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alignment in transfers to Romanian municipalities**

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When does the winner take more?

The role of political alignment in transfers to Romanian municipalities

Georgiana Puscas*

Abstract

This paper explores whether the political alignment between mayors and the central government brings additional financial benefits to municipalities in Romania, using a novel dataset over 2012-2018. Analysing close municipal elections, I apply a regression discontinuity design to identify the effect of political alignment on several categories of transfers. I find that politically aligned municipalities receive per capita about 19% more equalisation transfers, 46% more subventions and 30% more transfers for roads. The results indicate that transfers for decentralised costs at municipality level are non-discretionary.

JEL Classification — D72, H77, H81, P16, C21

Keywords — transfers allocation, political alignment, electoral competition

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Appendix available at this link.

1 Introduction

Under fiscal decentralisation, the central government assigns financial resources and spending responsibilities to lower-tier administrative bodies for ensuring an optimal provision of public goods. While the goal of such a system is maximising overall social welfare (Oates, 1999), from a political economy standpoint it is improbable that decisions about funding are always made on equity and economic efficiency grounds. The vertical structure of transfers, together with the flexibility of the allocation process and political incentives create opportunities for political actors to distort the redistribution mechanism.

The literature, both theoretical and empirical, has focused on contrasting theories regarding the relation between transfers and politics. Under these theoretical models, transfers are used by politicians to increase their chances of reelection; politically motivated transfers may be directed to municipalities where elections are close and voters are undecided (Dixit and Londregan, 1996; Lindbeck and Weibull, 1987) or, on the other hand, politicians may reward areas where they have significant and constant electoral support (Cox and McCubbins, 1986). Regardless of the extent of electoral competition, however, the government could direct more resources to local-level leaders belonging to the same political coalition while disadvantaging adversaries. Thus it is expected that the political alignment between the central and local layers of government increases the amount of transfers.

In this paper I investigate whether mayors' political affiliation in relation to the central government influences the allocation of transfers in Romania: does the political alignment of mayors influence the amount of transfers that municipalities receive? I hypothesise that the government favours elected local leaders who belong to their political organisation no matter what winning margin they achieved, thus allocating more transfers, on average, to a municipality headed by an aligned mayor.

This paper brings several contributions to the existing literature on the political economy of intergovernmental transfers. First, to the best of my knowledge, for Romania this is the first paper to study the alignment effect and the first quantitative research about public finance using post 2012 data. Romania is a good setting to study for multiple reasons. The country has seen several waves of fiscal decentralisation since 2000 (Sararu et al., 2018) and mayors have important policy prerogatives like the approval and execution of the local budgets. These factors, along with general high levels of political and economic corruption (Klašnja, 2015) and a lack of transparency about transfers allocations criteria suggest there is scope for substantial allocative distortions.

The second contribution is the dataset: I test my hypothesis using a novel, self-built dataset on the 318 Romanian municipalities across the period 2012-2018, integrating electoral, fiscal, economic and demographic variables. This new data allows for estimating the alignment effect on several types of transfers to Romanian municipalities: transfers for decentralised costs at municipality level, equalisation transfers, subventions and transfers for roads.

In this paper I apply a sharp regression discontinuity design (RDD) which compares barely aligned municipalities with municipalities where the elected mayor is barely unaligned with the central government; the 'barely aligned' status means that the local election was won with a minuscule margin by a mayor belonging to the governing coalition on the national level. By exploiting the quasi-random variation in the outcomes of close electoral races, the RDD setup has the advantage of alleviating the concerns of political alignment being endogenous to the allocation of transfers.

My third contribution is as follows. While RDD can be implemented using both parametric and nonparametric specifications, the studies using the latter normally restrict their sample to observations within a single chosen bandwidth. However, discussing the effect for one bandwidth, in isolation, at best provides a partial picture of the alignment effect given the sensitivity of the estimates to the bandwidth choice. This paper aims to improve the transparency of the nonparametric approach by providing a visual representation of how the estimates fluctuate as a function of various bandwidths.

The results are broadly consistent with my hypothesis: on average, politically aligned municipalities receive per capita about 19% more equalisation transfers, 46% more subventions and 30% more transfers for roads. Transfers for decentralised costs are found to be completely non-discretionary.

This paper will proceed as follows: the next section discusses previous literature; section three details the political and fiscal environment in Romania; section four describes the dataset and methodology; in section five I present the empirical results, while in section six I provide internal validity and robustness checks; I conclude with section seven.

2 Previous Empirical Results

A considerable amount of attention in economics has focused on understanding the role of political alignment in the transfers distribution to lower-tier levels of government, but an assessment of the alignment effect has proven to be a challenging endeavour. In the absence of a plausible exogenous variation in the alignment status, an apparent effect on transfers could be solely attributed to unknown local characteristics such as historical, geographical or socio-economic variables influencing both election results and received transfers (Larcinese et al., 2013). Earlier studies acknowledge this difficulty and, aiming to control for relevant determinants of transfers, use methods based on selection on observables. Such papers are by Grossman (1994) for the U.S. and Worthington and Dollery (1998) for Australia. They both find evidence for the alignment effect but their specifications still raise omitted bias concerns.

Most studies use fixed-effects specifications to overcome the endogeneity of political alignment, removing the effect of time-invariant confounding characteristics of municipalities. Several such papers provide empirical evidence of the alignment effect in the U.S., including Ansolabehere and Snyder Jr (2006), Larcinese et al. (2006) and Berry et al. (2010). In Canada, Milligan and Smart (2005) find that more development resources are allocated

to districts which are represented by members of the central governing party. Arulampalam et al. (2009) find that an Indian state which is aligned and where elections are tight receives larger transfers than an unaligned and non-swing state; moreover, the effect is stronger when the state elects the governing party in state congress than in national congress elections, suggesting that the central government is particularly interested in gaining political control of state administrations. The results of Solé-Ollé and Sorribas-Navarro (2008), who employed a differences-in-differences empirical strategy, show that in Spain the amount of grants that municipalities receive is influenced by their partisan alignment with upper-levels of government. Although these studies control for time-invariant confounders, unobservable time-variant heterogeneity may still lead to biased results: for example, an event may shift the party preferences of a municipality in the central government's direction and simultaneously that municipality may be favoured financially due to policy rather than political motivations.

More recent papers take advantage of the exogenous variation introduced by the as-if-random outcomes of close elections and use an RDD framework with fixed effects as a solution to the possible endogeneity of political alignment. From a methodological and results perspective, this paper is closest to this category of studies. In Portugal, Migueis (2013) finds that non-formulaic transfers are discretionarily allocated in amounts larger by 19% to aligned municipalities. The results of Bracco et al. (2013), who test the alignment hypothesis using Italian data, show that municipalities that are politically aligned with the central government are rewarded with 26 Euros per capita of additional grants. A study of Brollo and Nannicini (2012) finds that, in pre-election years, intergovernmental transfers in Brazil are biased with roughly 40% towards municipalities whose mayors are affiliated to the coalition of the president.

3 Institutional Background

3.1 Politics and Administration

Romania is a semi-presidential republic, with the majority coalition holding power at both legislative and executive levels while the president retains some limited authority. Mayoral and parliamentary elections are organised in the same year, every four years. In 2011, an electoral reform replaced the former two-round system of mayoral elections with first-past-the-post voting. Because of the differences between the two-round and first-past-the-post systems, the period analysed in this paper will be from 2012 to 2018. This interval includes the two first-past-the-post mayoral elections and the latest two parliamentary elections, in 2012 and 2016.

The composition of the coalition controlling the Romanian parliament and government changed during the period 2012-2018 but *Partidul Social Democrat* (PSD) was a constant presence and kept most important executive branch positions. Following a government ordinance in late 2014, 34 municipality mayors changed their party affiliation without losing

their mandate, resulting in changes of alignment in 2015. 2016 is the only exceptional year when the government was a technocracy; because there is no political alignment as defined previously, this year will not be included in my analysis.

Administratively, Romania is divided into 41 counties reuniting localities – (urban) municipalities and (rural) communes. Each county is administrated by a county council, responsible with ensuring the provision of county-level public goods and services in collaboration with mayors. Most county councils are aligned to the central government. At a municipal level, although a local council deliberates public projects, in practice the mayor directs the process, initiates most proposals and manages the financial resources. The mayor holds the executive power and is considered the most prestigious position in a Romanian municipality. For these reasons, in this paper the political alignment of a municipality reflects the party affiliation of the mayor.

3.2 Transfers

Counties and municipalities have two main sources of revenue: from county/local tax and from transfers allocated by the national government. The national budget law, outlining transfers for each county council and each locality, is designed at the beginning of the year by the Ministry of Finance then voted in parliament. During the year, the budget is rectified multiple times depending on the requests local councils make after discussing the financial needs of mayors. The budget law specifies transfers data disaggregated into multiple types based on their purpose. Compared to other countries which utilise formula-based transfers, although in Romania a few categories follow some formal rules of allocation, no transfers type is purely formulaic. This means that there is scope for discretionary allocation, although of a varying degree, for all types of Romanian transfers.

Transfers for decentralised costs at municipality level aim to support pre-university education, census public services as well as expenses related to social care, nurseries and nursing homes. According to the Local Public Finance Law 273/2006, the director of the Regional Public Finance Authority, subordinated to the Ministry of Finance, makes allocations to municipalities based on data received from them, but no formula or guideline is provided publicly.

Because tax revenue varies across localities, equalisation transfers aim to level local budgets. The allocation process of this category of transfers is complex and 80% of the funds are assigned following a multi-step rule based on several variables: population, locality area and fiscal capacity. The rest of 20% is directed to localities at the discretion of the county councils.

Subventions are conditional block grants for investments related to infrastructure, environment and waters, social protection, health, tourism, emergency funds, national interest programmes and the *National Programme for Local Development* (PNDL). The latter is application-based and particularly reported to be a discretionary financing scheme.

Transfers for roads are first allocated to county councils: 30% of the sum is allocated directly proportional to total county road length, and 70% of the sum is allocated inversely proportional to county financial capacity. The allocations per locality are made by the decision of each county council after they consult the mayors.

3.3 Theoretical Preliminaries

The same formal dynamics between voters, mayors and central government politicians as modelled by most papers on political alignment and transfers can also be assumed for Romania. Politicians at central level care about advancing the electoral interests of their political coalition and allocate transfers which increase existing local revenues, thus expenditures on public projects. Citizens in a municipality vote according to their utility from public goods consumption and (fixed) ideology. As they have imperfect information about the sources of municipal income, the political credit derived from public goods provision is shared between the mayor and the central government; if the political affiliations of the two layers of government coincide, then the ruling coalition captures all the utility from transfers. For this reason, central level politicians have strong incentives to favour aligned mayors and to disadvantage unaligned municipalities.

Bracco et al. (2015) explain that transfers act like a 'signal of mayor competence'. Central governments are interested in augmenting it because, as Solé-Ollé and Sorribas-Navarro (2008) explain, aligned mayors not only provide local political control but are also important opinion leaders who can influence the results of elections of all types, thus advancing the electoral goals of the coalition. Brollo and Nannicini (2012) add that the preferential allocation could be deliberately aimed at 'tying the hands' of opposition mayors, to reduce their chances of reelection. All of these nuances are applicable to the Romanian context and support the hypothesis of this study, namely that barely aligned municipalities receive more of each category of transfers, everything else equal.

4 Data and Empirical Strategy

4.1 Data

The dataset is comprised of municipal fiscal, economic and demographic data for the period 2012-2018 excluding 2016, and electoral data of mayoral elections in 2012 and 2016. As motivated in the previous section, the choice of the period is due to the different local election types before and after 2012, and due to a lack of alignment in 2016. I exclude the capital because its administration rules and fiscal mechanism are distinct from the other municipalities. Thus the sample consists of 318 municipalities observed in each of the 6 years of the study.

The treatment in my analysis is the political alignment of a municipality with the central government. I thus define the alignment dummy, *aligned*, equal to 1 if the mayor of a municipality is affiliated to a party that is part of the coalition in power on a national level and 0 otherwise. Following the election of 2012, 180 municipalities were aligned and 138 were unaligned, while for the 2016 mayoral election the numbers are 165 and 158, respectively.

The running variable is the margin of alignment, *margin*, which represents the difference in vote shares between the winning mayor and the best ranked candidate of the opposite political alliance - this accounts for the possibility that the two most voted candidates belong to the same coalition, either the one in power or the opposition. The value of *margin* is positive if the municipality is politically aligned and negative if not. Treatment changes discontinuously from 0 to 1 at the cutoff of 0% vote margin; the observations around this threshold, where the absolute value of *margin* is small, are considered to have had close elections.

Table 2 outlines the distribution of the observations between aligned and unaligned municipalities and provides the number of close elections. The total number of observations is 1908, from which roughly one in six is within 5% from the cutoff, and 118 are close elections with an absolute vote margin smaller than 2%. While the total sample has more aligned observations, the proportion between aligned and unaligned municipalities is balanced when considering only close races.

Table 1 Distribution of observations by alignment and *margin*

	Observations		
	All sample	$ margin \leq 5\%$	$ margin \leq 2\%$
Aligned	1077	154	57
Unaligned	831	150	61
Total	1908	304	118

The dependent variables are the transfers from the central government to municipalities, per capita: transfers for decentralised costs, equalisation transfers, subventions and transfers for roads. Table 3 provides descriptive statistics for the four types; all are measured in RON. Transfers for decentralised costs are clearly the largest in amount. Still, subventions and equalisation transfers are considerable and, like all transfers, show a lot of variability. To limit the impact of outlier municipalities, I use logarithms of transfers. Transfers for roads have a distinctive distribution: although they are the most modest in value, a municipality receives no funds in roughly two thirds of the observed cases. Thus I apply an inverse hyperbolic sine transformation according to Bellemare and Wichman (2020), which approximates a logarithmic transformation but retains the large number of zero-valued observations.

Table 2 Descriptive statistics of transfers

	Mean	Median	Std. Dev.	Min	Max	Obs.
Transfers for Decentralised Costs per capita	585.83	569.71	269.11	84.50	3259.82	1908
Equalisation Transfers per capita	139.44	76.71	196.78	0	2666.77	1903
Subventions per capita	130.58	56.07	234.30	0	2946.57	1908
Transfers for Roads per capita	4.99	0	16.02	0	238.88	1903

I add control variables which, according to Romanian legislation, affect the amount of funds a municipality is allocated or are variables related to the economic development of a municipality: population, number of pupils in pre-university education, municipality area, roads length, modernised roads length, unemployment rate, number of new firms per 1000 people, local revenue.

4.2 Empirical Strategy

To overcome the identification challenges posed by the possibility of alignment being endogenous to the distribution of transfers, I use an RDD to generate an unbiased estimate of the local average treatment effect (LATE). The intuition behind my identification strategy is that municipalities where the aligned mayor won by a narrow margin against a candidate of the opposition can be a good counterfactual for municipalities where the opposite happened. This approach is based, as Lee (2008) explains, on the quasi-random variation in election outcomes: in a close election a victory or a defeat is likely to be decided by pure chance because no candidate can precisely manipulate the result.

I follow Hoxby (2000) and the empirical literature and include municipality and year fixed effects in all my specifications to limit bias. Robust standard errors are clustered at municipality level.

As a first step in my analysis, I assess whether political alignment is correlated with each transfers category by estimating the following OLS equation:

$$\ln(\text{Transfers/capita})_{it} = \beta \text{Aligned}_{it} + \theta_i + \mu_t + \epsilon_{it} \quad (1)$$

where Aligned_{it} is the alignment dummy, equal to 1 if the municipality is aligned and 0 otherwise, θ_i is the municipality fixed effect, μ_t is the year fixed effect and ϵ_{it} is the error term.

I use a parametric/global RDD strategy as my main specification, given my limited sample size. This approach has the advantage of borrowing strength from the full sample to estimate an unbiased LATE for observations in the vicinity of the cutoff through modelling transfers as a function of *margin*. I choose a quadratic functional form: first, it is the most appropriate by the Akaike information criterion (AIC), procedure recommended by Jacob et al. (2012); second, it is consistent with the critique of Gelman and Imbens (2019) who argue that controlling for higher-order polynomials, the usual practice in older RDD studies, is flawed. My general polynomial regression is the following:

$$\ln(\text{Transfers/capita})_{it} = \beta \text{Aligned}_{it} + F(\text{Margin}_{it}) + \theta_i + \mu_t + \epsilon_{it} \quad (2)$$

where $F(\text{Margin}_{it})$ is a quadratic function of *margin*.

As a complement for the parametric estimation, I use a nonparametric/local approach according to Imbens and Lemieux (2008). This strategy relies on close elections only by restricting the sample to observations within a certain bandwidth around the cutoff, where the functional form should be close to linear. The bandwidth is typically computed through a procedure that minimises mean square errors and so finds the best trade-off between bias and precision, which both increase as the bandwidth and sample size increase. Using such a criterion, however, has a solely methodological rationale but not a contextual meaning. Frequently used bandwidth selection algorithms include those by Imbens and Kalyanaraman (2012) and Calonico et al. (2018b); they are designed for cross-sectional data, so in fixed-effects settings the optimal bandwidths are not actually suited to the correct specifications. Providing results for a single bandwidth, however, is problematic for a more important reason: the point estimates are very sensitive to the bandwidth choice (Imbens and Lemieux, 2008), so a single effect corresponding to a single bandwidth may be misleading. Thus I estimate the following local linear regression for all bandwidths b , where $\text{margin} \in [-b, +b]$:

$$\ln(\text{Transfers/capita})_{it} = \beta \text{Aligned}_{it} + \gamma_1 \text{Margin}_{it} + \gamma_2 \text{Aligned}_{it} \cdot \text{Margin}_{it} + \theta_i + \mu_t + \epsilon_{it} \quad (3)$$

5 Results

Table 3 presents the OLS and polynomial RDD results for regressions with logged per capita transfers as dependent variables and the alignment dummy as explanatory variable. The coefficient for alignment is positive across the two specifications and the four transfers categories, in line with my hypothesis, and typically the size of the polynomial estimate is larger than that of the OLS regression. This can be explained by the fact that RDD accounts for possible confounders at municipal level, while in OLS these factors may lead to an under-estimation of the effect. Moreover, the OLS regression includes all elections while the RDD estimate is the LATE for close elections, where the influence of alignment may be stronger.

Table 3 The impact of political alignment on transfers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. variable	Transfers for Decentralised Costs		Equalisation transfers		Subventions		Transfers for Roads	
Specification	OLS	Polynomial	OLS	Polynomial	OLS	Polynomial	OLS	Polynomial
Aligned	0.020 (0.014)	0.014 (0.024)	0.097 (0.066)	0.179* (0.105)	0.357** (0.145)	0.384* (0.233)	0.161* (0.088)	0.261** (0.121)
Observations	1908	1908	1866	1866	1898	1898	1903	1903

Note: This table shows results for OLS and RDD 2nd order polynomial, following Eq. (1) and (2). Outcome variables are log of per capita transfers. Robust standard errors clustered at the municipality level are in parentheses. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Figure 1 presents the estimates of the local linear RDD regressions for all bandwidths around the cutoff, smaller than 50%. Ideally, very small bandwidths would be preferable for estimation, as it is there that the assumption of random alignment is most plausible. Generally, however, due to the small number of observations and large sampling variation, the point estimates are most volatile until a bandwidth of 10-20%, and the standard errors are the largest in the same bandwidth range, as shown by the confidence intervals. The disproportionate effects that result from very small bandwidths, smaller than the recommended ones, are likely to be due to overfitting: the algorithms of Imbens and Kalyanaraman (2012) and Calonico et al. (2018b) use principles similar to cross-validation to avoid this risk. Although the effects are never statistically different from zero, this is expected because the local linear regressions use fewer observations than the full-sample parametric regression, increasing standard errors. These issues illustrate the difficulty of confidently estimating an effect using the nonparametric strategy, especially when the sample size is small.

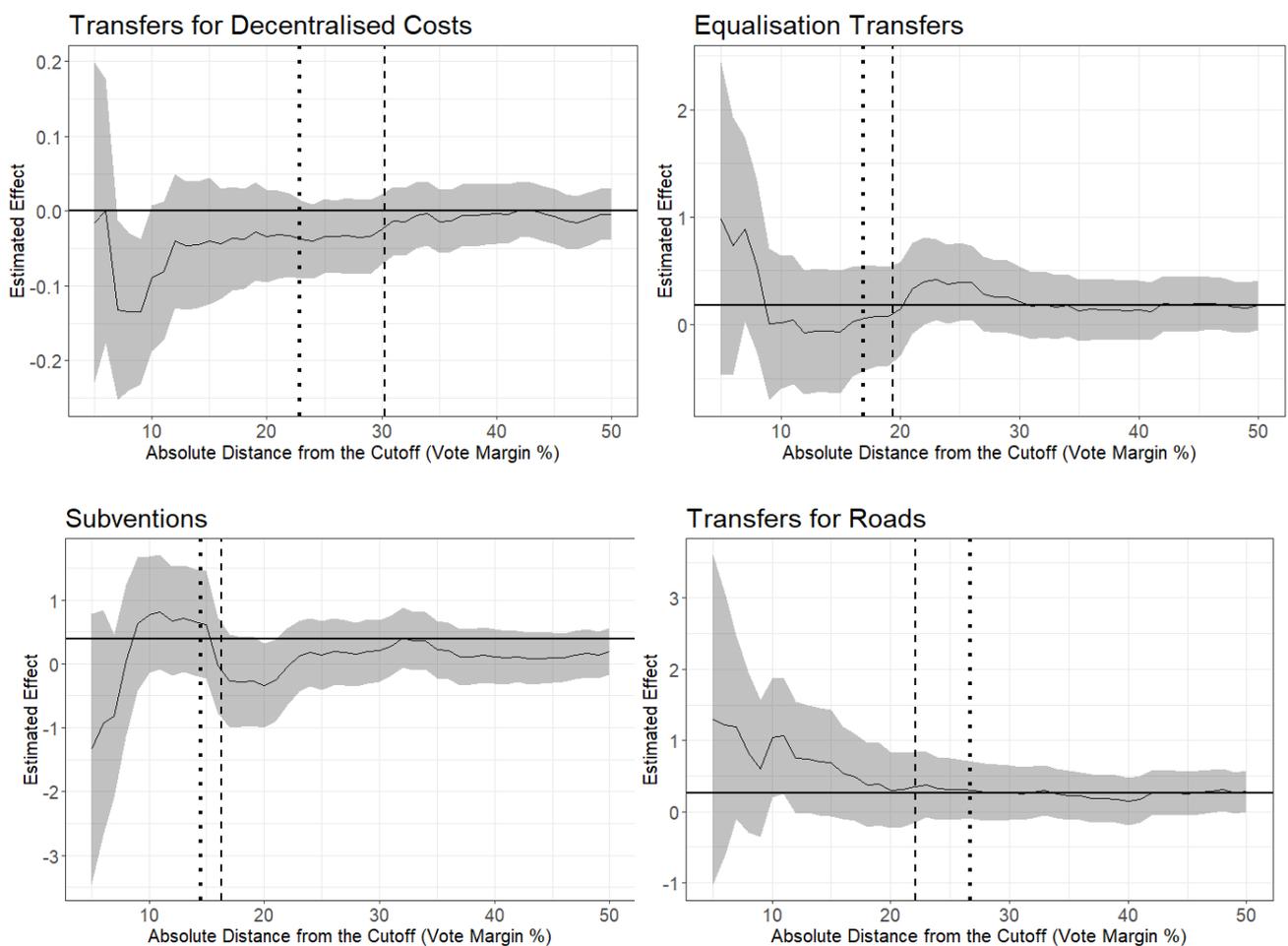


Figure 1 Graphical presentation of local linear RDD regressions results (Eq. (3)), along with 95% confidence intervals, based on Bueno and Tuñón (2015). The horizontal line marks the main polynomial RDD effect. The vertical dotted line marks the optimal bandwidth as per Calonico et al. (2018b), calculated using Stata command `rdbwselect` with default options from package `rdrobust` (Calonico et al., 2018a). The vertical dashed line marks the optimal bandwidth according to the algorithm of Imbens and Kalyanaraman (2012), available at <https://imbens.people.stanford.edu/software>.

The RDD estimate shows that transfers for decentralised costs are not subject to a political alignment influence. The result is unexpected given the lack of details about their distribution mechanism but encouraging for the public finance situation of Romania, as this type of transfers comprises the bulk of funds allocated to a municipality. Figure 2 illustrates this finding: not only is there no discontinuity at the cutoff but also it seems there is no relationship between these transfers and the vote margin in a municipality. Interestingly, the graphical representation is consistent with a transfers distribution decided by a formula that is common to all municipalities and which did not change in the observed time interval. This clarifies my previous observation that, in comparison to other countries, Romania did not appear to have any purely formulaic transfers. The local linear RDD estimates are broadly consistent with the results of the parametric strategy: although negative, the point estimates are approach-

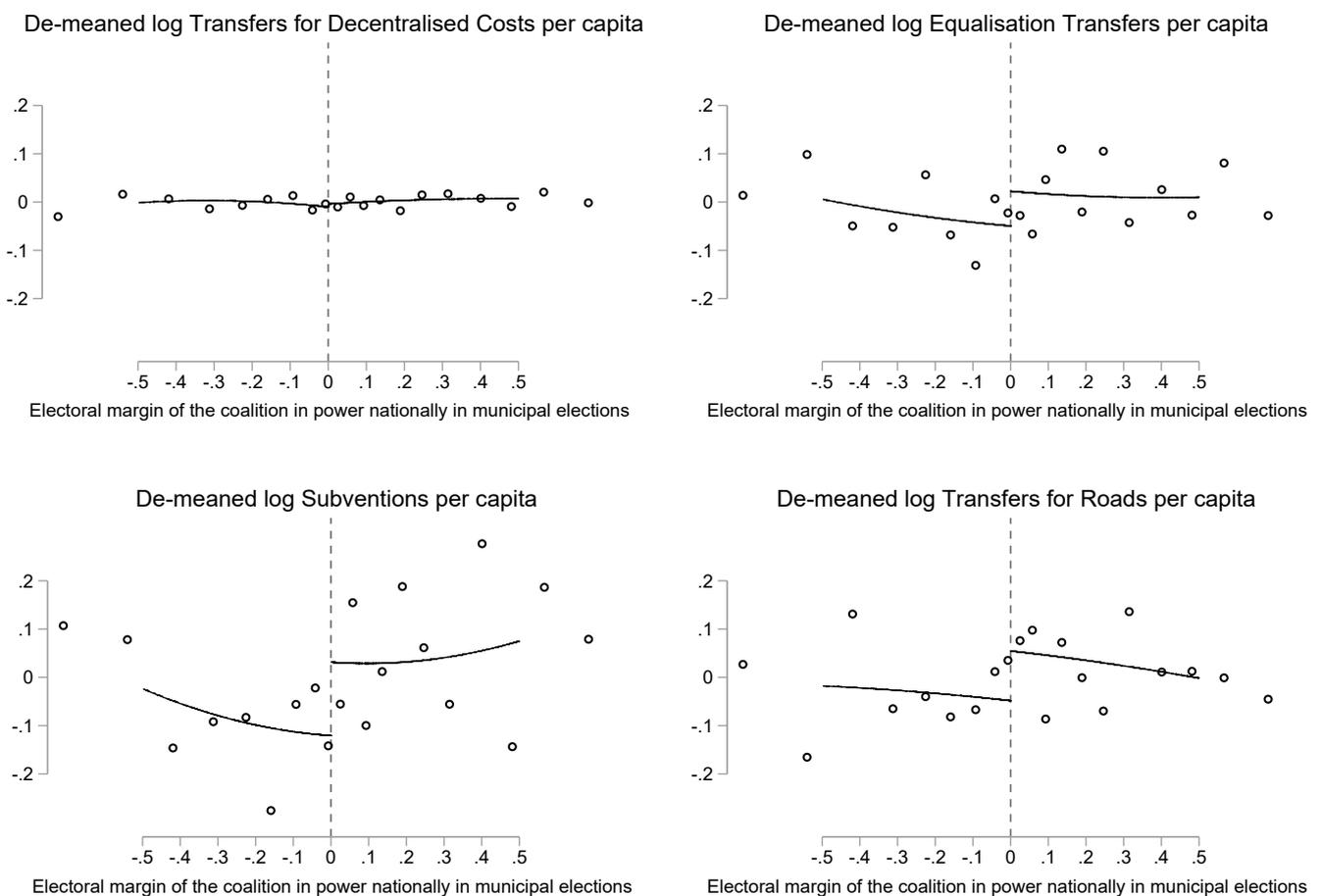


Figure 2 Graphs based on Migueis (2013). The dependent variables were first stripped of their yearly and municipal averages. Then these transformed dependent variables were averaged within 20 intervals, ordered by *margin*. Each of the open dots is the average of one of these intervals. The solid lines are the representation of the predicted value of the dependent variables.

Equalisation transfers per capita are found to be about 19% larger when the mayor of a municipality belongs to the coalition in power nationally. Given that the distribution of this type was the closest to being formula-based, the size of this effect is considerable. There are a few possible explanations for this result. It could be that the limited 20% share of equalisation transfers which is discretionarily allocated by county councils is preponderantly directed to aligned municipalities, driving the significant result, or perhaps the formula itself

is advantageous for aligned municipalities. Additionally, the complexity of the rules behind the distribution of this transfers type makes the determined amounts difficult to trace, raising the possibility of political manipulation. The variation of the bins in Figure 2 confirms that indeed equalisation transfers do not have the behaviour of a formulaic type. Although graphically transfers to aligned municipalities appear to be larger, the figure does not show a visible differential in transfers between unaligned and aligned municipalities very close to the cutoff. Under the nonparametric specification, the point estimates stabilise in the vicinity of the polynomial RDD effect, supporting the main estimate of the polynomial specification.

The political alignment of mayors is also found to influence the subventions a municipality receives, increasing the amounts per capita by 46% on average. This represents a clear discretionary tendency that brings substantial financial benefits to aligned municipalities. In Figure 2 subventions to unaligned municipalities decline the closer the election is; this is consistent with the theory of Brollo and Nannicini (2012), that the coalition in power wants to 'tie the hands' of opposition mayors who won by a small margin to decrease their chances of reelection. Although the graphical evidence at the right of the cutoff shows a lot of variability, overall the central government tends to direct more transfers to municipalities where their candidate won with larger margins, supporting the significant correlation between subventions and alignment reflected in the OLS estimate. While this could be due to political considerations, the endogeneity of alignment for observations far from the cutoff might also be a driver of this pattern, as these municipalities might attract more subventions due to endogenous local factors. Subventions appear to be the least robust to the local linear specification, showing a large decline when the bandwidth is small. Moreover, the point estimates stabilise lower than the main effect; however, while the point estimates become more precise the more observations are included in the bandwidth, due to the large variation in the data the linear specification is less likely to be a good fit, ultimately leading to bias when estimating the effect. Subventions illustrate the shortcoming of providing only one effect corresponding to an optimal interval around the cutoff: the two recommended bandwidths yield completely different estimates, which are also dissimilar to those generated with the other possible bandwidth choices.

Being politically aligned with the coalition in power on a national level increases the amount of per capita transfers for roads by 30%. As roads are some of the most visible public investments to voters, this result could support the claim of Bracco et al. (2015) that transfers act like a signal of mayor competence. The graphical estimates do not show a cut in the transfers to unaligned municipalities close to the cutoff but do indicate that the aligned municipalities with very small vote margins receive some of the largest amounts, implying a tactical allocation. The effects of the local linear regressions with various bandwidths are mostly constant at the level of the polynomial effect, bringing confidence to the accuracy of the point estimate.

6 Validity and Robustness

To ensure my RDD is internally valid, I discuss the three main threats to this empirical strategy: manipulation of the assignment variable, discontinuities in non-outcome variables and discontinuities in average outcomes at false cutoffs.

First, I argued that outcomes of close elections are due to random shocks so vote margins and assignment to treatment cannot be precisely manipulated. Even if candidates or parties act strategically, as Lee (2008) explains, any element of unpredictability such as voters' behavior is sufficient for random assignment, thus sorting above the cutoff should not be a concern. To confirm this, I inspect the histograms of *margin* in Figure 4 and find no disproportionate concentration of municipalities just above the cutoff. Following McCrary (2008), in Figure 5 I formally test the null hypothesis of continuity in the density of *margin* at the cutoff and conclude it cannot be rejected.

Secondly, I examine whether the characteristics of municipalities show any discontinuities at the cutoff. By definition independent of treatment, a correlation of these variables with political alignment would cast doubt on the treatment effects on transfers, as it would be unclear whether they are caused by alignment or a covariate. Although it is possible that some unobservables may be influenced by alignment, which is a limiting factor of RDD, it is reassuring that there is no significant discontinuity for any of the baseline characteristics of municipalities included in the dataset, as shown in Table 7.

Thirdly, I implement placebo tests inspired by Brollo and Troiano (2013) to check for discontinuities at false cutoffs and ensure my results are attributable to a real causal relationship and not random chance. I estimate polynomial RDD regressions for cutoffs between 50% and 1% *margin*, above and below the real cutoff of 0%, using increments of 1%, and plot the cumulative density function of the t-statistics of the treatment effects. Figure 6 shows that the majority of the coefficients are not significant for any of the four types of transfers as outcome variables.

The effects estimated through the polynomial strategy can be sensitive to the chosen functional form and to observations far from the cutoff. Moreover, although control variables are not required for unbiased estimates, effects should not be sensitive to the inclusion of covariates, as this would call into question the validity of the identification strategy. In Table 8 I provide the results for alternative functional forms, while in Table 9 I provide the estimates of my main regression with a quadratic control function, excluding the most extreme 1%, 5% and 10% of observations. Table 10 presents the results when covariates are added to the polynomial regressions. The estimates are robust to all these sensitivity checks with one exception: subventions are sensitive to a change of functional form, but only to the most complex cubic interaction specification.

7 Conclusion

Using an RDD leveraging close municipal elections in Romania, this paper provides new evidence of the alignment effect, reaching the conclusion that the political alignment between mayors and the central government increases the amounts of equalisation transfers, subventions and transfers for roads to municipalities. I find no discretionary tendencies in the case of transfers for decentralised costs. These findings underline the importance of employing formal allocation mechanisms such as formulas to increase transparency and limit the political influence in the distribution of transfers.

As my identification strategy relies on a specific group of Romanian municipalities where close elections took place, questions about the generalisability of the results remain. Similar evidence of an alignment effect has also been found, however, in other European countries such as Portugal (Migueis, 2013) and Italy (Bracco et al., 2013) or developing democracies like Brazil (Brollo and Nannicini, 2012). Thus my findings for Romania could potentially contribute to a broader understanding of how political factors shape intergovernmental transfers.

My analysis brings forward areas for further research and extension. Firstly, RDD is only able to identify the alignment effect for close elections, where the outcome is as-if random. Making further assumptions to extend the analysis to municipalities with low electoral competition is a potential matter of future study. Secondly, I assumed all county councils advance the interests of the central government, although county councils may have separate incentives and a few are unaligned. It would be interesting to explore the influence that these middle-tier administration bodies have in the allocation mechanism.

References

- Ansolabehere, S. and Snyder Jr, J. M. (2006). Party control of state government and the distribution of public expenditures. *Scandinavian Journal of Economics*, 108(4):547–569.
- Arulampalam, W., Dasgupta, S., Dhillon, A., and Dutta, B. (2009). Electoral goals and center-state transfers: A theoretical model and empirical evidence from India. *Journal of Development Economics*, 88(1):103–119.
- Bellemare, M. F. and Wichman, C. J. (2020). Elasticities and the inverse hyperbolic sine transformation. *Oxford Bulletin of Economics and Statistics*, 82(1):50–61.
- Berry, C. R., Burden, B. C., and Howell, W. G. (2010). The president and the distribution of federal spending. *American Political Science Review*, 104(4):783–799.
- Bracco, E., Lockwood, B., Porcelli, F., and Redoano, M. (2015). Intergovernmental grants as signals and the alignment effect: Theory and evidence. *Journal of Public Economics*, 123:78–91.
- Bracco, E., Porcelli, F., and Redoano, M. (2013). Incumbent effects and partisan alignment in local elections: a regression discontinuity analysis using Italian data.
- Brollo, F. and Nannicini, T. (2012). Tying Your Enemy’s Hands in Close Races: The Politics of Federal Transfers in Brazil. *American Political Science Review*, 106(4):742–761.
- Brollo, F. and Troiano, U. (2013). What happens when a woman wins an election. *Evidence from Close Races in Brazil. MPRA Paper*, 52244.
- Bueno, N. and Tuñón, G. (2015). Graphical presentation of regression discontinuity results. *The Political Methodologist*, 22(2):4–8.
- Calonico, S., Cattaneo, M., Farrell, M. H., and Titiunik, R. (2018a). Rdrobust: Stata module to provide robust data-driven inference in the regression-discontinuity design.
- Calonico, S., Cattaneo, M. D., and Farrell, M. H. (2018b). Optimal bandwidth choice for robust bias corrected inference in regression discontinuity designs.
- Cox, G. W. and McCubbins, M. D. (1986). Electoral politics as a redistributive game. *The Journal of Politics*, 48(2):370–389.
- Dixit, A. K. and Londregan, J. (1996). The Determinants of Success of Special Interests in Redistributive Politics. CEPR Discussion Papers 1054, C.E.P.R. Discussion Papers.
- Gelman, A. and Imbens, G. (2019). Why high-order polynomials should not be used in regression discontinuity designs. *Journal of Business & Economic Statistics*, 37(3):447–456.
- Grossman, P. J. (1994). A political theory of intergovernmental grants. *Public Choice*, 78(3-4):295–303.

- Hoxby, C. M. (2000). The effects of class size on student achievement: New evidence from population variation. *The Quarterly Journal of Economics*, 115(4):1239–1285.
- Imbens, G. and Kalyanaraman, K. (2012). Optimal bandwidth choice for the regression discontinuity estimator. *The Review of economic studies*, 79(3):933–959.
- Imbens, G. W. and Lemieux, T. (2008). Regression discontinuity designs: A guide to practice. *Journal of econometrics*, 142(2):615–635.
- Jacob, R., Zhu, P., Somers, M.-A., and Bloom, H. (2012). A practical guide to regression discontinuity. *MDRC*.
- Klašnja, M. (2015). Corruption and the incumbency disadvantage: Theory and evidence. *The Journal of Politics*, 77(4):928–942.
- Larcinese, V., Rizzo, L., and Testa, C. (2006). Allocating the US federal budget to the states: The impact of the president. *The Journal of Politics*, 68(2):447–456.
- Larcinese, V., Snyder, J. M., and Testa, C. (2013). Testing models of distributive politics using exit polls to measure voters' preferences and partisanship. *British Journal of Political Science*, 43(4):845–875.
- Lee, D. S. (2008). Randomized experiments from non-random selection in US House elections. *Journal of Econometrics*, 142(2):675–697.
- Lindbeck, A. and Weibull, J. (1987). Balanced-budget redistribution as the outcome of political competition. *Public Choice*, 52(3):273–297.
- McCrary, J. (2008). Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of econometrics*, 142(2):698–714.
- Migueis, M. (2013). The Effect of Political Alignment on Transfers to Portuguese Municipalities. *Economics and Politics*, 25(1):110–133.
- Milligan, K. S. and Smart, M. (2005). Regional grants as pork barrel politics.
- Oates, W. E. (1999). An essay on fiscal federalism. *Journal of economic literature*, 37(3):1120–1149.
- Sararu, C.-S. et al. (2018). Considerations about administrative decentralization and local autonomy in Romania. *Tribuna Juridică*, 8(16):596–607.
- Solé-Ollé, A. and Sorribas-Navarro, P. (2008). The effects of partisan alignment on the allocation of intergovernmental transfers. Differences-in-differences estimates for Spain. *Journal of Public Economics*, 92(12):2302–2319.
- Worthington, A. C. and Dollery, B. E. (1998). The political determination of intergovernmental grants in Australia. *Public Choice*, 94(3-4):299–315.