8%; energy - 3%; education - 2%; administrative capacity - 2%; cultural heritage - 2%; technical assistance - 2%; social infrastructure: 2%; tourism - 1%; health - 1%; IT - 1%. And in this case, the level of investments financed from European funds started to increase substantially from 2012 with 6.5%, reaching 14.5% in 2013, and 25% in 2014.

From the point of view of jobs, it is estimated that the European funds allocated to Romania for the period 2007-2013 (2015) have led to an increase of 3.8% of the population employed through the Community financial intervention. Statistical data shows a percentage of 1.1% in 2012, 2.4% in 2013, 3.4% in 2015 reaching 3.8% in 2015. The unemployment rate decreased inversely proportional to -1% in 2012, - 2% in 2013, -2.8 in 2014 and -3.1 in 2015. Wages increased by 25% following the use of European funds.

Comparison of percentages of contracting / payment over the intervals (2007-2009) - (2014-2016)

Figure no. 4



Data source: Ministry of European Funds; data processed by the authors

Most of the funds have been distributed for payments within the projects financed from European funds, in particular through POSDRU or POAT. The average monthly wage increased by 2% in 2011, 5% in 2012, 11% in 2013, 19% in 2014 and 25% in 2015. Private consumption increased by 19% compared to the situation where would use European funds. A more important evolution is presented since 2011 when it increased by 2%, 4.2% in 2012, 9.8% in 2013, 15.2% in 2014 and 19% in 2015.

Currently, compared to the new contracting period 2014-2020, Romania has the operational programs approved by the European Commission

and has completed the fulfillment of 23 ex-ante conditionalities, another 13 being still in operation. The year 2015 was one with a limited activity, because the efforts of the state were directed first and foremost to the completion of the 2007-2013 MFF in the best conditions. The year 2016 marked the launch of a very large number of financing calls, which caused the steep increase in the percentage of contracting from almost 0% to 10% in 2016, and will increase significantly as a result of the budget of 13 billion euros allocated through the cohesion fund. The National Rural Development Program performed at least as well as in the previous contracting period, reaching at the level of 2016 almost 15% contracting percentage and about 10% payment percentage. The Big Infrastructure Operational Program and the Competitiveness Operational Program have together contracted about 1.4 billion euros.

As can be seen from the graph above, the management of European funds performed better in the first part of the Multiannual Financial Framework 2007-2013 compared to the similar period of the MFF 2014-2020. However, the improvements made to the IT system, the reduction of bureaucracy and the facilitation of public procurement procedures should bring about an improvement in the absorption of European funds in the coming period.

The stage of absorption 2014-2017

Figure no. 5

Programe 2014-2020	Alocare 2014-2020 (UE)	Plăți către beneficiari (UE)		Sume solicitate CE în limita alocării UE a PO (rata de absorbție curentă)		Rambursări de la CE (rata de absorbție efectivă)	
		Valoare	%	Valoare	%	Valoare	%
		1	2	3	4	5	6
			$3=(2/1)*100$		$5=(4/3)*100$		$7=(6/5)*100$
PO Regional	6,600,000,000	51,476,744	0.78%	26,969,422	0.41%	24,272,480	0.37%
PO Infrastructura Mare	9,418,524,484	968,827,098	10.29%	953,653,087	10.13%	858,287,778	9.11%
PO Competitivitate	1,329,787,234	146,572,615	11.02%	86,143,549	6.48%	59,118,754	4.45%
PO Capital Uman	4,326,838,744	25,014,473	0.58%	3,892,197	0.09%	0	0.00%
PO Capacitatea Administrativă	553,191,489	24,709,051	4.47%	22,964,870	4.15%	20,668,383	3.74%
PO IIMM	100,000,000	93,090,000	93.09%	93,090,000	93.09%	83,781,000	83.78%
PO Asistență Tehnică	212,765,958	49,706,461	23.36%	49,540,248	23.28%	44,586,223	20.96%
SUBTOTAL	22,541,107,909	1,859,396,442	8.25%	1,236,253,373	5.48%	1,090,714,619	4.84%
PN Dezvoltare Rurală	8,127,996,402	2,141,031,435	26.34%	2,106,616,091	25.92%	1,991,025,758	24.50%
POPAM	168,421,371	14,892,225	8.84%	12,237,475	7.27%	9,785,156	5.81%
TOTAL FESI*	30,837,525,682	3,515,320,103	11.40%	3,355,106,938	10.88%	3,091,525,533	10.03%
FEGA 2015-2020**	11,196,040,258	3,950,185,560	35.28%	3,950,185,560	35.28%	3,282,437,931	29.32%

Source: Ministry of European Funds

At the end of 2017, the European Commission sent € 1.09 billion in reimbursements for operational programs managed by MDRAPFE and financed from European structural and investment funds (excluding European territorial cooperation programs), representing 4.83%; EUR 2.5 billion

represents the total amount received from the EC for the same programs, including repayments and pre-financing, the equivalent of 11.07% and over 1.37 billion (6.09%) payments to beneficiaries, of which 1.23 billion was requested by EC through payment requests.

• The role of investments in the field of Research - Development - Innovation on accelerating GDP growth in Romania

In Romania, the research and development policy in the field of technology and innovation materialized by approving a Romanian strategy for RDI for the period 2014 - 2020, highlighting the importance that this field can have for increasing economic competitiveness in the context of European policies in the field. . Romania took into account when drafting this document the priorities of the European Union presented in the framework of the Europe 2020 strategy, of the Europe - An Innovation Union initiative, and of the most important research and development program of the European Union - Horizon 2020.

The priorities of the Europe 2020 strategy mean growth that has the following characteristics: smart, sustainable and inclusive, and one of the most important objectives of the European strategy in the field of RDI is that by 2020, 3% of EU GDP will be allocated to investments. RDI.

The National Strategy for Development and Innovation Research - SNCDI, was built on the basis of a study on the national RDI market, a study funded by a contract with JASPERS. This study then evolved by highlighting the economic sectors with potential in the field. This strategy can be implemented through a series of subordinated instruments that also include operational programs in force from 2014 to 2020. Thus, the RDI field will be achieved through ROP, POCU, PNDR, but especially through the Operational Competitiveness Program.

This strategy adopts the pragmatic character of industrial research, moving away from purely speculative research, so as to follow the international trends of orienting the RDI towards achieving practical and economic impact. Also, SNCDI is based on an innovation partnership based on the following four pillars: Budgetary resources (provided by the state by allocating a percentage of GDP), Predictability (clear standards and rules for RDI activity), Public-Private Partnerships functional (to attract at least 1% of GDP by 2020), Researchers (reaching a number of researchers similar to the EU average).

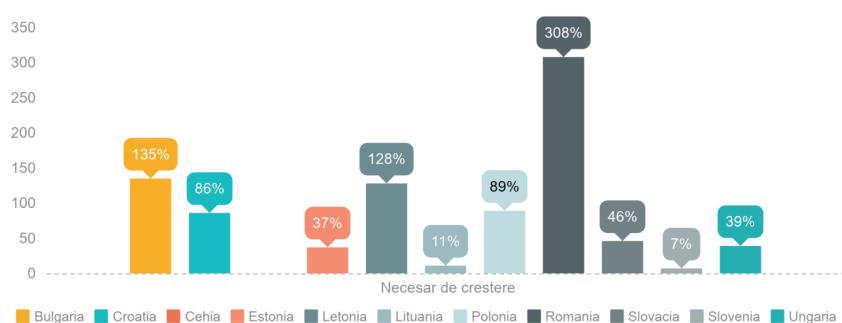
Romania's strategy in the field of RDI has identified those areas of the economy that would have growth potential, and could have a significant contribution to increasing economic competitiveness. The intelligent specialization priorities of Romania were identified as economic areas

with high competence and where our country would have real or potential competitive advantages over other national economies, which would implicitly lead to economic growth and the growth of the Gross Domestic Product. SNCDI identified the following economic zones as having an important economic and employment stimulating role: tourism and ecotourism, textiles and leather goods, wood and furniture, creative industries. The auto industry, ICT and food and beverage processing have been identified as having a competitive economic dynamic, and Health and pharmaceuticals, energy and environmental management and bioeconomy have added value and important characteristics of technological innovation and development.

SNCDI also proposes a set of priorities with public relevance that aim to attract resources and creative ideas in the fields of RDI that bring solutions to existing societal needs. In this case, it is the public sector that supports the identification and attraction of innovative or disruptive solutions from private or public actors.

The growth needed to reach the proposed national targets as a percentage of the GDP for the RDI

Figure no. 6



Data source: Eurostat, data processed by the authors

As shown in the graph above, Romania has set a clear target of allocating 1% of GDP for RDI by 2020, which would converge to the EU average. At least from a declarative point of view, we can see that for the MFF 2014 - 2020, Romania has proposed the highest growth dynamics, 308%. Romania leads the platoon of countries (Bulgaria, Greece, Latvia, Lithuania, Malta) that need significant growth in research - development in order to reach the target set for the Europe 2020 Strategy. In this group, the Member States have set some very ambitious targets in comparison with the level of previous GDP and past trends. Thus, compared to the European Union

average, Romania committed itself to a more serious and sustained effort to support Research and Development.

Particular attention should be paid to innovative sectors to identify trends that will be considered later. First of all, it is relevant to note that Romania has not yet achieved the EU 2020 target of 3% of GDP in development research. It is also useful to refer to the European Commission document: Innovation Union Scoreboard 2014, which divides the EU countries into 4 categories of innovation performance: Leaders, followers, moderate and modest innovators - the last group that includes Romania, Bulgaria and Latvia. However, Romania being the most powerful „modest innovator”. The report details the criteria used to achieve this ranking as well as the fact that in Romania, innovation performance increased until 2009, after which it fluctuated. Performance against the EU has worsened from 50% in 2009 to 43% in 2013. Romania is well below the EU average by almost all indicators. The very poor performance is observed also from the number of doctoral students from outside the EU and from the research and development expenses in the business sector. High growth in Romania is observed for community designs, community marks, new doctoral graduates and international scientific co-publications. Strong declines are observed in non-research - innovation spending, research and development spending in the business sector, doctoral students from outside the EU and venture capital investments.

The above results are complemented by the analysis of the National Institute of Statistics of Romania, published in July 2014, which also offers an interesting regional perspective. In summary, at the country level, between 2010 and 2012, the share of innovative enterprises was 20.7%, with 10.1 percentage points less, compared to the period 2008-2010.

The first 10 innovative activities in the period 2010 - 2012

Table no. 1

The first 10 innovative activities between 2010 and 2012		
Place	The economic activity	%
1	Production of tobacco products	80,0
2	Research and Development	55,5
3	Production of pharmaceutical products	52,3
4	Production of car engines	38,0
5	ICT services activities	35,6
6	Repairs, maintenance of machine and equipment installations	35,6
7	Financial intermediation minus insurance and pensions	34,6
8	Insurance, reinsurance and pensions (minus social insurance)	34,0
9	Decontamination services and activities	33,0
10	Production of machinery and equipment	32,2

Data source: INS; data processed by the authors

Certain economic activities record high values of innovative activities, thus, the most innovative economic activity in the industry was the manufacture of tobacco products, in 80.0% of enterprises, while in the services sector there were R&D activities, for 55 , 5% of enterprises. By size of enterprises, large ones are more innovative, 40.1%, compared to medium-sized enterprises, 26.6% and small ones, 18.3%. This trend was also mentioned in the two sectors, industry and services.

During 2010-2012, the highest shares of innovative enterprises were registered in the South-East region, 36.5% and North-East Region 32.2%, and the lowest were recorded by the West Region 14, 4% and North-West Region with 12.0.

The Competitiveness OP (financed by the ERDF) supports smart growth, promoting the knowledge and innovation based economy, through investments in: 1. Consolidating research, technological development and innovation; 2. Enhancing the use, quality and access to information and communication technologies. The Competitiveness OP responds to 4 of the development challenges established by the Partnership Agreement: I. Local competitiveness and development; II. People and society; III. Infrastructure; IV. resources; V. Administration and governance.

Financial allocations The Operational Program Competitiveness amounting to 1.33 billion Eurose will carry out for Priority Axis 1 - Research, technological development and innovation (RDI) in support of economic competitiveness and business development - 797,872,340 euros (60% of POC) and for Priority Axis 2 - Information and Communication Technology (ICT) for a competitive digital economy - 531,914,894 euros (40% of POC).

As elements of novelty 2014 - 2020 compared to 2007 - 2013 we notice that investments in RDI will be made only in relation to the areas identified in the national RDI strategy as „smart specialization” and partnerships between companies and research institutions in order to increase the transfer of knowledge, technology and personnel with RDI competencies for the development of products and processes based on RDI and market demand. Also, ICT investments will also be oriented towards improving the digital environment for providing public services for citizens and the business environment (life events).

The main orientations are to support the growth of research-development and innovation with private financing, the promotion and orientation of market research, the direction to four areas of intelligent specialization (bioeconomy, information and communications technology, space and security, energy, environment and climate change, eco- nano-technologies and advanced materials). Also, health research will be supported

as a national priority area and financial instruments (loans and guarantees) will be used. In addition, venture capital support (for the first time) for innovative, seed and pre-seed (accelerator) ideas is encouraged and priority is given to setting up / developing CD infrastructures in cluster organizations.

The main categories of interventions financed are the stimulation of the demand of the companies for innovation through RDI projects carried out by companies individually or in partnership with the institutes of R&D and universities, in order to innovate processes and products in the economic sectors that have growth potential; venture capital measures in favor of innovative SMEs; loans and guarantees for innovative SMEs and research organizations that respond to market demands; supporting innovative spin-offs and start-ups; Knowledge Transfer Partnerships

The categories of interventions financed by axis 2 include: developing, consolidating and ensuring the interoperability of the information systems dedicated to e-government services type 2.0 centered on events in the lives of citizens and businesses; ensuring cyber security of ICT systems and computer networks; ensuring the use of cloud computing technologies and social media collaboration technologies; promotion and use of open data and dim databases; Big Data (Big Data) for national data analysis and reporting; improving digital skills and enhancing digital content, including through systemic ICT infrastructures in the field of e-education, e-inclusion, e-health and e-culture; increasing the added value generated by the ICT sector and innovation in the field by developing clusters / competitiveness poles; supporting the use of ICT for business development, especially the e-commerce framework. Improving broadband infrastructure and Internet access.

Conclusions

Even though an increasing emphasis is placed on the commercialization of RDI, fundamental research occupies an important place in the next period, as it is important for stimulating the RDI offer, evaluated on the scientific quality of the proposals calculated according to international standards. Also the following interventions are financed: the large infrastructures of RDI; development of networks of CD centers, coordinated at national level and connected to European and international networks of profile and ensuring the access of researchers to scientific publications and European and international databases; creating synergies with the RDI actions of the ORIZONT 2020 framework program of the European Union and other international RDI programs; attracting staff with advanced skills from abroad to strengthen the RDI capacity. The financial framework 2014 - 2020 will mark the launching of two major research infrastructures of pan-European interest: the project

from Măgurele to ELI-NP and the project from Tulcea, called the International Center for advanced researches Fluvii - Delta - Danubius Seas.

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