Growth-Enhancing Expenditure in EU Cohesion Spending from 2007 to 2013

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1 Introduction

Measured by its share, Cohesion Policy[1] is the second most important spending category in the budget of the European Union (EU). Altogether, its three main funds, namely the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund (CF), account for approximately 38% of the EU budget in the current programming period 2007 – 2013 (based on the most recent adjustment of the financial framework: European Commission, 2011). One of the central objectives of EU Cohesion Policy is to offset economic, social and territorial disparities across Member States (Art. 174 TFEU).

Even though substantial resources are continuously being invested to achieve this goal, success cannot be taken for granted. The European debt crisis, in particular, has challenged the view that EU Cohesion Policy is an outright success and that it has indeed stimulated sustainable growth in recipient regions. Countries which have been major beneficiaries over decades are now in the centre of the crisis and suffer from severe shortcomings with respect to their competitiveness and growth potential. This fact is embarrassing and points to a substantial challenge for this policy field and the necessity for a careful evaluation and reorientation of regional spending.

Even before the recent crisis, academic research has been much less enthusiastic with respect to the long-run growth effects of regional spending as econometric studies provided mixed results compared to official EU documents. Yet, refined econometric methods point to a conditional effect: regions and countries with efficient institutions are more likely to benefit compared to those with poor administration or further institutional weaknesses (Hagen and Mohl, 2010; Heinemann et al., 2010).

This study approaches the evaluation of regional spending from a new perspective which is complementary to existing ones. It develops a classification which aims at identifying the investment share of regional expenditure and its contribution to long-run growth. This approach is well justified from insights on the long-run growth effects of public spending. Evidence from recent academic research suggests that the level and the composition of public spending indeed affects long-run growth, but also shows that the growth effects of different public spending categories differ significantly (Adam and Bevan, 2005; López and Miller, 2007; Deroose and Kastrop, 2008; Hong and Ahmed, 2009).

[1] Please note that we use the terms 'Cohesion Policy' and 'Regional Policy' synonymously.

In order to come up with a sensible definition of the investment share, we make use of the fact that it would be misleading to equate capital expenditure with growth-enhancing expenditure. The reason is that public spending classified as capital expenditure according to government accounting rules is neither a necessary nor a sufficient condition for its growth impact. For instance, spending on research and development or human capital cannot be classified as capital expenditure but exhibits a significant impact on growth. And, vice versa, not all types of capital expenditure qualify as unambiguously growth-enhancing (e.g. leisure facilities). Therefore, instead of solely identifying the share of capital investment, we additionally developed a classification which assigns projects to different categories ranging from 'no significant' up to 'large' growth effects.

Beyond doubt, the development and implementation of such a classification is accompanied by significant challenges. Even though we base our classification on insights from the empirical growth literature, an element of arbitrariness with respect to specific classification decisions is unavoidable. In order to account for this fact we distinguish between an 'optimistic' and a 'pessimistic' scenario. The 'optimistic' scenario is more generous in acknowledging growth effects of different spending categories compared to the more restrictive 'pessimistic' scenario. Thus, we are able to indicate a range which makes the substantial margin of interpretation of our results transparent. In spite of its limitations, this approach provides new insights as we are unaware of any other evaluation of growth effects from EU Cohesion Policy with a similar methodology and scope.

A further difficulty is given by the fact that EU Cohesion Policy funds a plethora of different types of projects in different areas with different types of beneficiaries. This is further aggravated by the circumstance that project information is poor and lacks a common standard. The EU provides inter alia aggregate spending data by thematic area and only limited information on the capital content. Therefore, this aggregate-level data is not sufficient for our purposes, given the considerable heterogeneity of projects within one thematic area and the possibility that the thematic labelling of projects is driven by non-economic considerations or is not done in a rigorous way. Hence, we make use of detailed project lists from several regions as our central data source. In particular, we exploit lists of beneficiaries which regional managing authorities are obliged to make publicly accessible and that contain some (but limited) information about the content and the size of the projects funded. We have been able to code almost 3,600 projects from these lists according to pre-specified criteria during the very short time-span of this project. We do not claim that our project sample is representative. However, we included very heterogeneous regions and countries with respect to wealth and regional policy instruments into our

sample. Thus, we are confident that the results are indicative for the state of EU Cohesion Policy in general.

Our main results are as follows: there is considerable heterogeneity across regions. For instance the public investment share is surprisingly low in multiple regions with values well below 50%. With respect to the share of growth-enhancing spending, we find that the share of spending without growth effects amounts to up to 63% under the pessimistic scenario.

Of course, the limited data base implies that our results are preliminary. Nevertheless, even these preliminary results clearly indicate that EU cohesion spending is by no means fully concentrated on projects which are clearly beneficial for long-run growth. Hence, it cannot be taken for granted that every euro spent on cohesion is an investment into long-run growth. Consequently, our results have a clear message for the negotiations on the level of cohesion spending in the financial framework 2014-2020: there are significant shares of current cohesion spending which lack growth relevance. Thus, even if growth-enhancing expenditure shares are fully exempt from budgetary cuts there is still leeway to cut back cohesion spending from its current levels.

We proceed as follows. Section 2 provides an overview of the theoretical background and describes the dimensions by which we classify individual projects to assess whether they can be expected to have long-run growth effects or not. Section 3 provides a brief overview of the objectives and allocation of funds of EU Cohesion Policy. Section 4 describes which data sources exist as well as their shortcomings. An insight from our research is that publicly available data and information on EU regional spending is very often not transparent and incomplete, although we find substantial differences across regions. Section 5 applies the criteria developed in section 2 to the project-level data and thereby classifies them by their expected growth effects. We then present the share of growth-enhancing expenditure by selected regions. Section 6 concludes.

2 Conceptual framework

2.1 Theoretical background

It is widely believed that public expenditure is central to growth, notably through the delivery of critical public services. In order to assess the growth effects of public spending, various policy parameters may be evaluated: a) the composition of public spending, b) the type of beneficiaries, c) the level of technical efficiency, and d) the 'cost' of public spending.

Before we review these factors in greater detail, it is important to note that any long-run effects which may arise are distinct from any short-run ("Keynesian") demand-side effects that trigger short-run growth effects only. These short-run effects should not play a role in shaping the future EU budget: the experience from the deep recession in 2009 has shown that coordinated national countercyclical instruments are feasible and effective. Thus, the EU budget should keep its focus on the stimulation of the long-run growth potential.

It is also important to recognize that irrespective of any long-run growth effects, public spending entails costs as it is ultimately tax-financed. This becomes evident if one accounts for the fact that government debt has to be repaid and that EU Member States' contributions come from the normal central governments' budgets. Any assumed benefits of public spending in terms of growth effects therefore have to outweigh these costs which include both the financial outlays and the distortionary effects of taxation. This implies that projects that appear to enhance growth might have negative 'net' growth effects, if one accounts for the distortionary effects of taxes.

The growth effects of different types of public spending vary significantly (Devarajan, Swaroop and Zou, 1996; Adam and Bevan, 2005; López and Miller, 2007; Hong and Ahmed, 2009). While some types may not have any growth effects, other types of public spending have significant growth effects that exceed the tax-related costs. Identifying these public spending categories is crucial. To this end, policy analysis traditionally distinguishes capital and current government spending to predict the growth effects of public spending. Underlying this categorization is the belief that capital spending leads to the accumulation of public capital and thereby to higher economic growth, whereas current or consumptive spending affects, at best, welfare while being growth-neutral in the long-run, or in a more pessimistic scenario, does not even affect welfare.

However, this view is being increasingly questioned by economic research and the literature on the 'quality of public finances' (Deroose and Kastrop, 2008). In models of growth and public finance, the growth effects of public spending depend on whether the particular types of public

spending affect the productivity of labour and private capital, and on the magnitude of these effects. In other words, whether public spending results in the accumulation of public capital is less relevant. Rather, through affecting private productivity, certain types of public spending potentially raise the returns to public investment and thereby the rate of private capital accumulation. It is the latter transmission channel which is essential to understand the effects of public spending on growth. The increase in overall capital through private investment, rather than any increase in public capital, is important.

We use the term 'growth-enhancing' expenditure to refer to these types of public spending categories. Growth-enhancing public spending is often labelled as 'productive' in the empirical literature. By contrast, public investment or capital spending refers to spending that increases the stock of physical public capital of a country, where this refers to all types of public buildings, equipment and machinery, road infrastructure, and all types of other physical structures. Although it could be hoped that in practice capital spending would be dominated by productive elements, both the distinction between capital and current expenditure as well as the composition of capital spending itself do not correspond to clear or common classification criteria and are often not reliable. Current expenditure including for instance wages do not necessarily have to be unproductive because they may complement productive expenditure including for instance road maintenance, or because they fund public services which also affect private sector productivity. Wages of teachers are one example of a type of current expenditure which funds productive public services.

There are likewise those public spending categories that are not expected to affect private productivity, and, taken by themselves, are therefore growth-neutral which implies that combined with the cost of financing, growth effects of these public spending categories are likely to become negative. In practice, differentiating growth-enhancing public spending types from growth-neutral expenditures is often complex. Depending on the public spending categories included and in analogy to above, growth-neutral public spending is labelled as 'unproductive'.

However, unproductive public spending may still fulfil important roles from a welfare point of view. Yet, assessed more critically, these budgetary items may imply hidden subsidies for the benefit of influential interest groups. In any case, for a budgetary policy focussed on long-run growth these spending items should be identified and critically evaluated.

2.2 Evaluation of the growth effects at the project level

Based on key insights from the theoretical and empirical literature (cited above), we classify projects along various dimensions. Taken together, these dimensions allow us to assign qualitative growth effects to each case, where we distinguish 'large' growth effects, 'moderate' growth effects, and 'no' growth effect. In the latter case, the project should not be funded from a growth perspective, given the cost of financing, but in the former cases, we predict that positive 'net' growth effects occur. While ideally the exact magnitude of the growth effects should be estimated, in practice this is not feasible in this context.

a) Sectoral composition of public spending

The sectoral composition of public spending has been shown to be a central determinant of the long-run growth rate of the economy. Based on the findings of the theoretical and empirical literature, it can broadly be assumed that public spending on education, research, health, transport, and communication is critical for growth (see for instance Kneller, Bleaney and Gemmell, 1999). We further assume that spending on energy networks and generation, water supply schemes and sewage may indirectly affect private sector productivity. We therefore assume that they have moderate growth effects. For instance, water-related projects may indirectly enhance health, but are not health sector projects with plausibly more direct effects. To control for such differences in growth effects, we classify projects along 27 subsectors that we chose for the purpose of this project. Table 1 provides a summarized overview with more aggregated sectors which comprise multiple subsectors. For instance, while we distinguish between education and training related projects for the subsectoral classification, the corresponding sectoral classification incorporates both aspects.

Table 1: Sectoral classification of projects

Sectoral classification	Included subsectors
education	education and training
health	health
transport	transport infrastructure
environment	water supply; sewage; waste treatment; flood protection and other measures for disaster prevention
research & development	research and development
safety	law enforcement and crime prevention
communication	communication infrastructure
energy	energy

tourism and culture	tourism-specific infrastructure; refurbishment and renovation of cultural sights and monuments
urban development	public amenities in non-tourist areas; amenities for children and youth
structural funds management and governance	technical assistance
business support	access to finance for firms; management and organisational consulting; support of start-ups; purchase and refurbishment of machinery, equipment and buildings; trade promotion; setting up of business parks
public administration	equipment and buildings for general public administration; consulting for public administration
social inclusion and jobs	social inclusion; job matching
territorial development strategies	local or regional development strategies
other	

Source: own representation

b) Spending on public services versus private goods

Public services entail non-rival and non-excludable public goods and are therefore not provided efficiently by private markets. The provision of such public services is the primary rationale for government spending. By contrast, it is commonly assumed that government provision of private goods which the markets could provide as well is inefficient and crowds out private sector activity. We therefore assume that public spending on private services tends not to promote long-run growth, but make some exceptions to this rule which account for the possibility of market failure (such as access to funds and loans provided to high-tech firms which use these funds to finance their research). López and Miller (2007) present evidence along these lines.

c) Type of beneficiary

Public spending may have different beneficiaries (i.e. those entities which receive the funds from the managing authority). On the one hand, the beneficiary may be a public entity. On the other, the beneficiary may be a private organization. This categorization is often congruent with the distinction of spending on public services and on private goods. Payments to private entities tend to fund private goods and are more likely to represent wasteful subsidies, and payments to public entities mainly fund public services where chances are generally higher that positive long-run growth effects occur. However, there are exceptions. For instance, public entities may provide private goods and therefore crowd-out private suppliers; even if these private goods are

desirable from a growth perspective, in most cases, long-run growth effects may not occur. At the same time, subsidies to firms operating in research intensive industries may entail technological spillovers so that growth effects could occur. Non-profit organizations often provide public services implying that supporting them may also involve growth effects depending on the contents of the project.

We therefore distinguish four different types of beneficiaries: public beneficiaries, private low-tech firms, private high-tech firms and non-profit organizations. The definition of high-tech firms comes from Gehrke et al. (2010).

d) Technical efficiency

The technical efficiency, i.e. the extent to which public spending actually translates into public services, such as teachers offering quality education in school, and public infrastructure such as roads constructed at an optimal cost/output ratio, matters. If efficiency is low, then even public spending which in principle is well suited to enhance private productivity fails to affect long-run growth. Unfortunately, our data is not sufficient to evaluate these aspects, such as whether goods and services purchased using funds from EU Cohesion Policy were overpriced or not.

However, the Court of Auditors (2010) notes that a large number of payments to projects from the ERDF, ESF and CF were affected by inaccuracies based on 180 randomly selected projects audited in the current programming period. 36% of the transactions carried out in relation to these projects were found to be affected by errors such as the reimbursement of non-eligible costs, the over-declaration of costs, unlawful use of award criteria as well as serious failures with respect to public procurement rules. With respect to all funded projects, the Court estimates that the share of transactions to projects affected by errors is considerably above 5%. Therefore, the Court of Auditors recommends that the Commission conducts frequent evaluations to ensure an acceptable quality, reliability and accuracy of data published by Member States (Court of Auditors, 2012).

The combination of information about the subsectoral classification of projects (27 different subsectors), the beneficiary type (4 different types) and the good type (public service or private good – 2 cases) results in 216 different cases. Table 2 provides an indicative overview of growth effects by sector which results from the preceding reasoning. We further compute two distinct scenarios, an 'optimistic' and a 'pessimistic' one. The optimistic scenario is very generous in acknowledging moderate or even large growth effects whereas the pessimistic scenario is more restrictive. The employment of two scenarios allows taking into account inaccuracies due to an imprecise classification, to the margin of subjective interpretation and to difficulties due to the

poor state of project data (see below). A detailed table that includes the growth effects under both scenarios in all 216 cases can be found in a separate Appendix.

Table 2: Evaluating the growth effects of projects

Sectoral classification	**Growth effects (optimistic scenario)**	**Growth effects (pessimistic scenario)**
education	all large	mostly large; none for training related projects with low-tech firms as beneficiary
health	all large	all moderate
transport	mostly large; none for transport related projects with low-tech firms as beneficiary	mostly large; none for transport related projects with low-tech firms as beneficiary
environment	all moderate	mostly moderate; none for environment related projects with low-tech firms as beneficiary
research & development	all large	mostly large; none for research and development related projects with low-tech firms as beneficiary
safety	all large	mostly large; none for safety related projects with low-tech firms as beneficiary
communication	all large	mostly large; none for safety related projects with low-tech firms as beneficiary
energy	all large	mostly moderate; none for energy related projects with low-tech firms as beneficiary; large for energy related projects with high-tech firms as beneficiary
tourism and culture	all moderate	all none
urban development	all moderate	all none
structural funds management and governance	all none	all none

business support	mostly moderate; none for finance, consulting, equipment or trade promotion related projects with low-tech firms as beneficiary; none for marketing or start-up related projects with non-profit organization as beneficiary	mostly none; moderate for start-up related projects with public or high-tech firms as beneficiary; moderate for business park related projects with public, non-profit organization or high-tech firms as beneficiary
public administration	all moderate	mostly none; moderate for consulting or equipment related projects
social inclusion and jobs	all moderate	mostly none; moderate for job matching related projects with public beneficiaries
territorial development strategies	all moderate	all none
other	not applicable	not applicable

Source: own representation

2.3 Evaluation of the public investment share at the project level

We also calculate a more traditional measure for the investment share of regional spending which focuses on the formation of capital goods. Specifically, we consider whether the project includes a significant share of public investment, i.e. whether at least parts of the project funding are used for public investment. We define public investment as spending that results in a higher stock of public physical capital which we refer to as roads, other types of public physical infrastructure, publically owned buildings and publically owned equipment. We exclude all privately owned equipment, even if this contributes to the delivery of public services, such as privately owned garbage collection vehicles. Projects that consist entirely of current spending which results in a higher stock of human capital accumulation or of subsidies to private sector firms aimed at increasing the stock of private capital do not have a public investment component under this definition. Of course, public capital accumulation mostly only results from projects where the beneficiary is a public entity.

3 The objectives and funds of EU Cohesion Policy

3.1 The objectives of EU Cohesion Policy

The financial framework 2007 - 2013 allocates € 348 billion to cohesion spending, which is the second largest item of expenditure in the EU budget (European Commission, 2011).

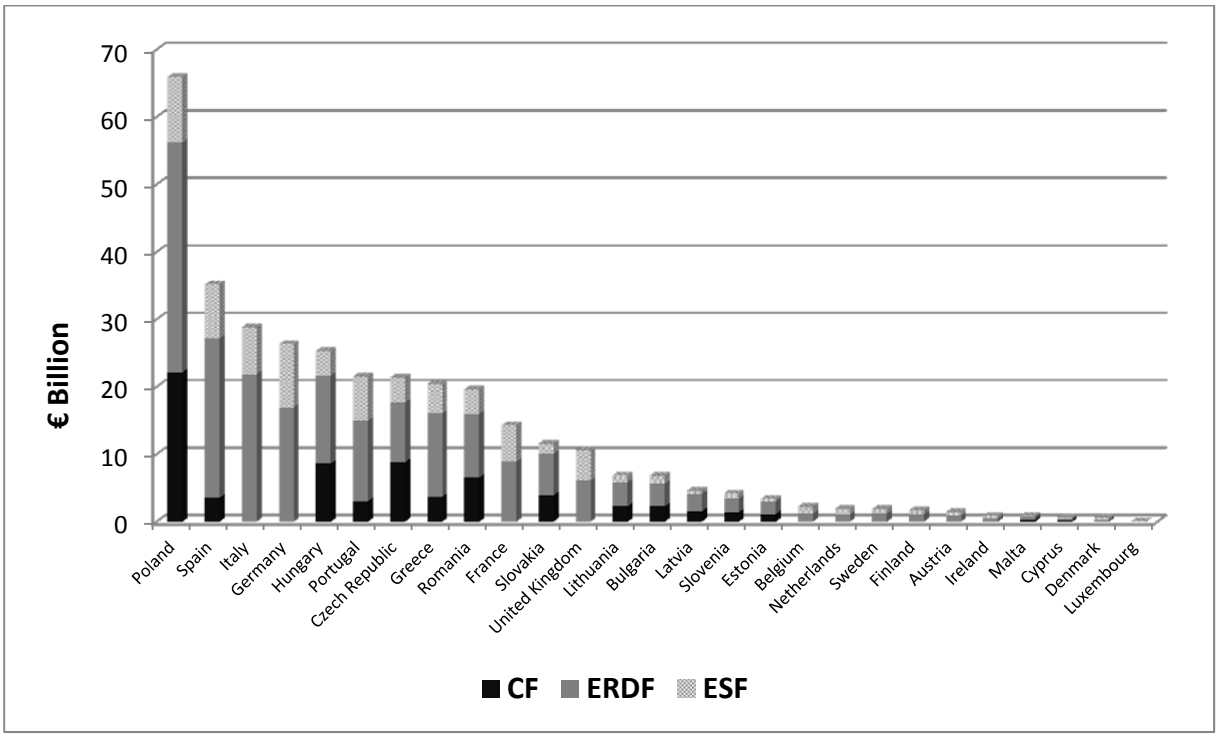
EU Cohesion Policy has three key objectives that are financed by its three main funds:

- **'Convergence'** - this objective targets the least developed regions in Member States whose per capita GDP is less than 75% of the EU average. Its primary aim is to support these regions in catching up with the EU average by improving conditions for growth as well as employment and thereby reducing economic disparities within the Union. This objective is being financed by all three funds, namely the Cohesion Fund, the European Social Fund, and the European Regional Development Fund. Expressed in shares of total regional policy spending, 81.5% of the resources are allocated to this objective.
- **'Regional Competitiveness and Employment'** - this objective aims at strengthening the competitiveness, employment and attractiveness of all regions and is financed by the ESF as well as the ERDF. Funds allocated to this objective amount to 16% of overall regional policy spending.
- **'European Territorial Cooperation'** - strengthening of cross-border, transnational and inter-regional cooperation is the goal of this objective. It is exclusively financed by the ERDF and accounts for 2.5% of total regional policy spending.

3.2 The funds of EU Cohesion Policy

With respect to the relative size of the three main funds, the ERDF exhibits the largest share in cohesion spending. It accounts for 57.1% of all resources for Cohesion Policy, followed by the ESF (22.4%), and the CF (20.5%). The CF is only eligible for Member States whose gross national income (GNI) per capita is less than 90% of the EU average, whereas the two Structural Funds (ESF and ERDF) are both eligible for all Member States and regions. The allocation of resources from the three funds to Member States can be seen in Figure 1.

Figure 1: Allocation of funds (commitments) from EU Cohesion Policy in the current programming period (2007-2013)



Source: European Commission - DG Regio (http://ec.europa.eu/regional_policy/thefunds/funding/index_en.cfm), own calculations

4 Data

4.1 Overview of data sources

In principle, multiple data sources are available for the purpose of this study. However, their quality and usefulness vary significantly as our classification approach requires detailed information on the specific character of spending. Documents related to the adopted **EU Budget** published for every calendar year provide only aggregate data. In addition and with respect to the ERDF, these documents solely distinguish the three main objectives of the fund, namely *Convergence*, *Regional Competitiveness and Employment* as well as *European territorial cooperation*. Yet, such a classification does not allow examining the growth effects and the public investment

share of spending under EU Cohesion Policy as the level of disaggregation is too low. In principle, the same holds true for data from the **fiscal framework** as well as annual **financial reports**.

Budgetary figures and **fact sheets**[2] for Member States provided by DG Regio at the European Commission may serve as a further potential source. While these fact sheets allow distinguishing between amounts allocated to every Member State from relevant funds, they also lack further information which is necessary to identify the share of growth enhancing long-run investments. DG Regio also provides a thematic disaggregation of regional spending by country. However, this classification is not useful from a growth perspective, as the growth effects by category are in some cases ambiguous, or the content in terms of projects is unclear. The sectors according to this classification include:

- Research and technological development (R&TD), innovation and entrepreneurship
- Information society
- Transport
- Energy
- Environmental protection and risk prevention
- Tourism
- Culture
- Urban and rural regeneration
- Increasing the adaptability of workers and firms, enterprises and entrepreneurs
- Improving access to employment and sustainability
- Improving the social inclusion of less-favoured persons
- Improving human capital
- Investment in social infrastructure
- Mobilisation for reforms in the fields of employment and inclusion
- Strengthening institutional capacity at national, regional and local level
- Reduction of additional costs hindering the outermost regions development
- Technical assistance

For instance, spending on research and development is likely to have growth effects which differ from the ones of spending on entrepreneurship which may also include support for firms in low-tech or non-tradable sectors. We therefore chose not to use this classification and data. In con-

[2] http://ec.europa.eu/regional_policy/information/brochures/index_en.cfm#8

trast, our classification allows for a more precise identification of growth effects as it exhibits a clearer subdivision of sectors.

DG Regio also administers a **project database**[3] with detailed information on around 450 projects from the current programming period which we refer to as 'EU project databse'. However, this database has several limitations. For instance, it does not contain all funded projects for every Member State and limits itself to major projects only with EU funding mainly worth over € 1 million. We cannot rule out that showcase projects with potentially large growth effects are over-represented whereas less impressive projects are left out purposely, and that the list of projects included is not representative at all, neither by theme, region nor fund. Nevertheless, we also evaluate the growth effects of the projects included in this database as a cross-check.

For the purpose of this project, the best suited data source is therefore the **list of beneficiaries.** As responsible authorities for the allocation of funds, regional authorities are obliged to publish lists of beneficiaries containing information on recipients as well as a project description. Depending on the region, these lists contain up to several thousand projects for the current programming period funded by the ERDF, ESF and CF, and information on each project. Unfortunately, this source has limitations as well. First and foremost, the project-level information is not standardized. It differs significantly not only when compared between countries but also within regions of the same country. The reason is that DG Regio apparently does not provide a unified template with unified criteria and quality standards to compile these lists. For instance, in some cases, the project description simply corresponds to the title of the project, whereas in others, detailed project descriptions are included. In other cases, only the name of the beneficiary is included, but other information about the project is missing. Accessibility also differs as lists are mostly published in the local language and often not in spread sheet format which is required for processing. Nevertheless, we decided to use this source for the purpose of this study because it is the best one available. Lists of beneficiaries are compiled and provided decentrally by regional authorities, but can be accessed via the website of DG Regio which provides links to responsible authorities through a map of regions[4]. Table 3 provides an overview of all data sources considered for this study and summarizes their quality.

[3] http://ec.europa.eu/regional_policy/projects/stories/index_en.cfm

[4] http://ec.europa.eu/regional_policy/country/commu/beneficiaries/index_en.htm

Table 3: Overview of potential data sources and their quality

	Data differentiated by:				
	Funds	Member States	Projects	Project details	Completeness
Budget	yes	no	no	no	no
Fiscal framework	partly	no	no	no	no
Financial report	partly	yes	no	no	no
EU project database	yes	yes	yes	yes	no
List of beneficiaries	partly	yes	yes	yes	yes

Source: own representation

4.2 Selection of regions

Given the quality of data sources as well as time and capacity constraints, a full coverage of projects was not an option. Instead, we chose a sample of regions and projects for our analysis. Overall, we were able to cover 3,600 projects from the financial framework 2007-2013 and categorised them according to our classification. The choice was guided by the need to cover a wide range of characteristics: both wealthy and poor regions, regions from large and small countries as well as regions from both old and new Member States.

Apart from that, further constraints had an impact on the choice of regions: On the one hand, we tended to select small regions with fewer projects due to time restrictions. On the other hand, given limits in the accessibility of lists of beneficiaries in terms of language but also data storage format, and given that some lists are incomplete, we tended to choose those regions that fitted the language skills of the project team and where information was seen as sufficient for a sensible analysis. A further limitation was given by the differing timeliness of lists of beneficiaries and the fact that selected regions consequently differ in their absorption rate of EU regional funds at the time of our analysis. This implies that our calculations are based on actual spending until the time of our analysis which may be different from budgeted or committed spending over the full current financial framework.

In order to reduce biases, our primary aim was always to carry out a complete analysis of a specific region. Therefore, we refrained from limiting ourselves to large projects in order to extend our regional coverage as we believe that this would implicate a larger bias. The only exception in this regard is Slovakia. As the list of beneficiaries for Slovakia lacked a differentiation by region as

well as fund and was only available for the country as a whole, we conducted the analysis without a focus on a specific region in Slovakia. Further, due to the large number of projects (about 6,700), we were forced to choose the 196 largest projects that cover 50% of total regional policy spending in Slovakia (based on actual spending).

In addition, we included all projects covered by the DG Regio's project database introduced in section 4.1 to our analysis. While this source also limits itself to large projects only, it comprises projects from all Member States. Yet, as the coverage of projects for Member States within the database varies considerably, we chose to report the results only for the database as a whole and not distinguished by country. Against this background, our analysis includes the following countries and regions summarized in Table 4.

Table 4: Overview of regions chosen

Country	Region	Population (in thousands)	GDP per capita regional / GPD per capita EU (in %; 2009; PPS[5])	EU regional spending per capita (in € per Person; annual average, 2007-2013)	EU financing share of total project volume - mean over all projects of each region (in %; 2007-2013)	Covered funds	Number of analysed projects	Share of covered volume in total committed regional policy spending in each country (in %; 2007-2013)	Share of covered volume in total committed regional policy spending of EU 27 at large (in %; 2007-2013)
EU Project Database	EU Project Database	499,687	100.00	97.04	64.14	ERDF/ESF/CF	452	--	7.77
France	Lower Normandy	1,471	84.10	11.39	28.31	ERDF	603	0.82	0.03
Germany	Bavaria	12,510	133.69	9.19	62.24	ERDF	1025	3.06	0.24
Germany	Bremen	662	159.40	41.09	62.24	ERDF	569	0.72	0.06
Italy	Molise	321	83.82	13.29	36.76	ERDF	263	0.10	0.01
Malta	all	414	82.24	181.87	85.00	ERDF/ESF/CF	85	61.56	0.16
Portugal	Algarve	430	84.91	20.13	63.23	CF	24	0.28	0.02
Slovakia	all	5,412	72.44	76.81	41.51	ERDF/ESF/CF	196	25.11	0.86
Spain	Ceuta	73	93.70	52.13	67.22	ERDF	299	0.08	0.01
United Kingdom	Yorkshire and The Humber	5,238	90.06	8.52	45.89	ERDF	72	2.94	0.09
Sum	--	--	--	--	--	--	3588	--	9.25

Source: own calculations

[5] PPS - Purchasing power standards

As can be seen in Table 4, regions chosen for our analysis are diverse in several ways. With respect to geographical coverage, analysed regions include not only major central European countries but Southern and Eastern European countries as well. Our selection further accounts for all three funds of EU Cohesion Policy with a special emphasis on the ERDF, as it accounts for the largest share in cohesion policy spending. In terms of level of development, which may be approximated by the ratio of the regional per capita GDP to EU per capita income, included regions again exhibit a considerable heterogeneity. For instance, Slovakia is the least developed region in our dataset with a relative per capita income well below the EU average, while Bremen exhibits a per capita income of 60% above the EU average.

The number of funded projects in the current programming period differs considerably between the regions and funds. While only 72 projects are funded by the ERDF in Yorkshire and the Humber, 1,025 are funded in Bavaria. A further source of variation comes from the EU co-financing shares for every Member State. While in Lower Normandy and Molise the EU share of total project spending sums up to 28.3% and 36.7% respectively, these values are equal to 85% in the case of Malta. The last two columns evaluate the share of covered funds by our analysis in per cent of total spending within the three major funds in the respective region and in the EU as a whole[6]. As can be seen from Table 4, in total, our analysis covered 9.25% of EU-wide resources for regional policy in the current programming period.

5 Results

While Table 5 summarizes the results of our analysis with respect to selected regions in the case of the optimistic scenario, Table 6 refers to the case of the pessimistic scenario.

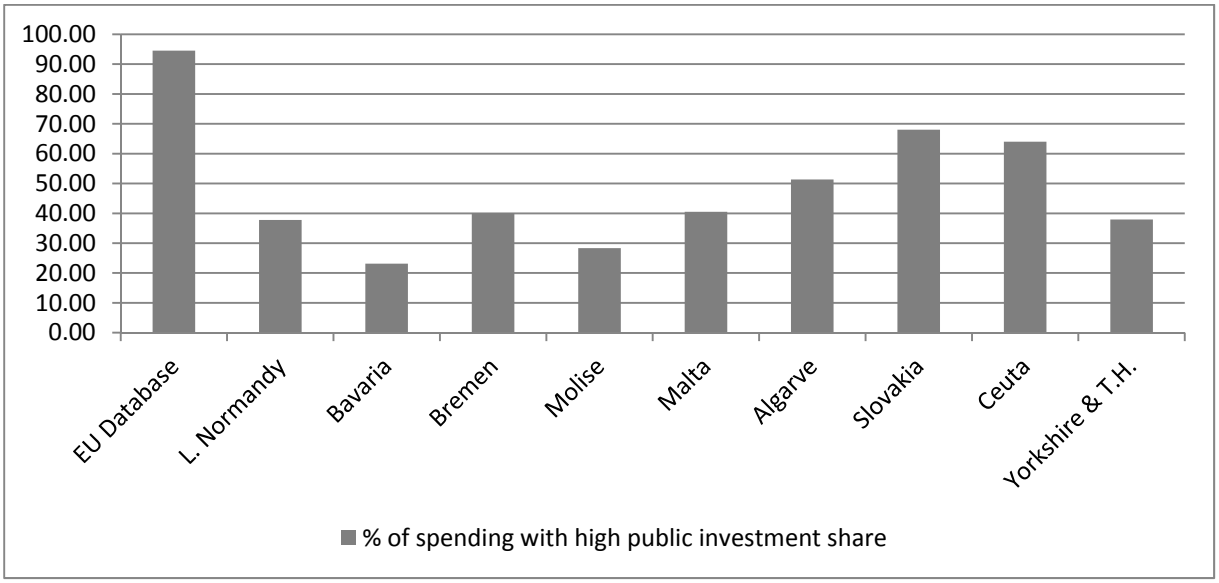
In column 1 (identical for Table 5 and Table 6), we include the percentage of projects where the beneficiary is a public entity. We see considerable variation between very low shares in Bremen or Ceuta (22.1%, respectively 25.7%) and regions such as the Algarve where more than 90% of recipients are public entities.

Column 2 (again identical for Table 5 and Table 6) contains the share of spending with a large public capital component (in per cent of spending on cohesion projects in the respective region) which is also shown in Figure 2 even though we stressed above that this indicator contains little

[6] Total spending is measured as commitment appropriations.

information about any growth effects. Nevertheless, it is a revealing first piece of information that the public investment share is surprisingly low in multiple regions. The share of spending with a high public investment component is below 50% in most regions. The fact that the results for the EU project database indicate a much higher level (95 %) is most likely misleading as the database limits itself to projects with funding worth over € 1 million which often incorporate large infrastructure projects and is therefore not representative. Given our methodology to select projects in Slovakia, here a similar problem may exist implying that the share of spending with a large public capital component is above average in our sample.

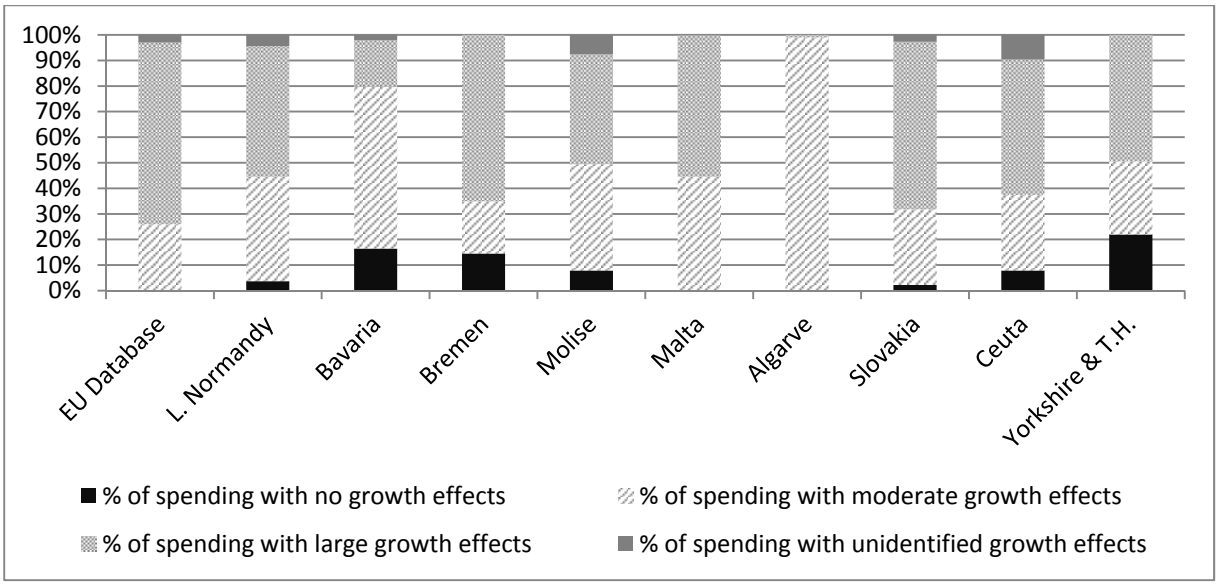
Figure 2: Spending with high public investment share (in %)



Source: own calculations

Columns 3 to 7 as well as Figure 3 and Figure 4 present our key results: the categorisation of projects with respect to their growth-enhancing character according to our classification. Naturally, the optimistic scenario draws a more favourable picture of the impact of cohesion spending on growth as large growth effects are assumed in more cases compared to the pessimistic scenario. But even in the case of the optimistic approach a considerable share of cohesion spending has been classified as not conducive for long-run growth. In the case of the optimistic scenario, this share tends to be higher for regions of richer European countries such as Germany and United Kingdom where 14% to 22% of cohesion expenditure is classified as having no impact on long-run growth.

Figure 3: Distribution of growth effects in the case of the optimistic scenario



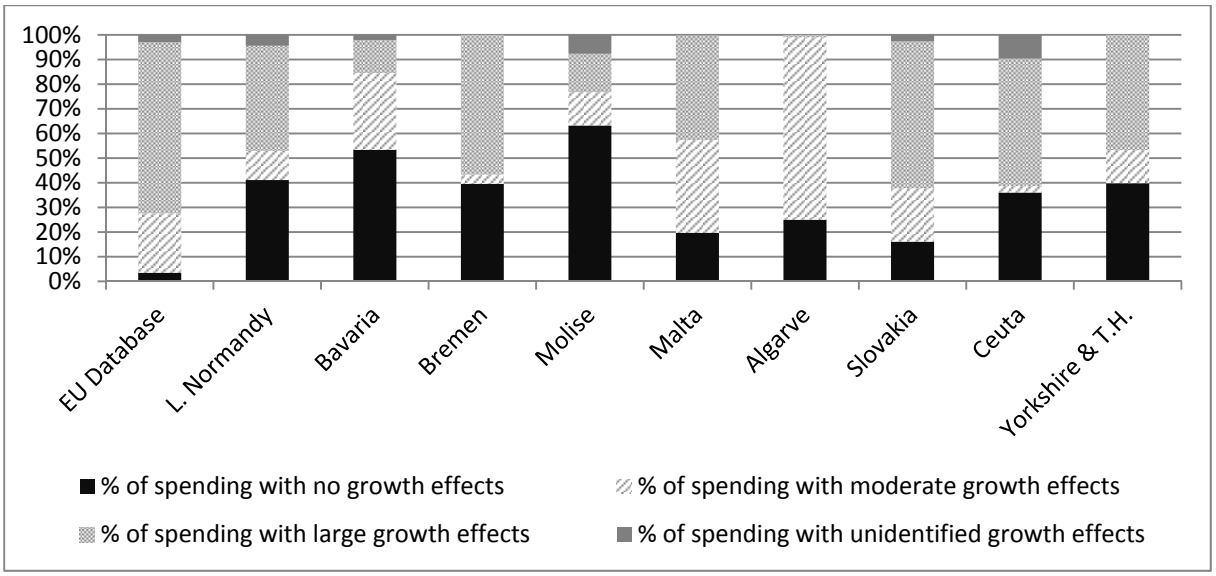
Source: own calculations

Table 5: Project characteristics and growth effects under the optimistic scenario

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Country	**Region**	**% of projects where beneficiary public**	**% of spending with high public investment share**	**% of projects with no growth effects**	**% of projects with unidentified growth effects**	**% of spending with no growth effects**	**% of spending with moderate growth effects**	**% of spending with large growth effects**
EU project database	EU project database	78.76	94.51	1.11	3.98	0.17	25.80	71.04
France	Lower Normandy	65.51	37.78	3.81	0.83	3.69	40.88	51.00
Germany	Bavaria	34.54	23.13	39.90	7.22	16.43	63.22	18.23
Germany	Bremen	22.14	40.09	33.74	0.00	14.50	20.39	65.11
Italy	Molise	33.01	28.34	13.14	8.01	7.87	41.58	42.89
Malta	all	82.35	40.49	0.00	1.18	0.00	44.55	55.33
Portugal	Algarve	91.67	51.34	0.00	0.00	0.00	99.00	1.00
Slovakia	all	86.22	68.03	6.12	2.55	2.25	29.53	65.56
Spain	Ceuta	25.75	64.00	61.20	16.05	7.89	29.53	52.98
United Kingdom	Yorkshire and The Humber	73.61	37.95	16.67	0.00	21.99	28.55	49.46

Source: own calculations

Figure 4: Distribution of growth effects in the case of the pessimistic scenario



Source: own calculations

Table 6: Project characteristics and growth effects under the pessimistic scenario

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Country	**Region**	**% of projects where beneficiary public**	**% of spending with high public investment share**	**% of projects with no growth effects**	**% of projects with unidentified growth effects**	**% of spending with no growth effects**	**% of spending with moderate growth effects**	**% of spending with large growth effects**
EU project database	EU project database	78.76	94.51	17.04	3.98	3.46	24.14	69.41
France	Lower Normandy	65.51	37.78	46.10	0.83	41.12	11.80	42.65
Germany	Bavaria	34.54	23.13	71.80	7.22	53.39	31.14	13.34
Germany	Bremen	22.14	40.09	66.43	0.00	39.52	3.77	56.71
Italy	Molise	33.01	28.34	71.79	8.01	63.23	13.53	15.59
Malta	all	82.35	40.49	28.24	1.18	19.64	37.72	42.53
Portugal	Algarve	91.67	51.34	16.67	0.00	24.95	74.05	1.00
Slovakia	all	86.22	68.03	25.00	2.55	16.06	21.70	59.58
Spain	Ceuta	25.75	64.00	70.90	16.05	36.04	2.64	51.72
United Kingdom	Yorkshire and The Humber	73.61	37.95	48.61	0.00	39.82	13.43	46.75

Source: own calculations

In the case of the pessimistic scenario, the share of the 'no growth effects'-category increases considerably and is never below 10% of the analysed projects in any of the regions (including the results for the EU project database). For instance, 63% of spending in Molise, 53% in Bavaria, 41% in Lower Normandy and around 40% in Yorkshire & The Humber as well as in Bremen is classified to have no growth effects.

An aggregation and conclusion to a pan-EU average from these sample results is not possible as we cannot treat the sample employed as fully representative in a statistical sense. Nevertheless, these results give a clear indication for Cohesion Policy, namely that it cannot be regarded as entirely centred around long-run growth policies.

Likewise, qualitative insights from our screening of 3,600 projects support this critical impression as numerous projects funded by resources from Cohesion Policy allow for substantial scepticism with respect to their impact on growth. For instance, the funding of a jubilee logo for a private firm in Germany and similar cases raise doubts about the value of EU regional spending from a growth perspective.

6 Conclusions

In budgetary debates, EU Cohesion Policy often appears sacrosanct as it, allegedly, is indispensable for stimulating long-run growth. While academic research has already expressed doubts about this view, our analysis provides further evidence along these lines.

Firstly, the share of spending with a large capital component is surprisingly low. There are regions where this share is even (far) below 50%, and out of all projects which we analysed, we classified the public investment share as 'high' in 20.79% of all cases. However, the theoretical and empirical growth literature stresses the fact that the growth effects of public spending are not strongly correlated with the share of capital spending. Therefore, we have added a further classification which allows for differentiated growth effects depending on the sector, the type of beneficiary, and the type of good. But even in the case of this refined classification, our results indicate that substantial shares of cohesion spending cannot be reasonably regarded as growth-enhancing. While we are unable to calculate a precise share for the complete cohesion budget, we identify many non-growth related projects which, in some regions, exceed 60% in the pessimistic scenario and still amount to more than 20% with more generous assumptions in the case of the optimistic scenario of all spending analysed within a region. While a clear pattern for the observable variation is hard to identify, under the optimistic scenario, spending in richer Europe-

an countries tends to be even less targeted towards growth compared to regions covered in poorer European countries.

Beyond doubt, several caveats have to be mentioned. Further research, a more complete coverage and better data would be needed to substantiate some of the findings. Yet, a revealing finding in itself is that the project data is so diverse and especially lacks a uniform structure as well as quality. Furthermore, classifications like ours always imply leeway for discretionary judgements. However, since we offer two polar scenarios, we are confident that our main findings are robust.

Our results have a clear message for the negotiations on the future financial framework 2014-2020 and its level of cohesion spending: there are significant shares in current cohesion spending which obviously lack growth relevance. Thus, even if growth-enhancing expenditure shares are fully exempt from budgetary cuts there still is leeway to cut back cohesion spending from its current levels.

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