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Greece and EU structural funds: what do the choices made by Greece regarding the allocation of structural funds over the past three decades imply for the developmental model of the country?

Greece has been a net recipient of EU structural funds for the past 28 years, starting with the Integrated Mediterranean Programmes (1986–1989) and progressing through four programming periods (1st Community Support Framework – CSF 1989–1993, 2nd CSF 1994–1999, 3rd CSF 2000–2006, 1st National Strategic Reference Framework – NSRF 2007–2013). The country is now engaged in intensive preparations for the design and implementation of its strategy for the 6th consecutive programme: the 2nd NSRF 2014–2020. This paper examines the macro-level choices made by consecutive Greek governments throughout this period, focusing on investment in three major areas: public infrastructure (with special reference to transportation infrastructure); education and human resources; research and innovation and support for private investment in the secondary and tertiary sectors. It attempts to map the investment priorities in these three areas, analysing their implications for the country’s development pattern and providing insights and explanations for the choices made (or the design rationale). Finally, the paper attempts to offer an initial opinion on planning for the new programming period (2014-2020) and the potential contribution towards Greece’s attainment of the EUROPE 2020 goals.

1. Introduction

Greece has been a net recipient of EU structural funds for the past 28 years, starting with the Integrated Mediterranean Programmes (1986–1989) and progressing through four programming periods (1st Community Support Framework – CSF 1989–1993, 2nd CSF 1994–1999, 3rd CSF 2000–2006, 1st National Strategic Reference Framework – NSRF 2007–2013). The country is now engaged in intensive preparations for the design and implementation of its strategy for the 6th consecutive programme: the 2nd NSRF 2014–2020.

The contribution of EU structural funds to the performance of the Greek economy was always significant in terms of GDP, employment, productivity, investment and the trade balance. Today, EU structural funding is more critical than ever for Greece. The economic crisis and the negative business climate have limited the access of both the State and the private sector to international capital markets. The European Structural and Investment Funds (ESIF) are tools for boosting economic growth without imposing any extra fiscal burden (Sampaniotis Th., 2011).

However, a quick look at the record shows that Greece has been allocated over € 64 bn in structural funds over the last two decades. Per capita, this is amongst the highest in the EU, yet the country faces serious competitiveness problems (Personn M., 2013). There are many reasons why the impact of cohesion policy is lower in Greece than expected. Most of them relate to the absence of an integrated domestic regional-development planning policy (Psicharis 2004), this having been replaced by the cohesion policy and community programmes.

This paper focuses on the planning process of the programmes and examines the macro-level choices made by consecutive Greek governments throughout this period, focusing on investment in three major areas: public infrastructure (with special reference to transportation infrastructure); education and human resources, research and innovation; and support for private investment in the secondary and tertiary sectors. It attempts to map the investment priorities in these three areas, analysing their implications for the country's development pattern and providing insights into and explanations for the design rationale.

Investment patterns are compared with the EU average and reveal a common trend between the cohesion countries in terms of directing sources into infrastructure. Misdirected EU aid has serious implications for the developmental model of the country. The reforms of the new programming period offer Greece an opportunity to take advantage of the thematic concentration and planning restrictions and maximize the potential contribution towards Greece's attainment of the EUROPE 2020 goals.

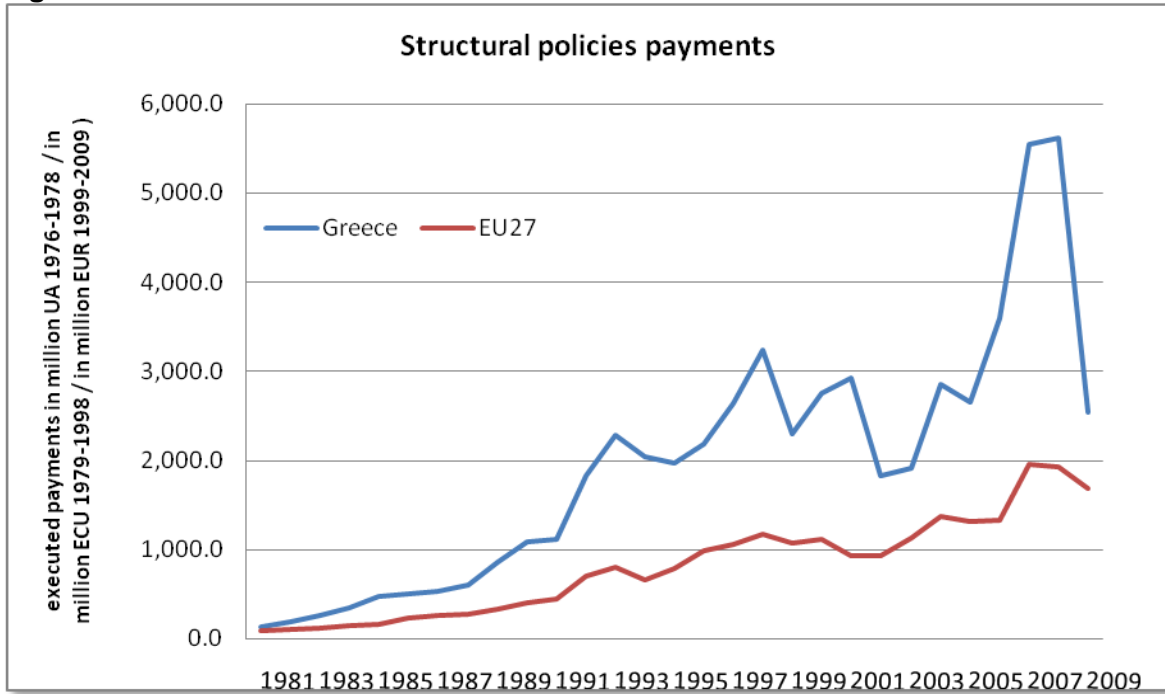
2. Structural-fund programmes and their results

Greece has been a main beneficiary of the cohesion policy since the very first year of the country's accession to the European Union (Figures 1 and 2). However, after four programming periods of funding, the actual impact of the community support programmes on the Greek economy and regional development is questionable (Economou, 1997; Georgiou, 1994; Tsoukalis, 1998: 304). Regional disparities persist and the convergence process seems to have halted (EC 2014). The economic crisis made the situation even worse and there is a strong critique of the choices made by the

Greek administration with regard to investment allocation and policy mix through these periods.

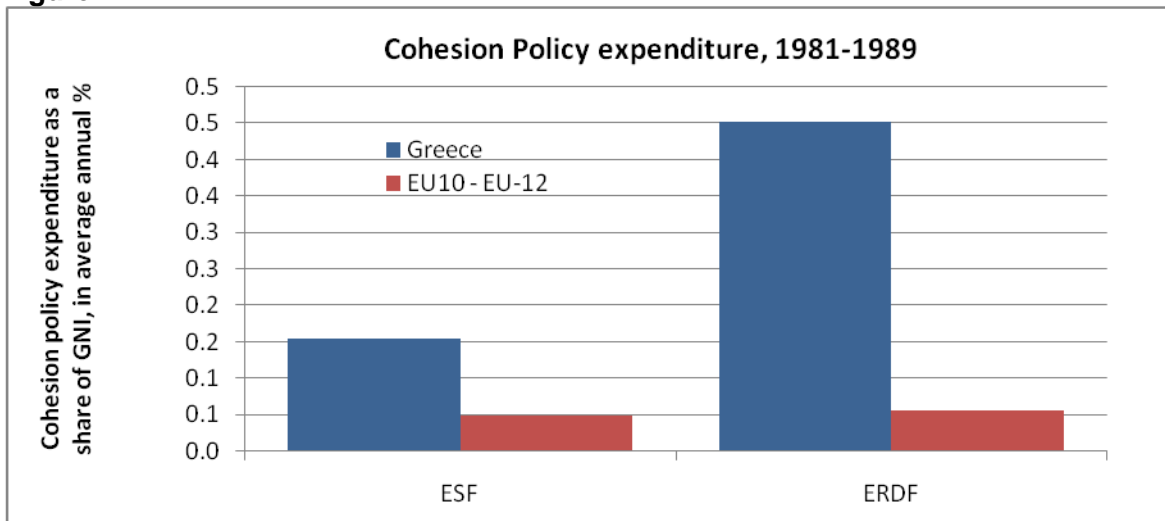
Before investigating these allocation patterns, it is necessary to describe briefly the four EU structural-fund programming periods for Greece so far.

Figure 1



Source: DG REGIO, 2014

Figure 2



Source: BUDG, AMECO, DG REGIO calculations

1989-1993: First Community-support Framework

The developmental strategy applied in Greece from 1989 to 1993 (1st CSF) was characterized by two main facts:

a) The wide dispersion of the available funds to small infrastructure projects all over the country (roads, ports, hospitals, schools, irrigation works, water supply and drainage systems, waste-water treatment plants, crop restructuring and improvements in training structures) paint a general picture of the interventions made. Absent from this strategy was the promotion of major infrastructure projects, a prerequisite for attracting foreign investment, along with a focus on productivity, quality and sustainable development (G.S.I.D. 2005).

b) The aforementioned period coincided with a significant milestone in the development policy of the European Community: the radical reform of structural funds (1988) made coordination possible among Community structural policies, which had remained autonomous up to that point. The new regulations required joint responsibility between national and regional authorities of member states and the European Community in the programming and implementation stages of co-funded development actions (G.S.I.D. 2005). However, the recently established¹ regional authority structures did not have the capacity to manage the funds (Psicharis 2004).

The “improvement of general infrastructure” was met in almost all the operating programmes (OPs) as a top priority, as in the case of “support for agriculture and rural development”. “Improvement of human resources” is not a priority, as is the case of “technological development” (met in only in four programmes) (Plaskovitis 2006). Two main problems arose from this strategy. The first is that it has been argued that investment in physical capital does not contribute more than that in human capital (Tondl, 2001). Moreover, without an integrated regional-development framework, the fragmentation of available funds into small infrastructure projects for local communities may have facilitated more rapid absorption of funds, but in the end it did not increase accessibility. Secondly, human-resources investment was translated unto useless seminars with extremely limited effectiveness (Psicharis 2004).

In conclusion, there was a strong emphasis on infrastructure but no strategy for productive restructuring to support an economy with significant problems. There was a huge deficit in institutional capacity and governance structures.

1994–1999: Second Community-support Framework

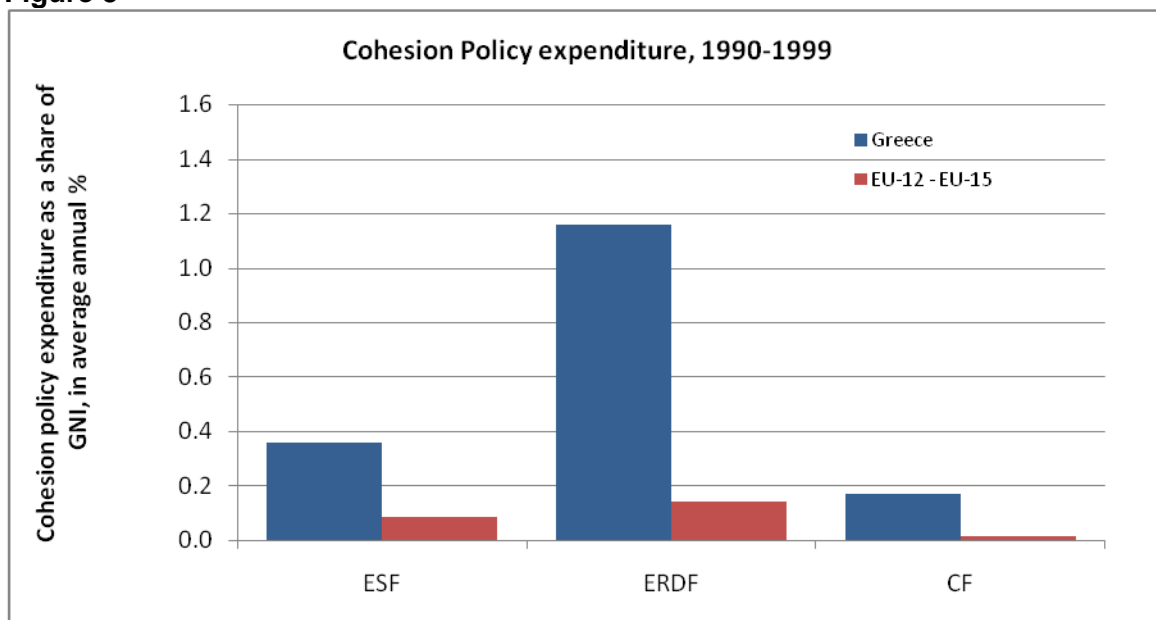
During the programming period from 1994 to 1999, more emphasis was put on major infrastructure projects of a national character and on connecting Greece to other countries (28% of the total allocation). Without abandoning the pursuit of balanced development, priority was given to the promotion of economic development and improvements in competitiveness, and to upgrading the environment and the establishment of better living conditions in urban areas. The main characteristics of the period are: the country’s preparation efforts to participate in the economic and monetary union and the commencement of major infrastructure projects of national importance, such as highways (PATHE, Egnatia Odos), port improvements, modernization of the

¹ The regional authorities were established very recently: in 1986 under law N.1622/86, ‘Local Government – Regional Development – Democratic programming’, (Estate Gazette 92/τ.Α/14-7-1986).

Hellenic Railway Network, the Athens metro, energy projects (wind farms, natural gas), telecommunications infrastructure, hospitals etc. (G.S.I.D. 2005).

“General infrastructure to improve the quality of life” is again one of the top priorities in all Greek regions. The weakness in implementing big infrastructure projects and absorbing the amount allocated led to a shift in funds from 28% to 22%. Compared to the previous period, there was far greater emphasis on the promotion of research and technological development, with environmental issues amongst the top priorities. Finally, the “improvement of human resources” is found as a separate priority in all operating programmes. However, it can be translated as an obligation to follow the EU rules imposed by the European Social Fund, rather than a genuine policy intervention (Plaskovitis 2006: 5).

Figure 3



Source: BUDG, AMECO, REGIO calculations
* from 1995 onwards

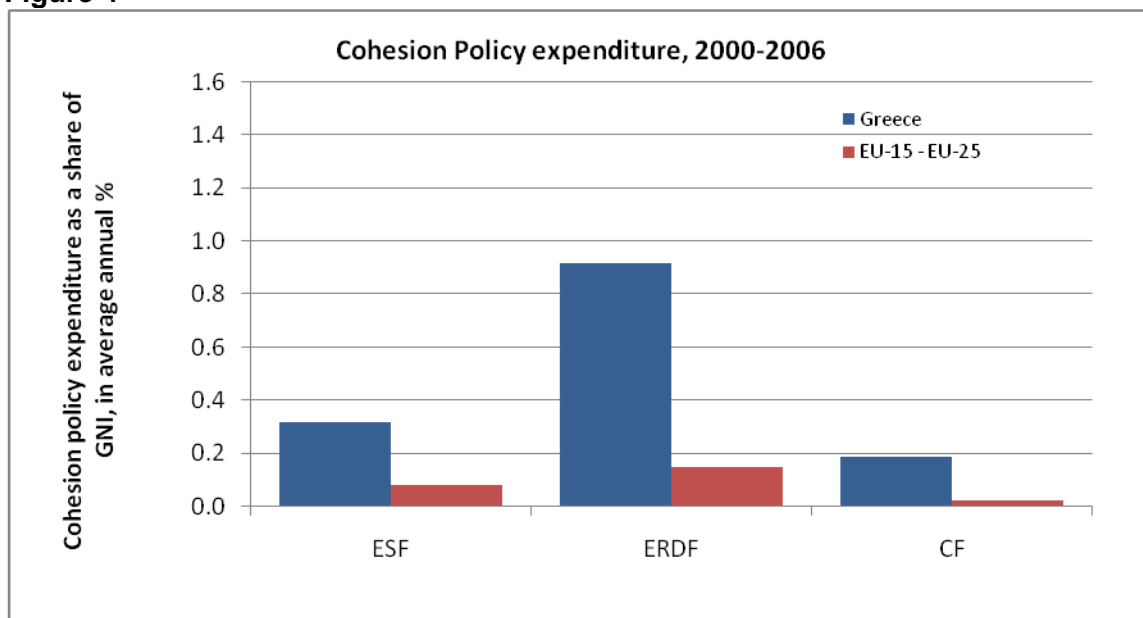
2000–2006: Third Community-support Framework

The 2000-2006 Community structural-assistance budget allocated to Greece amounted to a total of € 25 bn, compared with € 19.271 bn in 1994-1999. Thus, the amount available for this period was 1.1% more per year than in the previous one. The Greek CSF 2000–2006 aimed to contribute to Greece’s further integration into the EU and the knowledge-based world economy by promoting structural change, higher productivity and employment (G.S.I.D. 2005). Despite expectations, the emphasis was again on transport infrastructure (28%) plus infrastructure related to health, social care and sewage networks (Plaskovitis 2006, Psicharis 2004). The “improvement in competitiveness” follows, and “human resources” and the “promotion of employment” are also important. For the first time, priority axes with regard to “quality of life” and “information society” were introduced. The CSF 2000–2006 also included increased efforts in the fields of environment, culture, health and welfare, as well as sustainable regional development. It was financed by € 21.32 bn from structural funds and some €

3.3 bn from the cohesion Fund, plus loans and guarantees from the European Investment Bank and European Investment Fund.

The major reforms in this period include: a) The European regulatory framework became mandatory (Reg 1260/1999) and the new structural-funds regulations formed a new framework of partnership between Greece and the Commission. A new framework (Law 2860/2000) for the management, implementation and auditing of the community-support framework was activated (Psicharis 2004). Consultation and market orientation to special groups (individuals suffering from long-term unemployment or belonging to sensitive social groups, immigrants, ex-drug addicts etc.) were included in the new human-resources policies. According to Plaskovitis (2006: 7), this is the regional dimension of a new generation of national employment action plans.

Figure 4



Source: BUDG, AMECO, REGIO calculations
* from 2004 onwards

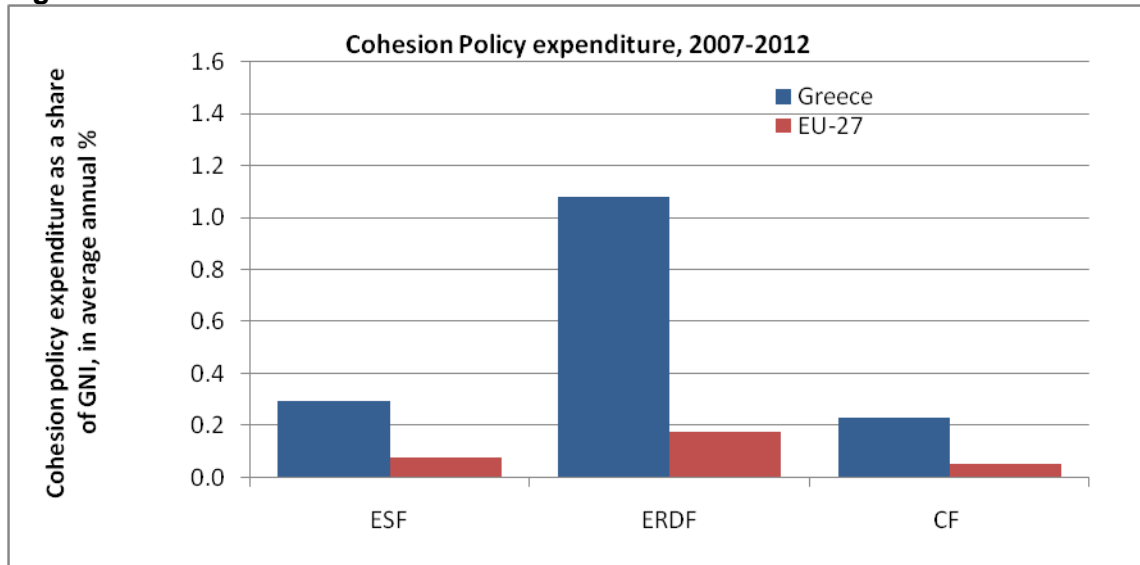
The 2007–2013 programming period

The 2007-2013 programming period was a period with serious problems that threatened the effectiveness of the programmes. Firstly, it started with a delay. The Greek administration's efforts to complete successfully the 2000-2006 programmes (which for Greece were extended to the end of 2009) diverted efforts away from the 2007–2013 programs. The implementation of operational programmes was also handicapped by burdensome administrative procedures at all levels (i.e. delegations to intermediary bodies, certification of intermediaries and approval of projects).

Secondly, the economic crisis, in the middle of the programming period, created severe problems for the implementation of the programmes. The Greek government was unable to co-finance projects due to liquidity problems and the Commission intervened positively to minimize Greek co-financing rates. As a result, overall implementation of the

Greek operational programs accelerated in 2010 and 2011, and Greece successfully met the quantitative target for absorption provided in the memorandum of understanding for 2010 (EUR 2 750m) and the ERDF and cohesion-fund targets for 2011 (EUR 2 600 m for ERDF and CF; EUR 3 350 m for 2011, all funds included). Today, that programming period has not yet closed. Similar to the previous programming periods, infrastructure again receives the main bulk of structural funds. To increase efficiency through decentralization, in 2011, Greece undertook a large-scale administrative reform, implying transfers of competence to the newly-elected regional administrations (EC 2014).

Figure 5



Source: BUDG, AMECO and SFC, REGIO calculations

3. Importance of EU structural funds for the Greek economy

The impact of EU funding for the GDP of EU economies is significant, but it is extremely difficult to estimate with any accuracy. Macroeconomic modelling is the **only way of obtaining a more integrated overview of the impact of cohesion policy on the EU economies (EC 2014-6CR)**. There is extensive literature on the evaluation side of structural funds, especially at the country level. However, assessing the impact of the funds at a lower spatial level (e.g. the regional one) is even more difficult, and this part of the literature remains sparse (Psicharis 2004). To bridge this gap, the European Commission developed a spatial equilibrium model, under the name RHOMOLO, to analyse the impact of cohesion policy at the NUTS II level. (Brandsma A. et al., 2013)

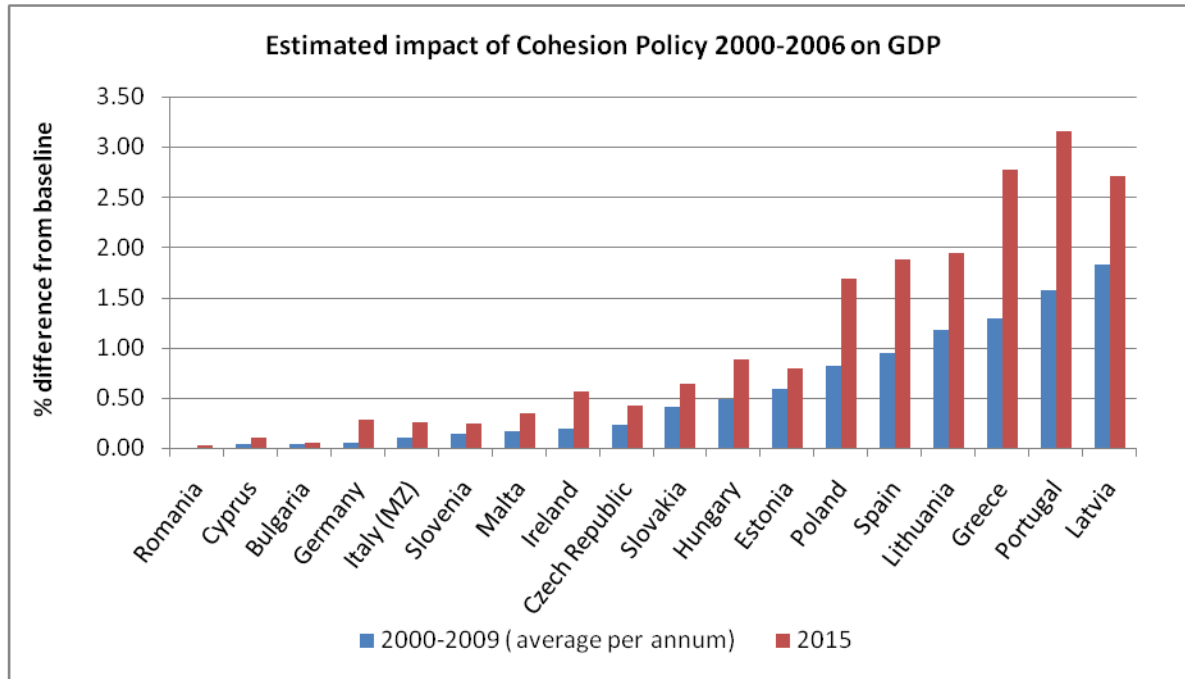
Every three years, the European Commission publishes a report on the effect of cohesion policy. The latest available one (EC 2014-6CR) makes a model-based²

² The model used to carry out this impact assessment is an extension of Quest III that contains a representation of the effect of investment on human capital and endogenous technological change, which makes it particularly suitable for the evaluation of a cohesion-policy type of structural intervention. It also includes explicit cross-country linkages through bilateral trade relationships to capture spillover effects and the interaction between EU member states. For a more detailed description of the model, see Varga, J. and J. van't Veld, J., A model-based analysis of the impact of Cohesion Policy expenditure

assessment of the potential impact of structural funds during the previous programming periods of 2000–2006 and 2007–2013 in the member states which benefitted most from financial support, including Greece (EC 2014-6CR).

Figures 6 and 7 demonstrate the potential impact of cohesion policy on GDP for the two programming periods, respectively, in the short and in the long run.

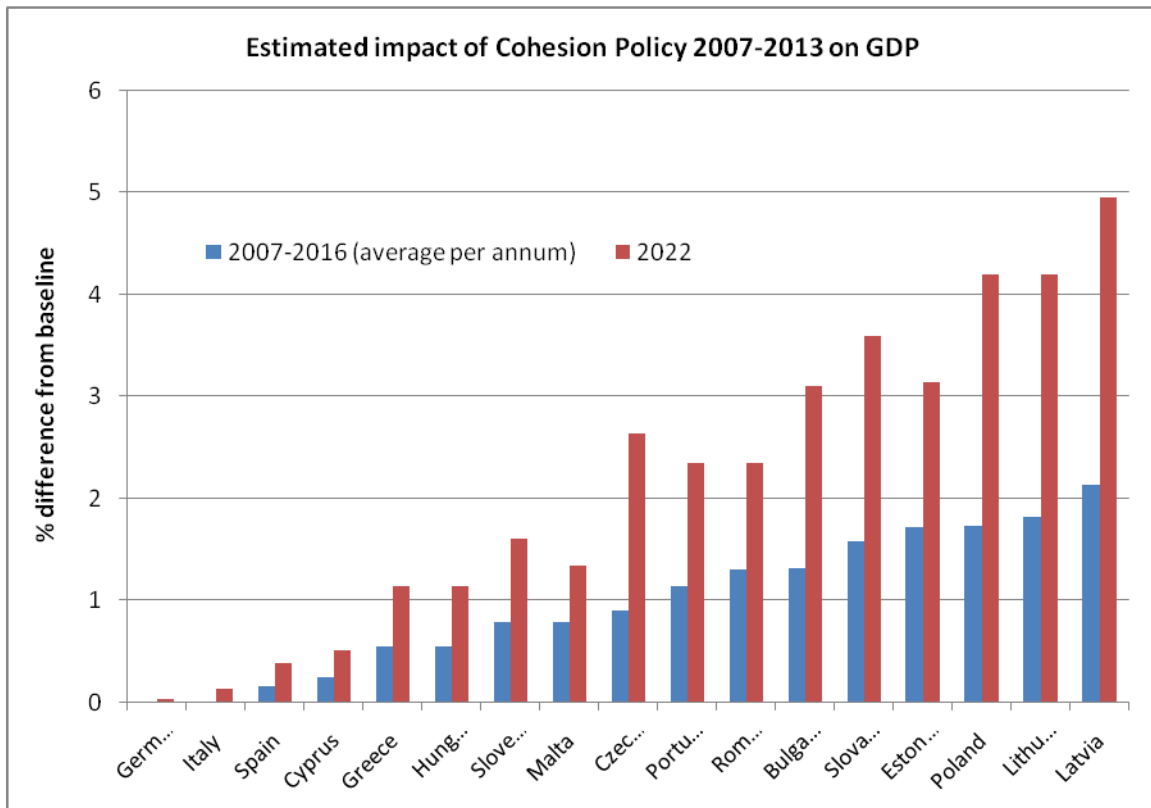
Figure 6



Source: EC 2014-6CR

2000–06: Simulations with the QUEST III endogenous R&D model, Economic Modelling 28 (2011) 647–663.

Figure 7:



Source: EC 2014-6CR

These results show the undisputable impact of cohesion policy on GDP in the member states considered. The preliminary results of RHOMOLO also demonstrate a large impact for regions located in Eastern, Central and Southern Europe. For instance, between 2014 and 2023, GDP is expected to increase by 1.7% annually in Norte (Portugal) and by 1.5% in Kentriki Makedonia (EC 2014).

In the Greek context, the majority of academic literature utilises a mainly quantitative analysis of the impact of ERDF (e.g. Halkos and Tzeremes, 2010; Lolos, 2009, Christofakis and Papadaskalopoulos, 2011) without analyzing the qualitative aspect, including how priorities at the national level align with the needs of particular regions or territories (Spilanis et al., 2013).

The quantitative-assessment studies fail to explain the reasons why the impact of cohesion policy is lower in Greece than expected. The share of the impact of the crisis on this low performance is under investigation from both academic researchers and policymakers. The quantitative-assessment studies also fail to answer whether the policy mix is correct and what would have happened if the choices made with regard to investment priorities were different.

4. Allocation patterns and implications for development

In the preceding sections we briefly examined the content of the four previous programming periods for Greece from 1989 to 2013. This section attempts to map the investment priorities under cohesion-policy thematic objectives, analysing their implications for the country's development pattern and providing insights and explanations for the choices made. Firstly it examines the allocation patterns for the 28 member states to highlight the EU's footprint, then it analyses Greek investment priorities over the five programming periods of structural assistance, and finally the reasons for the design rationale and the implications for the development model of the country.

The latest cohesion report (EC 2014) reveals the same longitudinal trend for less and more developed regions in Europe from 1993 until 2013. Investment in infrastructure has been persistently higher in less developed regions than in others in the EU-15. The share of funding in less developed regions in the EU-15 allocated to infrastructure, other than environmental infrastructure, was 36% in the period 1989–1993, but this fell to 23% in the period 2007–2013. In the other EU-15 regions, the share of investment in (non-environmental) infrastructure rose from 5% in 1989–1994 to 13% in 2007–2013, in part due to increased investment in renewable energy from 2000 onwards. At the same time, environmental investment increased from 8% to 14% of total funding.

In contrast to infrastructure, investment in human capital was higher as a share of total funding in the more developed regions than in the less developed ones, though it varied between periods. On the other hand, the business support share rose slightly from 31% in 1989–1994 to 34% in 2007–2013.

This trend is dominant in the Greek case. Transport, environmental and social infrastructure are by far the most frequent and generously financed type of intervention throughout the examined periods (Table 1); this “obsession” with infrastructure suggests two possible explanations. First, the infrastructural gap of the Greek regions was obviously so huge that twenty years of operational programmes did not reduce the demands which local planners face to devote the great majority of resources, again and again, to basic infrastructure (Plaskovitis 2006: p14). Second, the lack of a strategic planning culture led to Greece's dependence on EU aid that focused solely on increasing the absorption rate, with the effectiveness of investment only a secondary concern. EU support was thus directed towards politically advantageous projects, particularly transport, that did not have high added value (Karras 2012).

So what are the actual causes of directing EU funds solely to infrastructure and avoiding investing in human resources?

Table 1:³ Evolution of Financial Allocations by Category of Intervention⁴

³ Important notes:

- The first 4 columns of the table (IMPs, 1st–3rd CSF) are from Plaskovitis 2009.
- The next 2 columns (4th–5th CSF) are our own elaboration based on data from DG REGIO.
- The 12% of the R&D allocation of the 4th CSF included allocations to private sector “innovation investment plans”. The actual “innovative” character of these investments is debatable.
- 5th CSF allocations are calculated without the inclusion of EAFRD (the total allocations is € 19.3 bn of which € 4.2 bn is EAFRD funds).

	IMPs	1 st CSF	2 nd CSF	3 rd CSF	4 th CSF	5 th CSF
Transport Infrastructure	13%	28%	26%	31%	25%	22%
Social & Education Infrastructure	5%	15%	10%	9%	19%	15%
Environment Infrastructure	6%	20%	8%	9%	14%	18%
Industry (incentives, services, infrastructure)	33%	4%	11%	8%	5%	9%
Tourism (incentives, services, infrastructure)	4%	5%	7%	9%	-	-
Agriculture & fisheries	18%	4%	15%	20%	-	-
Research and Development	3%	1%	1%	2%	12%	6%
Human Resources	9%	18%	12%	7%	9%	11%
Other	9%	5%	10%	5%	16%	19%

Source: Plaskovitis 2006, DG REGIO, own elaboration

The truth lies somewhere in the middle. Greece followed the EU average and invested more in infrastructure, like the rest of the cohesion countries of the Mediterranean. According to some estimates, 25 per cent of the EU's so-called regional funds to Portugal has been invested in roads, contributing strongly to a ridiculous situation whereby the country has 60 per cent more kilometers of motorway per inhabitant than Germany and four times more than Britain (Persson 2013). Meanwhile, around one third of EU structural funds in Spain has been invested in infrastructure, while, as in Portugal, creating infrastructure with less demand.

The phenomenon in Greece was similar. Structural and cohesion funds have predominately been directed towards investment in physical capital (tangible assets such as roads, buildings, machinery, ports, airports etc., Karras 2012). The problem was intensified by the consistent shifting of priorities and erosion of the initial planning (Psixaris 2004). This is especially pertinent in the Greek case, which as Chardas (2012) explains has a highly centralised governance system with much less autonomy given to local authorities. Batterbury (2006) considers Greece to be one of the member states with little experience in planning and evaluating structural-fund actions, 'where evaluation is being driven by the regulatory obligations of the Structural Funds' (Spilanis et al. 2013).

- The allocation to categories of intervention for the 5th CSF is clearer than those for the 4th CSF, due to the use of thematic objectives in the new programming period.

- 5th CSF: Thematic Objective 2 (ICT), Thematic Objective 4 (low-carbon economy) and Thematic Objective 5 (climate-change adaptation) are all included in the "other" Category of intervention. Clearly, parts of them could also be calculated within the "R&D" and "environment infrastructure" categories.

⁴ This table tries to distribute the allocations among specific thematic objectives which were not the same during the six periods of programming. It should be treated with caution since there might be hidden overlaps between corresponding thematic objectives.

The core of the problem can be found in the programme design during the planning phase. The planning process is diverted by political pressures from a variety of stakeholders. The usual result was a rather incoherent 'shopping list' of projects which tended to focus more on 'hard' infrastructure. The infrastructure projects were consistently selected because, according to the policy officers (Spilanis et al. 2013): they had a clear output; there was enough technical and managerial expertise to run these projects; local communities consider these projects to be 'money properly spent'; there is a strong perception among decision-makers that transport infrastructure and more generally the construction sector can boost economic growth (Rodriguez-Pose 2002, De la Fuente 2002).

But, in turn, this was counterproductive in economic terms and had serious implications for the development model of the country. In theory, structural funds (in Greece) should aim to remove the determinants for lagging development, such as the under-investment in public capital stock, low accessibility, the poor quality of labour force, innovation and low institutional quality (EC 2014-6CR)

In the Greek case, the poor competitiveness of the economy and the lack of innovative companies and skilled labour were viewed as rather low priorities compared to 'hard infrastructure' projects and were largely disregarded during the consultation and planning process in the majority of programmes. This contrasts with the current planning orthodoxy in the EU (e.g. EU, 2010) and the 'Europe 2020' strategy, which focus on encouraging investment in the R&D and productive sectors as well as the knowledge economy and higher levels of skills (Spilanis et al. 2013).

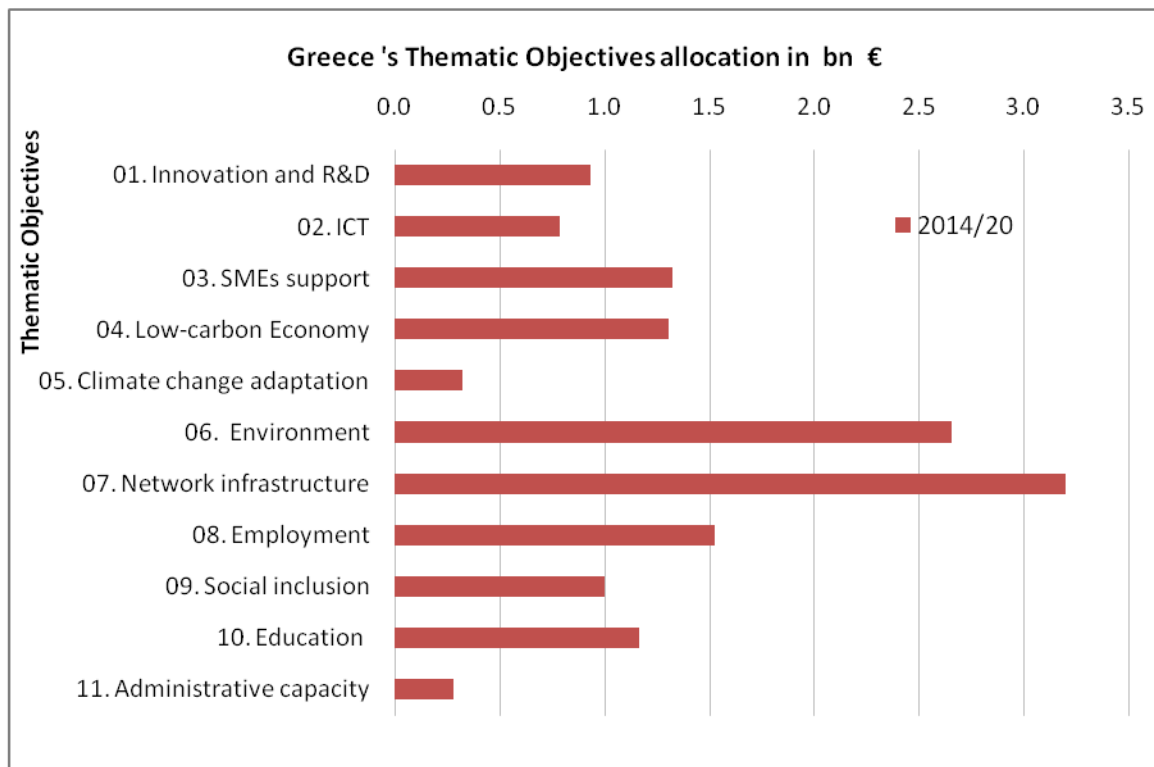
5 Future programming period 2014–2020 and its contribution to EU 2020

The new programming period is characterized by ambitious reforms which aim to increase the effectiveness of the programmes and face the structural rigidities of the past, as noted previously. For the first time, investment from ESI funding is concentrated on thematic objectives and targets directly derived from the Europe 2020 strategy. Provisions for thematic concentration for each fund will further enable cohesion policy to target resources at key growth factors. Secondly, investment under ESI funding is more closely linked to economic governance processes. Thirdly, each programme will have a performance framework allowing it to measure progress against milestones defined for it. A performance reserve will reward good performance. Finally, two kinds of conditionalities, ex ante and macroeconomic, will ensure that the necessary framework conditions for effective use of Union support are in place and that the wider economic environment does not erode the impact of EU investment (EC 2014 6CR).

The application of these reforms is crucial for the success of the next Greek programme (2014–2020) and the contribution to restarting the economy. Greece's allocation for structural funding (ERDF, ESF, CF) for the period 2014–2020 amounts to € 15.1 bn, compared with € 20.2 bn in the 2007-2013 period (country fiche). The priorities for Greece are set out in the partnership agreement (PA) approved by the European

Commission on 23 May 2014.⁵ The approved PA covers all eleven thematic objectives. Particular focus is put on competitiveness, human resources and active social inclusion, environment and the completion of infrastructure. Figure 8 shows the allocation per thematic objective as a percentage of the total. Network infrastructure is still the thematic objective with the highest allocation of all (22.07%), but it is significantly reduced compared to the 2007–2013 period (Figure 9). The administrative capacity of the public administration appears for the first time, but we doubt if the amount allocated is enough to address the inefficiencies of the public sector. Since we stressed earlier the importance of the huge deficiencies of the Greek administrative system in relation to the effectiveness of the structural funds programmes, it seems to be rather too optimistic to foresee a great impact from ESIF without a radical public administration reform supported by it.

Figure 8

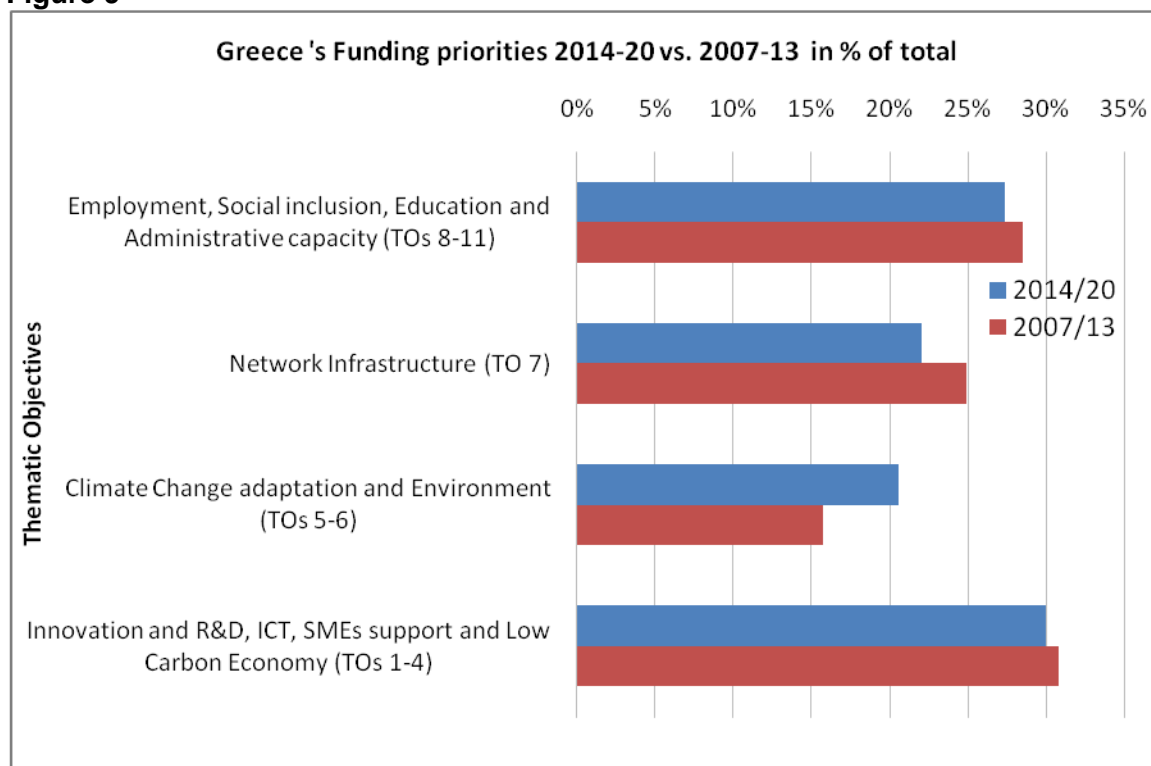


Source: EC 2014, DG REGIO

The Greek regions will invest relatively more compared to 2007–2013 on ERDF priorities (R&D and innovation, ICT, SMEs and low carbon) and climate-change adaptation priorities. In turn, less money will be invested on network and environmental infrastructure and in ESF priorities in total (employment, social inclusion, education and governance).

⁵ There are on going negotiations with the GR authorities with regard to the operational programmes.

Figure 9



Source: EC 2014, DG REGIO

The new programming period of 2014–2020 is important not only for restarting the economy but also for achieving the EUROPE 2020 targets. Today, Greece is not far off reaching these targets but there are specific fields where extra effort must be made. Table 2 shows the national targets and the current level, revealing the distance that has to be covered. R&D, innovation and renewables are very low compared to national targets. ESIF's contribution here is expected to be high. Since public investment is very low in these fields, the ESIF allocation for this period, due to thematic concentration, will stimulate these sectors and reduce the gap in the targets. The added value of this investment will be much higher compared to the investment in transport.

Table 2: Europe 2020 headline targets – National targets and current (2008, 2009 and 2010) levels

Europe 2020 headline targets	National target	Level
Employment (2010)		
75% of 20–64 year-olds to be employed	70%	64%
R&D and innovation (2009)		
3% of the EU's GDP to be invested in R&D/innovation	2%	0.6%
Climate change / energy (2008)		
Greenhouse-gas emissions to be 20% lower than in 2005	-4%	
Greenhouse-gas emissions in sectors not covered by ETS to be 10% lower than in 2005	4%	
20% of energy to come from renewables	20%	8%
Education (2010)		
Reduce the school dropout rate to below 10%	9.7%	13.7%

Europe 2020 headline targets	National target	Level
At least 40% of 30–34-year-olds to complete third-level education (or the equivalent)	32%	28.4%
Poverty/ social exclusion (2009)		
At least 20 million people to be at less at risk of poverty or social exclusion (per million inhabitants)	0.45	3.1
Population at risk of poverty or exclusion (% of pop.)	24%	27.6%
Persons at risk of poverty after social transfers (% of pop.)		19.7%
Severely-materially-deprived persons (% of pop.)		11%
Persons living in households with very low work intensity (% of pop.)		6.5%

Source: DG REGIO, Country fiche

6. Discussion

In summary, the main characteristics of Community-support financial allocations throughout the period 1989–2020 are:

- A continuous emphasis on “hard” infrastructure which does not significantly diminish as we progress from the 1st CSF to the 5th CSF, although it could be argued that the most pressing demands would have been met by the first CSFs: Transport and environmental infrastructure combined accounts for 48% of the allocations in the 1st CSF, falling to (at least) 40% in the 5th. This does not take into account actual allocations that can only be measured after the closure of each CSF and for which no reliable data are yet available.
- An emphasis on the absorption of funds at the expense of quality, impact and sustainability (ELIAMEP 2013). Although this is something to be expected for the initial CSFs, where the lack of experience and planning/ monitoring capacity was profound, it did not substantially improve with time. Thus, as an example, when in the 3rd and 4th CSF the authorities were faced with the prospect of budget under-spending, they authorized a shifting of the budget towards support for SMEs with almost no requirement for justification or cost-benefit analysis and without any obvious added value for the economy. In the end, a large number of SMEs that produced non-tradable products and services were funded though adding no obvious value to the economy.
- An initial allocation of infrastructural project funding to small-scale projects with no obvious long-term planning or strategy behind them (segmentation of allocations) which resulted in minimizing the impact of investment (Georgiou G. 1999, De la Fuente et al., 1995). This can be attributed both to the inexperience of the central and regional mechanism as well as to the corporatist and voter-pleasing nature of the Greek public sector. This initial tendency receded gradually, after the 2nd and especially the 3rd CSF. The reasons behind this improvement were twofold:
 - Internal: Planning and monitoring mechanisms were set up and functioning by the end of the 1990s; political direction as well as the need to prepare for the 2004 Athens Olympic Games prioritised larger projects; regional authorities were better organised and better able to perform their planning and monitoring functions.
 - External: Tightening of the structural-funds regulations that demanded more effort in terms of planning, programming and cost-benefit analysis from member states and their regional authorities

- A very inefficient system of “vocational training” that absorbed the lion’s share of ESF funds, though producing little in return in terms of “retraining” or offering market-related skills to those entering the jobs market or who were unemployed (ELIAMEP 2013, Psycharris 2004). Although the system (that was initiated in the 2nd CSF) has been heavily criticized as inefficient and nothing more than a thinly veiled unemployment-benefits dispenser, no serious attempt to reform it was ever undertaken.
- An overall under-representation of investment in education, R&D and innovation in all CSFs. Allocations to R&D were in the range of 1–2% in each of the 1st, 2nd and 3rd CSF. Although the exact percentage is not clear in the 4th CSF, it is similar to that in previous ones. The increase to 6% in the 5th CSF can be mostly attributed to conditionalities like the smart-specialization strategy attached to the ESF by the European Commission, rather than a clear strategy on the part of the central and regional authorities. It is clear that structural-funds allocation was not used by the Greek authorities as a means to achieve the country’s targets in the Lisbon Strategy, and it remains to be seen how it will contribute to achieving EUROPE 2020 commitments like the R&D and innovation target of 2% of GDP, which is arguably the hardest to achieve of the targets set for Greece (a 333% rise from the 2009 level of 0.6% needs to be achieved by 2020). Similarly, investment in education has been a secondary priority. To be sure, Greece has invested in each of these years in new higher-education institutes (7 out of 37 HEIs in Greece were founded after 1989) as well as establishing new schools and departments in already existing ones. But this was done without any clear strategy that could link the needs of the country and its development strategy to the quality and output of the HEIs. The lack of such a strategy often resulted in the creation of departments with obscure titles and degrees that would at best be just a specialization rather than a discipline. Additionally, the country invested a lot in the renewal of its primary and secondary “hard” infrastructure but too little in renewing its curricula and teaching methods. As a result, the core characteristics of the primary and secondary education system have remained intact for the past three decades. The issue of underinvestment in R&D and innovation resembles the old “chicken-and-egg” problem. Policymakers are reluctant to pledge resources in a very weak Greek innovation ecosystem (characterized primarily by an almost non-existent link between industry and academia and very weak private-sector investment,(EC 2011, Innopolity TrendChart 2011), and the innovation ecosystem will never grow without significant investment. On the other hand, the underinvestment in education has a lot to do with the need to modernise and reform the education system (quite a feat in itself, as proven by the several failed attempts towards modernization during the past two decades). An almost obsolete education system can only guarantee a very low return on investment, no matter how generous the allocations may be.

What does all of the above tell us about the choices that national and central authorities made during the past 25 years of structural-funds financing and what are the implications for Greece’s developmental model? With the benefit of hindsight, it might be argued that if Greece had selected to invest more heavily in education, R&D and innovation, it would have better prospects of building a knowledge-based economy that would favour extroversion and a focus on internationally tradable goods and services, although it might lack some of today’s really impressive transportation infrastructure. The recent (and ongoing) financial crisis has revealed the weaknesses of the Greek

economic model that heavily depended on borrowing, consumption, low-added value production and a non-competitive private sector oriented towards public money rather than a knowledge-based economy and the production of internationally-tradable goods (Makinsey 2013). Why then at no point in the past 25 years did Greece not opt to reverse this trend and invest more in education, R&D and innovation? We believe that more systematic research should be done to answer this question, including research into decision-making processes, planning and monitoring mechanisms, as well into the economic and political system itself. However, we can offer an initial set of explanations which need to be verified by systematic research. The main reasons are institutional, structural and political:

- Institutional: The lack of planning and monitoring experience on the Greek side when the CSF started has been well recognised and documented. What needs to be emphasised are two important characteristics of this weakness: First the lack of experience was more profound at the regional level since the Greek administrative regions were established just three years before the begging of the 1st programming period. This had profound implications for the readiness of local authorities vis-à-vis ownership of the regional operational programmes (ROPs which would in time become ever more important as part of EU regional policy and a core aspect of structural funds) and implied a chronic dependency on national authorities. Secondly, the services at the national level that were first assigned the role of planning and monitoring (the old Ministry of Planning that later moved through a series of renaming exercises) was not completely inexperienced; indeed it had quite good experience in implementing public infrastructural projects. This had serious consequences when the same people were asked to extend their efforts to investment in “soft infrastructure”, like education, social programmes and R&D, of which they had no prior experience. This is quite obvious in the use of the “technical data sheet” which is still used today to officially describe any structural-funds project: It is clearly elaborated to describe a “hard” infrastructure project, but it is used for all CSF projects, even research ones. Another serious institutional aspect was the lack of focus on the impact of interventions, which had implications for a series of issues: From the focus on absorption rather than the quality of the results achieved, to the absence of long term target-based policy coherence of the allocation of funds. It should be noted that even today very little has been done regarding measuring the impact of various interventions. As an example, actions supporting SMEs cannot produce indicators other than the level of investment and the number of new employment positions created.
- Structural: These are mainly inherent weaknesses of the national innovation, education and R&D systems that demanded a systematic reform effort before any investment could bring the desired results. An obvious example is the great internal (and often violent) resistance by the country’s universities towards any effort to connect with industry and the economy. Several reform efforts aiming to modernising the universities failed (the most recent one, initiated in 2011, is underway but has yet to demonstrate real results). Similar weaknesses can be found in the innovation ecosystem (Komninou N. et al., 2008).
- Political: These include a) a political system at the upper (national government) and lower (local government) levels that was used to secure votes by dispensing money and which opted for more visible “infrastructure projects” rather than more long-term “soft infrastructure” ones; b) corruption at all levels that favoured projects that presented better “cash-back” opportunities; c) a society that was to

a great extent corporatist and “rent-seeking”, and thus less inclined to favour investment that did not promised an immediate return.

Suggestions for further research:

- Compile a reliable data set of actual allocations after the adjustments that took place in each of the CSFs and after their closure. These data might indicate the extent of transfers of funds from education, research, innovation and social budget categories to “hard-infrastructure” ones.
- Research on the medium- to long-term economic, social and environmental impact of the main “crown-jewels” transportation infrastructure projects that were funded by the CSFs.
- Research on the institutional development and internal conflicts/ interests of the planning and monitoring mechanisms of the Greek state at the national and local levels, starting from the Ministry of Planning and including the role of the Management Organisation Unit S.A. and all the institutional players involved.
- Research on the impact of the reforms of the cohesion policy on low-performance member states.

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