To the ones in need or the ones you need?

The Political Economy of Central Discretionary Grants – Empirical Evidence from Indonesia

Gerrit J. Gonschorek, Günther G. Schulze and Bambang Suharnoko Sjahrir

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Abstract

We analyze the allocation of discretionary grants from the central government to local governments in Indonesia. Using OLS and Fixed Effects models on an unbalanced panel data set for more than 400 Indonesian districts covering the period 2005-2013, we investigate whether the allocation of the grants is determined by the need of a district, by political alignment of the central government with the local district heads, or by reelection motives of the incumbent president. We find that grant allocations are not determined by need characteristics and that political considerations matter significantly. Districts with low support for the president received significantly more than the core supporting districts, especially in the year of national elections. This effect is limited to the first term of the president. In the second term, after which reelection is impossible, political considerations were largely absent. This pattern is consistent with the view that the incumbent president considers discretionary grants as an instrument to increase reelection probabilities. Unlike the evidence for most countries, we find no effect for political party alignment with local district heads. Our results are robust to the inclusion of a number of other variables capturing competing motives.

1. Introduction

This paper analyzes the allocation determinants of a particular grant program, '*Tugas pembantuan'* (TP), from the central government to the regions in Indonesia. The program is designed to fund physical infrastructure, including agricultural infrastructure, and is allocated to the regions at the discretion of the central government. Every funded project needs the presidential approval. This raises the question whether the president approves allocations according to a specific rationale.

Using a unique unbalanced panel data set for more than 400 Indonesian districts for the period 2005-2013 and including a large vector of political, socio-economic, and geographical controls, we test four hypotheses on the determinants of fiscal transfers. First, transfers could be allocated according to the needs of the districts in order reduce differences in economic and infrastructure development and the fiscal capacity. A strong normative case could be made in Indonesia for such an allocation given the huge differences in prosperity across the archipelago: Poverty rates span from 1.75 percent to 47.52 percent with a mean of 13.59 and a standard deviation of 8.47.[1]

Alternatively, allocations could be made to maximize reelection probabilities. To this end, the incumbent president could channel funds to the core supporting districts, i.e. those that supported him the most in the last elections, as they may be more likely to respond positively, or he could focus on districts with the largest room for improving his vote share in the next elections. Since Indonesia is politically decentralized, the president could favor those districts that are politically aligned as he may want to strengthen his local base. Political capital created through the transfers may be shared between the local and the central level and would therefore not in part leak to the opposition if created in politically aligned districts.

Our paper thus speaks to four related strands of the literature. First, the normative fiscal federalism literature discusses the optimal design of fiscal constitutions including intergovernmental transfers (e.g. Boadway and Shah, 2009). We test which power it has for explaining the observed patterns of intergovernmental transfers. Second, our paper contributes to the second generation of fiscal federalism literature (Weingast, 2009, 2014) and, in particular, to the political-economic literature on the determinants of transfers to the regions.

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[1] Data Source: World Bank, Indonesia Database for Policy and Economic Research (DAPOER)

Two competing hypotheses have been put forward. The core voter hypothesis posits that transfers are made to core supporting districts as they are more likely to respond positively (Cox and McCubbins 1986); it has been supported empirically (Ansolabehere and Snyder 2006; Francken et al. 2012, Firpo et al. 2015, Kauder et al. 2016). In contrast, the swing voter hypothesis argues that transfers go to districts that can be won over easiest (Lindbeck and Weibull 1987); it has also found substantial empirical support (Wright 1974, Garrett and Sobel 2003, Arulampalam et al. 2009, Banful 2011, Sorribas-Navarro 2011, Litschig 2012; Solé-Ollé 2013, Veiga and Veiga 2013). We test which hypothesis is supported in the Indonesian context, if at all.

Third, the literature on political alignment has provided empirical evidence that politically aligned subnational jurisdictions are favored in transfer allocations (Berry et al. 2010, Larcinese et al. 2006, Bracco et al. 2015, Kauder et al. 2016, Solé-Ollé and Sorribas-Navarro 2008, Veiga and Pinho 2007, Arulampalam et al. 2009, Brollo and Nannicini 2012). We analyze whether political alignment matters in Indonesian politics. Lastly, since our observation period covers a large number of asynchronous local and the national elections, we contribute to the literature on political business cycles (PBC, Nordhaus 1975) by analyzing whether there is any cyclical pattern linked to local or national elections in the transfers. The PBC literature shows that the cycles depend on the characteristics of the political system, notably they are strong in young democracies while they tend to be less pronounced or even disappear in mature democracies (Brender and Drazen 2005, Shi and Svensson 2006, DeHaan and Klomp 2013). Pork barrel politics may be less pronounced also in the presence of term limits (Aidt and Shvets 2012). [2]

The mixed evidence suggests that results are very context-dependent. Most of the evidence has been derived in a developed country-established democracy setting. The few developing countries that have been analyzed, Brazil (Brollo and Nannicini 2012) and India (Arulampalam et al. 2009), have longer established democracies, much stronger ideological cleavages, and different political systems. The analysis of the Indonesian case thus adds greatly to our understanding of the political economy of intergovernmental fiscal transfers.

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[2] Cf. Sjahrir et al. (2013) for an analysis of PBCs in Indonesia at the local level.

Indonesia is a particularly interesting case in itself. It is the fourth most populous nation and the third largest democracy in the world and the dominating country in Southeast Asia. It was democratized only in 1998 after the demission of the long-time dictator Suharto and was strongly decentralized as recent as 2001. Moreover, it is a large country strongly divergent in geography and economic prosperity (Kis-Katos and Sjahrir 2017).

Yet, the particular features of its political system make the analysis of Indonesia interesting beyond the country as such and sets it apart from the cases analyzed so far. It is characterized as highly clientelistic with voters expecting tangible material benefits in exchange for their votes (Mietzner 2011, Aspinall and van Klinken 2011, Aspinall and Sukmajati 2016). Money politics play a large role not only in persuading voters but also for nominating candidates. Ideological differences between parties are relatively small and party loyalty of voters, but also of candidates for political offices, is comparatively weak (Mietzner 2013). The president, who is directly elected since 2004, needs to build large coalitions in the lower house, as it is quite fragmented. Local governments are responsible for core services such as health care, primary and secondary education, infrastructure, and environmental protection; while almost 40 percent of the budgetary responsibilities were devolved to the regions (World Bank 2008), districts are highly dependent on transfers from the center to finance their expenditures (Lewis 2014).[3] The fiscal and administrative decentralization was complemented by a political decentralization with free elections of local parliaments in 2001 and asynchronous elections of the district heads first by local parliaments and, beginning in 2005, directly by the local electorates. District heads have to garner support for reelection, which makes transfers from the center important to them.

The transfer scheme *Tugas pembantuan* is ideally suited to test our four hypotheses as it is allocated at the discretion of the central government and, being earmarked for capital goods, has a great visibility for the public.[4] The empirical analysis of the Indonesian case benefits from the large number and great diversity of districts, good data quality, and the fact that local elections are exogenously asynchronously timed, which makes identifying PBCs at the local level easy. Moreover, since the president faces a two terms limit, political-economic incentives to invest in reelection are absent in his second term and empirical results should reflect that, a fact that can be used as an internal consistency check.

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[3] Provinces have mainly supervisory and backstopping functions.
[4] Muraközy and Telegdy (2016) show for the allocation of the European Union's Structural and Cohesion Funds in Hungary that political motives for grant allocation were present when the visibility of the project outcome was high, but not for less visible projects.

Our paper is the first to study central government transfers to the regions in Indonesia from a political-economic perspective.[5] We find that the allocation of TP transfers is not influenced by different needs of the districts. Instead, transfers are allocated in order to increase reelection probabilities: they are strongly focused on those districts that provided *little* support for the president in his first election as they offer the biggest opportunities for increasing the vote share for the incumbent. This effect is limited to the president's first term in office. We find neither evidence for the core voter hypothesis nor an effect of political alignment on the TP allocation, which is explained by Indonesia's political system. Our results are robust to the inclusion of potentially confounding factors, such as political budget cycles, political concentration in the local parliaments, regional favoritism by the incumbent president, the existing service infrastructure, the importance of the agricultural sector, and the cost of providing services at the district level.

The paper proceeds as follows: Section 2 provides a brief background on Indonesia's political system, especially on the presidential elections and the fiscal structure relevant for our analysis. Section 3 discusses theoretical arguments for the determinants of central-government transfers in a decentralized system, relates them to the Indonesian context, and presents four testable hypotheses. In Section 4, we describe the data and our empirical approach and present the main results. Section 5 provides a number of robustness checks. Section 6 concludes.

2. Institutional Background

2.1 Elections

Indonesia is a presidential democracy. The president has veto power over all legislation; by constitution, laws must be made by 'joint agreement' with the House of Representatives (*Dewan Perwakilan Rakyat*, DPR) (Sherlock 2010). The president appoints his/her cabinet members and is directly elected by popular vote for a maximum of two 5-year terms since 2004.[6]

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[5] Previous analyses have either exclusively focused on the formula-based transfers that disallow decisions at the discretion of the central government (Brodjonegoro and Martinez-Vazquez 2004, McLeod and Fadliya 2010) or tested for a possible needs orientation of discretionary transfers and their effects on service delivery but disregarded potential political-economic motivations (Lewis 2016).

[6] Constitutional Amendment in 2002. Before 2004, the president was appointed by the House of Representatives. Since he/she is directly elected, the power of the DPR has decreased significantly (Schmidt 2010). According to Schmidt (2010), the appointed members of the DPR elected Suharto in engineered elections to be president seven consecutive times (1966-1998).

Presidential elections are held in two rounds if no ticket receives the absolute majority in the first round. A political party must have a minimum of 20 percent of the votes or 15 percent of the seats in the DPR to nominate a presidential candidate (Ufen 2009); presidential elections take place shortly after the legislative elections.[7] The DPR consists of 560 members and is elected by proportional representation at the district level. Since 2008, seats are allocated through an open party list system; all candidates must run for a certain political party, but voters can vote for a party or an individual candidate (Sherlock 2010).

The second chamber of parliament is the Regional Representative Council (*Dewan Perwakilan Daerah*, DPD). It consist of 132 members, four from each province, and is elected at the provincial level. It has only a participating and advisory function to the DPR. The People's Consultative Assembly (*Majelis Permusyawaratan Rakyat,* MPR) consists of the DPR and DPD members and oversees presidential decisions. Elections for the national, provincial, and district parliaments are held simultaneously every five years (2004 and 2009 in our observation period). The local parliaments at the district level, the DPRDs (*Dewan Perwaklian Rakyat Daerah*), are also elected by proportional representation with an open party list (Ananta et al. 2005).

Provincial governors, mayors (*wali kotas*), and regents (*bupatis*) are elected directly by popular vote since 2005 (Law No. 32/2004). The timing of the district heads elections is determined exogenously and independent from the timing of the national executive and legislative elections. They take place asynchronously after the 5-year term of a local official ends, which is a legacy from the Suharto era when district heads were appointed at different points in time. After Suharto's demise, the incumbent district heads were allowed to serve out their term and the democratization that followed. The asynchronous nature of district head elections allows us to clearly identify any effect of political party alignment or political business cycle on transfer decisions.[8] Only political parties or coalitions with at least 15 percent of seats in the local DPRD are allowed to nominate candidates; the candidates need at least 25 percent of the votes to win the election in the first round, otherwise, they face a run-off election against the candidate with the second largest vote share (Choi and Nankyung 2009).[9] Local

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[7] In 2004, parties that received at least 5 percent of the total vote or 3 percent of the parliamentary seats at the DPR were allowed to nominate a presidential or vice-presidential candidate (Law 23/2003 Article 101). For 2009, this minimum was changed to 15 percent of the seats or 20 percent of the votes.

[8] Since December 2015, district head elections are held in the same year but at different times within the year.

[9] Since 2008, independent candidates are allowed to run for office at local executive elections (Law 12/2008). However, due to the high costs of an electoral campaign and costly requirements to withdraw a nomination (Law 12/2008, Article 62), only a few independent candidates have contested in local direct elections (Buehler 2010).

government heads, in particular district heads, are the ones defining local policy making in contrast to the rather weak local parliaments (Buehler 2016).

In the 2004 presidential elections, Susilo Bambang Yudhoyono and Jusuf Kalla, nominated by *Partai Demokrat* (PD), were elected as President and Vice-president of Indonesia (60.6 percent). They defeated Megawati Sukarnoputri (the then incumbent president) and her running-mate Hasyim Muzadi (39.4 percent), nominated by PDI-P[10] (Ananta et al. 2005). These were the first direct elections in Indonesia's history.[11] Yudhoyono and Kalla, both former ministers in President Megawati's cabinet, were supported by the People's Coalition (*Koalisi Kerakyatan*) formed by PD, PBB[12], PKIP[13], and PKS[14]. Megawati Soekarnoputri, daughter of Indonesia's first President Soekarno (in office 1945-1967), and Hasyim Muzadi, a leader of the Al-Hikam Islamic Boarding School, were supported by the National Coalition (*Koalisi Kebangsaan*), consisting of Golkar, PDI-P, and PPP[15] (Ananta et al. 2005).[16]

In the 2009 presidential elections, Yudhoyono was reelected for his second (and final) term as president with the Indonesian central bank's governor Boediono as his running mate. Supported by his own party PD as well as by PKS, PAN[17], PPP, and PKB[18] (Sukma 2009), he won in a landslide victory (60.8 percent) in the first round.[19] Megawati Soekarnoputri (PDI-P) and her running mate Prabowo (26.8 percent) as well as Yudhoyono's first-term vice president Jusuf Kalla (head of the Golkar Party) and his running mate Wiranto (Partai Hanura) (12.4 percent) were defeated. Figures B1-B2 in the appendix show the regional distribution of votes for Yudhoyono in the 2004 and 2009 presidential elections across the Indonesian districts, showing stark regional differences in vote support.[20]

2.2 Fiscal Transfers

Indonesia has three levels of government, the central, the provincial, and the district level. The central government is responsible for judiciary, law enforcement, monetary and

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[10] *Partai Demokrasi Indonesia Perjuangan*

[11] In the DPR elections, Golkar had received the highest share of votes (21.6 percent), followed by PDI-P (18.5 percent), PKB (10.57 percent), PPP (8.15 percent), and the presidential party PD (7.45 percent). For more information on each of the political parties in Indonesia see Mietzner (2013), Ananta et al. (2005), Aspinall and Mietzner (2010), or Bünte and Ufen (2009).

[12] *Partai Bulan Bintang*

[13] *Partai Keadilan dan Persatuan Indonesia*

[14] *Partai Keadilan Sejahtera*

[15] *Partai Persatuan Pembangunan*

[16] The fact that Jusuf Kalla, a former Golkar official, was not supported by Golkar in the 2004 presidential elections, illustrates how blurry party lines in Indonesia sometimes are.

[17] *Partai Amanat Nasional*

[18] *Partai* Kebangkitan Bangsa

[19] In the 2009 national DPR elections a few month before, the presidential party PD won very substantially receiving 20.9 percent of the votes, followed by Golkar (14.5 percent), PDI-P (14.0 percent), PKS (7.9 percent), PAN (6 percent), PPP (5.3 percent), PKB (4.9 percent), Gerindra (4.5 percent), and Hanura (3.8 percent) (Sukma 2009).

[20] For more information on the 2009 presidential elections see Sukma (2009); Tomsa (2010); Fealy (2011), and Aspinall et al. (2015).

macroeconomic policies, religious affairs, defense, foreign relations, and security policy. Sub-national governments are responsible for all remaining functions, especially for decentralized service sectors like education (excluding tertiary education), health, and infrastructure. Provinces have limited responsibilities compared to district governments; they are responsible for supervision and cross-district cooperation. Districts provide core services; they receive the lion's share of their overall revenue from the transfers from the center. In 2010, central government transfers accounted for 54 percent of provincial and 93 percent of district expenditures (Shah 2012).

Indonesia's major government transfers (DAU, DBH, DAK) are non-discretionary; they are either determined by tax revenue generated at the sub-national level, specific criteria, or by a formula.[21] The general allocation grant DAU (*Dana Alokasi Umum*) is a non-earmarked, formula-based general purpose grant and the most important source of sub-national government revenue. DAU transfers accounted for 52 percent of total subnational government revenue between 2001 and 2009 (Agustina et al. 2012). The DAU formula takes into account the fiscal capacity and the fiscal needs of a district (for details see Agustina et al. 2012, McLeod and Fadliya 2010). The specific allocation grant DAK (*Dana Alokasi Khusus*) is earmarked for national priorities. Its allocation is determined by general criteria, such as the financial capacity of a subnational government, technical criteria, such as guidelines established by the responsible line ministry, and special criteria, such as specific characteristics of a region. The DBH (*Dana Bagi Hasil*) is Indonesia's tax and natural resource revenue-sharing system and is allocated according to a formula (Agustina et al. 2012).[22] It is motivated by political-economic considerations and aims at giving naturally resource-rich regions a larger share of resource rents (Harjowiryono 2011).

Compared to these non-discretionary transfers, TP (*Tugas pempantuan*, Co-Administration and Assistance Tasks Funding) is a discretionary central-government grant under the authority of the president.[23] Since 2001, line ministries of the central government, which are not responsible for the five 'core' responsibilities foreign affairs, defense, justice, fiscal/monetary policy, and religion, have to delegate the implementation of their tasks to sub-national

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[21] Law No. 33/2004 on fiscal decentralization, Law No. 32/2004 on sub-national governance, and Law No. 25/1999 on fiscal balance between central government and regions. In addition to these transfer mechanisms, there are Special Autonomy Funds (for Papua and Aceh) based on Law No. 35/2008, Law No. 11/2006, and Law No. 21/2001, Adjustment Funds for financial ad hoc assistance, Hibah-transfers for assistance in the infrastructure sector, a special Incentive grant (DID), and some smaller performance-based grant schemes.

[22] Since the beginning of 2014, the property tax (Territory and Building Tax, PBB and Property Title Transfer Fees, BPHTB) is devolved to the subnational level. This excludes mining, plantation, and the forestry sector.

[23] Government Regulation 7/2008 Article 6 paragraph 2.

governments, which act as representatives of the central government.[24] TP grants are not part of the local budget, but they are spent locally and are co-administered with a provincial governor and/or district head.

TP grants should be allocated to tasks of `physical nature` (Government Regulation 7/2008). Even though the allocations should be in accordance to some general principles, such as `harmonious national and regional development` (Government Regulation 7/2008), there are no clear allocation criteria in place leaving the allocation at the discretion of the central government. The line ministries which are planning to establish a TP funded project have to consult with the National Development Planning Agency (BAPPENAS), which is responsible for the coordination and planning of projects.[25] However, every project needs the approval of the president.[26] After the presidential approval, the Ministry of Finance disburses the funds, the Ministry of Home Affairs has a supervisory function. Figure 1 below shows the allocation of TP per capita by district for the year 2007. While districts on the economically most prosperous island Java receive lower grants per capita, there are distinct differences in the allocation to neighboring and economically similar districts. This suggests that political factors may play an important role in explaining the allocation of central discretionary government grants across Indonesia. The fact that TP grants should be allocated to tasks of `physical nature` should ensure a good visibility of the results of TP transfers to the voters.

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[24] Government Regulation No. 52/2001, Government Regulation No. 7/2008, and Government Regulation No. 106/2000.
[25] The National Development Planning Agency meets with local governments once a year in order to discuss priorities of local development for the following year. There is no other official channel for a proposal of grants by the local governments.
[26] Government Regulation 7/2008 Article 6 paragraph 2

Figure 1: Geographical distribution of TP per capita in 2007

Tp per capita (in Rph) in 2007
- (160000.00,1.00e+07] (32)
- (140000.00,160000.00] (8)
- (120000.00,140000.00] (17)
- (100000.00,120000.00] (22)
- (80,000.00,100000.00] (26)
- (60,000.00,80,000.00] (55)
- (40,000.00,60,000.00] (66)
- (20,000.00,40,000.00] (88)
- [0.00,20,000.00] (68)
- No data (57)
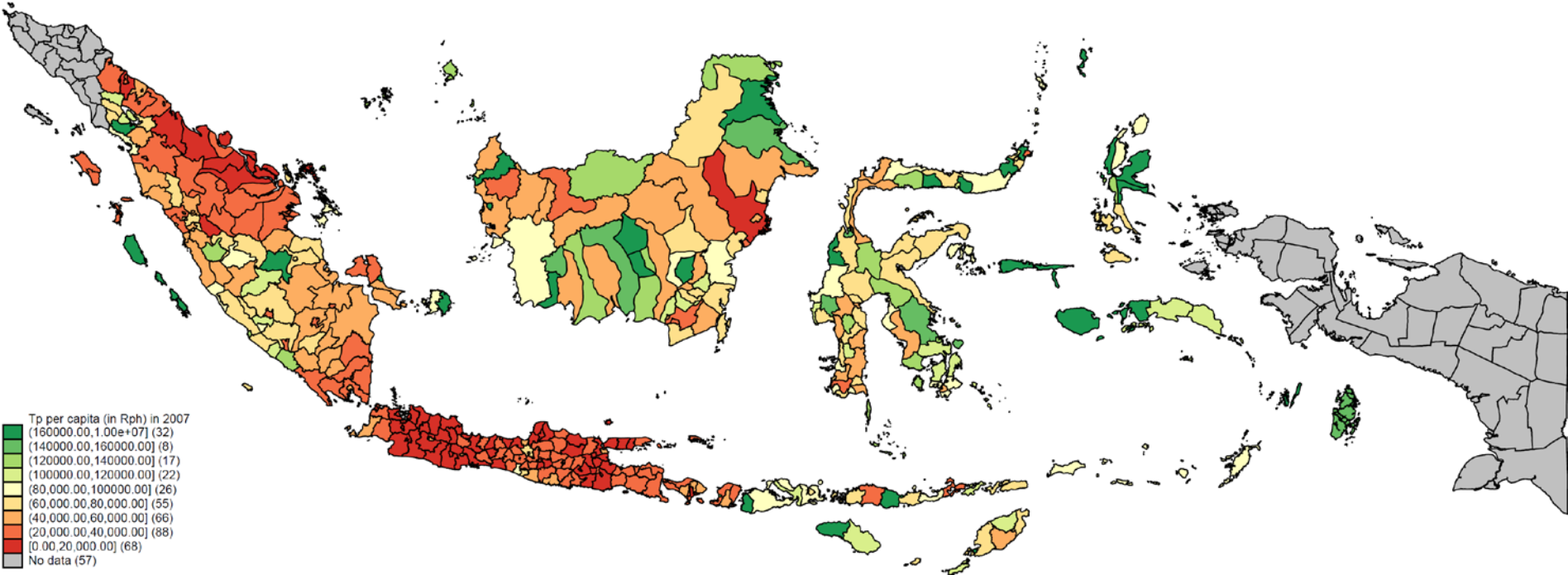
Source: authors' illustration

3. Theoretical Considerations

From an efficiency perspective, the transfers from the central government to the regions are regarded as an instrument that allows benefitting from the advantages of decentralization while minimizing the costs of decentralization in terms of fiscal inequity or negative external effects (Boadway 2007). Decentralization is advantageous for governance and public service delivery because it allows for better preference matching of a geographically heterogeneous population. Local governments have informational advantages over the central government, and since their actions are more transparent to the local electorate, participation of the local constituency is higher (Oates 1972). Moreover, in decentralized states mobile individuals can sort themselves into local jurisdictions that offer the best mix of public services and taxes (Tiebout 1956). Decentralization can also be seen as a laboratory for policy solutions (Hayek, 1945), and it promotes competition between districts, which increases their performances (Besely and Case 1995). Yet, this competition may create negative externalities as local governments do not take into consideration the effects of their policies on other local jurisdictions, for instance the erosion of local tax bases (Wilson 1999), and it may bias public expenditure composition (Keen and Marchand 1997). Oates (1999) argues that central government transfers have the normative objectives of fiscal equalization, securing national public service standards, and the internalization of spillover benefits of local public services (see also Boadway 2007). As a consequence, central government transfers should account for differences in fiscal capacity, differences in the costs of providing public services, and different development levels. Indeed, Government Regulation 7/2008 on Deconcentration and Co-Administration Funds stipulates that the allocation of TP should be determined by the district's financial capacity, the need of providing public services, and the district's development.

We thus formulate our first hypothesis:

Hypothesis 1 ("Needs orientation"):
Central discretionary grants are lower for districts with higher fiscal capacity and better socioeconomic development.

This hypothesis is testable as data for development levels, such as the Human Development Index (HDI), GDP per capita, price indexes, and fiscal variables are available at the local level

(and differ substantially between districts). In the Indonesian context, only Lewis (2016) has tested for a possible needs orientation of TP transfers; he finds mixed results.

In contrast to this normative point of view, the political-economic perspective considers government transfers as governed by reelection motives. The allocation of transfers is based on tactical and strategic considerations in order to maximize votes, seen as 'political capital' (Grossman 1994). Transfers are regarded as a means to persuade voters to vote for the central incumbent (president) either because the benefits derived from the transfer-financed projects are directly attributed him/her or because the president can benefit indirectly from increased popularity of a politically aligned local incumbent.

For the allocation of intergovernmental fiscal transfers, party alignment may thus play a pivotal role. Political benefits arising from the projects financed by these transfers may be shared between the president and local incumbents as voters may not clearly attribute the project to the central or local level. Hence, if the president seeks to garner support for his/her reelection bid by strengthening his/her local party base politically, optimal transfers will favor politically aligned districts. If central and local incumbents are from different parties, some of the created electoral benefits will 'leak' to the opposition, making the transfers less effective investments for the central incumbent, other things being equal. There is substantial empirical evidence for this political alignment effect in the allocation of central grants. Larcinese et al. (2006) show that governors in the United States who belong to the same party as the president receive significantly more federal funds. Berry et al. (2010) find that US districts and counties receive more federal funds if they are represented by members of the president's party. Bracco et al. (2015) demonstrate for Italy that politically aligned municipalities receive 40 percent more grants compared to non-aligned municipalities. Solé-Ollé and Sorribas-Navarro (2008) find a similar positive effect of political alignment on central grant allocation for Spain. Brollo and Nannicini (2012) show that politically unaligned mayors receive around 30 percent lower discretionary grants for infrastructure in the run up to local direct elections in Brazil. Arulampalam et al. (2009) find for India that districts that are both swing districts and politically aligned receive 16 percent higher grants.

Following the theoretical considerations outlined above and the empirical evidence that supports it, we formulate our second hypothesis:

Hypothesis 2 ("Political alignment"):

Central discretionary grants are higher for districts that are politically aligned with the president.

In the Indonesian context, however, it is questionable whether political party alignment has a significant influence on central grant allocation. For such a party alignment effect to materialize, the central incumbent needs to profit from a strengthening of the local party chapter and the party chapter needs to be able to profit from the transfers from the center. If the benefits provided are (partly) attributed to the local district head and not to the president's party at the local level, the local party chapter will not profit from the transfers. If then the district head's party loyalty is very weak, the central incumbent will not be able to capitalize on the district heads' increased popularity. Transfers will benefit the president directly to the extent that the benefits are attributed to him, but not indirectly through an increased local support base for him. The incentive to transfer more to politically aligned districts does not exist.

Many scholars of the Indonesian political system argue that this is an accurate description of Indonesia's reality. Local district heads often only have a loose (institutional) attachment to a political party and regard political parties just as vehicles for their nomination (Qodari 2010). Candidates are often not official party members or switch their party affiliation to parties with a stronger local network and better financial opportunities (Ufen 2009). Political parties in turn tend to sell nominations to promising, well-endowed independent local candidates that do not have any backing of a political party yet (Buehler 2010, Mietzner 2009). As Mietzner (2013, p: 224) puts it "While formally nominated by parties, these local officials […] have no or only weak institutional party connections."[27]

Orthogonal to the question whether party alignment matters is the question which districts would respond the most to transfers in terms of increased votes for the incumbent.[28] Voters are believed to vote for the candidate who gives them the highest utility, which is determined by the voters' ideological preferences in comparison to the candidates' political platforms and

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[27] The Indonesian law stipulates that a party nominating a presidential candidate needs at least branches in 60 percent of all provinces (Palmer, 2010). However, the political party *Partai Demkorat* (PD) is seen solely as a presidential party, used as an electoral vehicle to win presidential office in 2004 by Yudhoyono (Aspinall et al. 2015), lacking a real political platform and an organizational structure at the local level (Ufen 2009).

[28] This question refers to the direct effect of transfers for the president while party alignment refers to a possible indirect effect of transfers through a strengthening of the local party base.

their consumption levels under the respective candidate (Dixit and Londregan 1996). Transfers of the incumbent president to voters may thus shift the balance in his/her favor thereby increasing his/her vote share. Given the budget constraint, the question is whom the incumbent would optimally transfer money to.

In the literature, two main hypotheses have been put forward: incumbents may cater to swing voters (Lindbeck and Weibull 1987) or to their core constituency (Cox and McCubbins 1986). These competing theories focus on different aspects of the political investment process made by incumbents, who transfer resources to particular groups in order to maximize expected votes.

The *core voter hypothesis* argues that the responsiveness of groups to receiving transfers is only partly known, which makes these political investments risky. Since the responsiveness is better known for the core constituency, risk-averse incumbents will channel resources predominantly to their core voters (Cox and McCubbins 1986). Dixit and Londregan (1996) argue that incumbents know their core constituencies better and can thus target benefits more effectively, which makes investment more profitable, other things being equal.

Significant empirical evidence supports the core voter hypothesis. Kauder et al. (2016) show for Germany that core supporters of the incumbent state government receive significantly more discretionary grants. Ansolabehere and Snyder (2006) show that US states favor municipalities in which they received stronger electoral support. Firpo et al. (2015) demonstrate that Brazilian legislators tend to reward municipalities with more favorable budget amendments where they had received lager vote shares. Francken et al. (2012) find that areas in Madagascar with a stronger political support for the government in the past receive significantly more aid funds after a natural disaster.

Hypothesis 3 ("Core voter hypothesis"):
Central discretionary grants are biased towards electoral core supporters of the president in the past.

In contrast, the *swing voter hypothesis* argues that incumbents focus on voters with only weak ideological preferences for either candidate. Lindbeck and Weibull (1987) posit that groups with clear preferences for or against the incumbent either need not or cannot easily be persuaded to vote for the incumbent, who will therefore focus on groups with weak party

preferences, i.e. the swing voters. Political investments will have higher returns when focusing on those who are easy to persuade.

The swing voter model has been supported empirically for the US (Wright 1974, Garrett and Sobel 2003, Sobel and Leeson 2006) and several European countries (Case (2001) for Albania, Dahlberg and Johansson (2002) for Sweden, Solé-Ollé (2013) and Solé-Ollé and Sorribas-Navarro (2008) for Spain, Veiga and Pinho (2007) and Veiga and Veiga (2013) for Portugal). Empirical evidence for developing and threshold countries is limited to India (Arulampalam et al. 2009, Gupta and Mukhopadhyay 2016), Ghana (Banful 2011), and Brazil (Litschig 2012), where formula-based central government transfers have been altered to target swing voters. The swing voter hypothesis was derived in the context of the US, where presidents are elected by the electoral college and consequently swing states are defined as states that may be won or lost by a small margin and that are thus the focus of campaigning ('battleground states'). The logic of the swing voter hypothesis suggests that transfers are targeted at those groups that can be most easily persuaded to change their voting behavior in exchange for favors and that are not already in the incumbent's pocket. Translated into the Indonesian context, which is characterized by low ideological differences between parties, a low party loyalty of the voters, the importance of money politics, and the president being elected by popular vote, this implies that transfers are targeted at districts that did not vote in large numbers for the incumbent but can be persuaded to do so through transfers allocated to them. Since the Indonesian constitution stipulates a two-term limit, the reelection motive should prevail only in the first term of the president. We thus formulate an adjusted swing voter hypothesis as

Hypothesis 4 ("Political investment"):
(a) Central discretionary grants are biased in favor of districts with low support for the president in the previous election.
(b) This bias exists only in the first term, when reelection is possible.

Dixit and Londregan (1996) integrate core voter and swing voter models in an encompassing model and show that the result of the politicians' calculus depends on the relative strength of the described effects that underlie the core voter and the swing voter hypotheses. Consequently, a number of empirical studies do not find clear evidence in favor of one or the

other hypothesis. Among these are Cadot et al. (2006) for France and Larcinese et al. (2013) and Kringer and Reeves (2015) for the United States.

In sum the empirical evidence on the influence of past electoral vote support on central discretionary grant allocation is mixed, and it is mostly derived in a developed country and established democracy context. It suggests that the results are very context-specific and depend crucially on the political constitution (popular vote versus electoral college, majority voting versus proportional representation) and the political system (ideological differences, party loyalty etc., established versus young democracies).

Indonesia is a particular interesting country to study the allocation of intergovernmental fiscal transfers and to test the four hypotheses. First, it is a young democracy, only seven years old at the beginning of our observation period. This implies that voters may not fully see through the politicians' maneuvers to increase their votes, which therefore may be quite effective.[29] Second, it is an economically very diverse country with district poverty rates ranging from 1.75 percent to 47.52 percent with a large standard deviation of 8.47 ppts and a mean of 13.55 percent (data for 2013, DAPOER, World Bank Indonesia). Indonesia is thus a country for which a strong case can be made that intergovernmental fiscal transfers should reduce divergences in economic opportunities across districts. Third, the features of the political system are quite different from those of most countries for which determinants of transfers to the regions have been studied, but they are not uncommon for many developing countries. Indonesia has no strong ideological cleavages; political party platforms are hardly distinguishable (Mujani and Liddle 2010), so that the popularity of the candidates is more important than the party platforms (Mietzner 2013).[30] Political patronage and clientelistic practices are very prevalent in Indonesian politics (Mietzner 2013, Aspinall and Sukmajati 2016) – votes are often given to a candidate or party as a reward for services (Palmer 2010). In addition, Indonesian voters base their voting decision on the perceived economic situation (Mujani and Liddle 2010). This 'service-based' candidate-voter relationship together with the importance of the economic situation for voting decisions make transfers a very appropriate tool for the incumbent to influence voting behavior. Moreover, the 2001 decentralization created a comparable

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[29] This is the reason why political business cycles are much more pronounced in young democracies (Shi and Svensson 2006, DeHaan and Klomp 2013).
[30] The multiparty system and a fragmented central parliament together with the relatively small ideological differences lead to changing 'rainbow coalitions' at the central government level (Aspinall et al. 2015)

situation at the local level – clientelistic policies, low ideological divides, and strong reelection motives (Ufen 2009, Qodari 2010) in a young democracy.

This constellation makes Indonesia an ideal case study to test our four hypotheses – needs orientation, political alignment, core voter orientation versus political investment in 'opposition districts'. The country is also especially suited for an empirical analyses such as ours because of its large number of districts, good data, and the huge variation of districts in socioeconomic and geographical conditions.

4. Empirical Evidence for Indonesia

4.1 Data

To test the four hypotheses, we collected a unique unbalanced panel dataset for the period 2004-2013 including 497 Indonesian districts. Our main data sources are the Indonesian Database for Policy and Economic Research (DAPOER) of World Bank Indonesia, Indonesia's Election Commission (KPU), the Ministry of Home Affairs, the Ministry of Finance, and the Statistical Office (BPS). For descriptive statistics and variable definitions see Table A1 in the appendix. The districts of the special autonomy province Aceh Darussalam are not included.[31] Province DKI Jakarta is excluded as the capital region has a special legal status and its districts are not autonomous. Papua had to be excluded due to data limitations. Hence, our main restricted sample includes 428 districts, covering grant allocations from 2005 to 2013 to around 90 percent of Indonesia's population.

4.2 Empirical Approach

We use a pooled ordinary least squares model (1) with standard errors clustered at the district level to account for serial correlation of unobserved variables in a district. We also use a fixed effects (FE) model (2) to control for unobservable time-invariant district characteristics. The dependent variable is the natural logarithm of the total central discretionary government grant TP per capita in district d at time t, $(lnTPpc_{dt})$.[32]

Our baseline controls for district fiscal capacity and district socioeconomic development. All variables are lagged by one year as budgetary decisions are usually made one year in advance. $FCAP_{dt-1}$ measures the fiscal capacity of a district as the natural logarithm of the total revenue per capita by other (non-discretionary) revenue sources (own source revenue, DAU,

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[31] According to Law No. 35 (2008), Law No. 11 (2006), and Law No. 21 (2001), districts in these regions receive special autonomy funds. Our main results, however, do not change if we include Aceh Darussalam.
[32] The distribution of the dependent variable is depicted in Figure B3 in the appendix.

DBH, and DAK) in the previous year. DEV_{dt-1} controls for a district's overall socioeconomic development. It consists of the natural logarithm of real GDP per capita (excluding oil and gas) and the HDI at the district level. We also include population density (district population/area size) and area size to account for possible economies of scale and year fixed effects ($DmyYear_t$) to account for common macroeconomic shocks. In the pooled-OLS estimation (1), we include provincial dummies ($DmyProvince_d$) to control for unobservable time-constant factors at the province level, our omitted category being Bali Province. We add a dummy $DmyCity_d$ equal to one if a district is a city-district (*kota*), since cities are likely to differ in need characteristics from rural regencies (*kabupatens*). A dummy for coastal regions ($DmyCoastline_d$) is included to account for the difference between landlocked districts and those with access to the sea. As many districts have split during the observation period (*permekaran*), we add a dummy equal one if a district has lost parts of it administrative area within our observation period ($Dmyanysplit_d$). All time-invariant district effects are automatically controlled for in a fixed effects model, thus they are excluded in specification (2). ε_{dt} is the error term.

The baseline specifications are thus:

(1) $lnTPpc_{dt} = \alpha FCAP_{dt-1} + \beta DEV_{dt-1} + Dmyanysplit_d + DmyCity_d + DmyCoastline_d + DmyYear_t + DmyProvince_d + \varepsilon_{dt}$

(2) $lnTPpc_{dt} - \overline{lnTPpc_d} = \alpha(FCAP_{dt} - \overline{FCAP_d}) + \beta(DEV_{dt} - \overline{DEV_d}) + DmyYear_t + \varepsilon_{dt} - \overline{\varepsilon_d}$

To test for a possible effect of political alignment between the president and district heads, we add a dummy variable ($dmyPD_{dt}$), which is equal to one for all the years in which the head of a district was formally affiliated to the presidential party (PD), i.e. has been nominated by the president's party (PD) in the last local district head elections, and zero otherwise. Since local direct district head elections are independently conducted from national elections and asynchronously timed across districts, a potential alignment effect would be clearly identified.[33] Political alignment changes within districts over time enable us to run all our specifications as fixed effects models, thus controlling for unobservable (time invariant) heterogeneity across districts (Table 2).

To test for the effect of presidential vote support, we define a dummy ($dmyCoreSBY_{dt}$) that is equal to one if a district supports the president and its party by more than 70 percent in the final round of the last direct presidential elections for all the years until the next presidential election (*including the election year*) and zero otherwise. The 70 percent threshold is chosen since it is the lower value of the mean plus one standard deviation in electoral vote support for the president in the 2004 (77 percent) and 2009 (70 percent) direct presidential elections.[34] Changes in this threshold down to 65 percent or up to 75 percent to define core supporters do not change our results. We also include various dummies for different vote share groups in order to obtain a more nuanced picture as well as a swing dummy being equal to one if the incumbent president lost or won a district by less than 5 percent of the votes in the last presidential elections (Tables 3-4).

4.3 Empirical Results

4.3.1 Baseline

Our baseline specifications (Table 1) show that the socioeconomic development of a district is not significantly correlated with the actual grant allocation. Larger and more densely populated districts receive lower per capita grants, which points towards an economy of scale effect. In contrast to Government Regulation 7/2008, however, the fiscal capacities of the districts do not affect discretionary TP grant allocations as they should. Likewise, neither the HDI nor the district per capita GRDP influence the grant allocation.

We do not find any evidence for a needs-based allocation of the discretionary grant *Tugas pembantuan (TP).* Hypothesis 1 is not supported. These results are in line with those by Lewis (2016), who analyzes the allocation determinants of discretionary grants for a smaller time period (2006-2011). This finding points towards the possibility that political-economic motives may govern the TP allocation. However, Lewis (2016) does not consider political motives in the allocation of such discretionary grants. [35] We will test for these motives in the following.

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[34] Mean electoral support for president in 2004 and 2009: 58.25 percent, standard deviation 16.12 percent. Minimum: 8.37 percent, Maximum: 97.51 percent.
In 2004: Mean 60.41 percent, standard deviation 17.12 percent. minimum: 18.51 percent, maximum: 98.43 percent
In 2009: Mean 56.35 percent, standard deviation 14.96 percent. minimum: 8.37 percent, maximum: 94.97 percent
The distribution of vote shares for the president is depicted in Figure B4 in the appendix.

[35] Lewis (2016) is more concerned with the effects of discretionary transfers on local governments' performances rather than with their determinants. His observation period is smaller and since he runs simple OLS regressions only, he *cannot control* for unobserved heterogeneity and does not account for district splits. Most importantly, however, he disregards political-economic considerations.

Table 1: Baseline regression Discretionary Grants per capita (2005-2013)

Natural Logarithm of TP per capita	(1) OLS	(2) FE
Log of GRDP per capita (ex. Oil/Gas)	-0.036	-0.163
	[0.063]	[0.253]
Log of Fiscal Capacity pc. (non-discretionary)	0.158	0.091
	[0.124]	[0.093]
Human Development Index	0.009	0.003
	[0.010]	[0.009]
Log of Population Density	-0.381***	-0.811***
	[0.093]	[0.311]
Log of Area Size	-0.277***	-0.815***
	[0.095]	[0.290]
Dummy Any District Split	-0.026	
	[0.060]	
Dummy Urban District	-0.261*	
	[0.134]	
Dummy Coastline	0.078	
	[0.054]	
2005	-0.600***	-0.678***
	[0.128]	[0.124]
2006	-0.576***	-0.631***
	[0.100]	[0.096]
2007	-0.215***	-0.238***
	[0.060]	[0.061]
2008	-0.265***	-0.286***
	[0.038]	[0.041]
2010	-0.851***	-0.811***
	[0.049]	[0.049]
2011	-0.264***	-0.211***
	[0.052]	[0.056]
2012	-0.317***	-0.217***
	[0.061]	[0.073]
2013	-0.253***	-0.150*
	[0.078]	[0.084]
Province Fixed Effects	*Yes*	*No*
_cons	12.125***	20.056***
	[2.845]	[4.269]
R^2	0.56	0.14
N	3331	3408

Notes: Pooled OLS (1) and Fixed Effect Model (2). Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded from the analysis. The base year for the time fixed effects is 2009. All time-variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

4.3.2 Political Alignment and Political Budget Cycles

Political alignment is tested through a dummy indicating that the district head was nominated by the president's party (PD). Results are shown in Table 2. We find no evidence for a political alignment effect (models 1 and 2). We also checked whether district heads nominated by a

coalition of parties including the president's party receive more transfers and did not find alignment effect either (results not shown).[36]

We also test for political business cycles and find that districts holding local direct elections receive between 7 and 9 percent lower grants per capita in the election year. This could be explained by limited lobbying capacity of local governments due to the upcoming elections or uncertainty about the future local government with whom the center needs to cooperate in implementing the TP-financed projects. We investigate whether districts receive more in the year preceding the election as TP transfers may need time to create benefits. We find no such effect (models 3 and 4).

Yet, while we find no evidence for political business cycles in general, they could exist for politically aligned districts as the president seeks to support the reelection bid of his fellow party members. However, there is no indication for a local political budget cycle for politically aligned districts – mayors from the presidential party do not receive more grants in a local election year (models 5-6).

Finally, we analyze whether districts headed by members of the strongest opposition party (PDI-P) receive lower transfers and whether districts aligned with Indonesia's arguably most highly entrenched political party, *Golkar*, receive more transfers. *Golkar* had been in power for many years under Suharto and is often described as still having a large patronage capacity and formal as well as informal ties within Indonesia's government structure (Tomsa, 2009). Our results show that district heads aligned with *Golkar* or PDI-P do not receive significantly larger or smaller grants. Political alignment seems not to play any role for the allocation of discretionary grants.[37] There is no evidence in favor of Hypothesis 2.

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[36] Between 2004 and 2013, the number of district heads nominated only by the presidential party and elected into office is low (10 districts). Consequently, only 49 observations indicate a direct political alignment. The number of cases in which the presidential party PD is part of a district coalition is larger (750 observations).

[37] To control for a potential political alignment at the provincial level, we also controlled for districts under the authority of a governor (province level) nominated by a coalition including the presidential party PD, showing no significant influence. (There was no governor only nominated by PD in our whole observation period from 2005-2013.) As expected, we find no evidence for the political party background or political alignment of a district head with the president influencing the distribution of central discretionary grants in Indonesia.

Table 2: Political Alignment and Discretionary Grants per capita (2005-2013)

Natural Logarithm of TP per capita	(1) OLS	(2) FE	(3) OLS	(4) FE	(5) OLS	(6) FE	(7) OLS	(8) FE	(9) OLS	(10) FE
Dmy PD Mayor	-0.107	-0.376	-0.105	-0.374	-0.081	-0.356	-0.102	-0.374	-0.096	-0.372
	[0.190]	[0.254]	[0.189]	[0.251]	[0.208]	[0.275]	[0.190]	[0.251]	[0.190]	[0.250]
DmyLocalDirectElection			-0.093***	-0.074**	-0.092***	-0.073**	-0.092***	-0.073**	-0.091***	-0.076**
			[0.031]	[0.032]	[0.031]	[0.032]	[0.031]	[0.032]	[0.030]	[0.032]
DmyLocalDirectElection in t+1			0.009	0.011	0.009	0.012	0.008	0.011	0.006	0.014
			[0.042]	[0.040]	[0.042]	[0.040]	[0.042]	[0.040]	[0.042]	[0.040]
Dmy PD Mayor X DmyLocalElec.					-0.115	-0.085				
					[0.201]	[0.201]				
Dmy Golkar Mayor							0.034	0.007	0.041	0.002
							[0.062]	[0.066]	[0.064]	[0.066]
Dmy PDI-P Mayor									0.058	-0.156
									[0.098]	[0.107]
Baseline controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
_cons	12.797***	12.929***	12.928***	12.777***	12.926***	12.779***	12.998***	12.758***	13.028***	12.492***
	[2.878]	[3.865]	[2.884]	[3.917]	[2.884]	[3.918]	[2.859]	[3.916]	[2.832]	[3.924]
R^2	0.58	0.15	0.58	0.15	0.58	0.15	0.58	0.15	0.58	0.15
N	2849	2912	2844	2907	2844	2907	2844	2907	2844	2907

Note: Pooled OLS (OLS) and Fixed Effects models (FE). Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded from the analysis. All Baseline controls are included (cf. Table 1). All time variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

4.3.3 Past Presidential Support

We test the core voter hypothesis (Hypothesis 3) and the political investment hypothesis (Hypothesis 4) by relating the amount of transfers to the past presidential support. In all specifications, we include our baseline controls and dummies that account for a possible change in the political composition of a district due to a district split (*permekaran*). We add dummies that are equal to one if a district split between 2004 and 2008 (incl. 2004 and 2008) and between 2009 and 2013 (incl. 09).[38] Since the Indonesian president is elected by popular vote (and not districts won) we also control for the amount of eligible voters in the 2009 and 2014 presidential elections. Results are reported in Table 3.

Core supporting districts of the president in the last presidential elections receive significantly lower grants per capita, in particular in a national election year (models 1-4). Being a core supporting district in the last presidential election decreases TP grants per capita by around 0.19 log points per year (models 1-2), which implies at the sample mean switching to a core district lowers transfers by more than 7,000 IDR per capita. The sample mean is 40.945 IDR. In election years; this effect increases to 0.43 log points or a difference of more than 14,000 IDR per capita at the mean (model 3). Thus we find no evidence for the president rewarding his core supporters. Hypothesis 3 is not supported.

Instead, districts with weak support for the president in the past election are targeted for higher transfers. In particular, districts that showed support for the president of less than 30 percent of the votes received significantly more than the other districts. In comparison to the core supporter districts they receive 0.26 log points more in the off-election years and 0.83 log points in the national election years (OLS, model 7). This implies a difference at the sample mean of 9,374 IDR per capita in off-election years (i.e. -23 percent) and 23,162 IDR per capita in election years (i.e. - 57 percent).[39] For the fixed effects regression the values are 0.41 log points and 0.88 log points, respectively (model 8). In other words, we observe a very significant preferential treatment of the districts that have not supported the president in the past elections and this preferential treatment is much higher in the year of national elections.

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[38] If, for example, a district split in 2007, this dummy accounts for a potential change in the district's political composition up until 2009 (next presidential elections). After 2009, parent and child district are treated as two new observations, categorized based on their presidential vote support in the 2009 elections.

[39] Numbers refer to a switch from a core opposition district to a core supporting district at the sample mean and indicate the loss in transfers that this would entail. As the dependent variable is logged; a switch from a core supporting district to a core opposition district would entail a much larger gain of 12,264 IDR per capita (i.e.+ 57 percent) in off-election years and 53,333 IDR per capita in election years (+130 percent).

We thus observe a political business cycle effect in discretionary grants that shows the president investing in those districts that provide most room for improving his vote share.

As expected, 'swing districts' in the last presidential elections – districts, where the president 'lost' or 'won' by a vote margin of less than 5 percent – are not targeted as such, also not in the national election year 2009 (models 9-12). This result makes sense as the president is elected by popular vote and thus districts are neither lost nor won – the individual contribute towards a nation-wide vote share. Investments are made in districts with the greatest room for increasing the president's vote share.

If our interpretation is correct that the concentration of transfers on districts with low vote shares for the incumbent president provides evidence for vote maximizing investment behavior by the president, we should observe such behavior only if the incumbent can run for reelection. Since the Indonesian constitution stipulates a two-term limit for the president, we should observe this investment behavior during the first term, but not during the second.

To investigate this issue, we split our observation period into the two terms 2005-2009 and 2010-2013.[40] Tables 4a and 4b provide the results. Our results clearly show that in the first term, when reelection was possible, districts with low vote shares for the president in the 2004 elections were favored very strongly, as already suggested by the results in Table 3. For this period, the results replicate qualitatively the results of Table 3, but the estimated effects are stronger than in Table 3. They strongly suggest that a political investment motive by the incumbent president prevails in the allocation of the discretionary transfers.

In the second period, in contrast, no systematic bias in the allocation towards districts with low vote shares exists. Estimates for vote share brackets in the previous election are mostly insignificant and there is no pattern in the point estimates. There is no evidence for a political investment motive in the second term, which is only logical given the term limit.

The differential behavior provides additional evidence in favor of Hypothesis 4. The president invests in districts that did not support him in the past when he still has a reelection interest. Given the low ideological attachment of voters, these districts are politically promising investment opportunities. When reelection is no longer an option, this investment motive is absent. All evidence supports the perception that discretionary grants are used as an instrument to increase the reelection probabilities of the president.

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[40] Data for 2014 are not fully available yet.

Table 3: Past Presidential Vote Support and Discretionary Grants per capita (2005-2013)

Natural Logarithm of TP per capita	(1) OLS	(2) FE	(3) OLS	(4) FE	(5) OLS	(6) FE	(7) OLS	(8) FE	(9) OLS	(10) FE	(11) OLS
DmyCorePresident (>70%)	-0.193*** [0.068]	-0.190*** [0.066]	-0.161** [0.070]	-0.155** [0.068]							
DmyCorePresidentXNational Election			-0.270*** [0.087]	-0.253*** [0.088]							
DmyElectoralSupportPresident1 (0-30%)					0.335*** [0.092]	0.476*** [0.085]	0.262*** [0.090]	0.410*** [0.091]			
DmyElectoralSupportPresident2 (30-40%)					0.222*** [0.081]	0.221** [0.100]	0.187** [0.084]	0.196* [0.101]			
DmyElectoralSupportPresident3 (40-50%)					0.114 [0.073]	0.133* [0.079]	0.085 [0.074]	0.108 [0.080]			
DmyElectoralSupportPresident4 (50-60%)					0.173** [0.077]	0.168** [0.074]	0.135* [0.079]	0.133* [0.076]			
DmyElectoralSupportPresident5 (60-70%)					0.211** [0.083]	0.115 [0.079]	0.207** [0.084]	0.110 [0.080]			
DmyElectoralSupportPresident1XNationalElection							0.572*** [0.181]	0.470** [0.185]			
DmyElectoralSupportPresident2XNationalElection							0.323** [0.127]	0.242* [0.130]			
DmyElectoralSupportPresident3XNationalElection							0.252** [0.128]	0.202* [0.122]			
DmyElectoralSupportPresident4XNationalElection							0.339*** [0.111]	0.319*** [0.112]			
DmyElectoralSupportPresident5XNationalElection							0.028 [0.133]	0.044 [0.132]			
DmySwingPresident (+/-5% votemargin)									-0.047 [0.071]	-0.019 [0.089]	-0.052 [0.071]
DmySwingPresidentXNationalElection											0.044 [0.155]
Baseline controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
_cons	14.666*** [3.138]	23.740*** [5.269]	14.723*** [3.141]	23.753*** [5.245]	14.264*** [3.120]	24.762*** [5.017]	14.103*** [3.121]	24.561*** [4.879]	14.313*** [3.112]	21.582*** [4.974]	14.301*** [3.115]
R^2	0.56	0.14	0.56	0.14	0.56	0.14	0.57	0.15	0.56	0.14	0.56
N	3284	3284	3284	3284	3284	3284	3284	3284	3284	3284	3284

Note: Pooled OLS and Fixed Effect Model (FE). Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded from the analysis. All specifications include province dummies (omitted category: Prov. Bali). A district is defined as a core supporter of the president if it showed an electoral support of more than 70.0 percent for SBY (mean+ sd) in the last presidential elections of 2004 and/or 2009. All Baseline controls are included. All time variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

Table 4a: Past Presidential Support in 2004 and Discretionary Grants per capita (2005-2009), reelection possible

Natural Logarithm of TP per capita	(1)	(2)	(3)
DmyCoreSupporterPresident (>70%)	-0.218*		
	[0.118]		
DmyElectoralSupportPresident1 (0-30%)		0.554***	0.439**
		[0.187]	[0.176]
DmyElectoralSupportPresident2 (30-40%)		0.381***	0.321**
		[0.147]	[0.151]
DmyElectoralSupportPresident3 (40-50%)		0.216	0.176
		[0.131]	[0.130]
DmyElectoralSupportPresident4 (50-60%)		0.264**	0.203
		[0.128]	[0.133]
DmyElectoralSupportPresident5 (60-70%)		0.161	0.139
		[0.126]	[0.130]
DmyElectoralSupportPresident1XNationalElection			0.509***
			[0.185]
DmyElectoralSupportPresident2XNationalElection			0.281**
			[0.138]
DmyElectoralSupportPresident3XNationalElection			0.182
			[0.128]
DmyElectoralSupportPresident4XNationalElection			0.284**
			[0.123]
DmyElectoralSupportPresident5XNationalElection			0.097
			[0.141]
_cons	12.347***	11.642***	11.553***
	[3.771]	[3.728]	[3.742]
R^2	0.54	0.54	0.54
N	1718	1718	1718

Notes: Pooled OLS. Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded from the analysis. All specifications include province and year fixed effects. All Baseline controls are included. All time variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

Table 4b: Presidential Support in 2009 and Discretionary Grants per capita (2010-2013), no reelection possible

Natural Logarithm of TP per capita	(1)	(2)
DmyCoreSupporterPresident (>70%)	-0.084	
	[0.088]	
DmyElectoralSupportPresident1 (0-30%)		-0.220
		[0.143]
DmyElectoralSupportPresident2 (30-40%)		-0.063
		[0.109]
DmyElectoralSupportPresident3 (40-50%)		-0.113
		[0.105]
DmyElectoralSupportPresident4 (50-60%)		0.008
		[0.097]
DmyElectoralSupportPresident5 (60-70%)		0.208**
		[0.098]
_cons	15.668***	15.457***
	[3.584]	[3.531]
R^2	0.61	0.62
N	1566	1566

Note: Pooled OLS. Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded from the analysis. All specifications include province and year fixed effects. All Baseline controls are included. All time variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

5. Robustness Checks

In this section, we test whether the inclusion of a number of potentially intervening factors changes our central result that transfers are channeled to the districts with initially low approval rates (and that neither the socioeconomic development nor political alignment play a role). As there is no political investment motive in the second term, we focus on the first term of the president.

Local Parliament Composition and Political Concentration

A stronger mandate for the presidential party in a local parliament could enhance the president's power at the local level. Alternatively, the degree of political concentration in the local parliaments and especially a dominant position for the president's major opposition party could weaken the president's local influence. These constellations could affect the president's decision to invest in that district.

We control for the influence of the president's party by the vote share of *Partai Demokrat* (PD) in the local legislative. The degree of political concentration is captured by a Herfindahl Hirschmann index for political concentration, and we include dummy variables indicating if

Golkar or PDI-P hold the absolute majority in the local parliament.[41] Our results in Table 5 show that the strength of the presidential party in the local parliament is not correlated with TP grant allocations. Likewise, our results are neither driven by the political concentration in the local parliament nor by a simple majority for the president's main opposition party (PDI-P) or the oldest and well entrenched political party *Golkar*.

Table 5: Local Parliament Composition and Political Concentration (2005-2009)

Natural Logarithm of TP per capita	(1)	(2)	(3)	(4)
DmyElectoralSupportPresident1 (0-30%)	0.441*	0.488**	0.450*	0.462*
	[0.236]	[0.238]	[0.235]	[0.245]
DmyElectoralSupportPresident2 (30-40%)	0.447**	0.454**	0.453**	0.452**
	[0.186]	[0.186]	[0.185]	[0.186]
DmyElectoralSupportPresident3 (40-50%)	0.212	0.198	0.214	0.215
	[0.165]	[0.166]	[0.165]	[0.165]
DmyElectoralSupportPresident4 (50-60%)	0.279*	0.253	0.277*	0.275*
	[0.153]	[0.156]	[0.155]	[0.155]
DmyElectoralSupportPresident5 (60-70%)	0.152	0.137	0.154	0.153
	[0.150]	[0.152]	[0.150]	[0.150]
Share of PD in Local Parliament	0.617			
	[0.889]			
Political Concentration Index (HHI)		-0.964		
		[0.616]		
Dmy Majority Golkar			0.060	
			[0.194]	
Dmy Majority PDI-P				-0.055
				[0.207]
_cons	9.782*	9.686*	9.552*	9.423*
	[5.455]	[5.216]	[5.318]	[5.343]
R^2	0.50	0.50	0.50	0.50
N	1417	1417	1417	1417

Note: Pooled OLS. Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded. All specifications include province dummies and year fixed effects. All Baseline controls are included. All time variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

Local Political Budget Cycles

Upcoming elections at the local level could influence the allocation of central grants. We control for potential local budget cycles by including dummy variables for the presence of local direct elections. As our results in Table 6 show, districts facing local direct elections do not receive significantly more or less grants in a local election year. For our reduced period of observation 2005-2009, we find no significant evidence for local political budget cycles in

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[41] The presidential party did not hold a majority in any of the local parliaments - the maximum share of seats in our observation period was 24 percent.

central discretionary grants.[42] More importantly, the pattern of our central results remains unchanged.

Table 6: Local Political Cycles, Home Bias of President (2005-2009)

Natural Logarithm of TP per capita	(1)	(2)
DmyElectoralSupportPresident1 (0-30%)	0.572***	0.591***
	[0.187]	[0.188]
DmyElectoralSupportPresident2 (30-40%)	0.390***	0.408***
	[0.147]	[0.149]
DmyElectoralSupportPresident3 (40-50%)	0.222*	0.245*
	[0.132]	[0.132]
DmyElectoralSupportPresident4 (50-60%)	0.275**	0.300**
	[0.129]	[0.130]
DmyElectoralSupportPresident5 (60-70%)	0.163	0.179
	[0.127]	[0.128]
Dmy Local Direct Election	-0.047	-0.047
	[0.058]	[0.059]
Dmy Local Direct Election in t+1	0.071	0.071
	[0.047]	[0.047]
Dmy Home of President		0.668***
		[0.181]
Dmy Home Region of President		0.217
		[0.136]
_cons	11.714***	11.737***
	[3.750]	[3.751]
R^2	0.54	0.54
N	1692	1692

Note: Pooled OLS. Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded. All specifications include Province dummies, omitted category Prov. Bali. The base year for the time fixed effects is 2005. All Baseline controls are included. Year fixed effects are included. All time variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

Regional Favoritism

Empirical evidence suggests that incumbent presidents or members of parliament favor their home regions, i.e. the regions where they were born (Hodler and Raschky, 2014, Carozzi and Repetto 2016, Fiva and Halse 2016). The home district of President Yudhoyono, *Kabupaten Pacitan*, showed very strong electoral support for the president in both elections (87 percent in 2004 and 94 percent in 2009). We include a dummy for the home district of the incumbent president (*Dmy Home President*) as well as for all districts directly neighboring his home district (*Dmy Home Region of President*), excluding the home district itself.

Our results demonstrate that the home district of the president receives significantly more grants per capita (Table 6, model 2), but this does not apply for the neighboring districts.

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[42] If we extend the observation period to the complete period 2005-2013, the dummy for the local elections becomes negative and significant (as in Table 2).

This preferential treatment of the president's home district continued in his second term (2010-2013), a pattern consistent with the view that the home bias is not motivated by reelection considerations but rather by other, personal considerations. Our results thus suggest that a home bias was also present under President Yudhoyono; but, more importantly, our central results remain unaffected.

District Proliferation

Next, we analyze whether districts that split receive different amounts of TP transfers. In our sample period 2005-2013, 108 new districts were established through splits. These splits have to be endorsed by the president or can be created by a central parliamentary initiative (Fitrani et al., 2005). According to Fitrani et al. (2005), newly established districts often experience a construction boom since the provincial and national budget focuses on the establishment of new infrastructure in these areas. Hence, newly established districts may receive more TP transfers, which are designed for infrastructure. Alternatively, splitting districts may be more homogeneous after the split (Fitrani et al., 2005; Burgess et al., 2012; Alesina et al., 2014) and it therefore may be easier for the president to target specific constituencies for discretionary transfers. If splitting districts are predominantly those with a specific vote share for the president, our central results would be biased.

To investigate such a possibility, we include a dummy district split, this dummy equals one for all years where a district experiences a split at any point in time of our observation period. In other specifications, we include dummies being equal to one for all the following years after a district separated from an area (child district) or lost part of its administrative area (parent district) until the end of our observation period. Results are reported in Table 7. None of the dummies turned out significant. Splitting districts receive neither a more favorable treatment nor are they disfavored. This holds for parents and child districts alike. Our central results are unaltered.

Table 7: District Proliferation (2005-2009)

Natural Logarithm of TP per capita	(1)	(2)	(3)	(4)	(5)
DmyElectoralSupportPresident1 (0-30%)	0.550***	0.554***	0.555***	0.555***	0.551***
	[0.182]	[0.185]	[0.184]	[0.183]	[0.183]
DmyElectoralSupportPresident2 (30-40%)	0.381**	0.388***	0.382***	0.384***	0.377**
	[0.148]	[0.147]	[0.146]	[0.147]	[0.148]
DmyElectoralSupportPresident3 (40-50%)	0.229*	0.233*	0.232*	0.230*	0.229*
	[0.133]	[0.133]	[0.132]	[0.132]	[0.133]
DmyElectoralSupportPresident4 (50-60%)	0.291**	0.291**	0.297**	0.296**	0.295**
	[0.130]	[0.130]	[0.131]	[0.131]	[0.131]
DmyElectoralSupportPresident5 (60-70%)	0.173	0.172	0.172	0.174	0.172
	[0.129]	[0.129]	[0.129]	[0.129]	[0.129]
Dummy Split	0.084				0.084
	[0.081]				[0.138]
Dummy Child District		0.015		0.048	-0.025
		[0.086]		[0.095]	[0.147]
Dummy Parent District			0.088	0.106	0.042
			[0.067]	[0.076]	[0.128]
_cons	10.641***	10.927***	11.234***	10.835***	10.950***
	[3.824]	[4.080]	[3.798]	[4.070]	[4.074]
R^2	0.54	0.54	0.54	0.54	0.54
N	1689	1689	1689	1689	1689

Note: Pooled OLS. Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded. All specifications include Province dummies and year fixed effects. All Baseline controls are included. All time variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

Table 8: Existing Public Infrastructure, Construction Price Level, Importance of Agricultural Sector (2005-2009)

Natural Logarithm of TP per capita	(1)	(2)	(3)	(4)	(5)	(6)	(7)
DmyElectoralSupportPresident1 (0-30%)	0.554***	0.501***	0.530***	0.584***	0.477**	0.554***	0.519***
	[0.186]	[0.178]	[0.184]	[0.180]	[0.185]	[0.185]	[0.181]
DmyElectoralSupportPresident2 (30-40%)	0.375**	0.343**	0.376***	0.400***	0.300**	0.383***	0.309**
	[0.150]	[0.135]	[0.145]	[0.148]	[0.144]	[0.147]	[0.142]
DmyElectoralSupportPresident3 (40-50%)	0.215	0.202	0.212	0.249*	0.173	0.210	0.183
	[0.132]	[0.128]	[0.132]	[0.135]	[0.143]	[0.135]	[0.136]
DmyElectoralSupportPresident4 (50-60%)	0.261**	0.264**	0.272**	0.283**	0.284**	0.267**	0.287**
	[0.129]	[0.126]	[0.127]	[0.131]	[0.115]	[0.127]	[0.114]
DmyElectoralSupportPresident5 (60-70%)	0.153	0.153	0.159	0.174	0.135	0.165	0.141
	[0.126]	[0.124]	[0.125]	[0.128]	[0.114]	[0.123]	[0.115]
Share of Villages with asphalted road (%)	-0.001						
	[0.002]						
Households with Access to Sanitation (%)		-0.007***					
		[0.002]					
Households with Access to Safe Water (%)			-0.006**				
			[0.002]				
Households with Access to Electricity (%)				0.005*			
				[0.003]			
Construction Price Index (CPI)					0.002		
					[0.003]		
Log of GRDP per capita in Agricultural Sector						-0.043	
						[0.074]	
Log of Workforce in Agricultural/Fishery Sector							-0.031
							[0.068]
_cons	11.545***	10.705***	10.948***	11.332***	16.773***	12.087***	17.417***
	[3.725]	[3.667]	[3.754]	[4.170]	[4.326]	[3.559]	[4.154]
R^2	0.54	0.54	0.54	0.54	0.63	0.54	0.63
N	1717	1717	1717	1693	1111	1718	1106

Note: Pooled OLS. Robust standard errors clustered at the district level are reported in brackets. DKI Jakarta, Aceh and Papua are excluded from the analysis. All specifications include Province dummies and year fixed effects. All Baseline controls are included. All time variant controls are lagged by one year. * $p<0.1$; ** $p<0.05$; *** $p<0.01$

Cost of Providing Services

Next, we check whether TP grants might have been adjusted for differences in price levels for infrastructural and capital-intensive goods across districts.[43] If districts with higher price levels for these products had received more grants in nominal terms and had different voting patterns than other districts, our results could be biased. A different voting pattern could arise if more prosperous districts experiencing higher price levels voted more strongly in favor of the incumbent president in the 2004 elections, Megawati Sukarnoputri (PDI-P), as they were more approving of the situation than less prosperous districts. Higher transfers to districts with lower vote shares for Yudhoyono in 2004 could then be the result of inflation adjustment of the transfers rather than the consequence of a political investment calculus.

To investigate this issue, we include the construction price index (CPI) at the district level in our regression. Table 8, model 5 provides the result: The CPI is insignificant; its inclusion does not alter our results in any meaningful way.

Local Infrastructure and Importance of Agricultural Sector

We have included in our baseline regression and all subsequent regressions a set of comprehensive needs indicators (GRDP, HDI, fiscal capacity, and others) and found little evidence that grants were allocated according to needs. Since TP is supposed to be spend on goods of physical nature (Section 2.3), one might argue that needs parameters should reflect more specifically endowments that can be enhanced by TP grants.[44] We therefore include additionally variables measuring physical infrastructure: We use the share of villages with asphalted roads and the share of households with access to sanitation, safe water, and electricity as proxies for the overall public infrastructure development of a district.

Our results are reported in Table 8, models 1-4. They are inconsistent. The share of villages with asphalted roads has no impact on the TP allocation. Districts with higher access to sanitation and clean water receive lower grants, however, the effect is relatively small: A one standard deviation decrease in the access to sanitation (17.12 ppts) increases the endogenous variable by 0.12 log points or one tenth of a standard deviation. A one standard deviation reduction in access to clean water (20.03 ppts) increases per capita TP also by 0.12 log points. In contrast, a one standard deviation reduction in the share of households with access to

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[43] Price changes over time are captured by the full set of time FE.

[44] Of course, TP grants free resources for other purposes and thus more comprehensive indicators may better capture neediness than more narrowly defined indicators for specific infrastructure.

electricity (16.97 ppts) *decreases* TP allocations by 0.085 log points (i.e. 7 percent of a standard deviation). From these results, we cannot infer a needs orientation of TP. More importantly, the inclusion of these variables does not change our central results.

Data on the allocation of TP across sectors is unavailable for our observation period. In 2016, for which data are available, 73 percent of all TP grants to local governments were related to capital goods in the agricultural sector (fertilizers and irrigation systems), followed by public infrastructure (9.06 percent), rural development (6.37 percent), and fishery (6.31 percent).[45] If such a pattern prevailed also in our observation period, districts with large agricultural and fishery sectors could be favored. Again, if these districts had voting patterns different from the rest, biased estimates could result. To exclude such a possibility, we use the log of GRDP per capita in the agricultural sector and the log of the workforce in the agricultural/fishery sector as additional controls (Table 8, models 6-7). Neither variable turns out significant. Our results are thus robust to the inclusion of a large number of potentially intervening factors.

6. Conclusion

This study is the first to test the political determinants of the allocation of discretionary grants to the regions in Indonesia, the fourth largest country and the third largest democracy in the world. Using OLS and Fixed Effects models on a unique unbalanced panel data set for more than 400 Indonesian districts covering the period 2005-2013, we show that neither normative considerations of needs-based allocations nor political alignment of central government with local governments matter. The president rather invested in those districts that were opposed to him in his first election in order to win them over for his reelection bid, especially in the year of national elections. In his second – and last – term in office, this reelection motive is absent, and consequently the allocation of grants did not follow any political investment calculus, neither did it become more needs-based.

Our results are indicative for the political system of Indonesia, which is a very young democracy characterized by low ideological cleavages, little party loyalty, and the importance of money politics. While these features set Indonesia apart from practically all countries for which determinants of intergovernmental fiscal transfers have been studied, we believe they are not unique to Indonesia but characterize a number of developing countries.

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[45] Recommendations on the Regional Balance of Funding, Ministry of Finance Indonesia (published in June 2017)

Our results provide an idea what the system of intergovernmental fiscal transfers would look like if large parts of transfer system in Indonesia (DAU, DAK, DBH) were not formula-based. Even though formula-based systems are no panacea against political manipulation (Banful 2011 and Litschig 2012), they impose restrictions on the degree of manipulation by the incumbent. Our results also shed new light on Khemani's (2007) proposal that intergovernmental transfers should be determined by an independent agency as a way of reducing politically motivated distortions.

Future research should analyze how effective the political investment in initially opposing districts actually were. Moreover, comparative analyses of countries that share some but not all features of the Indonesian political-economic system could seek to identify which features are most important in shaping the pattern of intergovernmental fiscal transfers that we observe in Indonesia (and surmise elsewhere).

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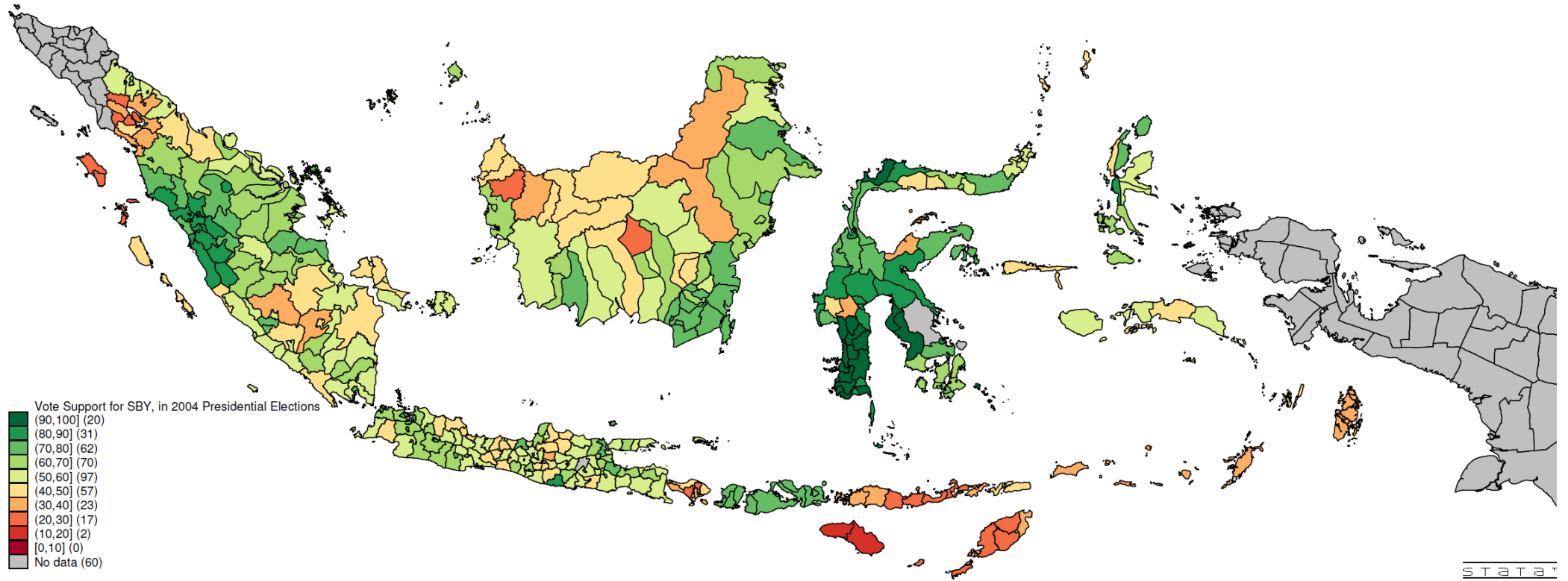
Appendix

Table A1: Descriptive Statistics

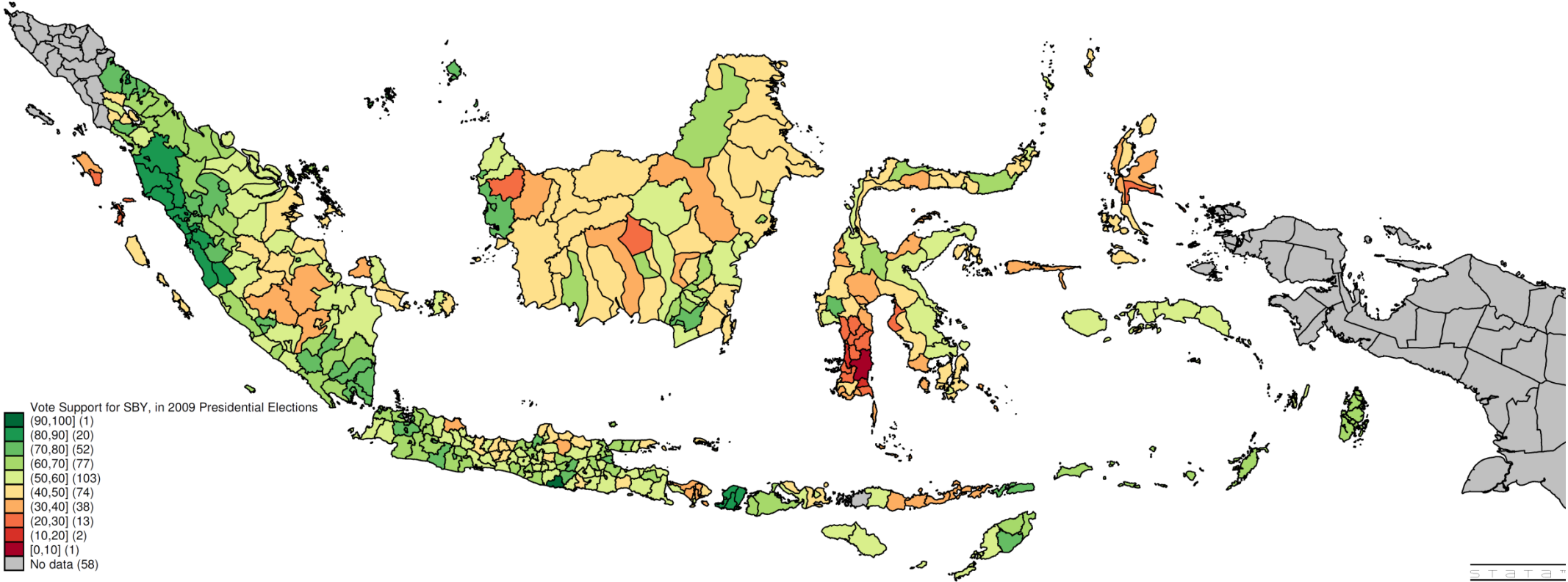| Varl Name	obs.	mean	sd	min	max	label
tp_pc	3655	74628.84	91533.88	0.00	1469630.50	TP per capita in IDR
ln_tp_pc	3644	10.62	1.21	3.59	14.20	Log of TP per capita
lngdppc_exoilconstantlag1	3594	1.67	0.61	-1.02	4.53	Logarithm of GDP per capita (excluding oil/gas sector, in constant prices)
ln_totalrev_pclag1	3490	14.24	0.75	11.53	17.99	Logarithm of Total (non-discretionary) revenue per capita (DAU, DBH, DAK, own source revenue)
HDIlag1	3601	70.63	3.91	54.16	80.24	Human Development Index
ln_popdenslag1	3558	5.43	1.84	0.12	9.71	Logarithm of Population density (population/areasize)
percSBY04	3420	60.42	17.15	18.51	98.43	Vote share for incumbent president (SBY) in 2004 Presidential Elections (in %, district level) 2nd and final round)
percSBY09	2025	56.36	14.96	8.37	94.98	Votes share for incumbent president (SBY) in 2009 Presidential Elections (in %, district level) (1st and final round)
hh_sani	3667	61.47	17.12	12.10	96.75	Household Access to Sanitation (in % of total Household)
hh_water	3667	52.77	20.03	0.96	100.00	Household Access to Safe Water (in % of total household)
asph_road	1210	67.09	26.67	1.61	100.00	Villages within a district with asphalted road (in % of total villages) note: interpolated for 2006/07, 2009/2010
hh_eleclag1	3522	86.31	16.97	10.29	100.00	Household Access to Electricity: Total (in % of total household) note: interp. for 2005
CPI	2839	141.07	48.55	70.58	314.25	Construction Price Index
ln_elegiblevoters	3616	12.46	0.96	9.27	15.04	Amount of eligible voters in 2009 presidential elections
dprd_hhi2	1535	0.19	0.06	0.09	0.47	Political Concentration in the Local Parliament (DPRD) (Herfindahl-Index)
sh_dem	1535	0.06	0.05	0.00	0.24	Share of Presidential Party in Local Parliament
sh_golkar	1535	0.25	0.11	0.00	0.62	Share of Golkar in Local Parliament
sh_pdip	1535	0.18	0.11	0.00	0.65	Share of PDI-P in Local Parliament
dmydirectelection	3667	0.21	0.41	0.00	1.00	Dummy=1 in a year a district has local direct elections
dmyPD	3104	0.01	0.12	0.00	1.00	Dummy=1 if District head nominated by PD (only), zero otherwise
dmyGolkar	3104	0.13	0.34	0.00	1.00	Dummy=1 if District head nominated by GOLKAR (only), zero otherwise
dmyPDI_P	3104	0.08	0.28	0.00	1.00	Dummy=1 if District head nominated by PDI-P (only), zero otherwise
dmykota	3730	0.21	0.41	0.00	1.00	Dummy=1 if district is a City District, zero otherwise
dmycoastline	3730	0.63	0.48	0.00	1.00	Dummy=1 if a district has a direct coastline
dmyHome	3734	0.00	0.05	0.00	1.00	Dummy=1 if a district is the birth district of the incumbent president, zero otherwise
dmyHomeRegion	3734	0.01	0.08	0.00	1.00	Dummy=1 if a district is the direct district neighbor to the birth district of the incumbent president, zero otherwise

Electoral Support for SBY in 2004 and 2009

Figure B1 Presidential Vote Support in 2004, restricted sample

Vote Support for SBY, in 2004 Presidential Elections
- (90,100] (20)
- (80,90] (31)
- (70,80] (62)
- (60,70] (70)
- (50,60] (97)
- (40,50] (57)
- (30,40] (23)
- (20,30] (17)
- (10,20] (2)
- [0,10] (0)
- No data (60)

Source: authors' illustration

Figure B2 Presidential Vote Support in 2009, restricted sample

Vote Support for SBY, in 2009 Presidential Elections
(90,100] (1)
(80,90] (20)
(70,80] (52)
(60,70] (77)
(50,60] (103)
(40,50] (74)
(30,40] (38)
(20,30] (13)
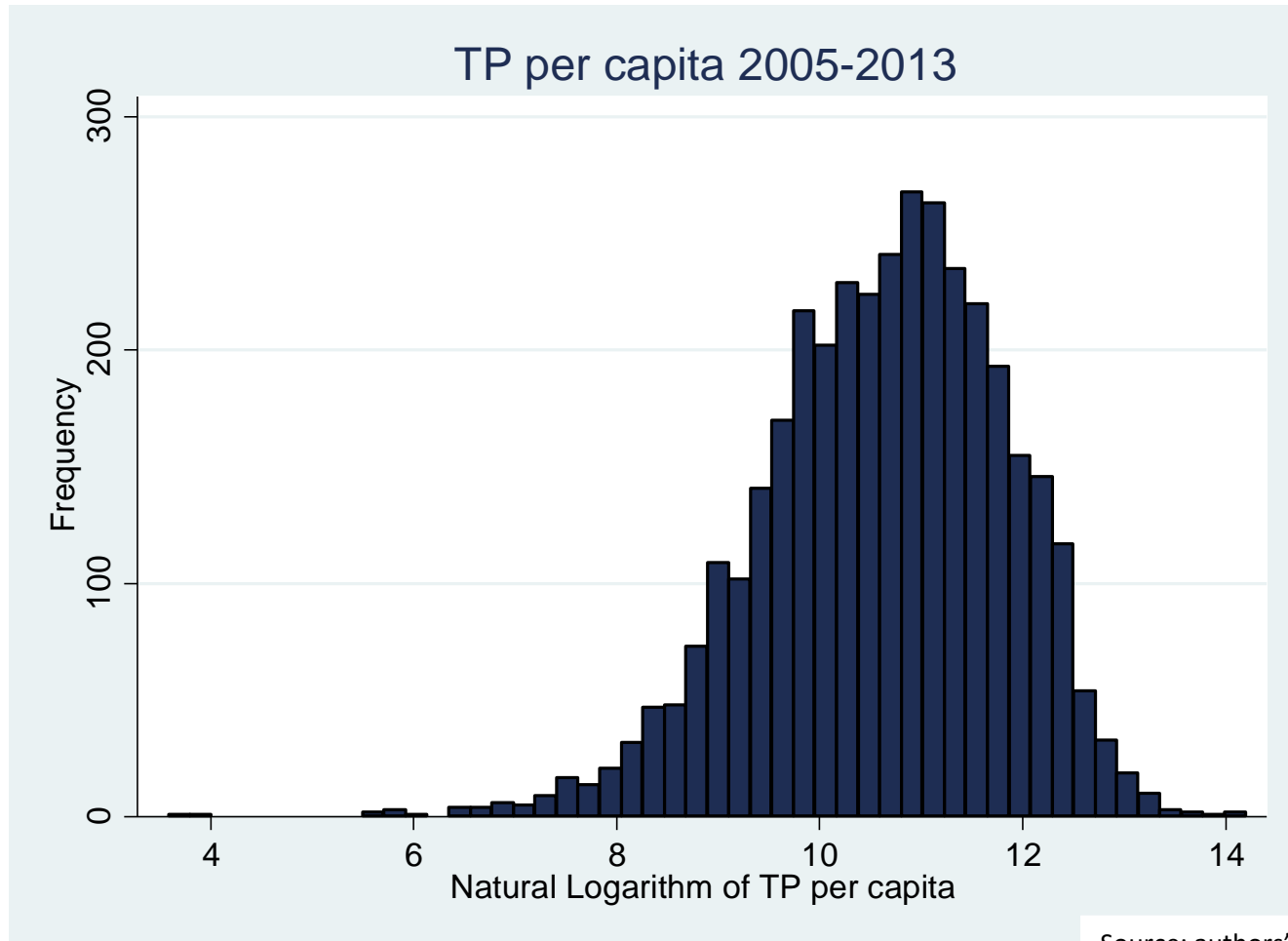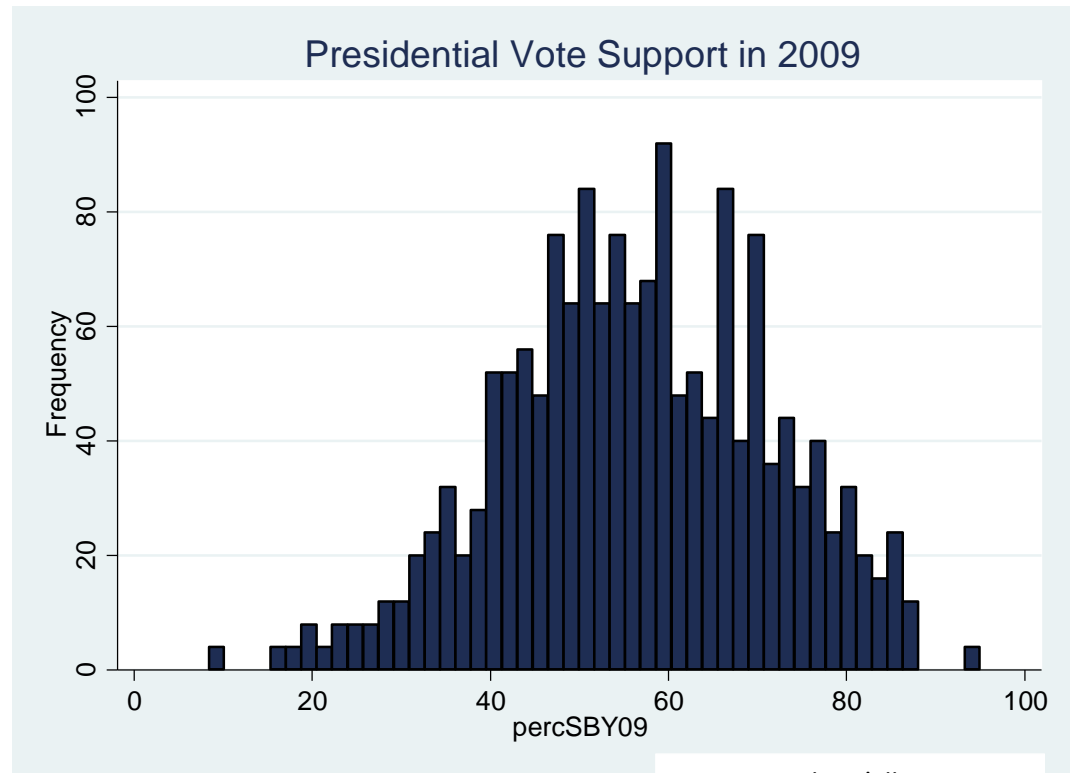(10,20] (2)
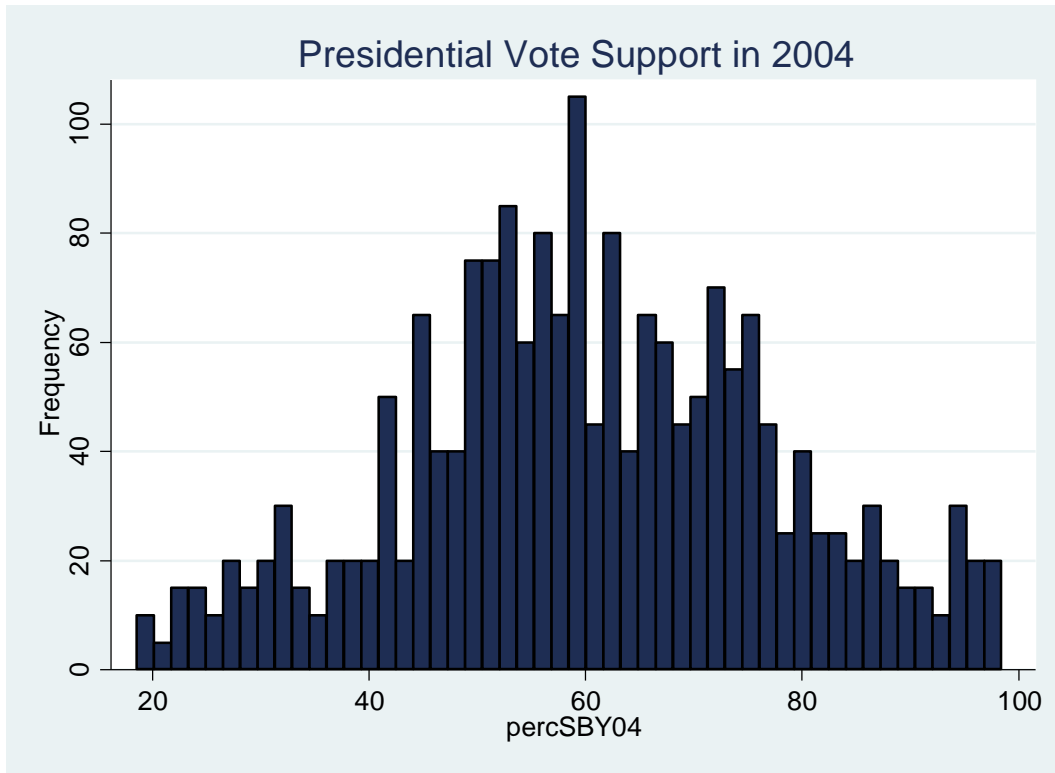[0,10] (1)
No data (58)

Figure B3

Source: authors' illustration

Figure B4

Source: authors' illustration