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The political economy of EU-funds in Poland: evidence for the period 2007 - 2013

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Abstract

We provide an empirical study analysing the distribution of EU funds among 2478 Polish municipalities in the period of the multiannual financial framework 2007 – 2013. We find EU funds to be concentrated in smaller municipalities and economically weak sub-regions. Expenditures of EU funds per capita do not decrease in the municipalities' fiscal capacity. This indicates that co-funding restrictions imposed by the EU did not prevent fiscally weak municipalities from attracting EU funds. Our primary focus rests on the question whether regional governments use their prominent role in the allocation process for EU funds to support their own political self-interest. Difference-in-difference estimations show that the answer is affirmative: Municipalities aligned with the regional government spend more EU funds per capita than non-aligned municipalities. Furthermore, we find support for the swing-district hypothesis: EU funds per capita decrease in the vote-share differential between the two leading parties.

JEL: D72, H77

Keywords: EU, Cohesion funds, Poland, local government, party alignment, swing districts, vertical grants

1. Introduction

The European Union provides substantial funds to promote regional development in economically weaker regions. In the period of the multiannual financial framework 2007 – 2013, the funds available for their so-called cohesion policy amounted to 347 Bill Euro (European Commission, 2007). These funds are provided to help the member countries improve regional competitiveness and reduce unemployment especially among the young. Though EU cohesion policies aim at directing money to where it is most needed and most effective, the EU funding mechanism has been suspected to leave considerable room for decision makers on national level to pursue their own political goals (e.g., Chalmers, 2013). A number of authors analyzed the impact of political factors on EU fund allocation and found evidence that national governments discriminate between regions for political reasons. Regions whose governments are aligned with the national government generally receive more grants (e.g., Bouvet and Dall’Erba, 2010; Veiga 2012). In this paper, we argue that the fund allocation process does not stop at the regional level. Instead, regional governments are in a situation similar to those of the national governments. They play an active role in deciding about how to distribute the EU funds among sub-regional units (e.g., Radzyner et al., 2014). We want to find out whether political alignment between regional governments managing EU funds and the potential recipient jurisdictions on the local level influences the allocation of funds on the local level.

To this end, we use data from 2478 Polish municipalities in the framework-period 2007 – 2013. Poland is highly suitable for this purpose because it is among the largest recipients of EU funds and all Polish regions are eligible to receive EU funds. Furthermore, regional governments play a particularly active role in managing EU cohesion funds. Next to being in charge of managing the so-called regional operational programs (OPs), they are assigned an active role in managing national OPs. Thus, their influence on the distribution of EU funds is substantial. We want to find out whether regional governments in Poland use their discretion as managing authorities

of EU funds to discriminate in favor of politically aligned municipalities. The contribution of our paper is threefold. First, it adds to the still comparatively small body of literature on the distribution of EU funds on local level (see Veiga, 2012 for a study on Portugal). Second, it provides – to the best of our knowledge – one of the first large-scale empirical studies on the distribution of EU funds in Poland. Third, it provides an indirect test on the effective degree of decentralization in Poland: Has the reform of 1999 granted real freedom of maneuver to the regional governments or are they still largely controlled by the national government?

Our results can be summarized as follows: In random effects panel models, we find evidence that cities with country rights receive more funds per capita while the general relationship between municipal size and grants per capita is negative. Funds per capita decrease in the GDP per capita. At the same time, they do not depend on the municipalities own revenues per capita. If at all, our regressions support a negative relationship. The latter result indicates that co-funding requirements associated with European funds did not provide a hurdle for fiscally weak municipalities. Somewhat surprisingly, EU funds per capita increase in the initial degree of sewage coverage. We used a difference-in-difference approach to test whether regional governments discriminate in favor of aligned municipalities. The result is clearly affirmative. Other things equal, aligned municipalities receive more than 10 percent more funds than non-aligned ones. The difference-in-difference estimations also show that municipalities with a small vote-share differential between the two leading parties receive more funds. This supports the swing-district hypothesis. The fact that alignment and swing status matters is also interesting in a more general perspective: Some scholars argue that the decentralization in 1999 that strengthened regional government was not inspired by the intention to install a strong regional-level government but by the fact that some degree of regional autonomy was necessary to fulfill the requirements of EU cohesion policy. Our results show that the decentralization step in 1999 – intended or not – led to a significant shift in decision power.

The paper proceeds as follows. Section 2 reviews the literature on EU funding and vertical grants. Section 3 introduces the reader to the institutional background in Poland and describes the process of EU-fund allocation with a special focus on the role of regions. Data and empirical results are presented in section 4 and discussed in section 5. Section 6 concludes.

2. Related literature

Essentially, EU regional funds are conditional vertical grants provided upon application. Normative theories of fiscal federalism proposed the use of conditional grants in cases when locally provided goods are characterized by positive regional spillovers. Alternatively, they can be motivated by the objective to reduce regional inequality. Earmarking funds can be justified if the grantor expects government failure on the recipient level or in cases where there are vertical spillovers from taxation (e.g., Oates, 2005; Fenge and Wrede, 2007; Bähr, 2008).

Public Choice scholars argue that non-benevolent governments may choose conditional grants to pursue their own interest.¹ First, the granting government may allocate funds to increase their own chance of re-election by concentrating funds in swing jurisdictions where the impact of additional funds on the probability to win the majority is higher than in jurisdictions with large vote-share differentials. Second, they may promote aligned governments on subsidiary level governments (e.g., Lindbeck and Weibull, 1987; Dixit and Londregan, 1998; Johannson, 2003; Solé-Ollé and Sorribas-Navarro, 2008).

Arulampalam et al. (2009) capture both patterns of behavior in a theoretical model of grant allocation behavior of the central government. In the benchmark model, they assume that the central government is only interested in increasing the chance of re-elections for aligned governments on state level. Vertical grants allow the subsidiary governments to fund development

¹ Conditional grants may also be used because they help the granting government to extract rents (Bischoff and Blaeschke, 2013).

projects and thereby raise income. The voters on state level are not fully aware of the fact that the increase in income results from money coming from the central government. Only a share θ of the increase in goodwill among voters accrues to the central government and $(1-\theta)$ accrues to the state government. The smaller θ , the more the central government can influence state election outcomes. Arulampalam et al. (2009) model the optimization problem of the central government that has a fixed amount of funds and wants to allocate them to maximize the expected number of states run by aligned governments after the next state election. They also differentiate between swing states and non-swing states. Swing states are characterized by a small difference in vote-shares between the party of the central government and its strongest opponent. For non-swing states, this differential is large. For the case where $0 < \theta < 1$, the authors arrive at three predictions regarding the central government's behavior: 1) Unaligned states receive less grants, 2) Unaligned swing-states receive less grants than unaligned non-swing states (unless θ is low), 3) Aligned swing-states receive more funds than non-swing states (regardless of their alignment).² In the empirical part of the paper, Arulampalam et al. (2009) test these predictions using data from India between 1974 and 1997. They find grants to be higher in swing states and in aligned states.

Solé-Ollé and Sorribas-Navarro (2008) build on an earlier version of the model by Arulampalam et al. (2009) to test the impact of alignment on so called "project grant" allocation in Spain between 1993 and 2003. Here, municipalities are the primary recipients of project grants from three upper-tier governments. Project grants are earmarked for specific projects. Municipalities can apply for these grants. The authors make use of the fact that elections at different tiers are held at different times. Using a difference-in-difference design, they show that both alignment

² If $\theta = 1$, the central government does not discriminate by alignment but only by the swing-property. Swing states receive more grants than non-swing states.

and swing-status have a strong impact on the amount of grants Spanish municipalities receive. Bracco et al. (2015) also build on the basic logic of the model by Arulampalam et al. (2009) when analyzing the amount of grants received by Italian municipalities between 1998 and 2008. They use a regression discontinuity design and focus on swing-municipalities only. Their results indicate that alignment with the central government increases the amount of grants received.

A number of studies focus specifically on EU cohesion funds and the impact of political factors on their allocation within the EU member states. These studies find that political alignment drives the allocation of EU funds to NUTS 2 and NUTS 3 regions (e.g., Kemmerling and Bodenstein, 2006; Bouvet and Dall'Erba, 2010). Substantial amounts of the NUTS 2 and NUTS 3 money are often not spent on the recipients' level but by lower-level entities – especially counties and municipalities (e.g., Heimpold, 2008). Often, the authorities managing EU funds on NUTS 2 levels do not define the projects the money is spent on but only define a broad scheme for the projects eligible for funding. Instead, lower level governments develop projects and apply to the managing authorities for funding (e.g., Lackowska-Madurowicz and Swianiewicz, 2013; European Parliament, 2014). Through their decisions which projects to fund and how much funds to give to different counties and municipalities, the managing authorities may influence the political competition in these jurisdictions. Only very few studies analyze the distribution of EU funds on local level. Veiga (2012) provides a study for Portugal between 1992 and 2006. She finds support for both political alignment and swing-characteristics – i.e. the vote-share differential – to drive fund allocation. Muraközy and Telegdy (2015) use data for Hungary between 2004 and 2012 and drop all municipalities run by an independent mayor. Among the remaining municipalities, alignment with the central government increases per capita funds. Our paper provides a study on the allocation of EU funds in all 2478 Polish municipalities in the framework-period 2007 – 2013. Our main research question is: Do the regional

authorities managing a large share of EU cohesion funds use their discretionary power in EU fund allocation to pursue their own political interest?

3. Institutional background in Poland

Poland is by far the largest economy among countries that have joined the European Union since 2004. It occupies 6th place out of all EU countries both in terms of population (circa 38 Mill.) and gross domestic product at purchasing power parity (circa EUR 689 Bill.).³ Like most central and eastern European countries before the fall of socialism in 1989, Poland was highly centralized. After 1989, Poland went through a number of fundamental reforms. Among other things, these reforms included massive reshaping of the local and regional jurisdictions and substantial decentralization. Currently, the territory of Poland is divided into 16 regions (voivodships, *województwa*), 314 counties (poviats, *powiaty*) and 2478 municipalities (*gminy*).⁴ Elections are held on all three levels and each level has its own government.

3.1 Municipalities

The re-establishment of local self-government constituted a crucial element of Polish transformation. The Constitution of the Republic of Poland states three major principles of local government. Firstly, under the principle of independence, there is no hierarchical dependency between local government tiers in Poland as well as between local and central administration. Secondly, pursuant to the principle of subsidiarity, the broadest scope of tasks is assigned to municipalities. Finally, according to the principle of presumption of competences, municipalities execute all the tasks not directly assigned to either counties or regions (Tarno, 2000, p. 19,

³ Eurostat data for 2013.

⁴ Ministry of Administration and Digitalization, online.

20). These principles also shape the vertical distribution of tasks and expenditures. Polish municipalities' tasks embrace a variety of spheres: starting from building and maintaining physical infrastructure, through social spending, ending up with promotional activities (for details see Box A.1 in Appendix B). The scope of tasks is not adjusted to type (urban, rural, urban-rural), size or any other characteristics of municipality. In total, 20 percent of all public expenditures (in consolidated terms) are spent by municipalities while the county level only accounts for 4 percent. Public education is most important task executed by Polish municipalities (see Table 1) followed by social security. The higher share of expenditures on transport and communication in bigger (urban) municipalities reflects higher density of roads, streets etc. and maintenance of urban transport network.

[Table 1 about here]

Municipalities receive shares in personal and corporate income taxes. These shares amount to roughly 20 percent of total revenues. Own revenues from local taxes, fees etc. amount to one third of municipal funds.⁵ Unconditional grants (vertical and horizontal ones) make up 30 percent and conditional grants amount to circa 20 percent of total revenues. The greatest part of the latter category of funds stems from the execution of state-delegated tasks. A substantial factor limiting autonomy of Polish municipalities, not captured by the depicted statistics, is the existence of mandatory own tasks. These tasks are enumerated in various "branch" acts (for instance the Teacher's Charter with reference to teachers' salaries, the Energy Law with reference to financing street lighting).

⁵ Municipal taxing power with reference to local taxes is curtailed by central legislation. For instance, a municipal council is not allowed to impose a unit tax rate on real estate higher than the one specified in Minister of Finance announcement.

Polish municipalities divide into 304 urban municipalities (out of which 66 cities with county rights⁶), 1563 rural municipalities and 611 urban-rural municipalities. They have on average 15.5 thousand inhabitants (compared to a mean of 5.6 thousand inhabitants for all 27 EU countries; Dexia, 2011/2012). The distribution of municipalities with respect to population size is significantly right skewed. Over 50 percent of all municipalities is inhabited by less than 8,000 people. Poland has a polycentric net of urban areas which supports balanced growth (OECD, 2008, p. 53-55). Figure 1 shows that population density is the highest in southern municipalities and the lowest in north-western and north-eastern ones.

[Figure 1 about here]

There are considerable regional disparities between the Eastern and Western part of the country as can be seen for instance in the distribution of own revenues (see Figure 2). This division (into so-called richer 'Poland A', west of the Vistula river and poorer 'Poland B', east of the Vistula river) has its beginnings in the period of partitions (18th century)⁷, or even earlier, in the first wave of urban development between 13th and 15th centuries (Gorzela, 1999; Grosfeld and Zhuravskaya, 2015). Before EU enlargement in 2007, five eastern regions (i.e. Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie, Warmińsko-Mazurskie) were the poorest regions in the EU (at NUTS 2 level) (Czerwińska, 2009). Furthermore, Poland is characterized by a substantial disparity between rural and urban municipalities. The own revenues *per capita* in cities

⁶ Cities with county rights are municipalities that perform both municipal and county tasks.

⁷ In 1795, Poland lost independence and for 123 years remained under control of Prussia (western part), Russia (eastern part) and Austria-Hungary (southern part). Grosfeld and Zhuravskaya (2015) claim that the influence of three invading empires on contemporary Poland is significant only with respect to: density of railroads, intensity of religious practices, democratic capital and political views. They find no significant results for: income, education, formal institutions, corruption or trust in government.

with county rights are about two times higher on average than in rural municipalities. In addition, rural municipalities differ substantially in per capita income and the capacity to generate own revenues.

[Figure 2 about here]

3.2 Regions

While the reforms in the 1990s gave with substantial autonomy being given to the municipal level, the Polish decentralization process did not install strong jurisdictions on the intermediate level. Unlike the states in the US or the Laender in Germany or Austria, the voivodships were initially designed to be top-down administrative dependencies of the national government. The head of this administration – the governor –was appointed by the national government. Only in 1999, regions were given a regional council elected by the regional population. This regional council elects its regional government (so-called board of regions headed by the Marshall). Many authors argue that the introduction of regional elections and a regional government was not driven by the genuine political will to install independent jurisdictions on regional level. Instead, the strengthening of regional autonomy was regarded Poland's strategic reaction to the introduction of the partnership principle by the EU and the crucial role it assigned to regions (e.g., OECD, 2010, p. 31). Main areas of responsibility of regional governments comprise transport and communication, melioration and flood protection, culture and national heritage protection. Regions are largely dependent on vertical grants from central budget (mainly conditional ones).⁸ In the context of our paper, we focus on the role of regional governments in the process of allocating and managing EU funds.

⁸ On average, conditional grants account for over 40 percent of regional government's revenues (National Council of the Regional Chambers of Audit, 2014).

3.3 Administrative structures of EU fund allocation

During the framework-period 2007 – 2013, all Polish NUTS 2 regions (consistent with administrative regions) were eligible for convergence objective as their GDP per capita at PPP was lower than 75 percent of the EU average. Poland was also eligible for EU cohesion funds because its gross national income per capita at PPP was below 90 percent of the EU member states average (Council Regulation (EC) No 1083/2006). By these criteria, the entire territory of Poland was eligible to EU cohesion funds.

In order to receive funds, national governments have to develop a so-called national strategic reference framework (NSRF). Therein, they lay out the national strategy to foster regional development and presents a number of programs through which this strategy is implemented (principle of programming). The NSRF is required to contain regional operational programs (OPs). The EU expects regional agents to play an active role in the development of these OPs. Once the NSRF is approved, regions play an active role in managing the approved regional OPs. Above all, regions are involved in designing the mechanism of allocating EU funds and choosing the specific projects that are supported by EU funds. The regional activities are monitored by independent institutions to make sure that the fund allocation process complies with general EU regulations and the OP-agreement reached with the EU. Nevertheless, regional authorities have considerable leeway to set own priorities (e.g., Heimpold, 2008; European Parliament, 2014).

In the framework-period 2007 – 2013, Poland was the largest beneficiary of funds designated for the EU economic and social coherence policy. The respective allocation of funds amounted to 67.3 Billion Euro (approximately 20 percent of the whole EU allocation). Poland was granted five country programs (Human Capital, Innovative Economy, Infrastructure and Environment, Development of Eastern Poland, Technical Assistance) and 16 Regional Operational Programs (see table 2). The OP Development of Eastern Poland was designated for five poorest regions

both in Poland and all EU-25 countries, i.e. Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie and Warmińsko-Mazurskie. There were also two operational programs pursuant to coordination with cohesion policy: OP Development of Rural Areas and OP Sustainable Development of the Sectors of Fisheries and Coastal Fishing Regions.⁹

[Table 2 about here]

According to the EU regulations, public and private enterprises, NGOs can apply for money from OPs just like jurisdictions can. In the framework-period 2007 – 2013, slightly over 30 percent of the EU cohesion funds was granted to local jurisdictions.¹⁰ The largest share (circa 60 percent) of this money went to municipalities. The potential recipients differed considerably by OPs. For instance, in the OPs “Innovative Economy” and “Human Capital”, enterprises respectively central government entities (agencies, ministries, universities) were the primary

⁹ These OPs are beyond cohesion policy. They represent structural measures of the Common Agricultural Policy and the Common Fisheries Policy. Yet, the existence of common intervention areas within territories reliant on agriculture and fisheries necessitates institutional cooperation on all stages of EU funds management process. Rural areas include localities in: rural municipalities, urban-rural municipalities excluding towns with more than 20,000 inhabitants and urban municipalities excluding towns with more than 5,000 inhabitants (Ministry of Agriculture and Rural Development, 2007, p. 8). In some instances (priority axes) there were established extra territorial restrictions. In addition, NUTS 3 regions located along internal and external borders of the EU and along maritime borders (within 150-kilometer margin) took part in the cross-border strand of the European Territorial Cooperation (allocated amount: EUR 523.7 Mill.). As regards the transnational and interregional strands of the ETC, the entire territory of Poland was eligible (Council Regulation (EC) No 1083/2006; Commission Decision of 4 August 2006; Commission Decision of 31 October 2006). As one of the poorest EU countries Poland benefited from Norwegian Financial Mechanism and European Economic Area Financial Mechanism, too. Combined financial support granted for Poland by Norway and other European Economic Area countries amounted to EUR 558.6 Mill in the period 2004-2009 and EUR 578.1 Mill. in the period 2009-2014 (EEA Grant Portal, online).

¹⁰ Other groups of beneficiaries include: enterprises (32 percent of EU funds), central administration institutions (23 percent), universities and other scientific institutions (8 percent), NGOs (3 percent); data in terms of signed contracts as of the end of February 2016 (KSI SIMIK, online).

beneficiaries. In OP Infrastructure and Environment, a substantial amount of resources was used to fund large projects like building and reconstruction of highways, expressways, airports, railways, tram and subway networks. Especially small municipalities and local jurisdictions in rural areas in general received little funds from these OPs. Contrary to that, the regional OPs distributed substantial amount of funds among small municipalities and jurisdictions in rural areas. By definition, these were also among the primary recipients of funds from the national OP on Rural Development.¹¹ The respective shares of funds distributed via regional OPs were equal to approximately: 80 percent for rural municipalities, 60 percent for urban-rural and urban municipalities and 40 percent for cities with county rights.¹²

The Minister of Regional Development is in charge of the overall coordination and implementation of cohesion policy for national and regional OPs (Ministry of Regional Development, 2008, p. 9). For every OP, a managing authority is installed. This managing authority plays a crucial role in the fund allocation process. It decides where and for which purpose the EU funds are spent.¹³ It does not design the projects to be supported themselves but invite eligible organizations to propose projects. Thus, potential recipients including the local jurisdictions have to apply for project grants. In their application, they have to describe the project and explain why and how it contributes to the overall aim of the OP they apply to. The managing authorities

¹¹ EU-funds allocated via OP Development of Rural Areas contributed to modernization and equipping of 3.8 thousand public utility buildings and construction of 17 thousand kilometers of water supply and sewage networks (The Agency for Restructuring and Modernization of Agriculture, online).

¹² Data as of April 2011, excluding OP Development of Rural Areas and OP Sustainable development of the sectors of fisheries and coastal fishing regions (Swianiewicz, online).

¹³ In addition, there is a certifying authority and an audit authority. The same authority may perform respective functions in more than one operational program Implementation of major projects (with budgets exceeding EUR 25 Mill. in the field of environmental protection and EUR 50 Mill. in other fields) shall be approved by the European Commission (Minister of Regional Development, 2008).

assess the quality of the applications and choose the projects to support.¹⁴ Second, the managing authority plays a prominent role in the monitoring project progress. This includes the essential decision about refunding the project expenditures.

For the regional OPs, the managing authority sits on regional level. Here, the board of region makes the decisions about which projects to fund. The board of region is the executive body on regional level. It consists of five members elected by the regional council. The regional council itself is elected in direct elections by the regional population. The board of region is supported by the Marshall's office in administering the process of inviting applications, assessing project quality and supervising project implementation. However, the final choice of projects funded by regional OPs lies in the hands of the boards of region. In addition, the board of region has a prominent role in choosing projects from national OPs. For instance, regional self-governments serve as intermediate bodies and choose projects (directly or via appointed entities) in selected priority axes within OP Human Capital, OP Development of Rural Areas and OP Sustainable Development of the Sectors of Fisheries and Coastal Fishing Regions. Once projects are chosen, the role of managing authorities or intermediate bodies includes monitoring project progress and making decisions on refunding (Council Regulation (EC) No 1083/2006).

Summing up, the regional authorities play a crucial role in the process of EU-fund allocation. The board of region is involved in choosing projects to be funded by EU funds and in making decision regarding refunding of project-related expenditures. In this paper, we want to find out whether they use their leeway to pursue their own political interest. A special focus rests on the

¹⁴ The managing authority may delegate some tasks and/or the right to choose projects to intermediate bodies and second-level intermediate bodies (implementing agencies). Nevertheless, the managing authority remains fully responsible for the program. The details of implementation of operational programs (selection procedure, types of supported projects, potential beneficiaries etc.) are discussed in detailed descriptions of the priorities of operational programs, e.g. (Ministry of Regional Development, 2008).

municipalities because they are much more important politically and they also receive much more funds than the counties.

4. Data and empirical results

4.1. Alignment and swing-status variables

The literature reviewed in section 2 suggests that the regional governments use their freedom of maneuver in managing EU funds to discriminate in favor of politically aligned municipalities. The concept of alignment used in these studies calls upper and lower tier government aligned if both belong to the same party. In case of coalition government, a lower-tier government is considered aligned if at least one of the parties in the lower-tier government is also represented in the upper-tier government. This concept of alignment can be used in countries where the political parties that dominate the national and regional political arena also play a dominating role on the local political level. It cannot be used in countries like Germany or Poland where these parties play only a minor role in local politics especially in small and medium-size municipalities. In Poland, most members of municipal councils as well as the vast majority of mayors belong to local committees. These committees are founded for the purpose of local elections and in most cases do not reach beyond the borders of the municipality. Only very few council members and mayors are associated with the political parties dominating parliaments and governments on regional and national level. The Polish People's Party is the only exception in this respect. But even this party is strongest party and sends the mayor only in 10 percent of all municipalities. As for the two big parties on regional and national level, Civic Platform and Law and Justice the share is less than 2 percent. For this reason, we cannot apply the concept of alignment underlying the studies sketched in section 2. Instead, we measure alignment with regional government using the vote shares political parties achieve in national elections in municipality m (respectively county c). We argue that regional governments still have an incentive to give higher per capita amounts of EU funds to municipalities where this

vote-share is high. While they cannot support an aligned municipal government, they can improve the quality of infrastructure and the income-generating capacities of citizens who support their own party. This will generate popularity spillovers to upper-tier governments that help the regional government parties in both regional and national elections. Furthermore, regional governments may prefer municipalities with a high share or aligned voters because they want to reward these voters for having supported them. Thus, we arrive at hypothesis H1:

H1: Municipalities whose voters are aligned with the regional government receive more EU-funds per capita than municipalities with non-aligned voters.

The dummy variable `R_M_ALIGNED` takes on the value 1 for municipality m if one of the parties in the regional board receives the highest vote share in m in the national elections (0 else). We expect a positive sign for `R_M_ALIGNED`.

EU-funds spent in municipality m are likely to generate horizontal spillover to nearby municipalities, for instance via improved infrastructure that can be used by citizens outside municipality m . These spillovers help the case of the regional government if they flow to municipalities that are themselves aligned with the regional government. To capture this effect, we account for the alignment of voters on county level. Hypothesis H2 reads:

H2: Municipalities in counties where the county voters are aligned with the regional government receive more EU-funds per capita than in counties with non-aligned voters.

To test H2, we account for the alignment on the county level using `R_C_ALIGNED` – calculated in the same way as `R_M_ALIGNED`. Given that the national government is also involved in managing EU funds, we include `N_M_ALIGNED` as a control variable.

The literature in section 2 suggests that municipalities with a high share of swing voters receive more funds per capita than municipalities with few swing voters. The role of swing-status is less straight-forward in our case because the electoral districts for direct mandates in regional

and national elections are much larger than the municipalities. Nevertheless, one might argue that an additional Euro of EU funds is likely to generate a larger marginal gain in votes in swing municipalities than in highly polarized ones. Therefore, we follow Arulampalam et al. (2009) and Solé-Ollé and Sorribas-Navarro (2008) and control for municipalities with swing status. Our third hypothesis reads:

H3: The EU funds per capita spent in a municipality decreases in the vote-share differential in this municipality.

For historical reasons, the standard leftwing rightwing scale of political parties cannot be applied to the landscape of Polish parties. At the same time, the two parties “Civic Platform” (liberal, pro-European) and “Law and Justice” (conservative, EU-skeptical) dominate national governments and at least one of them is part of the regional government in all regions. Based on the vote shares of these parties, we calculate the following variable:

$$CLOSE_CIVIC_LAW = 1 - abs[voteshare(civic) - voteshare(law, justice)]$$

CLOSE_CIVIC_LAW is 1 if the both votes have the same vote share and 0 if the difference in vote shares is 100 percent. The larger *CLOSE_CIVIC_LAW*, the less clearly one of the parties is in the lead and the more likely EU funds are going to cause a change in the ranking of vote shares. Thus, we expect a positive sign for *CLOSE_CIVIC_LAW*.

In the upcoming analysis, we use panel data for 2478 Polish municipalities within the most recent framework-period of EU cohesion policy 2007 – 2013. In this period, Poland held local elections¹⁵ in November 2010 and national elections in October 2007 and October 2011. The national government election in 2007 led to a change in the national government. The coalition

¹⁵ In Poland elections to all local government’s levels (municipal, county and regional) take place simultaneously.

government between Law and Justice, Self-Defense and League of Polish Families was replaced by a coalition between Civic Platform and the Polish People's Party. This coalition won the national election in 2011 and continued to run the country until October 2015. The composition of the regional government was changed as a result of the 2010 local elections. When calculating the alignment variables, we used the before-election results for the election year. On regional level, the composition of the regional government changed a number of times after 2007. Most of these changes led to the installation of board members representing the two parties that reached power on the national level (Civic Platform and Polish People's Party). When the modified regional board is installed in December of year $t-1$ or in January or February of t , we include the region in the dataset and calculate the alignment variables assuming that the new regional board was in place for the full year t . For changes in municipal government taking place in the middle of the year, we drop the region from the panel for the relevant year.

The electoral pattern between 2007 and 2011 provides us with substantial variation in our alignment variables. For the last two years 2012 and 2013, there were no more changes in our alignment variables. More importantly, our central variable `R_M_ALIGNED` is perfectly correlated with `N_M_ALIGNED` – making it impossible to differentiate between the impact of national and regional government on EU fund allocation. In the regression models presented below, we restrict our analysis to the years 2007 to 2011 to avoid a high degree of correlation between our alignment variables (see Appendix A for descriptive statistics).

4.2 Endogenous variable

The Ministry of Finance of Poland provides annual budgetary data on all 2478 municipalities. Among many other things, this database reports expenditures financed or presumed to be financed from non-repayable foreign funds. Given that 97 percent of these funds are EU funds, this position captures the expenditures that municipality m assigns to the projects (re)funded by

national and regional OPs in year t . The EU generally refunds these expenditures in the following period and the municipalities are allowed to run short-term deficit to cover them until the refund comes (Law on Public Finance, 2009). The available data on national level shows that the sum of expenditures booked to this position is largely identical with the sum of expenditures finally refunded by the EU. For the period 2007 – 2013 the ratio of EU-funds received by local jurisdictions to expenditures booked to this position is equal to 1.03.¹⁶ At the same time, only funds booked to this position can be refunded. Thus, the expenditures booked to this position are a very good proxy for the EU-funds finally spent by municipality m in year t .

[Table 3 and Figure 3 about here]

Over the full framework-period 2007 – 2013, the average sum of EU funds amount to 270 Euro per capita (see table 3). This is equivalent to 5.2 percent of overall municipal expenditures in that period. There is substantial variation between municipalities (see figure 3). Less than one percent of them receive no funds at all. Municipalities in the lowest decile spend 73 Euro on average while the expenditures in the highest decile amount to 510 Euro. The average municipality in Eastern Poland receives 60 Euro more than in Western Poland and small municipalities receive more funds per capita on average than larger ones if the cities with country rights are not counted. The latter receive substantially higher funds per capita.¹⁷ We use the natural log of municipality m 's expenditures on EU projects per capita in year t (LN_EXP_EU) as endogenous variable.

¹⁶ Own calculations on the basis of National Council of the Regional Chambers of Audit, 2008 – 2014.

¹⁷ Calculations use the average annual exchange rate for each year in the period.

4.3 Empirical results

a) difference in difference regressions: the role of political alignment and swing-status

We use a difference-in-difference approach with year and municipal fixed effects (e.g., Angrist and Piske, 2015). The results are reported in table 4. The baseline specification (column 1) includes all three alignment variables plus CLOSE_CIVIC_LAW. As hypothesized, we find significantly positive coefficients for R_M_ALIGNED, R_C_ALIGNED and CLOSE_CIVIC_LAW. N_M_ALIGNED is insignificant. In the subsequent columns (2) – (4), some of the alignment variables are dropped to test the robustness of our results. The results remain stable. Most importantly, N_M_ALIGNED is never significant. In columns (5) – (7), we report specifications that ignore the first two years of the EU-initiative and restrict the analysis to 2009 to 2011 only. The rationale behind this restriction is the following: In the years 2007 and 2008, some of the EU funds spent by municipalities stem from the previous program (the multiannual financial framework 2000 to 2006) that followed somewhat different rules. As there is no variation in national alignment, N_M_ALIGNED and CLOSE_CIVIC_LAW are dropped. Again, R_M_ALIGNED is significantly positive. In addition, R_C_ALIGNED yields a significantly positive coefficient estimator. In sum, our difference-in-difference clearly supports our main hypotheses H1 – H3.

[Table 4 about here]

From an economic perspective, the effects of alignment are substantial. The coefficient in the baseline model suggests that EU funds per capita in a municipality that is aligned with the regional government are 14 percent higher than in the non-aligned municipalities. Regarding our variable CLOSE_CIVIC_LAW, our results suggest that an increase in vote-differential by ten percentage points reduces EU funds per capita by 6 percent.

b) random effects panel regressions: the role of socioeconomic variables

As this is the first systematic study on EU fund allocation in Poland, it is worthwhile to look beyond the narrow scope of political alignment, swing-status and the tactical use of EU project grants. In particular, we want to learn more about the impact of the jurisdictions socioeconomic characteristics. (Descriptive statistics for the below variables are presented in Appendix A). Given the primary role of municipalities in spending EU-related funds, we restrict the analysis to municipalities. To this end, we include a number of economic variables that are related to the major objectives of EU Cohesion policies. We account for the natural log of average GDP per capita. Unfortunately, this data is not available on municipal level but on the sub-regional level only. We use observations for the years 2004 to 2006 to avoid endogeneity concerns (LN_GDP_PC).¹⁸ We expect municipalities in sub-regions with low GDP per capita to receive more grants per capita than municipalities in sub-regions with high GDP per capita. We furthermore control for the fiscal capacity of the single municipality by including the natural log of average own revenues per capita between 2004 and 2006 (LN_OWN_REV_PC). We expect EU funds to be concentrated in fiscally weak municipalities. On the other hand, EU co-funding requirements may be a severe hurdle for fiscally weak municipalities. The lack of means for co-funding can limit the applications from fiscally weak municipalities. Thus, fiscally weak municipalities may receive less EU funds. The Central Statistical Office of Poland provides data on the coverage of sewage and centralized water supply on municipal level (in percent of population) for the year 2006. We expect funds to be concentrated in municipalities where coverage is low. Thus, a negative sign is expected for our variables SEWAGE and WATER_SUPPLY.

¹⁸

In the analyzed period Poland was divided into 66 sub-regions (NUTS 3 level units).

We also control for the natural log of the average population size (LN_POP_TOTAL) between 2004 and 2006. We have no clear prediction regarding the sign of this variable. There are 65 large municipalities that are not part of a county but fulfill the county function themselves. We introduce a dummy to mark these so-called cities with county rights. Cities that obtained this status fall into three categories: i. cities with more than 100,000 inhabitants, ii. former provinces' capital cities, iii. selected cities in conurbations and agglomerations (The Law on County Self-government, 1998). We have no clear prediction regarding the sign of CITY_COUNTY_RIGHTS. We also control for the populations' attitude towards the European Union. The data is taken from a nationwide referendum on Poland's accession to EU held in 2002. The variable EU_REF_YES captures the share of voters within a municipality that voted in favor of accession. Finally, we introduce year fixed effects and dummies for the 16 regions. We estimate a random-effects panel model with LN_EXP_EU as endogenous variable (table 5). The first three models use data from 2007 to 2011 followed by three models for 2009 to 2011. Again, R_M_ALIGNED and R_C_ALIGNED are significantly positive. N_M_ALIGNED is significantly negative when used together with the other alignment variables but loses its significance when used alone. Unlike in table 4, CLOSE_CIVIC_LAW is never significant. Regarding the other variables, we find significantly positive coefficient estimators for SEWAGE and CITY_COUNTY_RIGHTS and negatively significant coefficients for LN_POP, LN_GDP_PC. LN_OWN_REV_PC is (weakly) significant and negative in most models.

[Table 5 about here]

5. Discussion

In this paper, we analyzed the determinants of the expenditures per capita for EU-funded projects in 2478 Polish municipalities in the period of the multiannual financial framework 2007 –

2013. We find funds to be concentrated in smaller (excluding cities with county rights) and economically weak municipalities. Somewhat surprisingly, expenditures of EU-funds is higher in municipalities with higher sewage coverage. At the same time, expenditures of EU funds are found not to increase in the fiscal capacity of the municipality. This indicates that co-funding restrictions imposed by the EU did not prevent fiscally weak municipalities from applying for EU funds.

The main objective of our paper was to test whether regional governments are guided by tactical reasons when distributing funds from EU cohesion policy. The answer is affirmative: The performance of `R_M_ALIGNED` and `R_C_ALIGNED` shows that per capita funds are higher in municipalities whose voters support regional government parties in the national election and/or in municipalities in counties whose voters support regional government parties in national elections. Furthermore, per capita expenditures of EU funds are a negative function of the vote share differential between the two leading parties “Civic Platform” and “Law and Justice”. This supports the notion that funds are concentrated in swing municipalities. In sum, our results support the main hypotheses formulated in section 4.1. Tactical reasons shape the allocation of EU funds across Polish municipalities. This result stands in line with the previous studies on vertical grants within countries and with the existing studies on the allocation of EU funds (see section 2). The economic effect of alignment is substantial: Our estimates suggest that being aligned is rewarded with an increase in EU funds by 14 percentage points.

This result is remarkable from a more general perspective: In the early reforms of the 1990s, the voivodships were designed to be top-down administrative dependencies of the national government. Only in 1999, regions were given a regional council elected by the regional population and a regional government with own competences. Many authors argue that this step was not driven by the genuine political will to install independent jurisdictions on regional level. Instead, it was regarded Poland’s strategic reaction to the introduction of the partnership principle

by the EU and the crucial role it assigned to regions (e.g., OECD, 2010, p. 31). This raises the question whether the newly installed regional councils and the boards of regions are de facto controlled by the central government or whether they have to be regarded as self-contained decision-making bodies that make use of the leeway they have been given the formal institutional settings installed in 1999. The results of our study show that regional level governments have to be considered self-contained decision-making bodies that have the leeway to use their discretionary power for their own purposes. Of course, in the case of EU fund allocation, the way the leeway is used is not in line with the normative theory of fiscal federalism (e.g., Oates, 2005). Nevertheless, our evidence clearly supports the notion that this leeway exists.

Our study suffers from a number of limitations. Most importantly, we cannot directly observe the amount of EU-funds finally spent in the municipalities. Instead, our endogenous variable captures the expenditures that municipalities indicate to be covered by EU-funds. In general, however, these expenditures are fully refunded. Thus, they provide a very good proxy for the EU-funds received by a certain municipality m in the end. So far, more accurate data on EU-funds effectively spent in Polish municipalities is not available. The Central Statistical Office more recently began to provide data on the monetary volume of all EU funding contracts signed in a certain year and differentiated by OP and the local jurisdiction the recipient resides in. Unfortunately, it is only available for the years 2010 onwards – a period where alignment between national and regional governments is perfectly correlated.¹⁹ Thus, it cannot be used for our purpose.

¹⁹

The data suffers from a number of additional shortcomings. First, this data does not encompass spending assigned to the OP Rural Development – an essential source of EU funds for the small municipalities in rural Poland. Second, this data does not differentiate between funds flowing to jurisdictions and funds flowing to firms and NGOs. Furthermore, it diminishes variation of money granted to municipal territories as the calculation procedure assumes equal shares in supra-municipal projects. Finally, signed contracts are

6. Conclusion

We provide – to the best of our knowledge – the first large-scale empirical study on the allocation of EU cohesion funds in Polish municipalities. Using data for the multiannual financial framework period of 2007 to 2013, we test whether regional governments use their position in the process of allocating and managing EU funds to pursue their own political self-interest. The result is clearly affirmative: Expenditures on EU-funded projects are higher in municipalities where the population is politically aligned with the regional government. Furthermore, expenditures are concentrated in municipalities with a small vote-share differential between Civic Platform and Law and Justice, the two leading parties in Poland. Our study contributes to the existing literature in three ways. First, it adds one study to the small strand of literature on EU fund allocation process on local level. It shows that the political patterns of EU fund allocation observed on regional level for the entire EU and on municipal level in Portugal carries over to Poland. Second, it adds to the equally small number of studies on EU fund allocation in Central and Eastern Europe. Third, it provides evidence that the process of decentralization in Poland has installed self-contained entities on regional level that have the leeway to use their power.

More research is needed in all three fields to see whether our results hold. In the narrow scope of our study, the newly emerging municipal-level data on the monetary value of EU-contracts signed promises valuable insights once the years 2016 onwards are included and thus the problem of perfect correlation between national and regional government is solved. As the data covers not only money flowing to jurisdictions but also funds flowing to NGOs and firms, it may be interesting to see whether political factors matters for all funds regardless of recipient. The results of Muraközy and Telegdy (2015) indicate that they are less important for funds

sometimes annulled or annexed as a result of which in a number of municipal areas cumulative value of allocated grants as of the end of year t is smaller than as of the end of year $t - 1$. Just like the proxy used in our paper, differences between the funds granted and the funds effectively spent are not captured either.

flowing to non-governmental recipients. Widening the scope, we have to acknowledge the fact that Poland – and probably many other Central and Eastern European countries – are providing scientists with a fast-growing data base. This opens fascinating opportunities for empirical research, e.g. on regional development or on the political economy of taxes and government expenditures in young democracies.

References

- Johansson, E. (2003). Intergovernmental grants as a tactical instrument: empirical evidence from Swedish municipalities. *Journal of Public Economics*, 87(5), 883-915.
- 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.
- Bähr, C. (2008): How does Sub-National Autonomy Affect the Effectiveness of Structural Funds?. *Kyklos*, 61(1), 3-18.
- Bischoff, I. and Blaeschke, F. (2013), Incentives and influence activities in the public sector: the trade-off in performance budgeting and conditional grants. MAGKS Discussion Paper 20-2013.
- Bouvet, F., and Dall'Erba, S. (2010). European Regional Structural Funds: How Large is the Influence of Politics on the Allocation Process?. *JCMS: Journal of Common Market Studies*, 48(3), 501-528.
- 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.
- Chalmers, A. W. (2013). Regional Authority, Transnational Lobbying and the Allocation of Structural Funds in the European Union. *JCMS: Journal of Common Market Studies*, 51(5), 815-831.
- Commission Decision of 4 August 2006 fixing an indicative allocation by Member State of the commitment appropriations for the European territorial cooperation objective for the period 2007-2013.
- Commission Decision of 31 October 2006 drawing up the list of regions and areas eligible for funding from the European Regional Development Fund under the cross-border and transnational strands of the European territorial cooperation objective for the period 2007 to 2013.
- Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999.

- Czerwińska, M. (2009). Operational Programme – Development of Eastern Poland, 2007-2013. Development Opportunities of Lublin Voivodeship and the Instrument of Regional Convergence. *Romanian Journal of Regional Science*, vol. 3, no. 1, 110-119.
- Dexia (2011/2012). EU Subnational Governments. 2010 Key Figures, <http://www.ccre.org/docs/Nuancier2011Web.EN.pdf> [access: 01.06.2015].
- Dixit, A. and Londregan, J. (1998). Fiscal federalism and redistributive politics. *Journal of Public Economics* 68: 153-180.
- EEA Grants Portal, <http://eeagrants.org> [access: 25.09.2015].
- European Commission (2007): Cohesion policy 2007–13, Commentaries and official texts. Luxembourg: Office for Official Publications of the European Communities.
- European Parliament (2014). An assessment of multilevel governance in cohesion policy 2007 – 2013. Policy Department B Structural and Cohesion Policies. [access November 2015]
- Fenge, R., and Wrede, M. (2007). EU Financing and Regional Policy: Vertical Fiscal Externalities when Capital is Mobile. *FinanzArchiv/Public Finance Analysis*, 457-476.
- Gorzela, G. (1999). Regional Policies and Regional Capacity-Building in Poland, in: Brusis, M. (ed.), *Central and Eastern Europe on the Way to the European Union: Regional Policy-Making in Bulgaria, the Czech Republic, Estonia, Hungary, Poland and Slovakia*, CAP Working Paper, Munich.
- Grosfeld, I. and Zhuravskaya, E. (2015). Cultural vs. Economic Legacies of Empires: Evidence from the Partition of Poland, *Journal of Comparative Economics* 43 (1): 55-75.
- Heimpold, G. (2008). Growth versus equalization? An examination of strategies for regional policy in the Czech Republic, Hungary and Poland after EU accession. *Jahrbücher für Regionalwissenschaft* 28: 1-29.
- Jastrzębska, M. (2012) Rola środków europejskich w finansowaniu rozwoju jednostek samorządu terytorialnego [Role of European Means in the Local Self-government Units Development], in: Miemiec, W. (ed.), *Europejskie bezzwrotne źródła finansowania polityki regionalnej w Polsce. Aspekty prawnofinansowe [European Non-returnable Sources of Financing Regional Policy in Poland. Legal and Financial Aspects]*, Oficyna Wydawnicza „UNIMEX”, Wrocław, 80-99.

- Kemmerling, A. and Bodenstein, T. (2006): Partisan Politics in regional redistribution: Do parties affect the distribution of EU structural funds across regions? *European Union Politics* 7(3):373-392.
- KSI SIMIK, online, Umowy o dofinansowanie według programów i form prawnych (29.02.2016) [Co-financing contracts according to programs and legal forms (29.02.206)], http://www.funduszeuropejskie.2007-2013.gov.pl/AnalizyRaportyPodsumowania/Strony/KSI_raporty.aspx [access: 01.03.2016].
- Lackowska-Madurawicz, M., and Swianiewicz, P. (2013). Structures, Procedures and Social Capital: The Implementation of EU Cohesion Policies by Subnational Governments in Poland. *International Journal of Urban and Regional Research*, 37(4), 1396-1418.
- Lindbeck, A and Weibull, J. (1987). Balanced budget redistribution as the outcome of political competition. *Public Choice* 52_ 273-297
- Ministry of Administration and Digitalization, Baza JST [Base of Local Self-government Units], <https://administracja.mac.gov.pl/adm/baza-jst/843,Samorzad-terytorialny-w-Polsce.html> [access: 01.06.2015].
- Ministry of Agriculture and Rural Development (2007). *Rural Development Programme 2007-2013*, Warsaw.
- Ministry of Finance database.
- Ministry of Regional Development (2007). *National Strategic Reference Framework 2007-2013*, Warsaw.
- Ministry of Regional Development (2008). *Guide to National Cohesion Strategy (National Strategic Reference Framework 2007-2013)*. General information, organizational structure, Operational Programmes, implementation system, contacts, Warsaw.
- Muraközy, B. and Telegdy, A. (2015). *Political Incentives and State Subsidy Allocation: Evidence from Hungarian Municipalities*. Hungarian Academy of Sciences, Centre for Economic and Regional Studies Working Paper MT-DP-2015/31 [access: November 2015]
- National Council of the Regional Chambers of Audit (2008 – 2014), *Sprawozdanie z działalności regionalnych izb obrachunkowych i wykonania budżetu przez jednostki samorządu terytorialnego* [The Report on functioning of regional chambers of audit and the budget execution by local self-government units], Warsaw.

- Oates, W. E. (2005). Toward a Second-Generation Theory of Fiscal Federalism. *International tax and public finance*, 12(4), 349-373.
- OECD (2008), *OECD Territorial Reviews. Poland*, Paris.
- OECD (2010). *Regional Development Policies in OECD Countries*, Paris.
- Polish Central Statistical Office Geostatistics Portal.
- Polish Central Statistical Office Local Data Bank.
- The Agency for Restructuring and Modernization of Agriculture, <http://www.arimr.gov.pl/po-moc-unijna/prow-2007-2013/pieniadze-z-prow-2007-2013-zostaly-rozdysponowane.html> [access: 10.03.2016].
- Radzyner, A., Todtling-Schonhofer, H., Frangenheim, A., Mendez, C., Bachtler, J., Charles, D., and Granqvist, K. (2014). *An Assessment of Multilevel Governance in Cohesion Policy 2007-2013: Volume 1, Study (Vol. 1)*. Publications Office of the European Union.
- 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.
- Swianiewicz, P., online, Wykorzystanie środków unijnych przez samorzady [The Use of EU Funds by Local Governments], <http://www.wspolnota.org.pl/rankingi/wykorzystanie-srodkow-zagranicznych-przez-samorzady/2010/> [access:17.11.2015].
- Tarno, J.P. (2000). Pojęcie i istota samorządu terytorialnego [The Concept and Essence of Local Self-government] , in: Byjoch, K., Sulimierski, J. and Tarno, J.P., *Samorząd terytorialny po reformie ustrojowej państwa [Local Self-government after the State Administrative Reform]*, Wydawnictwa Prawnicze PWN, Warsaw.
- The Law of 8 March 1990 on Municipal Self-government, *Journal of Laws of 2001*, No. 142, item 159, with amendments.
- The Law of 5 June 1998 on County Self-government, *Journal of Laws of 2001*, No. 142, item 1592, with amendments.
- The Law of 27 August 2009 on Public Finance, *Journal of Laws No. 157*, item 1241, with amendments.
- Veiga, L. G. (2012). Determinants of the assignment of EU funds to Portuguese municipalities. *Public Choice*, 153(1-2), 215-233.

Appendix A: Descriptive Statistics and Correlation Matrix

Table A1: Descriptive statistics (2007 – 2011)

Variable	Obs.	Mean	Std. Dev.	Min	Max
LN_EXP_EU	10813	4.019	1.700	-9.819	8.512
R_C_ALIGNED	12390	0.345	0.476	0.000	1.000
R_M_ALIGNED	12390	0.530	0.499	0.000	1.000
N_M_ALIGNED	12390	0.509	0.500	0.000	1.000
CLOSE_CIVIC_LAW	12390	0.817	0.131	0.245	1.000
CITY_COUNTY_RIGHTS	12390	0.026	0.160	0.000	1.000
POP	12390	15396	50799	1358	1697530
GDP_PC	12390	18028	3829	12965	64585
OWN_REV_PC	12390	739	817	193	33751
WATER_SUPPLY	12390	77.5	21.2	0.0	99.9
SEWAGE	12390	33.0	27.2	0.0	98.8
EU_REF_YES	12390	67.9	14.0	12.3	91.7

Table A2: Correlation matrix (2007 – 2011)

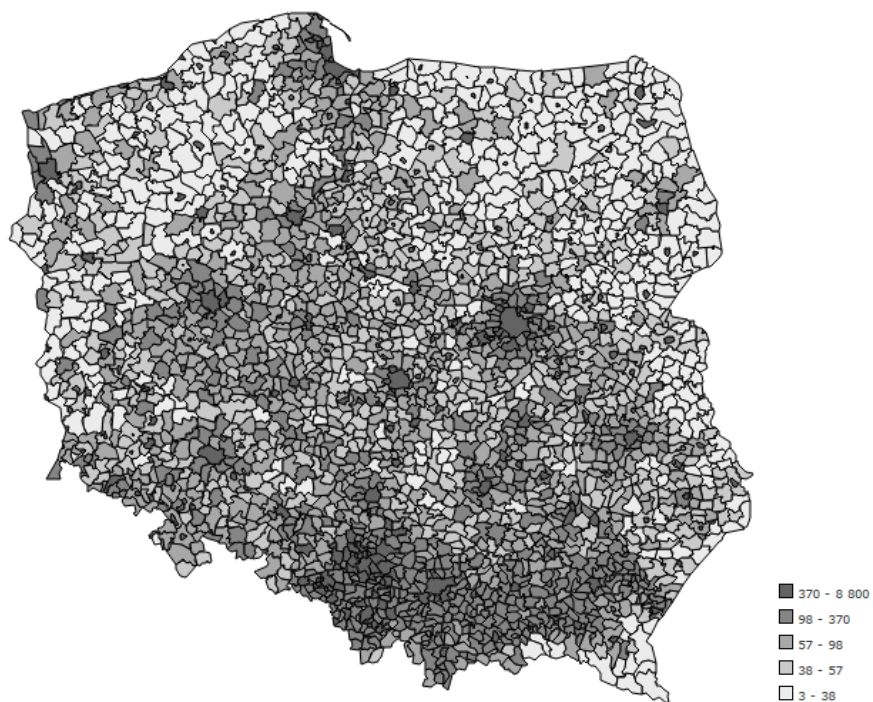
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LN_EXP_EU (1)	1.0000											
R_C_ALIGNED (2)	0.0302	1.0000										
R_M_ALIGNED (3)	0.0164	0.4511	1.0000									
N_M_ALIGNED (4)	-0.0303	0.2872	0.6491	1.0000								
CLOSE_CIVIC_LAW (5)	-0.0778	0.0508	0.1084	0.2164	1.0000							
CITY_COUNTY_RIGHTS (6)	0.0620	0.0516	0.0956	0.1058	0.0373	1.0000						
POP (7)	0.0238	0.0453	0.1106	0.0995	0.0175	0.5854	1.0000					
GDP_PC (8)	-0.0385	0.1915	0.1846	0.1775	0.1185	0.2286	0.3767	1.0000				
OWN_REV_PC (9)	-0.0168	0.0977	0.1305	0.1322	0.0513	0.1569	0.1657	0.2380	1.0000			
WATER_SUPPLY (10)	-0.0012	0.1858	0.2557	0.2654	0.2145	0.1541	0.1313	0.2406	0.1905	1.0000		
SEWAGE (11)	-0.0042	0.1955	0.3562	0.3328	0.1613	0.3398	0.3027	0.1845	0.3176	0.4366	1.0000	
EU_REF_YES (12)	-0.0053	0.3462	0.4845	0.4523	0.3317	0.1913	0.1829	0.2801	0.2587	0.3107	0.6051	1.0000

Appendix B: Background data on Polish municipalities

Box A.1 Tasks of Polish municipalities

- 1) Spatial order, real estate management, environmental protection, nature conservation, water management
- 2) Municipal roads, streets, bridges, squares and traffic organization
- 3) Water supply, sewerage, disposal and waste water treatment, maintenance of cleanliness, sanitary facilities and landfills, disposal of municipal waste, supply of electricity, heat and gas
- 4) Activities in the field of telecommunications
- 5) Local public transport
- 6) Health care
- 7) Social assistance, including welfare institutions
- 8) Support to families and foster care system
- 9) Municipal housing
- 10) Public education
- 11) Culture, including municipal libraries and other cultural institutions and the protection of monuments
- 12) Physical culture and tourism, including recreational areas and sports facilities
- 13) Marketplaces and market halls
- 14) Municipal greenery and shelterbelts
- 15) Municipal cemeteries
- 16) Public order and safety, fire and flood protection, including maintenance of flood storage
- 17) Maintenance of municipal buildings, public facilities and administrative buildings
- 18) Pro-family policy, including the provision of social, medical and legal assistance to pregnant women
- 19) Supporting and promoting the idea of self-government, including the creation of conditions for the operation and development of auxiliary units and implementation of programs to stimulate civic activity
- 20) Promotion of municipality
- 21) Co-operation with and activities in favor of non-governmental organizations

Source: The Law on Municipal Self-government, 1990.

Figures and Tables**Figure 1. Population density in Polish municipalities in 2013 (people per square km)**

Source: own elaboration on the basis of Polish Central Statistical Office Geostatistics Portal.

Figure 2. Own revenues *per capita* of Polish municipalities in 2013 (in PLN)



Source: Own elaboration on the basis of Polish Central Statistical Office Geostatistics Portal.

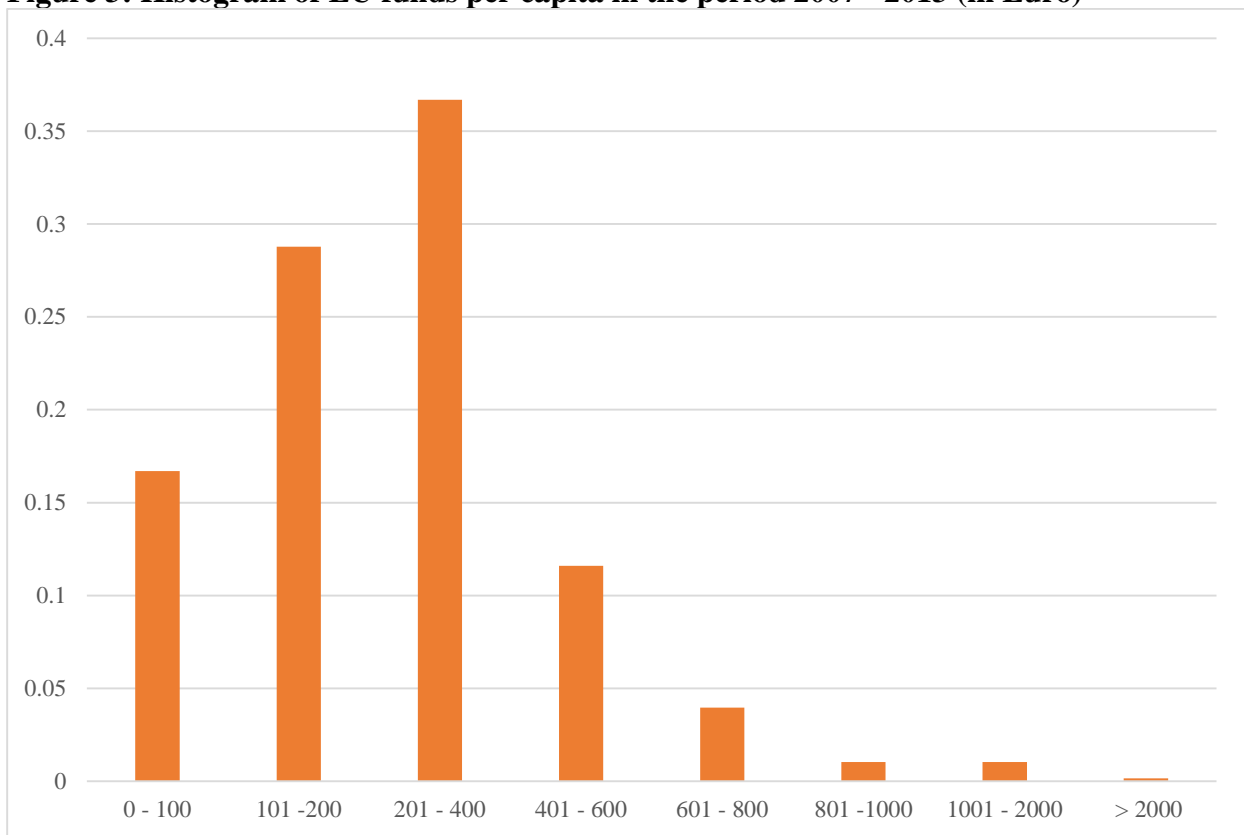
Figure 3: Histogram of EU funds per capita in the period 2007 - 2013 (in Euro)

Table 1. Structure of municipal expenditures in Poland in 2013

Type of expenditures	Average share (as percent)	Weighted average share (as percent)*	Standard deviation (as p.p.)	Coefficient of variation (as percent)
Education and educational care	38.9	35.5	6.9	17.7
Social security	17.6	14.9	5.0	28.2
Public administration	11.4	8.7	3.1	27.4
Municipal services and environmental protection	7.5	7.0	5.7	75.9
Transport and communication	7.0	14.1	5.2	74.5
Agriculture and hunting	4.5	1.9	5.7	12.2
Culture and national heritage protection	3.6	3.8	2.4	65.5
Dwelling economy	2.3	4.1	2.8	122.8
Physical education and sport	2.0	2.6	2.5	129.1
Public safety and fire protection	1.4	1.7	1.3	96.8
Health care	0.6	1.1	0.6	101.3
Others	3.2	4.6	2.9	90.9
Total	100.0	100.0	---	---

* Weighted to the amount of expenditures (the size of budget).

Source: own elaboration on the basis of Polish Central Statistical Office Local Data Bank.

Table 2. Indicative allocation of the EU resources into operational programs in the programming period 2007-2013

Operational Program	Allocation of resources (in EUR Bill.)	Allocation of resources (in percent of total allocation)
The Convergence Objective		
Regional OPs	16.6	20.4
OP Development of Eastern Poland	2.3	2.8
OP Infrastructure and Environment	27.9	34.4
OP Innovative Economy	8.3	10.2
OP Human Capital	9.7	11.9
OP Technical Assistance	0.5	0.6
Performance Reserve*	1.3	1.6
Objective European Territorial Cooperation		
OP European Territorial Cooperation	0.7	0.9
Other instruments coordinated with Cohesion Policy		
OP Development of Rural Areas	13.2	16.3
OP Sustainable development of the sectors of fisheries and coastal fishing regions	0.7	0.9
Total	81.2	100.0

* Performance Reserve is distributed among regions according to their progress in utilization of EU resources. Access to extra funds is dependent on reaching a certain level of absorption (e.g. 20 percent of allocation until the end of 2010) and the position in the respective ranking (Jastrzębska, 2012, p. 95).

Source: (Ministry of Regional Development, 2007, p. 122, 123).

Table 3: EU funds per capita in the framework period 2007 – 2013 (in Euro)

	Obs.	Mean	Std. Dev.	Min	Max
Full sample	2478	270.39	249.99	0.00	5377.71
Eastern Poland	708	312.97	215.21	28.00	1790.66
Western Poland	1770	253.35	260.74	0.00	5377.71
pop < 5 000	613	336.71	337.37	4.23	5377.71
5000 < pop < 10001	1028	268.17	233.69	0.00	3967.84
10000 < pop < 20001	514	218.26	161.87	1.41	1296.03
20000 < pop < 50001(*)	228	190.43	142.42	5.72	1114.64
pop > 50000(*)	29	200.19	137.56	22.81	540.74
Cities with county rights	65	401.72	238.64	32.94	1123.91

(*) excluding cities with county rights

Table 4: Difference-in-difference regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
YEARS	2007-11	2007 -11	2007-11	2007-11	2009-11	2009-11	2009-11
R_M_ALIGNED	0.133** (0.0651)	0.175*** (0.0610)	0.168*** (0.0601)		0.319*** (0.116)	0.493*** (0.0728)	
N_M_ALIGNED	-0.0408 (0.0568)	-0.0288 (0.0569)		0.00500 (0.0560)			
R_C_ALIGNED	0.132** (0.0659)				0.286** (0.123)		0.531*** -0.0746
CLOSE_CIVIC_LAW	1.069*** (0.339)	1.087*** (0.339)	1.107*** (0.337)	1.045*** (0.337)			
CONSTANT	1.960*** (0.317)	1.945*** (0.317)	1.912*** (0.311)	2.044*** (0.314)	4.836*** (0.0371)	4.845*** (0.0379)	4.910*** (0.0281)
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-statistic	756.6***	864.8***	1004.5***	1007.9***	562.0***	746.6***	742.0***
R ²	0.479	0.479	0.479	0.478	0.373	0.372	0.372
Observations	10812	10812	10812	10812	7174	7174	7174
Number of code	2473	2473	2473	2473	2472	2472	2473

Robust standard errors in parentheses

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

Table 5: Random effects regression results

	(1)	(2)	(3)	(4)	(5)	(6)
YEARS	2007 -11	2007-11	2007-11	2009-11	2009-11	2009-11
R_M_ALIGNED	0.138*** (0.0493)	0.115*** (0.0399)		0.305*** (0.0669)	0.165*** (0.0439)	
N_M_ALIGNED	-0.0816* (0.0456)		-0.0119 (0.0379)	-0.241*** (0.0714)		0.0284 (0.0483)
R_C_ALIGNED	0.0734** (0.0372)			0.0886** (0.0422)		
CLOSE_CIVIC_LAW	0.167 (0.141)	0.164 (0.140)	0.135 (0.141)	0.0872 (0.153)	0.0705 (0.152)	0.0478 (0.152)
CITY_COUNTY_RIGHTS	1.418*** (0.135)	1.409*** (0.135)	1.402*** (0.135)	1.126*** (0.124)	1.096*** (0.122)	1.087*** (0.123)
LN_POP	-0.280*** (0.0339)	-0.279*** (0.0339)	-0.274*** (0.0340)	-0.318*** (0.0351)	-0.316*** (0.0351)	-0.311*** (0.0351)
LN_GDP	-0.305** (0.124)	-0.286** (0.123)	-0.275** (0.123)	-0.414*** (0.131)	-0.378*** (0.131)	-0.365*** (0.131)
LN_OWN_REV_PC	-0.0851 (0.0537)	-0.0809 (0.0537)	-0.0740 (0.0538)	-0.135** (0.0584)	-0.135** (0.0580)	-0.130** (0.0581)
WATER_SUPPLY	1.29e-05 (0.000970)	-1.19e-05 (0.000969)	4.59e-05 (0.000968)	-0.000272 (0.00102)	-0.000388 (0.00101)	-0.000311 (0.00101)
SEWAGE	0.00340*** (0.00105)	0.00330*** (0.00105)	0.00338*** (0.00104)	0.00533*** (0.00111)	0.00512*** (0.00111)	0.00519*** (0.00111)
EU_REF_YES	0.00119 (0.00221)	0.000854 (0.00219)	0.00191 (0.00221)	0.000152 (0.00238)	-0.000637 (0.00238)	0.000659 (0.00237)
CONSTANT	8.610*** (1.203)	8.385*** (1.197)	8.223*** (1.200)	10.94*** (1.279)	10.64*** (1.268)	10.47*** (1.270)
Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Wald-Statistic	6767***	6754***	6749***	2867***	2851***	2828***
R ² overall	0.392	0.393	0.392	0.269	0.267	0.267
Observations	10812	10812	10812	7174	7174	7174
Number of code	2473	2473	2473	2472	2472	2472

Robust standard errors in parentheses

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