Distributive politics and intergovernmental transfers: The local allocation of European Union structural funds

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Abstract

The European Union budget is distributed primarily in the form of intergovernmental grants to sub-state governments, which invest the grants in local projects. Transfers are allocated under the auspices of the European structural funds. This article assesses the causal links between electoral incentives on the recipient side, European funding goals, and local grant allocation. Tobit regressions of the allocation patterns in 419 local districts in Germany for the period 2000–6 suggest the following: although recipient sub-state governments enjoy substantial discretion in selecting projects, their distributive choices are largely in accord with European goals. As theoretically predicted, however, there is robust evidence that sub-state governments' electoral concerns distort the local allocation of structural funds.

Keywords

Distributive politics, EU fiscal policy, intergovernmental grants, structural funds

Introduction

Any federation is confronted with the problem of unequal living conditions and fiscal capacity among its jurisdictions or states. A central policy instrument to counteract such problems is intergovernmental grants (Oates, 1999). The European Union (EU) allocates this type of grant under the auspices of EU

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regional policy (see Becker et al., 2010; Zürn and Joerges, 2005). Having started in 1975, this policy consists of a series of interrelated funds known as structural funds. The structural funds partially finance local projects in the EU member countries via various intermediary institutions. These intermediaries, typically government ministries and agencies at the sub-state level, select and monitor local projects. The overarching aim of EU regional policy is to promote economic convergence and sustainable development inside the EU, especially in economically lagging areas (Dellmuth, 2011). This article examines a largely unexplored issue: the motivations and behaviour of recipient sub-state governments in allocating structural funds to local projects. It will be shown that the distributive choices of recipient sub-state governments are largely in accord with European goals. Yet, because sub-state governments enjoy substantial discretion in selecting projects, their electoral concerns are still significant determinants of the local allocation of structural funds, calling into question whether the structural funds can be effectively used by the EU to promote policy agendas.

In recent years, an increasing number of scholars have raised doubts as to whether EU regional policy is effective. Numerous studies have examined the effectiveness of structural funds to promote regional economic convergence (Boldrin et al., 2001; Fagerberg and Verspagen, 1996; Lebre de Freitas et al., 2003), to enhance public investment (Alegre, 2010; Blom-Hansen, 2005) and to build sustainable local capacities in the EU member states (De Rynck and McAleavey, 2001; Milio, 2007; Montoya, 2008). Although not all assessments have been negative (for example, Becker et al., 2010; Beugelsdijk and Eijffinger, 2005; de la Fuente, 2002), many studies find little consonance between structural funds transfers and the desirable changes in economic macro-level indicators (for example, Alegre, 2010; Boldrin et al., 2001; Fagerberg and Verspagen, 1996; Lebre de Freitas et al., 2003).¹ The widespread perception of the ineffectiveness of EU regional policy has challenged both policy-makers and scholars in the EU. In this respect, recent literature explores the extent to which recipient sub-state governments use EU structural funds for their self-interest (for example, Bachtler and Mendez, 2007; De Rynck and McAleavey, 2001). For example, Milio (2007) shows that the funds' implementation in two Italian regions depends partly on political and socioeconomic factors and partly on the administrative capacity of the recipient sub-state authorities. Blom-Hansen (2005) demonstrates on the basis of a comparative case study of EU structural funding in three Danish cities that the European Commission's capacity to monitor and control how sub-state authorities spend the structural funds is very limited. These studies have significantly advanced our understanding of the political process driving the local allocation of structural funds. Yet their empirical analyses are limited to one or a few recipient jurisdictions, thereby potentially causing biased findings.

We contribute to this literature by conducting a large-*n* study of the causal link between EU funding goals, political distortions on the recipient side, and the local allocation of structural funds. We focus on political distortions on the recipient side because they frequently shape the allocation of national intergovernmental grants

(see Grossman, 1994; Solé-Ollé and Sorribas-Navarro, 2008; Sørensen, 2003; see Oates, 2005, for a detailed literature review). In addition to enhancing our understanding of the motivational and informational problems faced by recipient governments during the domestic implementation of structural funds, studying the link between the EU, recipient governments, and final beneficiaries becomes salient as policy-makers debate EU regional policy reforms for the upcoming EU financial perspective 2014–20 (see Barca, 2009; Santos, 2009).

Although transfers are allocated to sub-state governments in all EU member states, we focus the empirical part of this piece on Germany. We use an original database of EU structural funding in 419 German local districts – both recipient and non-recipient – for the period 2000–6. Germany makes an excellent choice for a large-*n* study of the political processes driving local structural funds allocation. First, German sub-state (*Länder*) governments have sufficient resources and expertise to implement structural funds (see Conzelmann, 2002), so that one can rule out that the funds are ineffectively implemented owing to insufficient administrative capacity. Second, socioeconomic and political conditions vary widely between German states, in particular between East and West German states, allowing for an effective test of the generated hypotheses. Finally, Germany has the largest number of local districts (a total of 429) among the EU member states, which is almost four times as many as in Italy, France, or the United Kingdom.

The negotiation process

The structural funds are allocated within the boundaries of the EU's financial perspective, which specifies the expenditure ceilings for the structural funds and the eligibility criteria for recipient districts for a period of seven years. Under the terms of the financial perspective negotiated for the period 2000–6 (European Council, 1999), there are four structural funds: the European Regional Development Fund, the European Social Fund, the European Agricultural Guidance and Guarantee Fund – Guidance Section, and the Financial Instrument for Fisheries Guidance. The funds are allocated to sub-state authorities under two schemes: Objective 1 and Objective 2. Objective 1 funding assists areas whose development is lagging behind the rest of the EU. Areas qualify for funding if they have a gross domestic product (GDP) per capita measured in purchasing power parities (PPP) of less than 75 percent of the EU average. Objective 2 funding targets areas in structural difficulty that are not covered by Objective 1, such as deprived urban areas and areas undergoing industrial decline. Areas are eligible if they have an unemployment rate above the EU average and a declining employment rate in the manufacturing sector (Kemmerling and Bodenstein, 2006). The investment volume under these two schemes amounts to €160 billion during the period 2000–6. Overall, €195 billion were set aside for the structural funds, rendering them the second-largest EU budget component between 2000 and 2006 (Articles 2 and 7(2), Council Regulation No. 1260/1999 of 21 June 1999 laying down general provisions on the structural funds).

Several domestic and European actors are involved in the negotiation process that culminates in the local allocation of EU structural funds. At the beginning of a seven-year funding period, recipient domestic governments draw up a map of areas within their jurisdiction that are eligible for structural funding. In Germany, these areas are districts at either the *Landkreis* (county, NUTS 3) or the *Regierungsbezirk* (region, NUTS 2) level.² Under Objective 1, sub-state governments retain some discretion in drawing up the maps, whereas they retain considerable discretion under Objective 2, because the eligibility criteria are less precise. The maps are negotiated with and approved by the European Commission (Bachtler and Mendez, 2007).³

On the basis of the list of eligible districts, recipient authorities develop multi-annual investment plans. These plans contain an analysis of the socioeconomic disparities between districts in the recipient jurisdiction, an evaluation of funding priorities ('ex ante evaluation') and a breakdown of structural funds needed by year, funding priority, and district (Article 16, Council Regulation No. 1260/1999). Sub-state governments enjoy substantial discretion when drawing up these plans, because the financial perspective does not specify precise funding objectives. Yet the discretion of recipient governments is limited by the Commission's guidelines, working papers, and aides-memoires. Through these provisions, the Commission exerts what Bachtler and Mendez (2007: 556) call 'soft influence' when negotiating the investment plans with the domestic authorities. At the end of this negotiation process, the Commission transforms each plan into a legally binding decision that specifies the amount of funding that a recipient government can spend during the funding period (Articles 3, 4 and 15–19, Council Regulation No. 1260/1999).

Subsequently, recipient governments invest the structural funds in local projects across a range of areas such as transport, business development, and communications infrastructure. The Commission has a supervisory role during the funding period. Actual payments through the structural funds are made by way of reimbursement of aggregated statements of expenditure that recipient governments submit to the Commission several times a year. The Commission can confirm or amend the rate of structural funds assistance in order to ensure that the projects receive the resources needed for their achievement without the beneficiaries acquiring any unjustified advantage, for example through a distortion of market conditions. In the case of irregularities or ineligible expenditures, the Commission can penalize sub-state governments by cutting back the amount of funding. More specifically, it can apply extrapolated or flat rate corrections if it is difficult to quantify the amount of irregular expenditure precisely, or if it would be disproportionate to cancel the expenditure in question entirely (Court of Auditors, 2008b). In the case of criminal non-compliance or fraud, the Commission can invoke a case before the European Court of Justice (see Blom-Hansen, 2005). Recipient governments retain some discretion when choosing projects because the investment plans do not entail clear-cut eligibility criteria for projects.

Hypotheses

When sub-state governments allocate EU structural funds, their strategies will be shaped by electoral incentives. Recipient governments will assume that voters will reward the investment of EU funds since they create value for them. Hence, local structural funds allocations will be associated with sub-state governments' electoral concerns through two main mechanisms: (1) the expected rate of return measured in votes per euro invested in districts and (2) the expected effect of structural funding on the transfer levels to be received for the ensuing funding period. We address each mechanism in turn.

First, EU funds will be directed to districts in which sub-state governments assume electoral support will be increased most effectively for the parties in sub-state government. There is a large literature on how vote-purchasing behaviour affects the allocation of intergovernmental grants. Starting with a focus on the behaviour of US congresspersons, scholars have studied the ways in which politicians in first-past-the-post systems form coalitions in order to secure public investment for their districts (for example, Bickers and Stein, 2000; Ferejohn, 1974; Weingast et al., 1981). More recent literature has provided evidence for the strategic use of public funds both by parties and by individual members of parliament in other political and electoral systems, particularly in proportional representation and mixed-member electoral systems (for example, Cadot et al., 2006; Denemark, 2000; Lancaster and Patterson, 1990; Stratmann and Baur, 2002). This literature starts from a common assumption: if the benefits of a policy are concentrated while the costs are dispersed, parties or individual politicians can effectively minimize political opposition by pursuing vote-seeking strategies (see Buchanan and Tullock, 1962).

In the context of EU regional policy, sub-state governments should be less concerned about how EU expenditure affects their budgets than in the case of domestic expenditure. Citizens are less likely to pressure sub-state politicians to use public funds efficiently in the case of international funds because they perceive these funds as other people's money (Bird and Smart, 2002). Although the structural funds have to be matched with domestic funds,⁴ it can be reasonably assumed that citizens will put less pressure on sub-state governments to spend EU funds efficiently than they would in the case of domestic budgets.

Sub-state governments' discretion in allocating EU funds is mainly limited by the competences of the Commission to monitor the funds' implementation. However, the Commission has few incentives to interfere with sub-state governments' funding strategies because oversight procedures and sanctions are costly. The EU is characterized by a complex chain of delegation, in which the member states are the principals and the Commission is the agent (Pollack, 2003). Pollack (1995, 2003) shows that, if the Commission pursues an agenda that fundamentally differs from the preferences of member governments, member states may 'cut the wings' of the Commission when reforming the structural funds for the next funding period. It is therefore unlikely that the Commission would interfere with how the

funds are spent after it has approved the investment plans. Accordingly, there is evidence that ‘the Commission would only extrapolate irregularities and make financial corrections in cases where the Regulation had not been correctly applied’ (Court of Auditors, 2001: 37) but would not cut EU funding in cases where projects do not promote EU funding goals (Court of Auditors, 2008a: 10).

With regard to the second mechanism, recipient authorities will refrain from reporting misallocations, because this may hurt their chances of receiving a similar or greater amount of funding in subsequent funding periods. Although the Commission has little incentive to control whether the financed projects are suitable for reaching EU goals, it should have incentives to make recipient governments spend the available funds. The idea behind this is that failures of recipient domestic authorities cause reputational problems for the Commission with respect to its effectiveness and credibility (see Majone, 2000). This becomes evident in EU regional policy when the Commission is blamed for errors during the implementation of the EU budget by its European peers, for example in the case of funds not being spent (Bauer, 2006; Court of Auditors, 2008a). Absorbing the available funds is the best strategy to ensure that sub-state governments will receive equal or more funding during the next funding period.

In light of these considerations, how will German sub-state governments distribute EU structural funds to please voters? In the German mixed-member electoral system, a party’s share of seats in a sub-state parliament (*Landtag*) depends predominantly on its overall vote share in the sub-state jurisdiction rather than on the winning of individual district mandates. Hence, parties in sub-state government will invest more EU funds in districts where they received strong support in the previous election in order to maximize their overall vote share, instead of targeting marginal districts in order to win a district race. This argument is related to the rationale of the ‘core voter model’ developed by Cox and McCubbins (1986). In this model, two parties compete in an election by trading targetable goods to specific groups of voters for electoral support. Owing to risk aversion, the parties will distribute benefits to their core voters and not to other groups such as swing voters.⁵ By taking cues from this theory, scholars have hypothesized that incumbents will target districts where they already have high electoral support (for example, Dahlberg and Johansson, 2002). Similarly, we argue that incumbent sub-state governments will purchase votes by investing structural funds in districts where the share of voters who have cast their votes for the incumbent sub-state government is relatively high.

H1: The more electoral support for an incumbent sub-state government in a district, the more EU transfers that district will receive.

To shed further light on the causal mechanism behind the relationship between electoral support and transfer levels, we explore an implication of this argument for the conditioning effect of the socioeconomic context in districts. We would expect that economically lagging areas are particularly prone to pork barrel spending.

The idea behind this is that governments can assume they will receive more votes per euro invested in poor than in rich sub-state districts because funding in poorer districts is worth more than funding in richer districts.

H2: The positive effect of electoral support for a sub-state government in a district on EU transfers to that district is strengthened, the weaker the economic performance of that district.

Research design

To test the hypotheses developed in the previous section, we use an original data set on EU structural funds allocations in Germany during the period 2000–6. The data set contains information about structural funds expenditure in 419 local districts in 13 German *Länder* under the Objective 1 and 2 schemes as well as a range of political and economic variables. Berlin, Bremen, and Hamburg are excluded from the analysis because these *Länder* are identical to NUTS 3 regions, so that the theoretical propositions cannot be meaningfully examined. The unit of analysis is a German local district, which we use to denote a *Landkreis* or NUTS 3 area (see note 2). Since we derive the data on the local allocation of structural funds from a study that aggregates structural funds expenditure for the period 2000–6 (SWECO, 2008),⁶ the analysis in this paper is cross-sectional. Given that the co-financed projects are usually multi-annual, aggregating the data for the whole funding period instead of providing yearly data is appropriate. The independent variables are measured in the year 1999, because we assume that the investment plans for the period 2000–6 were mainly drawn up during 1999 and finalized in 2000. This is realistic because the investment plans were submitted to the Commission in either November or December 1999 or in the first half of 2000 (see Table A1 in the web appendix for submission and approval dates).

To measure the dependent variable, we use the amount of *local funding per capita* through the EU structural funds (SWECO, 2008). In addition, we create a variable *deviation of local funding per capita* for the purpose of a robustness check. This measure captures how much funding per capita a particular district receives compared with all other districts in the same *Land*. The formula for this variable is given by

$$\text{deviation of local funding} = \log \left(\frac{\text{funding}_i}{\frac{1}{n} \sum_{k=1}^n \text{funding}_k} \right),$$

where i, k are individual districts of a *Land* and n is the total number of districts in the *Land*. The logarithm is used in order to treat deviations above and below the

average funding level in a *Land* in the same way. The following figures show that the structural funds can be of vital importance for recipient districts. In the period under investigation, the investment volume was €33.4 million on average, ranging from no transfers (171 districts) to a maximum of €787.2 million in transfers in the city of Dresden in Saxony. The mean of financial transfers to districts that were eligible for EU structural funding was roughly €56 million. Overall, almost €14.2 billion were allocated during the period 2000–6.

Furthermore, we include a range of political and economic variables. The political variables are measured on the basis of electoral results from the German *Länder* elections that preceded the negotiations of the investment plans (Schnapp, 2008). Before proceeding with the operationalization of the political variables, a number of clarifications are necessary. Since elections at the *Land* level are held every five years, sub-state governments may not be re-elected in the course of the funding period, so another government may get the credit for the invested EU funds. However, because this article analyses the distributive choice of sub-state governments in drawing up the investment plans at the beginning of the funding period, we use data from *Länder* elections that took place either in or prior to 2000. In 2000, the greater part of the regional investment plans was submitted to the Commission (see Table A1 in the web appendix). Additionally, we measure the electoral variables on the basis of data only from *Länder* elections for two reasons. First, the German federal government receives only about 6 percent of the total Objectives 1 and 2 funding allocated to Germany (European Commission, 2001: 14). Second, the federal government does not interfere with the local allocation of structural funds by the *Länder* governments (see Bachtler and Mendez, 2007; Conzelmann, 2002).

To measure electoral support for the sub-state government, we employ the *vote share of the Land prime minister's party* in the elections that preceded the negotiations about the local allocation of EU funds. The idea behind this is that the *Land* prime minister's party typically controls the distribution of EU structural funds because it fills most of the ministerial posts that manage and coordinate the funds' local allocation. In 1999, the respective *Land* prime minister's party occupied 21 out of the 23 relevant ministerial posts that manage and coordinate the allocation of EU funds for the period 2000–6. With the exception of Brandenburg, all cabinets were formed either by a single majority party or by a party coalition of a large party (CDU or SPD) and a small party (FDP or Greens) (see Table A1 in the web appendix for information about the term of office and the party membership of the ministers who manage the allocation of EU structural funds). The evidence supports H1 if there is a positive association between the explanatory factor and *local funding per capita*.

Furthermore, we create a variable *marginality of districts* that measures the percentage point difference in vote share between the two parties with the highest number of votes in order to test whether sub-state governments target districts in which there are many swing voters. The evidence corroborates our hypotheses if there is no effect of this concept on *local funding per capita*.

Turning to the economic variables, we derive a measure for GDP per capita in PPP from Eurostat, because this is the key concept for measuring economic need for Objective 1 funding (Dellmuth, 2011; De Rynck and McAleavey, 2001; Kemmerling and Bodenstein, 2006). The evidence supports H2 if the positive relationship between *vote share of the Land prime minister's party* and *local funding per capita* is strengthened as *GDP per capita* decreases. Moreover, we use a measure of unemployment rates because the unemployment rate of a district is the key concept for measuring economic need for Objective 2 funding (Bouvet and Dall'erba, 2010; Kemmerling and Bodenstein, 2006). We would be more convinced by the evidence for H2 if the positive relationship between *vote share of the Land prime minister's party* and *local funding per capita* is strengthened as *unemployment rates* increase.

Finally, we include a variety of measures to control for a potential effect of EU funding goals on local structural funds allocations. In so doing, we follow a standard practice in the literature on international and federal grants allocation, where the influence of donors on recipients is examined by using measures that relate to the interests or policies of the donors (for example, Stone, 2004). The overarching aim of the EU structural funds is to assist areas that are either economically lagging or in structural difficulties (Article 1, Council Regulation 1260/1999). A testable implication of this aim is that there should be an association between measures that the EU utilizes to identify economic need and the local allocation of EU structural funds. Aside from the GDP and unemployment rate measures, the general structural funds regulation specifies that indicators for areas in need are 'socio-economic change in the industrial and service sectors, declining rural areas, urban areas in difficulty and depressed areas dependent on fisheries' (Article 4, Council Regulation 1260/1999). First, we use the *geographical size* of the districts because geographically large districts are more likely than small districts to include declining rural areas. Unfortunately, direct measures for declining rural areas, such as areas characterized by a declining agricultural industry, are not available at the NUTS 3 level. Second, we include a measure for urban areas in difficulty. The official conceptualization of 'urban areas in difficulty' in the general structural funds regulation (Article 4, No. 1 and 7, Council Regulation 1260/1999) is rather broad and includes a wide array of possible indicators such as a 'particularly damaged environment' and 'a low level of education among the population'. To capture the different facets of the concept 'urban areas in difficulty', we use a dummy variable *urbanization* indicating whether or not districts comprise a city with more than 50,000 inhabitants. It can be reasonably assumed that urban areas with structural difficulties are more likely to be located in large urban agglomerations, which are more heterogeneous than small cities.

To be sure, we make no claim that these are direct measures of economic and social need. Nor does the structural funds regulation dictate a linear relationship between these measures and the allocation of funding by subnational authorities. Rather, we use these measures because the EU proposes them as indicators of economic need to determine which regions qualify for structural funding. A direct effect of economic need on local transfers would be in conformity with

the general structural funds regulation and the corresponding Articles 158–160 of the Treaty Establishing the European Community.

Table 1 gives an overview of the variables and their sources (see Tables A2 and A3 in the web appendix for descriptive statistics and a correlation matrix).

Empirical results

Almost 40 percent of the districts in the data set did not receive any funding. Similarly to previous studies of national (John et al., 2004), European (Bouvet and Dall'erba, 2010), and international funds allocations (for example, Dreher et al., 2009), we therefore use Tobit regression (Tobin, 1956). Tobit is appropriate here because the observations in the data can solely take on positive values or zero, leading to non-constant marginal effects (see Wooldridge, 2002: Ch. 17). Moreover, the use of Tobit regression is necessary because sub-state governments can influence both the eligibility of districts and the size of transfers to eligible districts. In this context, using OLS (on both the full and the non-zero sample) would lead to

Table 1. Variable description and data sources

Variable	Description	Data source	Expected effect
<i>Dependent variable</i>			
Local funding per capita	EU structural funding in million € per capita	SWECO International AB (2008), Eurostat (n.d.)	
<i>Independent variables</i>			
GDP per capita	In thousand purchasing power parities	Eurostat (n.d.)	—
Geographical size	In km ²	Eurostat (n.d.)	+
Unemployment rates	Based on the measurement proposed by the OECD, that is unemployed persons of 15 years and over	Eurostat (n.d.)	+
Urbanization	Dummy indicating cities (at the NUTS 3 level) with more than 50,000 inhabitants	Own calculations on the basis of Eurostat (n.d.)	+
Vote share of <i>Land</i> prime minister's party	Vote share of <i>Land</i> prime minister's party	Schnapp (2008)	+
Marginality of district	Percentage point difference between district winner and second	Own calculations on the basis of Schnapp (2008)	0

biased results. With regard to the dependent variable, we use the logarithm of *local per capita funding* in order to meet the assumption of homoscedastic residuals that underlies Tobit models (Wooldridge, 2002). Furthermore, we adjust the covariance matrices for within-*Land* correlation in order to take non-observed *Land* characteristics into account.⁷

Before proceeding with the multivariate analysis, we explore the bivariate relationships between the electoral variables and local transfers. Figure 1 presents local polynomial smoothing estimates of the association between *local funding per capita* and the *vote share of the Land prime minister's party*. Since sub-state governments enjoy more discretion to allocate funds under Objective 2, we draw separate graphs for the Objective 1 and 2 schemes. The left-hand panel of Figure 1 shows transfers under Objective 1, indicating no correlation pattern between vote share and structural funds allocation. By contrast, the right-hand panel suggests that there is indeed an association between these two variables under Objective 2. The mean of *local funding per capita* increases linearly from a vote share of about 40 percent onwards. Because the left-hand panel does not lend support to H1, we will account for potential differences between the two funding schemes in the subsequent multivariate analyses. Further, we conduct a *t*-test to check whether those districts in which the party of the prime minister had not received a plurality of votes were given substantially less funding. This applies to 15 percent of the districts in the sample, yet the structural funds allocations to these districts amount to only 7 percent of total structural funds expenditure. The difference in means between the two groups is statistically significant at the 5 percent level, with the mean of structural funds for districts led by an opposition party being less than half the size of financial transfers to the other districts. This result corroborates the evidence revealed in Figure 1.

Figure 1. Vote share of *Land* prime minister's party and structural funds.

Notes: The solid lines represent local polynomial smoothing estimates of the data trend and the shaded areas 95 percent confidence intervals. The vertical axes have been rescaled to give a better sense of the trend; some observations with high levels of structural funds are therefore not visible as data points in the graph but have been included in the calculations.

Table 2 presents the results from the multivariate analyses of *local funding per capita*.⁸ Model (1) includes only the indicators measuring the EU's socioeconomic objectives. Aside from the coefficient for *geographical size*, the coefficients are statistically significant at the 1 percent level and in the expected direction. These findings are robust across all models presented in this section. To further test the robustness of these results, we estimate a simple probit model based on the independent variables of Model (1) explaining the step from receiving no funds (code 0) to being eligible for structural funding (code 1). Using the point estimates of the resulting regression, we were able to predict almost 80 percent of the observed cases correctly (see Table A4 in the web appendix). Substantively, these findings indicate that EU funding goals are indeed significant determinants of local structural funds allocations.

Model (2) tests the first hypothesis. The coefficient for the *vote share of the Land prime minister's party* is statistically significant at the 1 percent level and has the expected sign, thereby supporting the first hypothesis. To illustrate this result, we calculate the marginal effect of vote shares on local spending for those districts that received structural funding. Holding all variables at their means, a 1 percentage point increase in vote share in a district leads to an increase of EU structural funding in that district by about 8 percent.

In Model (3), we include an interaction term to test whether there are differences in local transfers under Objectives 1 and 2. The coefficient of the interaction term is not significantly different from 0, suggesting that sub-state governments do not have different funding strategies under Objectives 1 and 2.

Model (4) shows that the coefficient of *district marginality* is statistically significant at the 10 percent level and has a negative sign. As expected, this suggests that sub-state governments do not systematically target districts where there are many swing voters. This may be explained as follows. In the presence of two large parties – as is the case in the German party system – we would expect district marginality to be parabolically related to the *vote share of the Land prime minister's party*. The stronghold districts of both the large governing party and the large opposition party should show small levels of marginality, whereas the competitive districts should show high levels of marginality. Figure 2 shows, however, that this is not the case with the data at hand. There are almost no stronghold districts of the major opposition party, but only marginal districts or strongholds of the *Land prime minister's party*. The variable *marginality of district* to a large extent measures the same as the variable *vote share of Land prime minister's party*, with a correlation of $-.78$. Therefore, the evidence provided by Model (4) further corroborates H1.

In sum, the results from Models (2)–(4) indicate that sub-state governments direct funds towards the strongholds of the *Land prime minister's party* and not to marginal districts. This finding is further supported by the linear increase in local transfers with an increasing vote share of the *Land prime minister's party* in Objective 2 districts (see Figure 1).⁹

To test H2, Figure 3 presents simulation estimates for the marginal effect of the vote share variable on the logarithmized transfer levels, contingent on variation in

Table 2. Tobit regression of local funding per capita (log)

	(1)	(2)	(3)	(4)	(5)	(6)
Vote share of Land prime minister's party		0.14*** (0.04)	0.14*** (0.05)			0.13*** (0.05)
Vote share × Objective I			−0.00 (0.05)			
Marginality of district				−8.89* (5.13)	−10.13 (7.00)	
Marginality × Objective I					−3.12 (7.06)	
GDP per capita	−0.35*** (0.10)	−0.32*** (0.09)	−0.33*** (0.09)	−0.32 (0.10)	−0.33*** (0.10)	
Unemployment rates	0.74*** (0.14)	0.76*** (0.14)	0.77*** (0.25)	0.74*** (0.13)	0.78*** (0.21)	0.97*** (0.12)
Geographical size	1.75 (1.10)	2.42** (1.01)	2.42** (0.99)	2.13** (0.92)	2.04** (0.86)	
Urbanization	3.17*** (0.94)	3.70*** (1.01)	3.69*** (0.98)	3.54*** (0.88)	3.39*** (1.06)	
Constant	2.20 (3.21)	−5.64 (4.67)	−5.76 (5.55)	−0.35 (3.80)	−0.66 (4.40)	−11.33*** (4.01)
N	416	419	419	416	416	419
Log-likelihood	−952.13	−947.36	−947.35	−947.89	−947.68	−977.09
F	36.18***	37.02***	33.80***	23.74***	23.68***	5.94***
Nagelkerke R ²	.40	.41	.41	.41	.41	.35
BIC	−183.27	−186.79	−180.78	−185.74	−180.11	−166.69

Notes: Standard errors are clustered at Land level and given in parentheses. Significance levels: * $p < .10$, ** $p < .05$, *** $p < .01$.

Figure 2. Vote share of *Land* prime minister's party and district marginality.

GDP per capita and *unemployment rates*. Part (a) of the graph shows how the marginal effect of vote share is affected by changes in the unemployment rates of a district. The marginal effect triples as *unemployment rates* in districts increase from their minimum to their maximum. A 1 percentage point increase in the *vote share of the Land prime minister's party* in districts with the lowest unemployment rates increases the level of *local per capita funding* by 4 percent, whereas it increases *local funding* in districts with the highest unemployment rates by 14 percent. To illustrate what this means, imagine a district that receives an average amount of funding of €56 million. In a district with particularly low unemployment rates, a 1 percentage point increase in *vote share of the Land prime minister's party* would imply a rise of funding of €2.28 million (90 percent confidence interval 1.49; 2.94). By contrast, if that district displayed the highest level of unemployment, the increase in funding would amount to €7.24 million (90 percent confidence interval of 3.73; 10.70).

Graph (b) depicts the marginal effect of vote share contingent upon changes in *GDP per capita*. An increase in GDP weakens the marginal effect of vote share. In both graphs in Figure 3, the marginal effect of vote share is statistically significant at the 1 percent level across the entire range of values of the GDP and the unemployment rate variables. In sum, Figure 3 indicates that the electoral impact on the funds' distribution is present in relatively rich districts and increases in poorer districts, thereby supporting H2. Relatively poor districts appear to receive more pork barrel

Figure 3. Marginal effect of vote share of *Land* prime minister's party on local funding per capita (log).

Notes: The solid lines depict the marginal effect of the vote share dependent on unemployment rates and GDP per capita, respectively. The shaded areas indicate the simulated 90 percent confidence intervals.

spending than relatively rich districts, because policy-makers assume that they will receive more votes per euro invested in poor than in rich districts.

We conducted a final robustness check (see Table A5 in the web appendix). We replicated all models in Table 2 by using *deviation of local funding* from the *Land* average as a dependent variable. The idea behind this is that the results might be driven by differences between the *Länder* in the overall amount of funding available to each *Land* during the seven-year period. By standardizing to the *Land* average, we level these differences, thereby accounting for possible distortions. All coefficients remain in the expected direction and are robust throughout.

In conclusion, there is strong evidence that subnational governments use the received EU transfers largely in accordance with EU funding goals. That is, sub-state governments exhibit a bias in structural funds allocations in favour of districts with lower GDP per capita, higher unemployment rates, and large urban agglomerations. Yet, even after controlling for the indicators that operationalize EU funding goals, there is robust and strong evidence that recipient sub-state governments provide more funds to districts in which they expect to maximize their overall vote share most effectively, that is districts in which they already have high electoral support.

Discussion

Previous literature has modelled the relationship between sub-state governments and the Commission as a principal–agent relationship, as the Commission and sub-state governments engage in contractual relations in the allocation of EU structural funds (for example, Bauer, 2001; Blom-Hansen, 2005). In the standard principal–agent model, a principal delegates authority to agents and tries to provide the agents with incentives that make them behave in a way that maximizes the utility of both the principal and the agent. Yet agents may not fulfil the principal's goals,

which is compounded by the fact that the principal usually has only incomplete information on the actions of the agent (Kiewiet and McCubbins, 1991). In the context of EU regional policy, the European Commission, acting as the principal, seeks to structure intergovernmental transfers in ways that promote EU funding goals. Because the Commission has only imperfect information and control over the fiscal activities of decentralized governments and sanctions are costly, its monitoring and enforcement capacities are largely ineffective (see Blom-Hansen, 2005). Yet this particular approach to applying the principal-agent model is limited in its application. First, the EU is in fact characterized by a more complex chain of delegation. The member states are the principals and the Commission is the agent that has the authority to further delegate tasks to domestic agencies (for example, Bauer, 2001; Pollack, 1995). As we have argued in this article, it can be reasonably assumed that the Commission has incentives to supervise that sub-state governments in fact spend the available EU funds but not to supervise *how* the funds are being spent. Second, this application of the principal-agent model describes a setting of 'administrative federalism' (Inman, 2003) in which sub-state governments are conceptualized as agencies that respond to central directives, implying that the implementation of central directives undergoes changes owing to diverging preferences between central and sub-state governments. In this respect, the electoral dimension of the public sector remains outside the scope of this application.¹⁰ By contrast, our analysis suggests that the distributive choices of sub-state governments are systematically related to their electoral incentives.

Although the reliance of this analysis on evidence from Germany limits our ability to generalize, these results are significant because they point to political distortions in EU spending programmes that have hitherto remained unexamined. Although we have motivated the selection of Germany theoretically, we must still ask whether our findings travel to other contexts in which sub-state governments are less autonomous. For example, De Rynck and McAleavey (2001) make the theoretical argument that EU structural funds implementation exhibits the features of distributive politics independently of sub-state autonomy. Against this background, the effects of political distortions on the recipient side on local structural funds allocations, as well as potential conditional effects of domestic institutions, remain an interesting field for further research.

Furthermore, this article points out the importance of formulating a model that systematically includes the range of factors that may determine the sub-state implementation of international grants. The literature on national intergovernmental grants has identified a diverse array of factors that may explain federal grant allocations, all of them operating at the national level of analysis. By contrast, little is known about the ways in which the allocation of international grants at the sub-state level actually works and the factors that determine their implementation by the recipient sub-state authorities. Yet international grant programmes are an important instrument for international organizations to promote policy agendas (see Montoya, 2008; Tallberg, 2002). In the African Union, for example, almost 30 percent of the African Development Fund's total investment volume is allocated to

subnational public authorities in the form of regional development grants (African Development Bank Group, 2008). Since international officials respond to different constituencies than do domestic policy-makers and are not accountable for a country's macroeconomic situation, they have different policy agendas and may influence subnational funds allocations in many different ways (see Riker, 1987). Further research is needed to examine the potential effects of international pressure on the sub-state implementation of international grants.

Finally, if electoral concerns of recipient governments drive the local allocation of European structural funds, then this may help explain the variation in outcomes such as economic growth, regional economic convergence, and public sector spending in the EU. The implication for the effectiveness of structural funds is that recipient governments that direct financial transfers to please voters may distort the intended effects on socioeconomic development. Studies on the effectiveness of European intergovernmental transfers have estimated the effects of political factors on the recipient side such as corruption (Boldrin et al., 2001) and federalism (Bähr, 2008). Yet our results suggest that we still need to find better ways to model the process driving the local allocation of European intergovernmental transfers and then link these outcomes to the effectiveness of these transfers.

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Notes

1. For example, Alegre (2010) shows on the basis of annual data from 15 member states from 1993 to 2005 that there is only a small degree of crowding-out of the structural funds on national public investment. This indicates that the structural funds have enhanced public investment in less developed EU member states. By contrast, others find evidence that eligibility for European funding has not speeded up convergence across EU regions (Lebre de Freitas et al., 2003). Yet others find a significant effect of eligibility on real GDP per capita growth but not on employment growth (Becker et al., 2010). Despite the mixed evidence, many scholars and practitioners would agree that the structural funds should be reformed in order to increase their effectiveness (see Alegre, 2010; Barca, 2009; Tarschys, 2003).
2. NUTS 3 areas are statistical units that are classified according to the EU's nomenclature of territorial units for statistics (NUTS). There are three levels of NUTS area, the average size of areas lying within the following population thresholds: 3–7 million for NUTS 1, 800,000 – 3 million for NUTS 2 and 150,000–800,000 for NUTS 3 (Regulation (EC) No. 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics). Areas are classified on the basis of existing political and administrative regional tiers; only where pre-existing structures are lacking are areas classified on the basis of population figures. Hence, German NUTS 3 regions correspond to the administrative unit *Landkreis*, NUTS 2

regions correspond to the unit *Regierungsbezirk* and NUTS 1 regions correspond to the unit *Land*. Eligibility for Objective 1 funding is determined at NUTS 2 level, whereas eligibility for Objective 2 is determined at NUTS 3 level (Articles 4 and 5, Council Regulation (EC) No. 1260/1999).

3. We define discretion as the sum of delegated powers to subnational governments in implementing the structural funds, minus the constraints placed upon these actors on the basis of formal rules (see Epstein and O'Halloran, 1999: 109). The level of discretionary power depends on the degree to which spending criteria are precisely specified. If criteria are imprecise, actors have a high degree of discretion. Conversely, if the criteria are precise, the actors retain a low degree of discretion.
4. In Objective 1 regions, no more than 75 percent of the total eligible cost and, as a general rule, at least 50 percent of eligible public expenditure may be funded. Under Objective 2, regions may receive grants only up to 50 percent of the eligible total cost and, as a general rule, at least 25 percent of eligible public expenditure (Articles 28 and 29, Council Regulation No. 1260/1999).
5. The competing model in the literature is the 'swing voter model' (Dixit and Londregan, 1996; Lindbeck and Weibull, 1993), which predicts that incumbent parties distribute benefits to swing voters.
6. The data set contains information on the structural funds that have been committed under all German operational programmes under Objectives 1 and 2 but have not yet been reimbursed by the Commission. The differences between 'commitment data' and 'payment data' are, however, negligible. The funds included in the database have been allocated to projects within local districts and not to projects that span several districts (SWEKO, 2008: 29–31).
7. Unfortunately, we cannot use a fixed-effects estimation, because a conditional fixed-effects estimation of the parametric Tobit model cannot be applied and unconditional fixed-effects estimation would lead to biased results. Moreover, we refrain from using a multilevel Tobit design because of the small number of level-one groups (13 *Länder*). However, we address the concern that there might be dependencies between districts within one *Land* by introducing the variable *deviation of local funding*, which accounts for the between-*Länder* variation.
8. Because we suspected that some of the independent variables may be collinear and may therefore bias the results, we tested for multicollinearity in the models. No such problem was detected. All variables had a variance inflation factor (VIF) of approximately 2 or smaller, whereas the VIF of the *vote share* variable was 1. Furthermore, we estimated Model (6) by including only the variables *vote share* and *unemployment rates*. The results for the variable *vote share* remain robust throughout.
9. We thank one of the anonymous reviewers for suggesting the presentation and interpretation of the bivariate relationships in Figure 1.
10. See Oates (2005) for a similar argument with regard to the application of principal-agent models in the study of fiscal federalism.

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