

Buying turnout or rewarding loyalists? Electoral mobilization and EU structural funding in the German *Länder*

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Dominik Schraff

Department of Political Science, University of St. Gallen, School of Economics and Political Science (SEPS), St. Gallen, Switzerland

Abstract

This research note elaborates on the role of electoral mobilization in the allocation of EU structural funding. Revising current findings on the German *Länder*, I show that stronghold regions with a high level of electoral mobilization receive more money. This strategy is conceptualized as ‘rewarding loyalists.’ The article argues that due to temporally stable turnout levels, incumbents have incentives to favor stronghold regions with high turnout rates. Hence, incumbents use differences in the level of electoral mobilization to make distributive decisions among their many core constituencies. To test for spatial interdependencies and autocorrelation, I use a spatial autoregressive model as a robustness check. Even though the data shows spatial interdependencies, the results remain the same.

Keywords

Distributive politics, electoral mobilization, intergovernmental grants, redistribution, structural funds

Introduction

In a recent article published in this journal, Dellmuth and Stoffel (2012) find that German *Länder* governments favor core supporter regions in the allocation of EU funds. They show that *Länder* governments have substantial discretion in distributing funding. An analysis of EU structural fund allocations in the period 2000–2006

Corresponding author:

Dominik Schraff, Department of Political Science, University of St. Gallen, Switzerland.

Email: dominik.schraff@unisg.ch

reveals that NUTS3 regions with a higher vote share of the respective Prime Minister's party receive more funding.¹

In this article I argue that Dellmuth and Stoffel (2012) ignore a central dimension of *Länder* governments' vote-maximizing strategies – electoral mobilization. Accordingly, I show that a more comprehensive theoretical account – combining arguments on electoral mobilization with the core voter model – is necessary to explain the allocation process. Due to the many government strongholds in the German *Länder*, incumbents have to make further distributive decisions between those strongholds. Regional electoral mobilization seems to fulfill this function in the German context. The empirical analysis shows that there is a significant and positive interaction between the effect of the Prime Minister's party vote share and electoral turnout on regional funding.

Since this note relates directly to Dellmuth and Stoffel's (2012) research, the analysis follows the parameters set by their project. This means that there is basic agreement on the allocation process and *Länder* governments' level of discretion in distributing funds. The note, therefore, immediately starts with a discussion of competing theoretical accounts of governments' vote-maximizing strategies.

Vote-maximizing strategies

Referring to prominent theoretical contributions on pork barrel politics in the US, research on intergovernmental grants usually tests the so-called 'swing' and 'core' voter models (Cox and McCubbins, 1986; Dixit and Londregan, 1998; Lindbeck and Weibull, 1993). While those models were developed to analyze the allocation of benefits between single voters or groups of voters, they are also used to assess allocation patterns between territorial units (cf. Ansolabehere and Snyder, 2006).

Lindbeck and Weibull (1993) argue that incumbents at the federal level use their discretion in the allocation of funds to distribute more money to regions with a relatively high number of swing voters. Politicians at the central level have an incentive to increase their probability of re-election and therefore target benefits at highly contested regions. A study by Dahlberg and Johansson (2002) finds empirical support for the swing hypothesis. Analyzing data on government grants for ecological projects in Swedish municipalities, the authors show that municipalities with a larger share of swing voters receive more funding.

In contrast, Cox and McCubbins (1986) advance a model in which incumbents target funds at their core supporters. The underlying assumption here is that politicians are risk-averse and, therefore, try to rally and secure existing support. Accordingly, Solé-Ollé and Sorribas-Navarro (2008) show that regional transfers to Spanish municipalities are influenced by the alignment of the regional authorities with the central governing party. Dellmuth and Stoffel (2012) also identify similar patterns in the allocation of EU funding between German NUTS3 regions.

The role of electoral mobilization

Empirical research, therefore, finds support for swing and core voter arguments. It seems that it depends on the specific context whether the swing voter model or the core voter model prevails. Cox (2010) argues that both approaches focus on persuasion as the mechanism behind vote buying, which is defined as an attempt to change voters' preferences. However, '[o]nce one brings coordination (defined as an attempt to affect the number and character of alternatives from which voters choose) and mobilization (defined as an attempt to affect whether or not citizens participate in the election) into analytic view, the argument that vote-maximizing parties should focus their distributive benefits on core voters is substantially strengthened' (Cox, 2010: 344).

Using Dellmuth and Stoffel's (2012) data on EU funding in the German *Länder*, this article aims at testing Cox's proposition on mobilization. To begin, it is necessary to outline how Cox (2010) reaches his conclusion.

Nichter's (2008) research about the role of electoral mobilization in vote-buying theories develops a strong rationale for Cox's argument. Even though this research focuses on the individual level, it can provide us with insightful cues for distributive politics on a regional level. Nichter shows that turnout is a crucial factor for governments' vote-maximizing strategies, arguing that it is unconvincing to talk about vote buying as an attempt to buy support (the actual vote), since the ballot is secret and incumbents effectively cannot monitor if people do vote for them. He reasons that incumbents, rather, try to buy turnout because this is easier to monitor. Two points make this argument theoretically compelling and strengthen the core voter model. First, effective monitoring works only with buying turnout, since this is a directly observable action. Second, if one accepts that vote-maximizing strategies aim at buying turnout, the government has strong incentives to target its efforts at supporters because only a higher turnout of supporters maximizes their vote gains. Nichter therefore infers that incumbents prefer to seek 'turnout buying' strategies. This strategy predicts that incumbents target benefits towards electorally immobilized supporters.

In contrast to Nichter, I argue that in the context of the German *Länder*, incumbents have incentives to follow a strategy that rewards loyalists. The German case shows that moving from Nichter's individual level approach to an aggregated level can result in a strong rationale for, what Nichter calls, 'rewarding loyalists strategy.' The explanation for this result is as follows.

My argument builds on the core voter model's assumption of risk-averse politicians. Accordingly, I follow Cox (2010) in arguing that if incumbents are risk-averse, they have strong incentives to target benefits towards mobilized supporters. Incumbents could have an incentive to target benefits to mobilized supporters, since those are the most reliable voters with the highest electoral potential. Moreover, rewarding reliable voters could be attractive because investments in voters who are less likely to turn out might be wasted. The move from the individual to a constituency level of analysis makes this rationale especially strong.

Imagine a situation where electoral turnout tends to be continuously lower in some regions than in others. Here, it would be reasonable to expect that incumbents anticipate this structural character of regional mobilization and concentrate their vote-maximizing strategies on high turnout regions. Considering differences in electoral turnout levels between German NUTS3 regions over time makes this argument particularly strong. Turnout patterns in the German NUTS3 regions seem to be relatively stable and certain NUTS3 regions consistently tend to have higher turnout rates than other NUTS3 regions. To illustrate this point, I conducted an ordinary least squares (OLS) regression estimating Bavarian turnout levels from the 2003 *Landtag* elections with turnout levels from the 1998 elections.² The effect of the 1998 turnout levels on later turnout is large, highly significant, and explains over 80% of the variance in the 2003 turnout.³ Even though overall turnout declined in the past decades (Norris, 2002), mobilization differences between NUTS3 regions seem to remain. If one now considers that politicians anticipate this structural character of turnout for their vote-maximizing strategies, they have a strong incentive to target high turnout regions with benefits. Vote-maximizing strategies in low-turnout regions are wasted efforts since the expected vote gains are structurally smaller than in regions with higher turnout. This should be true especially for governments which are primarily interested in the overall vote share they get from an election, as it is the case for the German *Länder* governments.

Two recent studies confirm the connection between benefits and turnout. A study by De La O (2013) about a Mexican conditional transfer program shows that program enrolment led to an increase in turnout and an increase in the incumbent vote share. Similarly, an article by Chen (2013) shows that hurricane disaster aid in Florida increased the incumbent party's turnout. Individual-level evidence for increased turnout in those studies confirm Nichter's (2008) turnout buying strategy. However, it remains open if this rationale transfers to the allocation of benefits on a regional level, such as the European structural funds. Due to persisting differences in turnout between German NUTS3 regions, I argue that *Länder* governments follow a rewarding loyalist strategy. The resulting hypothesis expects incumbents to concentrate their vote-maximizing efforts on highly mobilized stronghold regions:

H: Regions with high electoral turnout and many government supporters receive more funding than comparable regions with low turnout ('rewarding loyalists' hypothesis).

This hypothesis expects a positive interaction between the number of government supporters and electoral mobilization. In other words, I expect that the core voter model is substantively strengthened by taking into account patterns of electoral mobilization.

Research design and operationalization

The empirical analysis uses the replication dataset provided by Dellmuth and Stoffel (2012). The dataset contains objective 1 and 2 payments from the

European Fund for Regional Development (EFRE) during the funding period 2000–2006. The data is available as aggregated funding levels of German NUTS3 regions. The exclusive focus on the EFRE is explained by limited data availability. However, the EFRE is the biggest and, therefore, most important EU fund. Any finding on the EFRE is therefore likely to have a high level of generalizability to EU structural funding.

The dependent variable is the logarithm of structural funding per capita. This variable captures funding as a share of a region's population. Dellmuth and Stoffel (2012) use the logarithm of the variable to approximate a normal distribution.

The core supporter hypothesis is measured by Dellmuth and Stoffel's (2012) variable 'vote share,' which provides data about the *Land's* Prime Minister's party vote share in each NUTS3 region before 1999. It is expected that vote share has a positive effect on funding. The swing voter hypothesis is tested with Dellmuth and Stoffel's (2012) variable 'margin.' This variable captures how electorally contested a NUTS3 region is. This is measured by the difference in vote share between the first and the second strongest parties in the last *Landtag* election prior to 1999. Margin is expected to have a negative impact on funding, since funding should be targeted to regions with a small difference between the two major parties. The reliable voter hypothesis is tested with an interaction term of vote share and electoral mobilization. Electoral mobilization is measured by levels of electoral turnout in the last *Landtag* election prior to 1999. It is expected that regions with a high share of the Prime Minister's party and high levels of electoral turnout receive more funding. To receive a meaningful coefficient on the interaction term, vote share and turnout are centered on their respective means.⁴

Following Dellmuth and Stoffel (2012), the models include four socio-economic variables. GDP per capita, unemployment, geographical size and urbanization are used as control variables. Those variables have a strong theoretical foundation since they correspond to the socio-economic goals laid down in the guidelines of the European Commission (1999). All four variables are measured in 1999 to reflect the situation at the time the investment plan was drawn up. Geographical size is included because bigger regions are more likely to encompass declining rural areas than smaller regions. Hence, geographical size is a proxy for declining rural areas, about which no data is available on the NUTS3 level. Furthermore, urbanization is used to account for the funding priority of urban areas in difficulties. The variable used by Dellmuth and Stoffel (2012) is therefore a dummy, indicating unity if a district comprises a city with more than 50,000 inhabitants.

Results

Since nearly 40% of the German NUTS3 regions did not receive any funding in 2000–2006, I use – in line with Dellmuth and Stoffel (2012) – a Tobit regression to estimate the allocation of funds (Tobin, 1956). Standard errors are clustered by *Länder* to account for autocorrelation between NUTS3 regions of the same *Land*. Finally, standard errors are estimated robustly to account for heteroskedasticity.

Due to randomly missing data in various variables, the sample size decreased from 424 NUTS3 regions to 399. The only non-random cause for the missing data is a territorial reform in *Sachsen-Anhalt*. The final dataset of 399 regions is without missing data, which is required for the spatial model I will use as robustness check. Since Tobit coefficients are not estimated linearly, they cannot be interpreted directly. In a first discussion I will, therefore, focus on the direction and the significance of the coefficients.

Model 1 of Table 1 presents a full model with all variables of interest. The interaction term is significant at the 5% level and points to the theoretically predicted direction. There is indeed a positive interaction between turnout and vote share. Model 2 addresses an important issue in the data which was convincingly presented by Dellmuth and Stoffel (2012). As they show, there is a high correlation

Table 1. Regression of EU funding per capita (log).

	Tobit		SPGMM
	(1)	(2)	(3)
Vote share	0.0664 (0.112)	0.150*** (0.0396)	0.0896* (0.0481)
Margins	-7.252 (11.22)		
Turnout	0.184** (0.0858)	0.161* (0.0829)	0.138*** (0.0429)
GDP per capita	-0.348*** (0.126)	-0.352*** (0.123)	-0.184*** (0.0393)
Urbanization	3.788*** (0.943)	3.769*** (0.955)	0.716*** (0.0519)
Unemployment	0.839*** (0.154)	0.837*** (0.152)	1.417*** (0.467)
Geosize	2.124** (1.029)	2.248** (0.966)	2.056** (0.830)
Turnout × vote share	0.0120** (0.00531)	0.00917** (0.00421)	0.00906* (0.00500)
Constant	-0.544 (4.863)	0.750 (3.685)	1.622 (1.210)
N	399	399	399
Pseudo R2	0.11	0.10	
Adjusted R2			0.45
LM Lag (Anselin)			4.75**

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Robust standard errors in parentheses.

between margins and vote share and Model 1, therefore, suffers from multicollinearity (Person's $r = 0.79$, $p < 0.01$). This is due to the fact that the swing hypothesis does not work for the German *Länder*. Swing arguments assume that there are government and opposition strongholds and highly contested regions in the middle. However, in the data at hand, regions are either government strongholds or contested. Therefore, Dellmuth and Stoffel conclude that the two variables measure the same phenomenon. As Model 2 shows, the results are not changed by taking out margins. The interaction effect is still positive and significant.

But how can we substantively interpret the interaction in Model 2? To capture how turnout moderates the effect of vote share on funding, Figure 1 plots the average marginal effect of vote share over different levels of turnout. Vote share becomes significant when there is a turnout of over 60%. This is the case for 361 regions of the 399 in the model. This means that for a vast majority of cases in the data, there is a significantly positive linear interaction of vote share and turnout on funding. On average, the effect of vote share becomes stronger with increasing levels of turnout. Furthermore, about 10% of the cases have a critically low level of turnout which implies that for those cases, vote share does not significantly affect funding.

Dellmuth and Stoffel's original findings miss the central role of electoral turnout. Incumbents do not simply allocate money to supporters; they seem to discriminate between regions with high and low electoral turnout. This is an important finding given the high number of government strongholds in the German *Länder*.

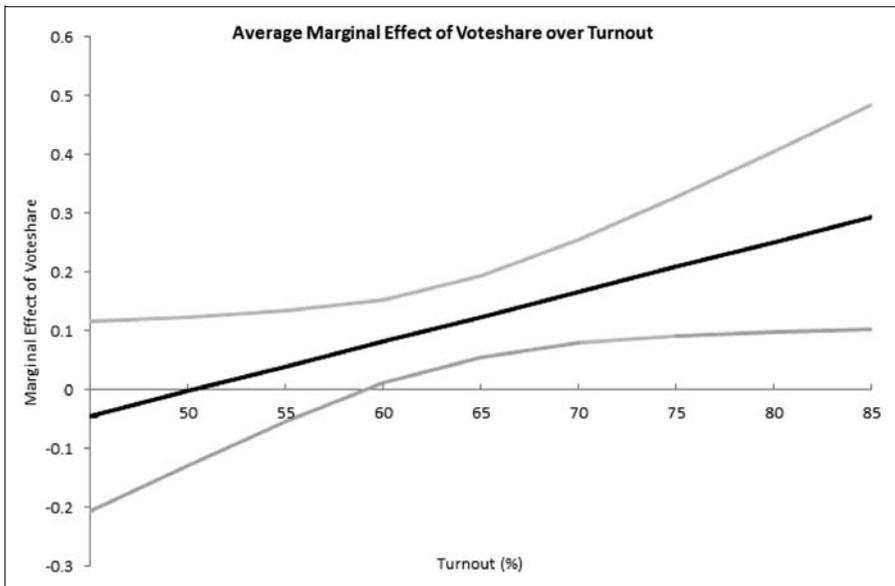


Figure 1. Interaction of Prime Minister's vote share with electoral turnout.

Figure 1 shows that electoral turnout is a crucial factor helping incumbents to make distributive decisions between their stronghold constituencies. Furthermore, this interaction leads to a more comprehensive and complex theoretical story which goes beyond classical core voter explanations. The findings confirm Cox's (2010) general expectation that mobilization considerations further strengthen core voter arguments.

Robustness check

The analysis above, as well as Dellmuth and Stoffel's (2012) research, ignores an important threat to the internal validity of the estimation strategy. With the exception of the clustered standard errors on the *Land* level, the analysis assumes statistical independence of the NUTS3 regions. Yet, it seems possible that the funding of a NUTS3 region is interdependent with regard to spatially close neighbor regions.

Figure 2 presents the total EFRE distribution among all German NUTS3 regions for the funding period 2000–2006. Spatial patterns are easily identifiable, such as the structural fund accumulations in East Germany, East Bavaria or the Saarland. The Graph also presents turnout patterns in the German NUTS3 regions. In some regions high turnout seems to align with high funding, such as

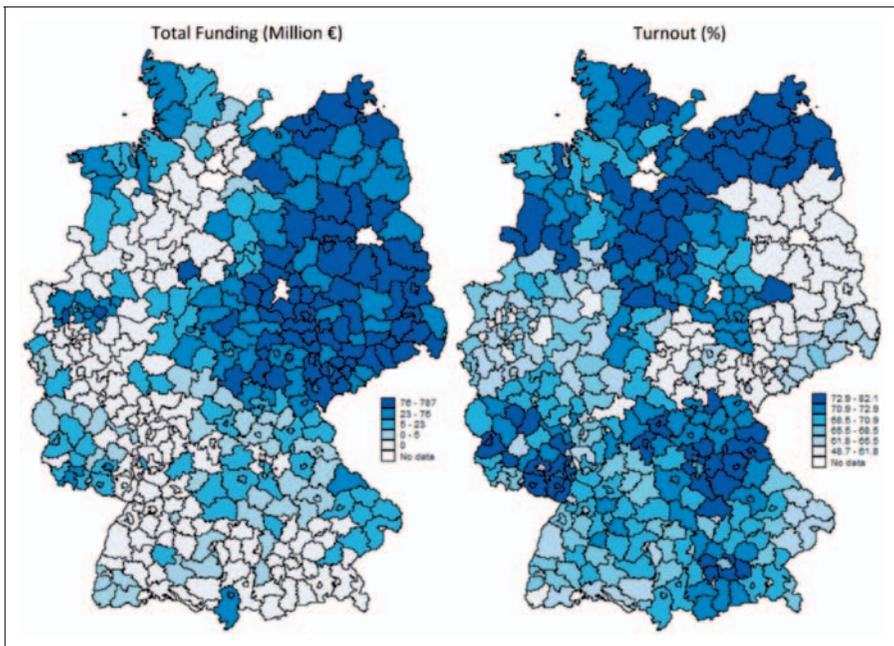


Figure 2. Spatial distribution of EU funding and turnout.

the Saarland or the South-West of Baden-Württemberg. Contrarily, in a number of East German areas, for example, high funding levels seem to coincide with low turnout.

So, how could those spatial patterns threaten the validity of the results? NUTS3 regions are territorially small units bordering a lot of other regions. It is possible that funding projects cross NUTS3 borders or that funding effects cross those borders. As funding effects are not exclusively restricted to NUTS3 borders, vote-maximizing strategies might cross those borders as well. Moreover, funding could be clustered on the level of NUTS2 regions.

With regard to the specific effect of vote share and turnout on funding, an important issue is that the clustering of funds in neighboring regions might align with macro-economic, historical or cultural conditions. High or low turnout could co-vary with such spurious conditions. If those spurious factors are geographically bound, spatial effects can control for that. Furthermore, it might be possible that funding in one region 'wakes' desires in a neighboring region. Seeing that a neighboring region from the same area receives certain funds could lead to increased demand for similar treatment. Such patterns of spending spillover effects and 'yardstick competition' found a lot of attention in literature on public spending and regional tax competition (cf. Foucault et al., 2008).

Since the 1970s, the inclusion of spatial effects finds regular application in econometric literature using panel or time-series data. Anselin and Florax (1995) introduced a prominent model which combines spatial lag dependence (funding in one region affects funding in another region) with spatial error dependence (an exogenous shock affects regions similarly).

Kelejian and Prucha (1999) advanced this spatial modeling to cross-sectional data. Autocorrelation and disturbances across units of cases at one point in time is possible as well and this potential effect is often ignored in political science research. Especially in data using relatively small spatial units, such as NUTS3 regions, interdependences and autocorrelation across units is very likely.

To test the robustness of Model 1 and 2 in Table 1 against spatial effects, I am going to use a spatial autoregressive cross-sectional model ($i = 1, \dots, n$):

$$y_i = \lambda \sum_{j=1}^n \omega_{ij} y_j + \sum_{p=1}^k x_{ip} \beta_p + u_i,$$

$$u_i = \rho \sum_{j=1}^n m_{ij} u_j + \varepsilon_i$$

where ρ and λ are the spatial autoregressive parameters for the ωy and mu spatial lags.

The spatial effects are modeled as a contiguity matrix, which assumes that interdependencies and autocorrelations occur between neighboring regions. Hence, the weighting matrices ω and m are created as $n \times n$ matrices, which are

0 if two regions have no common border and are 1 if regions share a common border (cf. Drukker et al., 2011).⁵ The average number of neighbors of a NUTS3 region in Germany is 3.6.

A STATA software package by Shehata (2012) allows estimating Spatial Autoregressive Generalized Method of Moments (SPGMM) models with censored data (based on Kelejian and Prucha, 1999). The SPGMM models are again censored at zero and standard errors are robust and clustered at the *Länder* level.

Model 3 in Table 1 re-runs Model 2 with spatial effects. The LM Lag Test reports that the spatial lagged dependent variable has spatial autocorrelation. This means that funding in one region tends to affect the funding level of neighboring regions. This could be due to one of the reasons mentioned above. Furthermore, it is also possible that funding is objective specific and interdependencies reflect a similar objective status of neighboring regions. The SPGMM method qualifies as a more efficient estimation strategy. However, controlling for spatial effects does not change anything substantive in the results. There is still a significant, positive interaction and even the size of the coefficient is very similar. This should give us confidence in our results. Even though there are spatial interdependencies, they do not seem to compromise the effect of vote share and turnout on funding.

Conclusion and discussion

This research note re-assessed findings on the allocation of EU structural funds by Dellmuth and Stoffel (2012). Departing from a more refined theoretical story about core voter arguments and electoral mobilization, it could be demonstrated that electoral turnout plays a significant role in the allocation of funds. The empirical findings support the rewarding loyalist hypothesis, which expects incumbents to target benefits towards highly mobilized stronghold regions. On average the effect of the vote share of the governing party on funding increases with higher levels of turnout. This means that *Länder* governments tend to allocate more money to government strongholds if the level of electoral turnout is high. Since the German data entails a relatively high number of government strongholds, the additional role of electoral turnout substantively enriches the explanation. Governments seem to use electoral mobilization as a discriminating factor between their many core constituencies.

On a theoretical level, these findings imply that research on politicians' vote-maximizing strategies should supplement considerations regarding persuasion with arguments about electoral mobilization (Cox, 2010). Especially where differences of turnout levels between regions seem to be stable over time, the targeting of high turnout regions is logically conclusive. This runs counter to the individual-level arguments presented by Nichter (2008) who favored the turnout buying hypothesis over rewarding loyalist arguments. This article showed that on an aggregated level and under the condition of relatively stable turnout rates, rewarding loyalists is more convincing than any other strategy.

An important caveat for this article and similar research in the field (e.g. Bodenstein and Kemmerling, 2006, 2012; Dellmuth, 2011; Dellmuth and Stoffel, 2012) refers to the cross-sectional nature of the analysis. It seems likely that there is a complex causal interaction between vote-maximizing efforts on the one hand and funding on the other. If, for example, current turnout affects funding in the next period, which in turn increases turnout in subsequent periods, we would have an issue of reversed causality which cannot be convincingly addressed with this kind of data. The theoretical account of the rewarding loyalist strategy does not have to be compromised by this because it assumes that funding serves as a means to secure existing support. Funding, therefore, is not expected to increase turnout levels. However, to test such assumptions, further research should try to obtain data from several funding periods.

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Notes

1. The 'NUTS system' (*nomenclature des unités territoriales statistiques*) is used to systemize territorial levels in the European Union. In Germany, there are 429 NUTS3 regions (*Landkreise und Kreisfreie Städte*), 39 NUTS2 regions (*Regierungsbezirke*) and 16 NUTS1 regions (*Länder*).
2. Bavaria is chosen because it is a big *Land* with a sufficient number of NUTS3 regions ($N=96$) to run a regression.
3. The coefficient on the 1998 turnout is 1.19, with a standard error of 0.06. The R-square is 0.85.
4. Centring is done by a simple linear transformation of the two variables. Each variable is subtracted by its respective mean. After that the new zero points are average vote share and average turnout.
5. Geographical data on German NUTS3 regions is derived from the European Environment Agency's homepage (<http://www.eea.europa.eu/data-and-maps/data/administrative-land-accounting-units>).

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