

# The impact of the Structural Funds in European regions: Quality of governments and political decentralization

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## **Abstract**

In the debate regarding the effectiveness of European Union cohesion policy the role of regional (subnational) governments has been emphasized. The place-based policy approach argues that, in order to be effective, policy intervention has to be accompanied by increased local involvement. Yet, the actual involvement of regional governments in cohesion policy cannot be taken for granted; neither has been explored in a systematic fashion. We explore to what extent regional governments contribute in making cohesion policy more effective by looking at their quality and their degree of political decentralization. The analysis covers 158 regions in the programming period 2000-2006. We find that regional governments play a significant role in affecting the impact of Structural Funds expenditure on economic performance. The quality of regional government is particularly important, while political decentralization plays a less important role. Policy implications for cohesion policy are discussed.

**Key words:** European cohesion policy, Structural Funds, regional institutions, political decentralization, local development; NUTS2 EU regions

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## 1. Introduction

Within the debate about the effectiveness of the European Union (EU) cohesion policy and structural funds (SFs) different possible sources of policy failure have been identified. The lack of involvement of regional (sub-national) governments has been emphasized by the ‘place-based’ policy or ‘territorial’ policy approach’. These approaches call for a shift from the ‘one-size-fits-all’ approach to a context specific approach (Tödting and Trippi, 2005; Barca, 2009), for the lack of attention to the specific characteristics of the places where cohesion policy is implemented is identified as an important possible source of failure. This line of reasoning puts at the center of the stage the role of the region, and in particular regional government. However, a necessary superiority of local/regional governments vis-à-vis central governments for the governance of cohesion policy is not claimed. Quite the opposite, a realistic view of the limits of local governments themselves is taken: *‘Local governments can consistently fail to build the appropriate economic institutions, either because they are not benevolent or because they do not have the capacity or the means to do so’* (Barca, 2009). Within this context, the exogenous public intervention can overcome these shortcomings, but, crucially, in order to be effective *‘it needs to be accompanied by increased local involvement. This is the condition for eliciting the information on preferences and the local knowledge needed to tailor interventions to places’* (Barca, 2009).

But do, in fact, regional governments play a role with respect to EU cohesion policy? Some political scientists argue that despite the continuous reference to regions in the cohesion policy discourse, in fact, SFs are a matter of central governments, while supra- and sub-national governments are just part of a *‘carefully choreographed ‘intergovernmental play’* (Bachtler and Mendez, 2007). Furthermore, the actual share of SFs managed by regional governments vis-à-vis central governments is still low, especially in lagging behind regions which in turn receive the lion’s share of funding. Finally, the relative involvement of regional governments vis-à-vis central governments in cohesion policy depends on the degree of political decentralization of the country. It is easy to check that sub-national governments will have a greater voice in countries like Germany, Spain, and Belgium, while the opposite is true for centralized countries. Within this context, this paper seeks to answer to two key questions about the relationship between regional government and cohesion policy. First, *do governments matter for the success of cohesion policy?* And second, *what are the characteristics of subnational governments which make them matter?*

European cohesion policy *“aims to promote harmonious development of the Union and its regions by reducing regional disparities”*.<sup>2</sup> This policy is implemented mostly thanks to the SFs, particularly the European Regional Development Fund (ERDF) and the European Social Fund (ESF). The extent whether the SFs were actually effective inspired a lot of research. Some investigating growth and convergence in European regions casted some doubts on the effect of structural funds (Sala-i-Martin, 1996; Boldrin et al., 2001), while others identified a positive relationship between the SFs and economic growth both at a national level (Ederveen et al., 2002; Beugelsdijk and Eijffinger, 2005) and at a regional level (Cappelen et al., 2003; Becker et al., 2010). Others detected the presence of convergence clubs among lagging European regions with mixed evidence about the effectiveness of SFs (Rodriguez-Pose and Fratesi, 2004; Corrado et al., 2005; Neven and Gouymte, 2008).

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<sup>2</sup> (Article 174 of the Treaty).

Recently, Becker et al. (2012) go one step further trying to identifying the presence of a threshold above which transfer intensity exceeds the aggregate efficiency.

These studies have substantially broadened our understanding on the overall impact of these policies. Yet, this research concentrates the attention on the aggregate impact of the SFs on economic growth and convergence, while the very mechanisms which made SFs work or not are not addressed. Particularly, little is said about the importance of contextual and local factors. Along the overall impact of the SFs on economic growth, we are particularly interested in investigating the presence of specific characteristics of the region – namely regional governments - which might facilitate the effectiveness of the SFs. We therefore aim to go beyond the question *whether* the SFs have been effective or not, trying to understand *what* made them work or not, by focusing on two characteristics regional governments: (i) their quality and, (ii) the degree of political decentralization. Our contribution is therefore to establish a link between the empirical research exploring the impact of SFs, and the more recent emphasis on the contextual/place-based nature of cohesion policy and regional development theorizing.

This paper's analysis is also relevant for the debate around governance in the EU which has witnessed a shift from hierarchical types of governance based on the nation-state, to a more non-hierarchical system of governance. Political scientists put forward the notion of 'multi-level' or 'multi-actor' governance, in that both the supra-national level (say the EU level) and the sub-national level gained in importance in policy governance (Marks, 1993; Keating, 1998). This has been linked to the process of political decentralization within Member States over the last decades. Today, there exist substantial differences in the degree of political decentralization at the national level, ranging from federal states (Germany, Austria), more centralized ones (Portugal, Greece), and regionalized ones (Italy, Spain). In short, the EU – and the related policy governance - has been defined as a 'maze' made up of various interconnected levels (Schobben and Boschma, 2000). In shedding light on the actual role of regional government for the success of cohesion policy, this paper also contributes to this strand of research.<sup>3</sup>

The empirical analysis covers 158 EU regions in the programming period 2000-2006. Overall, we find that the regional governments play a significant role in affecting the impact of Structural Funds expenditure on economic performance. The quality of regional government is particularly important, while political decentralization play a less important role. Policy implications for cohesion policy are discussed.

The following section outlines the evolution of the role of regions in EU cohesion policy. Section three presents the data, while section four shows the results. In the last section we provide a discussion and derive some policy implications.

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<sup>3</sup> For a thorough and multidisciplinary discussion on these issue see the special issue 'Europe and the regions: The issue of governance', volume 10, Summer 2000, no. 2.

## 2. The governance of cohesion policy in the 'Europe of regions'

In this section we describe the role of regions in the context of cohesion policy, discussing the (i) the process of regionalization which occurred in Europe over the last decades; (ii) the governance of cohesion policy. We argue that there is no doubt that regions have come to play an increasing role under several aspects, and this is reflecting into cohesion policy as well as development theory. Yet, their real involvement in the governance of cohesion policy cannot be taken for granted. The latter has been advocated by those proposing a place-based approach for cohesion policy, but, at this stage, systematic empirical work on this issue is still lacking.

### The rise of the 'Europe of the regions'

The expression 'Europe of regions' describes the process of the increase of supra-national and sub-national authority occurred particularly in Europe since the 1970s (Rhodes, 1974; Keating, 1997; see also, Bukowski et al., 2003; Brenner, 2004). The process of regionalization of Europe is associated to that of political decentralization. It was argued that the lack of political autonomy and an excessive dependence on national funding and national designed policies was an important explanation for the lack of dynamism and development of the lagging regions, such as those of Italian Mezzogiorno and South-Western Spain (Rodríguez-Pose, 1998). There is strong evidence of a general marked increase in the level of regional authority in the past fifty years. As Marks et al (2008) argue: *'Not every country has become regionalized, but where we see reform over time, it is in the direction of greater, not less, regional authority by a ratio of eight to one'*. In brief, while already decentralized countries remained the same, those less decentralized increased their level of devolution.

The regionalization process has been functionally associated to the European integration process. Several member states have created regional levels in order to conform to EU rules on cohesion funding. The EU has enhanced 'regional consciousness' through policies and targets at specific types of regions, and through the requirement that regions participate more actively alongside the central governments in regional policy planning and structural funding (Sharpe, 1993). Over the past decades, regions have come to play an increasing role following the process of State rescaling of policies occurred throughout Europe since the 1988 Reform of Structural Funds (Brenner, 2004). Thus, European integration and regionalization are viewed as complementary processes in which central state authority is dispersed above and below the national state (Bache and Flinders, 2004). This has been condensed into the concept of 'multilevel governance' (Hooghe and Marks, 2001) discussed below.

Finally, it has been argued that the change in the approach of regional policies has been considerably influenced by EU cohesion policy and the decentralization. Up to the 1990s, regional development policies were mostly based on infrastructures and aid managed by the central governments, a part for the federal states. Over the last years we have witnessed a shift towards a differentiated territorial policy approach in cohesion policy (Tödtling and Trippl, 2005; Todtling, 2010). The urgency to manage the European cohesion policy with a greater involvement of local actors has been also claimed by the advocates of place-based policy (Barca, 2009). This is not to say that policy has to be implemented entirely at a local level because of a necessary greater efficiency compared to the central government level. Quite the contrary, place-based policy

approach puts a great emphasis on the exogenous intervention, say national and European level. Yet, in order for this intervention to be effective it has to be accompanied by increased local involvement to encourage for the eliciting the information on preferences and the local knowledge needed to tailor interventions to places.

### **The governance of EU cohesion policy: are regions really involved?**

Policy is about choices. Public policies are the results of decisions made by governments, therefore excluding those taken by the private sector, associations, interests groups, individuals or other social groups which are not part of the government. The implementation of a public policy entails different stages including: definition of the agenda (issue making), policy design, decision (decision making), implementation, and evaluation. Therefore, policy can be better described as processes entailing a number of decisions at any step. Choices are taken within an environment of great uncertainty in which actors – including policy makers - have limited rationality. The complexity of the environment arises from a number of factors, including uncertainty, information asymmetry, and contractual incompleteness (Howlett et al., 1995). For these reasons, the success of public policies depends on several contextual factors, including (i) the competences of the formal institutions which are responsible for the policy, along with their capacity to learn and past experience (Bennett and Howlett, 1992); (ii) the availability of local information and Hayekian knowledge (Bonaccorsi, 2009); (iii) the quality of social capital (Putnam, 1993; Woolcock and Narayan, 2000).

This paper focuses on the role that regional governments play in EU cohesion policy, provided that their involvement is today strongly advocated as a necessary requirement for policy to be effective. Enquiring the role of regional government for managing cohesion policy implies the assumption that regional governments have specific functions along the cohesion policy process (for a more general discussion on regional government see, Bukowski et al., 2003). *To what extent regional governments are involved in the cohesion policy?* This depends in the first place by the nature of cohesion policy governance. The nature of governance in the cohesion policy is still debated among political scientists. On the one hand, some described cohesion policy as a case of *multi-level governance* (Hooghe and Marks, 2001; Bache and Flinders, 2004). Multi-level governance describes the structural funds as ‘the leading edge of a system of multilevel governance in which supranational, national, regional and local governments are enmeshed in territorially overarching policy networks’ (Marks, 1993). According to this view, multi-level governance progressed particularly in relation to the European case (Hooghe and Marks, 2001). On the other hand, those criticizing this view argue that cohesion policy is still heavily grounded on the role of central governments (Borras-Alomar et al., 1994; Bachtler and Mendez, 2007). According to this view the development and functioning of cohesion policy has to be explained looking at the Member States’ level: central governments lead the game while supra- and sub-national actors play a less relevant role (Pollack, 1995). Interestingly, the programming period covered in our analysis (2000-2006), has been described as a process of ‘renationalization’ of cohesion policy (Bachtler and Mendez, 2007).

The degree of involvement of the region in cohesion policy also depends on the mechanisms of policy management and implementation. Hooghe and Marks (2001, ch. 6) provide a useful distinction among the influence of the level of the actors – European, national, subnational – depending on the specific phase of the cohesion policy. They divide the policy process into three phases: (i) creating the budgetary envelope; (ii) designing institutions, and (iii) structural programming. The first two phases are mostly managed by central

governments and the Commission. The role of subnational governments grows when it comes with structural programming, which deals with the design of national and regional operational programs in the first place, and then with the implementation and monitoring of the operational programs themselves. They also show that the relative importance of subnational governments vis-à-vis national governments vary from country to country: with regional governments play a greater role in more decentralized countries such as Belgium, Germany, and Spain.

Summing up, the complex nature of the governance of the EU cohesion policy poses interesting questions about the actual involvement of regional governments. So far, we are aware of empirical research carried out by political scientists by means of a case-study approach. Piattoni (1996) finds that local political factors, i.e. the ability of political class as well as their 'entrepreneurial' approach, are key to explain the success of cohesion policy in some Italian regions. By comparing the cases of Spain and the UK, Bache and Jones (2000) show that there exist different degree of regional empowerment in EU regional policy and this depends on pre-existing differences in the relative power between the center and regions. Moving from the assumption that political factors have to be analyzed within the context of the administrative capacity of the regional authority, Milio (2007) shows that the administrative capacity of a region positively does affects the implementation of SFs policies. These studies make an important case for the role of local government for the success of cohesion policy. However, at this stage a systematic empirical analysis covering a large number of cases is lacking, therefore making hard to derive general statements.

This paper seeks to fill this gap by exploring the role of regional governments for cohesion policy effectiveness across 185 European regions in the programming period 2000-2006. We focus on two strands of research which address subnational governments from two different perspectives: the *neo-institutional approach* and the *political decentralization* (or fiscal federalism) approach. The former takes the quality of the government seriously as it deliberately abandons the hypothesis of benevolent local policy makers, and also considers the possibility of institutional traps and institutional efficiency. The importance of explaining the quality of government has been a prominent aim of this stream of research, provided that the quality of government is in turn central to understand economic development (Holmberg et al., 2009). In turn, decentralization has been advocated as a specific solution to possible public failures deriving from incomplete information and the preferences and knowledge of individuals at a local level (Oates, 1999). These two approaches make possible to take sufficiently into account the importance of regional government for cohesion policy effectiveness in the context described above. Quality of government and decentralization explicitly address two of the contextual factors which might drive policy success mentioned above (i) the competences of the formal institutions which are responsible for the policy; (ii) the availability of local information and knowledge.

### 3. Data

#### Structural Funds expenditure

Data on Structural Funds regional spending from 2006 to mid-2009 is based on the latest available dataset provided by the European Commission in 2011. The dataset includes the financial resources allocated to 557 Operational Programmes (OPs) broken down by type of funding (EU Structural Funds, other regional or national public expenditure, private investment) and field of intervention (transport, research and innovation, energy, etc.). Data takes into account any variation in the allocation of resources occurred by the end of 2008.

Even though using actual payments made at the end of the eligible period would have been the most precise way to measure where and on what the funding has been used, data on resource allocation (commitments) is still the only data available covering the entire EU. Moreover, we expect that commitments and payments will eventually converge, since almost 100% of committed resources have been spent at the end of the eligible period (European Commission, 2010). Furthermore, minor differences between payments and commitments in the regional distribution have been found by SWECO (2008) for what concerns the ERDF.

The European Commission dataset presents the information at the OP level. Since OPs have different territorial scope - not only regional but also national and multiregional – it was necessary to determine the regional breakdown by accessing to additional information on the areas where the OP has had impact. The website *Inforegio*<sup>4</sup>, run by the DG Regional Policy, offers a quite detailed view on the eligible areas of the 'Regional Development' OPs. These OPs are mainly co-financed by ERDF and therefore falling under the responsibility of the DG Regional Policy. Then, the regional distribution is calculated on the basis of the eligible regions' share of the total population living in the OP area.

Only 209 out of the total 557 OPs included in the original dataset are defined by the Commission as Regional Development OPs. However, they account for the 70% of the total cost of all OPs, which include not only Objective 1 and 2, but also the residual components 'Community Initiatives', 'Innovative Actions', 'Objective 3' and 'Objective F'. In particular, the selected Regional Development OPs account for the 83% of total Objective 1 allocation (97% of ERDF, 52% of ESF) and 99% of Objective 2.

#### The quality of regional government

In order to measure the quality of government at the regional level, we employ a composite indicator – *regqog* – developed by 'The QOG Institute' (Quality of Government Institute, 2010; Charron and Lapuente, 2011).<sup>5</sup> The *regqog* is a perception-based indicator built from a 34,000-respondents survey from 172 regions within 18 EU member states. This constitutes the largest survey ever undertaken to measure *QoG* at the sub-national level to date. The EU regional survey was undertaken between 15 December, 2009, and 1 February, 2010. The survey consisted of 34 *QoG* and demographic-based questions to the approximately 200 respondents per

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<sup>4</sup> The list of regional development OPs can be found here [http://ec.europa.eu/regional\\_policy/country/prordn/index\\_en.cfm](http://ec.europa.eu/regional_policy/country/prordn/index_en.cfm)

<sup>5</sup> We want to thank Nicolas Charron and Victor Lapuente of 'The QOG Institute' of the University of Goteborg for their help.

region. Regarding the *QoG* questions, the respondents were asked about three general public services in their regions – education, health care and law enforcement – which are often administered or financed by regional authorities to maximize the amount of within-country variation. In focusing on these three services, respondents were asked to rate their public services with respect to three related concepts of *QoG* – the quality, impartiality and level of corruption of said services. In addition two further questions were included in the index – one about the fairness of regional elections and the other about the strength and effectiveness of the media in the region to expose corruption (the complete questionnaire can be found in the Appendix of Quality of Government Institute, 2010). A series of extensive sensitivity tests to see whether changes in the model alter the final data was done. It arises that data constructed here are highly robust to multiple changes in weighting and aggregation schemes, the removal of individual questions or alterations in the demographic make-up of the respondents (Quality of Government Institute, 2010).

The Report suggests the presence of significant within-country variation from country to country (see Figure 1). As explained by Charron and Lapuente (2011) the data show that the indicator of *QoG* is either equally or more important than variation between EU countries themselves. For example, some regions in Italy and Belgium perform like those in the best performing countries, while others rank similarly to low-performing regions in Hungary and Greece. The first point to stress is therefore the importance of going beyond national level when analyzing the role of institutions.

--- Figure 1 ---

The second point that is worth noting is the connection of regional *QoG* and political decentralization. In particular, the level of regional variation within the country is not highly correlated to the degree of political decentralization (federalism). It is easy to check that there is large variation within highly centralized countries (e.g. Portugal) as well as in highly decentralized countries (e.g. Belgium). Conversely, one can also observe low variation in the *regqog* index both in highly centralized countries (Denmark) and highly decentralized ones (e.g. Germany).

### **The degree of political decentralization**

In order to measure the degree of political decentralization we employ the ‘Regional Authority Index’ developed (Marks et al., 2008, 2008)<sup>6</sup> The Regional Authority Index – *rai* - is a measure of the authority of regional governments in 42 democracies or quasi-democracies on an annual basis over the period 1950–2006. The countries included are twenty-nine OECD countries, the 27 countries that are members of the European Union, plus Albania, Bosnia and Herzegovina, Croatia, Macedonia, Russia, and Serbia and Montenegro. Regional authority is measured along eight dimensions: institutional depth, policy scope, fiscal autonomy, representation, law making, executive control, fiscal control, constitutional reform.<sup>7</sup>

In figure 2 we plot the degree of political decentralization and sub-national variation in the year 2000. Large differences in the degree of political decentralization arise between European countries, in particular federal-

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<sup>6</sup> For more details see: [http://www.unc.edu/~gwmmarks/data\\_ra.php](http://www.unc.edu/~gwmmarks/data_ra.php).

<sup>7</sup> For a discussion of the reliability of the data and a preliminary analysis see the Special issue on "Measuring Regional Authority", *Regional and Federal Studies* (2008), 18, 2-3: 111-302.



types countries such as Austria, Belgium, and Germany stand out with high figures. As for sub-national variation, a quite mixed picture emerges. Several countries show no variation, while others show moderate variation (e.g. Belgium, Spain, and Italy), as well as high variation (e.g. Portugal and United Kingdom).

--- Figure 2 ---

## 4. Results

In this section we present the results of a set of regression aiming to explore the impact of the SFs, in particular depending on the quality of regional government – proxied by *regqog* - and the degree of political decentralization – proxied by *rai*. Across all models, the dependent variable is the average annual change of per capita GDP over the period 2000-2008.<sup>8</sup> Even though the programming period of the SFs covers years 2000-2006, in fact, regions were allowed to spend their funding until mid-2009. In addition, it is reasonable to assume the presence of a lag between the expenditure and the effect on economic performance. A quick look at Figure 3, plotting GDP change and the initial level of GDP (in log), suggests the presence of convergence over the considered period across European regions. This is also confirmed by the regression presented in Table 3 testing the presence of beta-convergence. This implies that regions lagging behind in terms of GDP per capita have been growing at a faster pace compared to richer ones over the years 2000-2008.

--- Figure 3 ---

--- Table 1 ---

The models are all cross-section ones, in which our dependent variables is regressed against the whole SFs expenditure per capital in a single region over the programming period 2000-2006, plus our key regressors – quality of regional government and decentralization – and a set of control variables. The basic model we are going to test is the following:

$$y_i = \alpha + \beta_1 SFexp_i + \beta_2 Z_i + \varepsilon_i \quad (1)$$

where  $i$  is the individual region,  $y$  is the average annual change of per capita GDP over the period 2000-2008,  $SFexp$  is the log of per capita SFs expenditure in the 2000-2006 period (total cost including regional, national and private *co-financing* resources) in the single region, and  $Z$  is a vector including a set of control variables. Table 2 presents the estimates of equation 1.<sup>9</sup> In all the models presented we controlled for the initial level of per capita GDP (log). The negative coefficient associated to the initial level of per capita GDP is consistent with the catching-up process briefly outlined above. In this model we use quality of regional government and decentralization as control variables.<sup>10</sup> Finally, we included the average annual change of per capita GDP at a

<sup>8</sup> We use data from OECD: Regional GDP per capita, US\$ constant PPP, constant (real) prices (year 2005).

<sup>9</sup> See Table 1A in the Appendix for the correlation of the variables used in the regression.

<sup>10</sup> As we have mentioned earlier, the *regqog* indicator refers to year 2009, which is the last year of our period of interest (2000-2009). Unfortunately, this indicator is not available before 2009. We can interpret the results associated to *regqog*

national level in order to control for the presence of spacial correlation, and the population in 2000 (log). We find that the coefficient of SF expenditure is negative and highly significant, with the exception of the last model in which national growth is included.

--- Table 2 ---

Table 3 presents the same model for two separate groups of regions, advanced regions and lagging regions.<sup>11</sup> As explained above, it is important to study them separately as the latter group of regions is the main receptor – as well as the *raison d'être* itself - of the SFs. It clearly arises that the results in the all sample (Table 2) are driven by the lagging regions. For these regions, the coefficient of the SF expenditure is negative and significant across the all models.

--- Table 3 ---

We now turn to the core of our discussion. We extend the model presented in equation 1 by adding up our two key variables in the form of interaction terms (see equation 2). The first -  $SFexp * regqog_i$  - is the interaction of SF expenditure and the *regqog* indicator presented above. The second -  $SFexp * decentr_i$  - is the interaction of SF expenditure and the indicator of political decentralization. It has been argued that there are a number of difficulties in interpreting interactions between two continuous variables (Brambor et al., 2006). A nice way to interpret the results of such interaction is that of transforming by centering the variables subtracting their mean from each case. In this way, the main effect – in our case  $\beta_1 SFexp_i$  – can be interpreted as the effect of SF expenditure on the dependent variables when *regqog* and *decentr* are at their mean value. In other words,  $\beta_1$  represents the effect of SF expenditure on  $y$  for the region which is average on quality of government and degree of decentralization. It should be noted that centering the variables affects only the estimated main effect, while it will not change the estimated effects of interactions.

$$y_i = \alpha + \beta_1 SFexp_i + \beta_2 regqog_i + \beta_3 SFexp * regqog_i + \beta_4 decentr_i + \beta_5 SFexp * decentr_i + \beta_6 Z_i + \varepsilon_i \quad (2)$$

Table 4 presents the estimates for the model summarized in equation 2, with the variables *regqog* and *decentralization* centered on their average. Also in this case, the coefficient of SF expenditure (the main effect in this model specification) is negative and significant. As for the interaction term between SF expenditure and regional quality of government is always positive and significant, except for the last model in which the standard error is calculated clustered by country. As for the second interaction term, SF expenditure multiplied by the degree of decentralization, the coefficient is considerably lower compared to the first interaction term, but it arises as positive and highly significant across all the specification of the model. It should be noted that in column 2, decentralization can be interpreted as a control variable for the coefficients regarding quality of regional government. Similarly, in column 4, the coefficients associated with decentralization take into account the quality of regional government in that *regqog* works here as a control variable.

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taking in consideration that, in the first place, these types of measures tend to be quite stable over time. Secondly, it can also be the case that regional governments have learnt over the considered period. Thus, high scores in *regqog* are likely to reflect both 'good' regional governments as well as regional government which became 'good' as a result of a process of institutional learning. (We are currently exploring the opportunity to implement an instrumental variable).

<sup>11</sup> In this paper we refer to lagging regions as Objective 1 regions, while advanced regions are the others (non-Objective 1 regions).

--- Table 4 ---

Another way to explore the influence of regional quality of government and political decentralization on the impact of SF expenditure on GDP growth is by using graphs. Figures 4a and 4b show two charts in which we plot the regression lines for two groups of regions. The chart plot in figure 4a is obtained by estimating a robust estimation of the equation:

$$y_i = \alpha + \beta_1 SFexp_i + \beta_2 regqog_i + \beta_3 SFexp * regqog_i + \varepsilon_i \quad (3)$$

While that in the chart 4b is obtained by estimating a robust estimation of the equation:

$$y_i = \alpha + \beta_1 SFexp_i + \beta_4 decentral_i + \beta_5 SFexp * decentral_i + \varepsilon_i \quad (4)$$

In both cases, the slopes are obtained for y on x while holding the value of the moderator variables, *regqog* and *decentralization* respectively, constant at either a high value (mean + 1 standard deviation) or a low value (mean - 1 standard deviation) using the method of recentering. By looking at the chart, it arises that for regions with a high level of the quality of regional government the relationship between SFs expenditure and annual rate of GDP growth while the opposite holds for regions characterized by a low level of *regqog*. Similarly, in the case of decentralization, (figure 4b), regions with a high degree of decentralization show a positive correlation between SFs expenditure and annual rate of GDP growth while the contrary holds for low decentralized regions.

--- Figure 4 ---

Another way to explore the effects of the interaction terms is that of plotting the marginal effects. In figures 5a and 5b we plot the marginal effect of SFs expenditure on per capita GDP change depending on the level of *regqog* and the degree of *decentralization* respectively. These are obtained from the models reported in Table 4 column 3 for figure 5a, and column 6 for figure 5b. The two charts are very similar. In both cases the negative association between SF expenditure and GDP change arises as significant in the region below 0. However, what it is important is the positive slop, which implies that the marginal effect of SF expenditure on GDP growth depends on the level of *regqog* and *decentralization* respectively in a positive way. He higher the levels of *regqog* and *decentralization*, the higher the impact of SF expenditure and GDP change.

--- Figure 5 ---

## 5. Discussion and conclusions

The debate about the effectiveness of Structural Funds has recently received new emphasis and re-thinking about the whole strategy. This is not surprising if one considers that (i) Structural Funds expenditure has been growing to a considerable pace and at present it accounts for a remarkable share of the Community budget; (ii) the current economic crisis is exacerbating the national budgets; (iii) the strategy for the new programming period 2008-2014 is currently under development. Furthermore, there is the awareness that cohesion policy could have been more effective. Among the criticisms to the design of cohesion policy, a number of scholars argue that cohesion policy has been suffering from a placelessness and decontextualized approach over the last years (Tödtling and Trippel, 2005; Barca, 2009; Todtling, 2010). In particular, it is argued that one of the sources of policy failure in cohesion policy in the past has been the lack of involvement of local (regional) government in the governance of the policy. This went hand in hand with a debate in local development research which argues that regional development policy is dominated by a narrow concept of competitiveness which has led to the 'ubiquitification' of regional development strategies (Bristow, 2005, 2010).

The involvement of regional governments in the governance of cohesion policy has been discussed by political scientists at large. On the one hand, there are those arguing that regional governments play an important role in cohesion policy governance within interplay with the Commission and national governments. This goes under the label of multi-level governance. On the other hand, there are others stating that national governments are still the major responsible for the governance of cohesion policy. As already said, the programming period under scrutiny here – 2000-2006 – was defined by such scholars as a period of re-nationalization of cohesion policy.

We first tried to answer to a general question: do regional governments matter for the effectiveness of cohesion policy? In this way this paper seeks to contribute to two complementary streams of research. The first is that which investigates empirically, and quite systematically, the impact of SF expenditure on economic growth. The second is that exploring the role of regional governments in the governance of cohesion policy, in the realm of political science and by means of cases studies. Our first main result is that of showing that regional governments do matter for the effectiveness of cohesion policy.

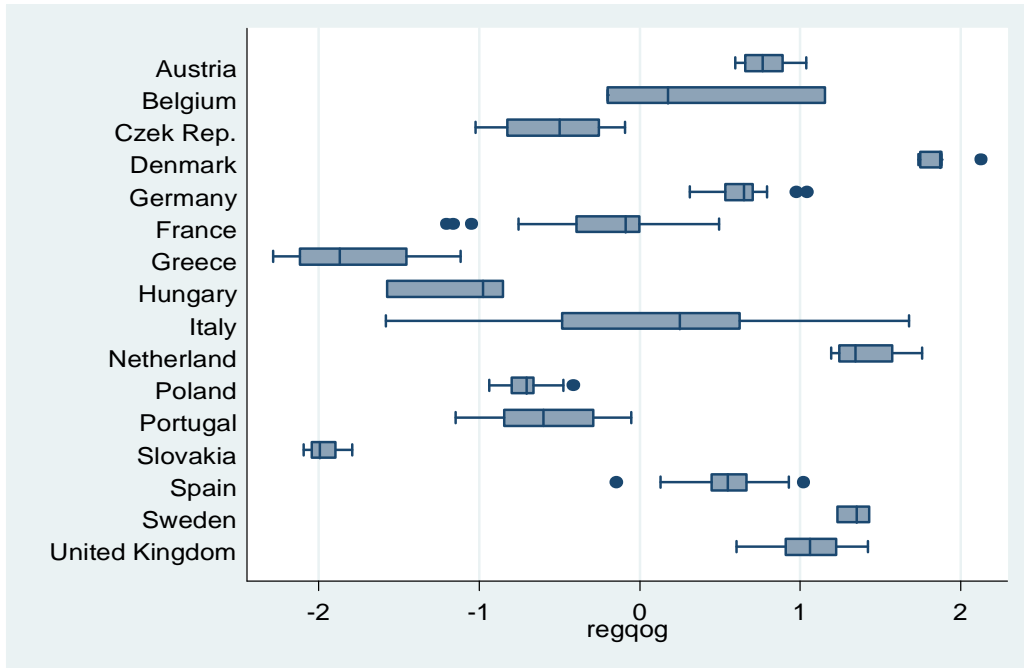
We were also interested in identifying those characteristics of regional government which actually matter. A natural candidate is the degree of political decentralization. In fact, EU Member states are characterized by a considerable variation of decentralization. In some cases, one can find variation in decentralization also within countries, such as for the cases of Spain or Italy. The second characteristic we take into consideration is the quality of regional government. While political decentralization falls within the realm of formal institutions, quality of government involved both formal and informal institutions. It has been shown that the performance of formal institutions, even (and in some cases more importantly) at the regional level, is affected by informal institutions which in turn have been shaped by culture and social capital over history within a path-dependent fashion (Putnam, 1993; North, 2005; Tabellini, 2010). The role of both formal and informal institutions for the governance of cohesion policy has been largely emphasized (Barca, 2009), but research on this is still scarce.

We find that both the quality of regional governments and the degree of political decentralization are two characteristics of regional governments which play a role in making SF expenditure cohesion policy more effective. In particular, the quality of regional government is considerably more important than decentralization. More precisely, we find a negative association between SF expenditure and GDP per capita growth in the period 2000-2008. Yet, when interacted with quality of government, and political decentralization, SFs expenditure is positively associated with GDP growth. We also show that, as far as the quality of regional government and the degree of decentralization improve the negative association between SFs expenditure and GDP change decreases significantly. It should also be noted that the negative association between SFs expenditure and GDP change holds only for objective 1 regions. Also the positive effects of regional quality of governments and decentralization is driven by objective 1 regions. This is not surprising considering that these regions are the main beneficiaries of SFs expenditure.

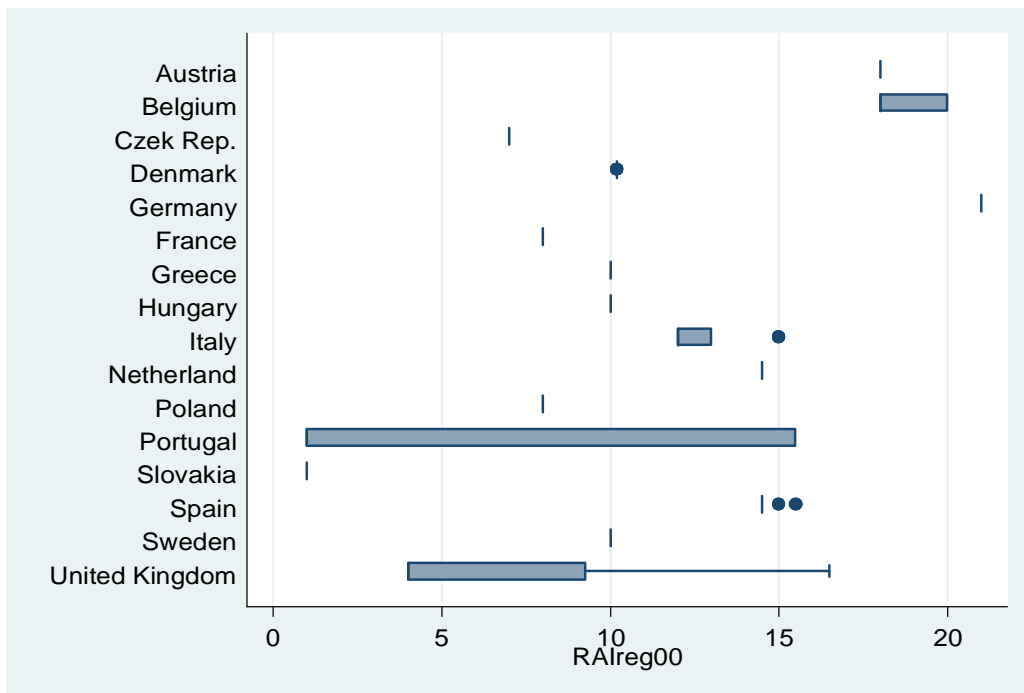
To what extent our results make the case for the place-based approach for cohesion policy? We are not able to say whether a source of failure of cohesion policy is the lack of attention to the specific economic, political, and social characteristics of a territory. We argue, in favor of the multi-level governance, that regional governments played an important role during the programming period 2000-2006 in making SF expenditure more effective. On the ground of our results, we are able to make three statements. First, regional governments involvement is not sufficient *per se* to make cohesion policy effective. This is well explained in Barca (2009), here he argues that regional institution can be ineffective and actually promote inefficiency bringing the territory to an inefficient lock-in which is not lessened from cohesion policy. Second, *conditionality*, here understood in terms of quality of regional government, is key to make cohesion policy effective. Importantly, it is not just a matter of *formal* institutions. Providing more power to regional government through increasing political decentralization by means of political reform cannot be sufficient. It is the actual *quality* of regional government which matters greatly for policy effectiveness. This leads to our last statement. Our results provide empirical support to the role played to institutional building (or institutional learning). It is claimed that the governance of cohesion policy should encourage processes of institutional learning which in turn make policies - not only cohesion policies - more effective and reduce the risk of policy failure. The very mechanisms which encourage, or impede, cohesion policy to encourage such processes should be more carefully understood.

## Tables and Figures for the text

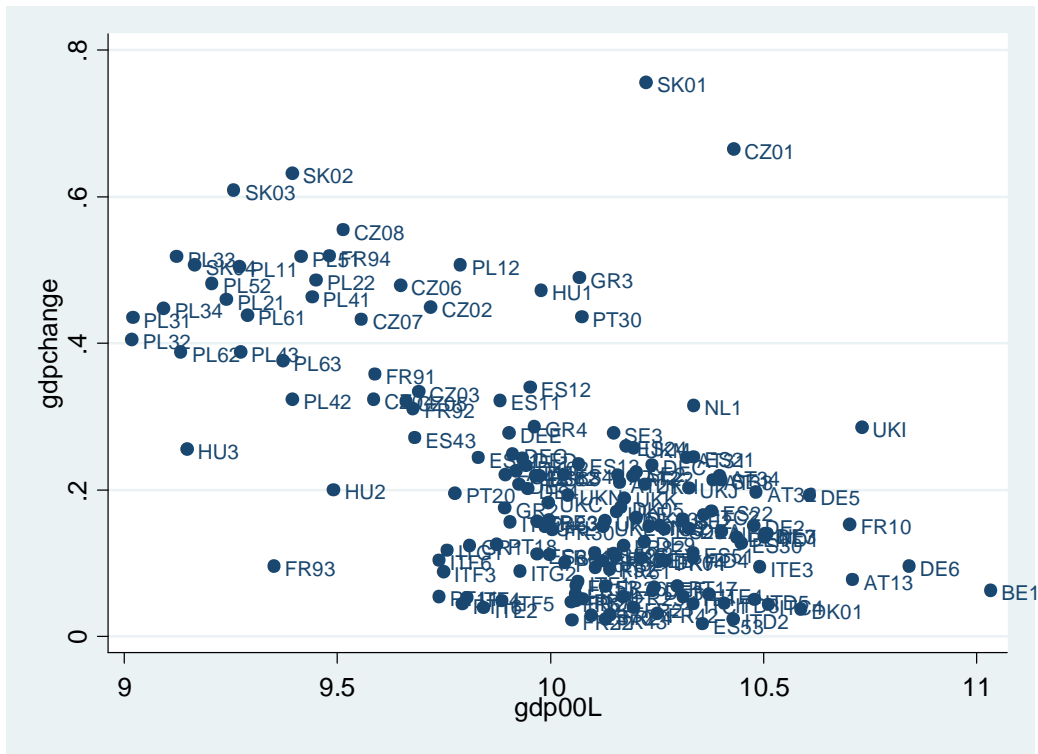
**Figure 1:** regional quality of governance and sub-national variation



**Figure 2:** degree of political decentralization and sub-national variation



**Figure 3:** convergence in European regions, 2000-2008



**Table 1:** beta-convergence in European regions, 2000-2008

gdp 2000	2.04***	0.79***
	-0.23	-0.21
national gdp change		2.11***
		-0.2
Constant	22.5***	2.91
	-2.31	-2.58
Observations	158	158
R-squared	0.334	0.608

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 2:** The impact of Structural Funds expenditure on gdp change (all sample)

Dependent variable: gdp per capita change (annual average) over the period 2000-2008

	(1)	(2)	(3)	(4)
gdp 2000	-2.26***	-2.26***	-2.12***	-0.86*
	-0.22	-0.22	-0.42	-0.47
SF expenditure	-0.32***	-0.32***	-0.34***	-0.097
	-0.098	-0.098	-0.11	-0.077
regional QoG			-0.19	0.024
			-0.22	-0.11
decentralization			0.019	-0.00083
			-0.032	-0.025
national gdp change	-0.17	-0.17	-0.21	-0.21**
	-0.12	-0.12	-0.13	-0.093
population (log)				2.08***
				-0.43
Constant	30.1***	30.1***	29.1***	6.49
	-3.34	-3.34	-3.6	-6.13
Observations	158	158	155	155
R-squared	0.413	0.413	0.427	0.636

Note: country cluster robust errors; \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

**Table 3:** The impact of Structural Funds expenditure on gdp change (two subsamples)

	advanced regions				lagging regions			
gdp 2000	-0.012	-0.012	-0.0092	0.33	-1.74***	-1.74***	-1.52***	-0.89*
	-0.71	-0.71	-0.82	-0.6	-0.34	-0.34	-0.5	-0.51
SF expenditure	-0.17	-0.17	-0.22	-0.066	-0.45***	-0.45***	-0.52***	-0.23**
	-0.16	-0.16	-0.23	-0.13	-0.1	-0.1	-0.12	-0.11
regional QoI			-0.21	0.1			-0.11	0.0094
			-0.42	-0.2			-0.18	-0.14
decentralization			-0.006	-0.031			0.028	0.018
			-0.026	-0.022			-0.024	-0.022
national gdp change				2.27***				1.63***
				-0.47				-0.34
population (log)	-0.22	-0.22	-0.26	-0.18	-0.15	-0.15	-0.27	-0.29**
	-0.15	-0.15	-0.2	-0.12	-0.13	-0.13	-0.17	-0.14
Constant	5.34	5.34	6.38	-6.67	26.8***	26.8***	26.3***	10.7*
	-9.42	-9.42	-11.3	-7.43	-2.94	-2.94	-4.19	-6.22
Observations	75	75	75	75	83	83	80	80
R-squared	0.047	0.047	0.066	0.454	0.498	0.498	0.511	0.623

Note: country cluster robust errors; \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.



**Table 4:** The impact of Structural Funds expenditure on gdp change with interaction variables (all sample)

Dependent variable: gdp per capita change (annual average) over the period 2000-2008

	(1)	(2)	(3)	(4)	(5)
gdp 2000	-1.80***	-1.86***	-2.08***	-1.77***	-1.66**
	-0.35	-0.54	-0.29	-0.54	-0.61
SF expenditure	-0.32***	-0.33***	-0.35***	-0.38***	-0.36***
	-0.068	-0.082	-0.069	-0.094	-0.078
regional QoI (regqog)	-0.2	-0.23		-0.28	-0.29
	-0.16	-0.21		-0.22	-0.21
SFexp.*regqog	0.23**	0.23*			0.15
	-0.09	-0.13			-0.12
Decentralization		0.016	0.004	0.017	0.015
		-0.033	-0.02	-0.029	-0.03
population (log)	-0.23**	-0.23*	-0.17*	-0.23*	-0.24**
	-0.099	-0.12	-0.093	-0.11	-0.11
SFexp.*decentralization			0.039***	0.045***	0.036***
			-0.012	-0.015	-0.011
Constant	21.9***	22.5***	24.3***	21.5***	20.5***
	-3.26	-4.93	-2.69	-4.88	-5.69
Observations	156	155	157	155	155
R-squared	0.461	0.464	0.458	0.481	0.496

Note: country cluster robust errors; \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

**Table 5a:** The impact of Structural Funds expenditure on gdp change with interaction variables (advanced and lagging regions)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				advanced regions			
gdp 2000	-0.95	-0.8	-0.68	0.017	0.017	-0.48	-0.48
	-1.05	-1	-0.78	-0.55	-0.7	-0.67	-0.81
SF expenditure	-0.63	-0.63*	-0.39	-0.21*	-0.21	-0.47**	-0.47*
	-0.38	-0.38	-0.27	-0.11	-0.14	-0.21	-0.25
regional Qol (regqog)	0.23	0.27	0.33			0.28*	0.28
	-0.31	-0.27	-0.23			-0.16	-0.2
SFexp.*regqog	0.60*	0.61	0.41			0.38	0.38
	-0.36	-0.37	-0.25			-0.23	-0.24
decentralization		-0.013	-0.035	0.017	0.017	0.012	0.012
		-0.026	-0.027	-0.024	-0.041	-0.021	-0.034
population (log)	-0.29	-0.29	-0.21	-0.18*	-0.18*	-0.21*	-0.21*
	-0.19	-0.19	-0.13	-0.098	-0.094	-0.11	-0.11
national gdp change			2.09***	2.17***	2.17**	2.09***	2.09***
			-0.65	-0.5	-0.7	-0.42	-0.64
SFexp.*decentralization				0.049***	0.049**	0.046***	0.046***
				-0.012	-0.018	-0.0095	-0.014
Constant	13.2	11.7	3.06	-4.37	-4.37	1.07	1.07
	-11.8	-11.1	-8.54	-6.12	-8.1	-7.3	-9.21
Observations	75	75	75	75	75	75	75
R-squared	0.139	0.142	0.472	0.529	0.529	0.557	0.557

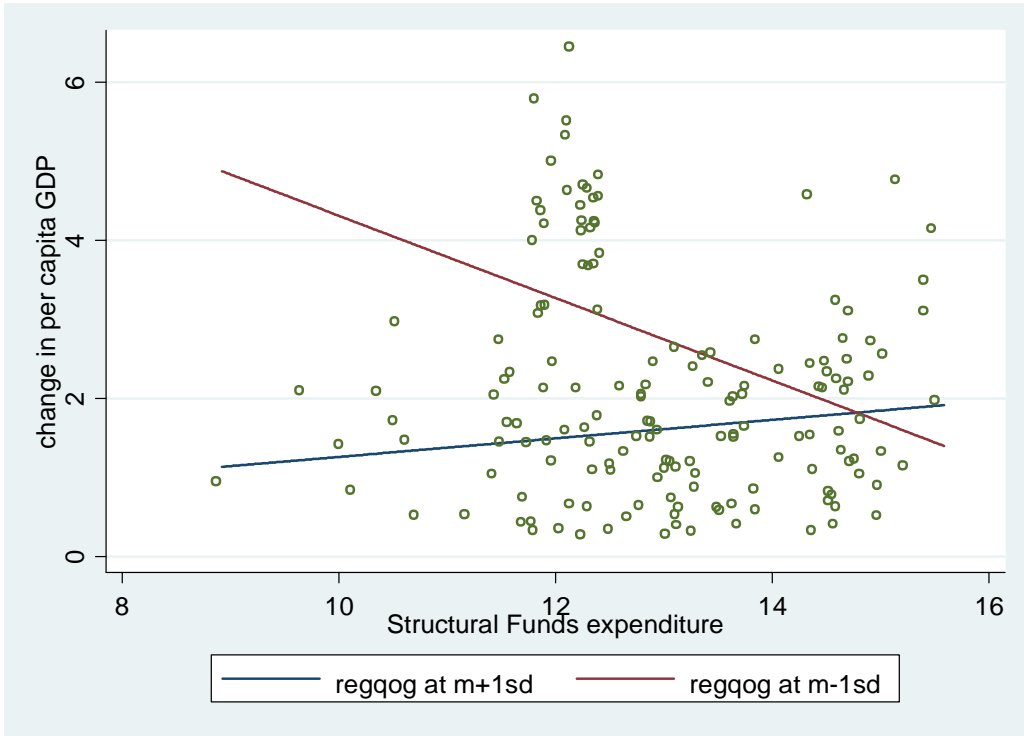
Note: country cluster robust errors; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 5b:** The impact of Structural Funds expenditure on gdp change with interaction variables

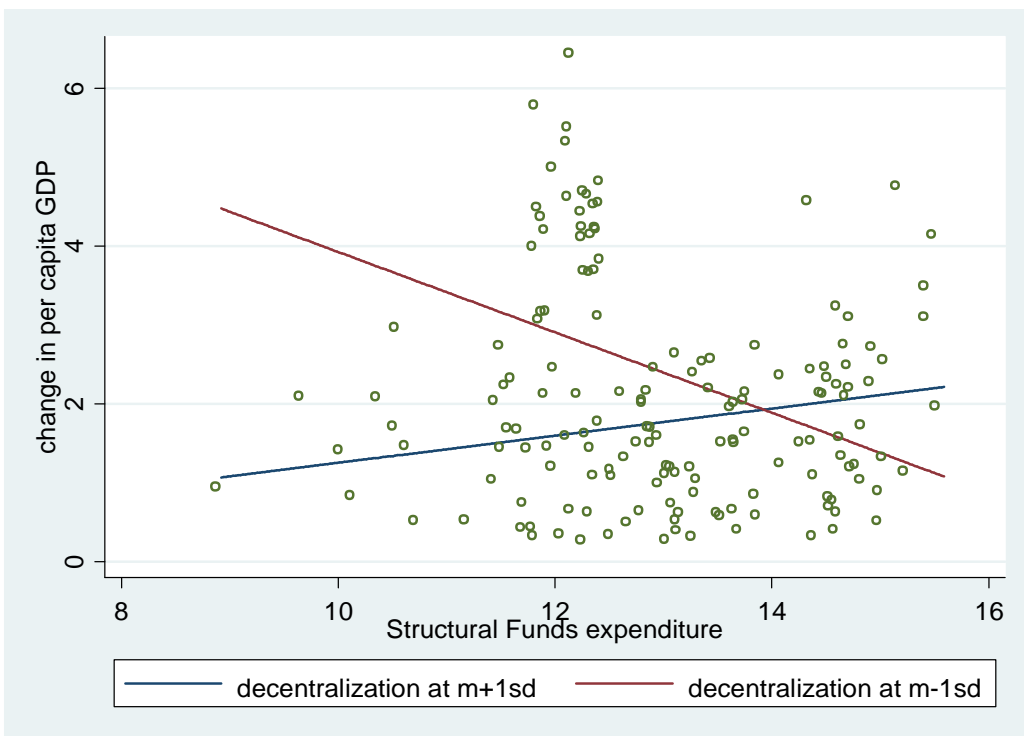
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	lagging regions						
gdp 2000	-1.01*	-0.97	-0.8	-1.40***	-0.96*	-1	-0.83
	-0.52	-0.56	-0.51	-0.42	-0.53	-0.59	-0.55
SF expenditure	-0.41***	-0.44***	-0.23*	-0.25	-0.1	-0.30**	-0.13
	-0.079	-0.14	-0.13	-0.15	-0.073	-0.13	-0.094
regional Qol (regqog)	-0.29*	-0.34	-0.058			-0.19	0.049
	-0.16	-0.22	-0.14			-0.18	-0.14
SFexp.*regqog	0.27***	0.26***	0.066			0.14	-0.027
	-0.084	-0.082	-0.069			-0.093	-0.08
decentralization		0.022	0.018	-0.096***	-0.067*	-0.064*	-0.055**
		-0.043	-0.04	-0.031	-0.033	-0.032	-0.025
population (log)	-0.27*	-0.29*	-0.29*	-0.099	-0.086	-0.23	-0.24**
	-0.15	-0.16	-0.14	-0.14	-0.13	-0.13	-0.1
national gdp change			1.50***		1.19**		1.40***
			-0.32		-0.45		-0.38
SFexp.*decentralization				0.088***	0.063**	0.068**	0.058**
				-0.022	-0.028	-0.025	-0.023
Constant	14.7***	14.6**	7.53	17.0***	8.37	14.1**	7.57
	-5.08	-5.16	-5.31	-3.82	-6.04	-5.56	-5.66
Observations	81	80	80	82	82	80	80
R-squared	0.55	0.554	0.625	0.573	0.63	0.588	0.649

Note: country cluster robust errors; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

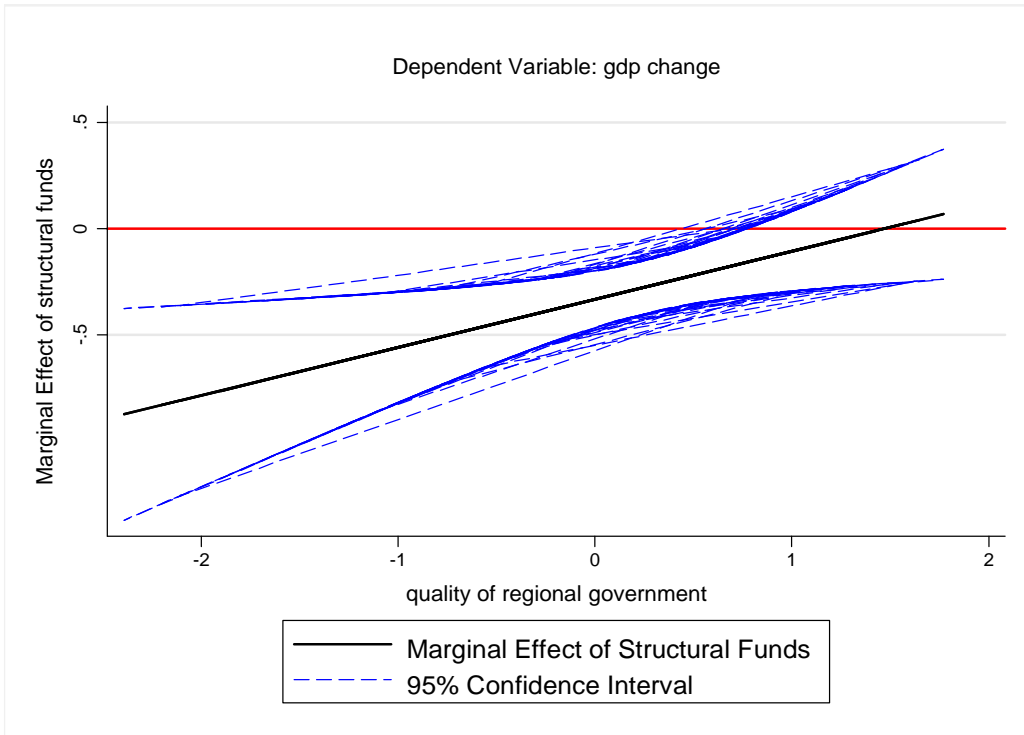
**Figure 4a:** impact of SF expenditure depending on the quality of regional government



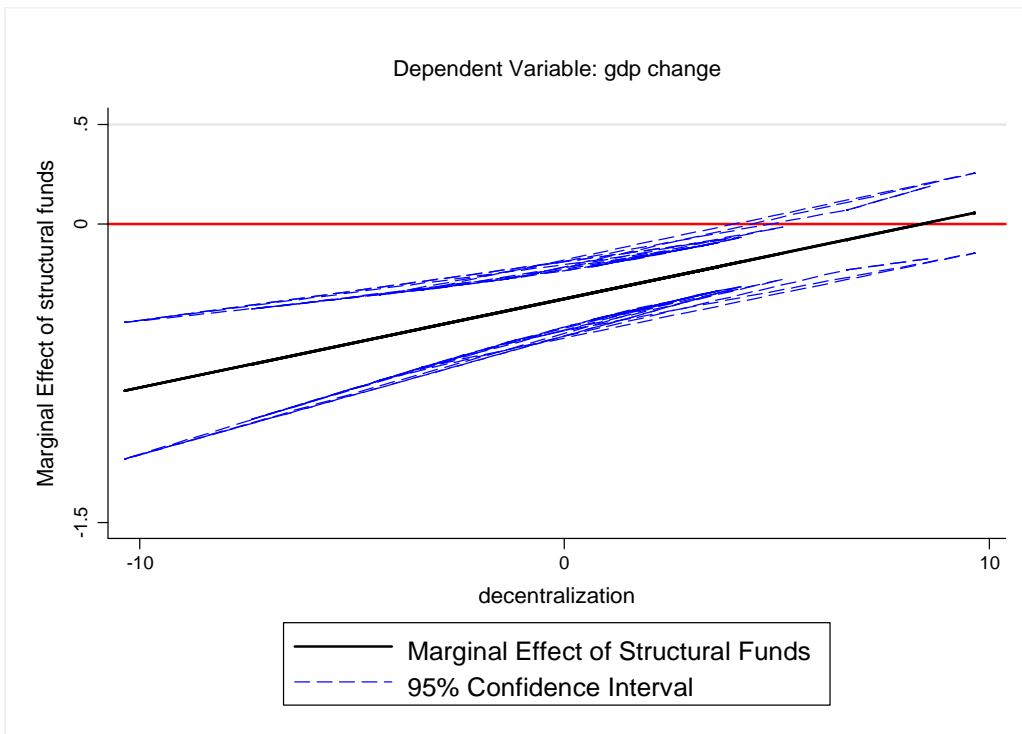
**Figure 4b:** impact of SF expenditure depending on the degree of political decentralization



**Figure 5a:** Marginal Effect of SF on GDP change as QoG Changes



**Figure 5b:** Marginal Effect of Structural Funds as decentralization changes



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## Appendix

**Table 1A:** pairwise correlation of the variables

		1	2	3	4	5	6	7
gdp change per capita	1	1						
gdp 2000 (log)	2	-0.5778	1					
SF expenditure per capita (log)	3	-0.0976	-0.259	1				
regqog	4	-0.379	0.5834	-0.2153	1			
decentralization	5	-0.2409	0.4181	0.0058	0.4586	1		
population 2000 (log)	6	-0.1064	0.1352	-0.3389	0.0611	-0.0091	1	
gdp change per capita (national)	7	0.7572	-0.5582	-0.1581	-0.4206	-0.2154	-0.0158	1