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Evidence from Decentralized Indonesia**

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Abstract

Lower-level officials often engage in clientelistic relations with the upper-level government. The nature of these relations might be determined by institutional factors such as how the lower-level officials come into their position. This paper specifically highlights the different political incentives that elected versus appointed lower-level officials have for becoming political intermediaries for the upper-level government, and it investigates empirically how these differing incentives bring electoral consequences. Upon exploiting a natural experiment in Indonesia, the study found that the elected village headmen have stronger incentives to support the incumbent mayor than the appointed village headmen do. The results suggest that while civil service reforms might weaken the bureaucratic clientelism, the pre-existing patron-client relations that are deeply embedded in the society are immersed in local political competitions; thus, this practice challenges political consolidation in the young democracy.

JEL-Codes: clientelism, selection mechanism, local elections

Keywords: D72, H77, H83, O17, O18

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1 Introduction

Politicians can gain electoral support through direct exchange of personal favors. One type of political exchanges is *clientelism*; here defined as political exchanges where politicians give personal favours in return for political support or vote (Robinson and Verdier 2013).¹ Albeit mostly inefficient, clientelistic exchange is electorally effective. Therefore, it is hardly surprising that various case studies have widely documented this clientelistic exchange, in particular in developing countries such as Paraguay (Finan and Schechter 2012), Benin (Fujiwara and Wantchekon 2013), Indonesia (Martinez-Bravo 2014), India (Anderson, Francois, and Kotwal 2015) and Brazil (Frey 2019). The 2017 World Bank Report particularly highlighted that in developing countries clientelism partly accounts for bad policy outcomes (World Bank Group 2017).

One reason clientelism is ubiquitous in developing countries is because politicians are generally unable to make credible electoral promises to voters (Keefer 2007; Keefer and Vlaicu 2008). This absence of credibility enables the pre-existing patron-client relations², a social institution that is widely observed in developing countries, to become deeply immersed in the political arena. In a society where electoral promises are not credible and patron-client relations are strong, politicians prefer to rely on intermediaries—patrons who already have long-standing social relations with voters—to gain votes, since this strategy is less costly than directly reaching voters.

Intermediaries are those who gain benefits from mediating the relation between candidates and the voters. The intermediaries who have a closer affinity with voters can give the candidates information about voters and open access to local voters. They mobilize and persuade voters by delivering benefits from the candidate in

1. Following Hicken (2011), what further distinguishes clientelism from other political exchanges such as vote buying is that a clientelistic relation should be dyadic, contingent, hierarchical, and repeated.

2. Here, following Scott (1972), patron-client relations are defined as “a special case of dyadic (two-person) ties involving a largely instrumental friendship in which an individual of higher socioeconomic status (patron) uses his own influence and resources to provide protection or benefits, or both, for a person of lower status (client) who, for his part, reciprocates by offering general support and assistance, including personal services, to the patron”. By this definition, patron-client relations encompass a larger scope than clientelism.

exchange for a vote for the candidate. Intermediaries might be respected community leaders who have a hold on local networks, or they might be hierarchically accountable lower-level officials who govern local communities.

In this paper, I study the behavior of lower-level officials who act as intermediaries for the upper-level government. Becoming an intermediary means providing electoral support for the incumbent upper-level government such as by mobilizing and persuading voters to vote for the incumbent government in exchange for certain benefits. I particularly explore whether the incentives for these lower-level officials differ depending on how they are selected—that is, whether they are elected or appointed—and I show that this difference in incentives, in turn, brings electoral consequences.

Literature studying the different mechanisms of officials' selection emphasizes that elected and appointed officials face different incentives and, thus, behave differently (See for example Besley and Coate 2003; Alesina and Tabellini 2007, 2008; Coate and Knight 2011; Levin and Tadelis 2010; Enikolopov 2014; Vlaicu and Whalley 2016). In general, elected officials are motivated by elections, whereas appointed officials are motivated by career concerns. Therefore, for the elected lower-level officials, the decision to be intermediaries for the upper-level government depends on whether or not this is in their own self-interest; namely whether it will help them get elected. In contrast, the appointed lower-level bureaucrats exchange their political support for some employment benefits; that is, they engage in some forms of bureaucratic clientelism (see Calvo and Ujhelyi 2012). Accordingly, the incentive for the appointed lower-level officials to act as intermediaries decreases when civil service laws prevent incumbent politicians from requiring and receiving political services from bureaucrats (Ujhelyi 2014a, 2014b).

Here, I focus on local governments in Indonesia, which represent an ideal setting for this study for two reasons. First, the decentralized structure of the government allows this study to analyze the political relations between levels of government. Indonesia has five tiers of government, namely the central government, provinces, districts, sub-districts and villages. Following the fall of the authoritarian regime in May 1998, the country immediately adopted decentralization policies in 1999,

devolving most government functions to districts; the reforms have fundamentally redefined political relations between villages and the district. Second, Indonesia has institutional variations at the village level which allow this study to test different behavior between elected and appointed village headmen. In general, villages are classified into two types, that is *desa* villages and *kelurahan* villages. In a *desa* village, a village headman is a civilian who is elected by the village electorate. In a *kelurahan* village, by contrast, a village headman is a civil service employee who is appointed by and accountable to the district mayor.³

Following the introduction of direct mayoral elections in 2005, village headmen of *desa* and *kelurahan* have since had incentives to act as intermediaries for the incumbent district mayor. Village headmen of *desa* are willing to support the incumbent mayor because having close ties with the district is a crucial factor for their own reelection prospects (see Aspinall and Rohman 2017), whereas village headmen of *kelurahan* are willing to offer political support in exchange for employment benefits. Nevertheless, the electoral efforts that can be exerted by the headmen of *kelurahan* are greatly limited by the civil service reforms initiated in 1999. As a result, electoral efforts exerted by village headmen of *desa* are expected to be higher. In turn, the difference in the efforts to mobilize and persuade voters brings electoral consequences, in that the incumbent mayor is more likely to win in *desa* than in *kelurahan* villages.

In order to test the empirical predictions, I employed data from mayoral elections conducted in 2015, 2017 and 2018, in particular mayoral election results from villages. The empirical analyses examined whether or not electoral outcomes in *desa* differ significantly from that in *kelurahan* and whether or not the difference is due to the different electoral efforts between village headmen of *desa* and of *kelurahan* in supporting the incumbent mayor. The baseline strategy is to control as many covariates that crucially explain voting behavior as possible, such that the remaining difference can be attributed to the difference in the village headmen's efforts to mobilize and persuade voters.

The baseline results suggest that an incumbent district mayor is more likely to win

3. Another major factor distinguishing a *desa* from a *kelurahan* is the level of urbanness in that a *desa* is more rural while a *kelurahan* is more urban.

in a *desa* than in a *kelurahan* and, furthermore, the likelihood decreases as political competition in the district intensifies. In particular, the OLS estimates show that an incumbent mayor, on average, is 0.0592 (or 5.92 percentage points) more likely to win in a *desa* than in a *kelurahan* in a typical district with only two candidates running in the mayoral election. The likelihood of winning is estimated to decrease by 0.0542 (or 5.42 percentage points) as the number of contenders increase by one. Following the conceptual framework, the results should imply that elected village headmen have stronger incentive to influence voters than do appointed village headmen.

A major concern with the baseline results is that different voting behavior between *desa* and *kelurahan* could be driven by other heterogeneities that are not adequately captured by the control variables. In this case, the effect is confounded and, thus, cannot be plausibly interpreted as the difference in efforts exerted by village headmen. One method to reduce the bias is to apply Propensity Score Matching (PSM). This method generates a sample in which the treated and the control group are comparable in all observed covariates. However, PSM is less likely applicable to this study since *desa* and *kelurahan* are systematically different. Consequently, the propensity scores generated by a logistic regression are not reasonable, since the regression suffers from perfect separation problems. In this regard, I simply adapted the general idea of PSM in order to generate a relatively comparable sample. I selected *desa* and *kelurahan* which are spatially close to one another, assuming that the spatial proximity causes these villages to share similar characteristics and, thus, voting attitudes. This presumably minimizes the confounding factors. The empirical results using the spatially selected villages confirms the baseline results. I also tested for other alternative explanations, namely urban versus rural voting behavior and targeted transfer, and did not find evidence for these alternative explanations. In addition, I performed a sensitivity analysis to show the stability of the empirical findings. The sensitivity analysis shows that controlling for an additional set of control variables does not affect the results of the paper.

This study is related to a number of different strands of literature. First, this paper enriches the literature on clientelism, such as Keefer (2007), Finan and Schechter

(2012), Fujiwara and Wantchekon (2013), Anderson, Francois, and Kotwal (2015) and Frey (2019). Specifically, the paper enriches the literature by exploring how institutional arrangement might determine the nature of clientelistic relations in which officials engage. It highlights, in particular, the different incentives between elected versus appointed lower-level officials for becoming intermediaries for the upper-level government, and it provides evidence on how this might bring electoral consequences.

Second, this study relates to a larger body of literature concerning the importance of institutions and institutional change to economic and societal outcomes (See for example North 1990; North and Weingast 1989; Acemoglu, Johnson, and Robinson 2001; Acemoglu and Robinson 2008). In particular, the paper contributes to the literature by extending the work of Martinez-Bravo (2014), who showed that the appointed village headmen had stronger incentives to influence voters during regimes in transition in Indonesia. This paper exploits the post-transition political context by employing the current data set on mayoral elections. The results of this paper, which run counter to the findings by Martinez-Bravo (2014), suggests that as transition advances, a new political scenario emerges. This has redefined incentives for each political agent, and, thus, different behaviors of local officials prevail.

Third, this study adds to empirical literature that contrasts the elected versus the appointed officials. Empirical literature on this issue mainly discusses the policy implications of the two selection mechanisms and, in particular, exploits variations of institutional arrangements in the U.S., such as Levin and Tadelis (2010), Coate and Knight (2011), Enikolopov (2014) and Vlaicu and Whalley (2016). In this regards, this study enriches the existing literature by providing evidence using a data set from local governments in Indonesia that different selection mechanism of lower-level officials bring electoral consequences.

Fourth, this study relates to the literature on civil service reforms. Compared to the extensive literature on institutions and institutional designs, the literature on civil service rules and reforms is relatively limited; this includes, to name a few studies, Folke, Hirano, and Snyder (2011) and Ujhelyi (2014a, 2014b). Based on

the empirical evidence of this paper, the intuitive interpretation is that civil service reforms that weaken bureaucratic clientelism decreases incumbents' probability of reelection.

Finally, the paper enriches the literature on decentralization and local political dynamics, such as Bardhan and Mookherjee (2006), Araujo et al. (2008) and Alatas et al. (2019). This study adds to the literature by analyzing how decentralizing powers creates opportunities for local political actors to benefit from political competitions at the local level, in particular by exploiting the pre-existing patron-client networks.

2 Institutional Context and the Conceptual Framework

2.1 Villages Governance

Villages were autonomous and self-administrated during the Dutch colonial rule. Therefore, the forms of village governance considerably varied in how they conformed to the local customs. When Indonesia gained independence in 1945, the young republic maintained the autonomy of the villages until Suharto took power in 1965. The new regime deemed that heterogeneity in village administrations was not conducive for economic development and national stability since it prevented the central government from having a full control over villages. In 1979, Suharto passed a new law⁴ in order to standardize the villages. This profoundly changed village governance.

According to the law, villages were the lowest administrative unit directly under sub-districts (*kecamatan*). Villages were standardized into two forms, namely *desa* and *kelurahan*. The classification was mainly conducted according to a set of indicators distinguishing urban and rural society, which included population size, area size, distance to the capital of the district, public utilities, economic activities and social characteristic of the society. Villages displaying rural characteristic with a strong dependence on an agricultural economy were formed as *desa*. Those in which the economy depended more on non-agricultural activities were formed

4. Law No. 5 of 1979 on village governance.

as *kelurahan*. In addition, *kelurahan* could also be formed in the capital city, the capitals of provinces, the capitals of districts and the capitals of sub-districts.

In order to strengthen political control over villages, the state decreed a new regulation in 1980⁵, pronouncing that all village headmen of *kelurahan* were made as a civil service employee.⁶ Ideally, in order to gain full control over villages, village headmen of *desa* should also have been made civil service employees as well. However, such an idea required massive financing and, thus, was never implemented (Kato 1989). This arrangement remains in operation to date, marking a fundamental difference in the selection mechanism of village headmen between *desa* and *kelurahan*.

Village governance has further changed following the fall of the Suharto's regime in 1998 and the adoption of decentralization policies⁷ in 1999. In the new decentralized system, *desa* villages have reverted to being autonomous, having rights to manage their own affairs and have since been no longer under the direct authority of the sub-district.⁸ Village headman elections have become more competitive, since the state control on village headmen elections has been lifted. Although elected by villagers, village headmen of *desa* are still required to submit annual governance report to the district mayor. However, mayors generally could not discharge village headmen of *desa* unless village headmen of *desa* commit a serious offense.⁹ Appendix Table 3.A.1 summarizes changes in village governance.

5. Government regulation No. 55 of 1980 on appointment of village headmen and other village officials of *kelurahan* as civil service employee.

6. The arrangement to appoint a civil service employee as the village headman of a *kelurahan* presumably was a strategy to boost *Golkar*'s vote in the upcoming 1982 election since *Golkar* was less successful in urban areas in the 1971 and 1977 election (Kato 1989).

7. Law 22 and 25 of 1999, which were amended by Law 32 and 33 of 2004, which were further amended by Law 23 of 2014.

8. The new law on *desa* governance, Law No. 6 of 2014, not only removes the hierarchical relation between villages and the sub-district but also allows *desa* governments to operate more effectively by providing a new financial resource from the central government's budget. In addition, the new law acknowledges cultural diversity by allowing *desa* villages to adopt the local customs, such as addressing *desa* institutions by any traditional name. In Province Bali, for instance, *desa* are called as *banjar*.

9. Only if the village headmen is indicted on felony, corruption, terrorism or separatism charges, mayor can discharge a village headman without a proposal from the legislative body of the village. Otherwise, the legislative body of the village should propose the dismissal of the village headmen.

In contrast, governance in *kelurahan* villages has not substantially changed. *Kelurahan* villages have remained administrative units below the sub-district and are hierarchically accountable to the district. However, now that decentralization policies have devolved most of government powers to the district, district mayors have direct authoritative control over *kelurahan*. In particular, a mayor has an extensive authority to appoint or to dismiss village headmen in *kelurahan*.

2.2 Districts

Districts are the third tier of government in Indonesia. In general, districts are categorized into two types, namely *kabupaten* (regency) and *kota* (municipality). The categorization was initially based on economic structure and demography. A *kabupaten* is generally larger in size, more agricultural and rural than a *kota*. The categorization is less relevant now, since several *kabupaten* exhibit urban characteristics.

Following the implementation of decentralization policies, districts have become autonomous regions and are no longer accountable to the province. Districts have an extensive authority, conducting most government functions except for international and foreign policy, national defense and security, justice, monetary and national fiscal policy and religious affairs.

Decentralization reforms have also led to a proliferation of new local governments. In 1999, there were 26 provinces and 292 districts; in 2018, the number increased to 34 provinces and 514 districts. Among the 514 districts, only 508 are autonomous, since six districts located in Province DKI Jakarta are non-autonomous administrative municipalities.

Starting in 2005, district mayors have been directly elected by the district electorate, and these elections follow a first-past-the-post system. In order to contest a mayoral election, a candidate must be accompanied by a running mate, that is a candidate for vice mayor. The pair may run with or without a nomination from a political party or a coalition of parties. The winner serves a five-year term, and the term limit for the district office is two terms (each of five-years). Each District Election Commission (*Komisi Pemilihan Umum Daerah*, KPUD) organizes

the mayoral elections independently.

To date, three regional election waves have taken place, the first was conducted between 2005 and 2009, the second between 2010 and 2014 and the third in 2015, 2017 and 2018. In the first two waves, each regional election was organized at different times. In 2015 the government introduced laws on simultaneous regional elections (*Pilkada Serentak*), pronouncing that local elections must be conducted on the day set by the National Election Commission (*Komisi Pemilihan Umum*, KPU). Therefore, elections during the third wave of local elections were conducted on three specific dates, namely: on 9 December 2015, 15 February 2017 and 20 June 2018.

2.3 Relation between Villages and the District

During the Suharto's regime, village headmen of both *desa* and *kelurahan* exhibited similar vertical accountability, despite having different selection mechanisms. Village headmen of *kelurahan* were loyal to the district, the representative of the state, for two reasons. First, the appointive nature of their position made them vulnerable to being replaced, and, second, as civil service employees, they had to adhere to the principle of singular-loyalty, which obliged all civil employees to support the regime's party, *Golkar*. For village headmen of *desa*, although their position was elective, elections were tightly controlled by the state. Candidates underwent a thorough screening, ensuring that only those who were loyal would win. The district and other higher state officials monitored them closely, evaluating their ability to co-opt villagers, maintain their village's stability, deliver government programs and bring electoral victories to *Golkar* (Aspinall and Rohman 2017). Therefore, similar to their counterparts in *kelurahan*, the village headmen of *desa* also demonstrated a strong loyalty to the district.

Devolution of power to districts and, in particular, mayoral elections have fundamentally affected villages-district relations by creating opportunities for village headmen to capitalize upon political competitions in the district (See Antlöv, Wetterberg, and Dharmawan 2016). On the one hand, candidates running for the district's office need access to villagers' votes. As directly building communications with voters in each village are costly, candidates might simply rely on village

headmen to gain villagers' votes (see Keefer and Vlaicu 2008). Village headmen are ideal vote brokers because not only do they interact socially with villagers, but they usually also have patron-client relations with the villagers. On another hand, village headmen are willing to mobilize and persuade villagers to support a candidate in a mayoral election in exchange for certain benefits.

Village headmen of *desa* are particularly willing to support the incumbent mayor because having ties with the district is important for their own electoral success. During a village headman election, villagers particularly assess the relation between each candidate¹⁰ and the district. A candidate who has a good and close relation with the district mayor is preferable, since this candidate will be likely to extract more development projects from the district (See Aspinall and Rohman 2017). Thus, the incumbent village headmen and other aspiring village elites will build alliances with the district government, expecting that these alliances will help them extract development transfers from the district.

For village headmen of *kelurahan*, bureaucratic accountability remains the driving factor for their support of the incumbent mayor. What differs is that under the decentralized system, mayors have a wider authority over the district's civil service employees. The authority includes appointments, promotions, transfers, dismissals and also formulation of pay levels, pensions and other benefits. The new institutional setting brings about new opportunities, namely that, first, the village headmen of *kelurahan* might offer political support in exchange for career advancements and, second, that mayors might abuse their authority by turning village heads of *kelurahan*, and civil service employees at large, into political machinery during mayoral elections. These factors have created incentives for the village head of *kelurahan* to show political allegiance to the mayor.

Accordingly, since both elected and appointed village headmen have the potential to gain certain benefits from the elected mayor, they will evaluate political competitions in the district. For instance, the more candidates that run in the mayoral election, the more intense the political competition, and the higher prob-

10. In general, any villager who meets certain requirements can run in the village head elections. The requirements include that the candidate must be a citizen of Indonesia, must be at least 25 years old, and must have been living in the village for at least one year.

ability that village headmen will shift their political support from one candidate to another candidate. In addition to that, village headmen also evaluate each candidate's probability of winning. They might not support the incumbent mayor if they expect that the incumbent will lose the mayoral election.

The practice of clientelism facilitated by the new institutional setting is detrimental for consolidation toward a well-functioning democracy. Therefore, it is *de jure* prohibited. Laws on local elections¹¹, for example, explicitly forbid candidates from involving village headmen in any electoral activities. While these laws do not *de facto* efface the practice, they should reduce the political incentive for the village headmen of both *desa* and *kelurahan* to explicitly show political allegiance.

The incentive for the village headmen of *kelurahan* is further reduced by the civil service reforms¹² that promote the neutrality of civil service employees. In particular, civil service employees are not allowed to be members of any political party or participate in any political campaign. The reforms also provide a wider protection for civil service employees from being politically exploited by enforcing that appointments, promotions, transfers and dismissals of civil service employees must be made on merit, and this is closely monitored by a national independent commission, the Civil Service Commission (*Komisi Aparatur Sipil Negara*, KASN).¹³ Therefore, the civil service reforms reduce the stakes that the appointed village headmen have in the mayoral elections.

What might further discourage village headmen of *kelurahan* is the nature of their employment. For most village headmen of *kelurahan*, their job as a civil service employee is their main and only permanent occupation. Therefore, village headmen of *kelurahan* will be less likely to put their job at stake by explicitly supporting the incumbent mayor's reelection efforts. This is in contrast to village headmen of

11. Law No. 10 of 2016 on local elections.

12. Civil service reforms were immediately initiated following the collapse of the authoritarian regime. Government Regulation No. 5 of 1999 was passed, pronouncing that civil service employee must remain neutral and are not allowed to be a member of any political party; thus, marked the end of the singular-loyalty principle. The regulation was further strengthened by Law No. 43 of 1999, Government Regulation No. 53 of 2010 and Law No. 5/2014.

13. An anecdotal example: In 2018 KASN required the elected governor of Province DKI Jakarta to return the positions of several officials, who had been transferred immediately following the governor election. These transfers were deemed politically driven.

desa. The village headman office in *desa* is a political position with term limits, namely a maximum three terms of six years. Therefore, village headmen of *desa* normally have other main occupations, mostly as farmers or traders.

Finally, the selection mechanism also affects the effectiveness of village headmen as vote brokers for the incumbent mayor. Village headmen of *desa* are generally more effective vote brokers since they have stronger social ties with other fellow-villagers. The reason is that in order to run in a village headman election, candidates must be residents of the village. This assures that the village headman has already interacted socially with other fellow villagers, even before he or she holds the village office. Most of the time, village headmen of *desa* already have long-standing patron-client relations with the villagers. These pre-existing social relations help them to mobilize and persuade villagers during elections. As pointed out by Aspinall and Rohman (2017, p.49), “Most village heads [i.e. in *desa*] are vote brokers par excellence and, all over Indonesia, political candidates try hard to attract their support”. In contrast, village headmen of *kelurahan* are transferred civil service officials who can be posted to any *kelurahan* in the district for a specific period of time. Since they stay in a *kelurahan* only for a limited period of time, the social relation between a village headman of *kelurahan* and the villagers is less likely be as strong as it is in *desa*.

2.4 Conceptual Framework and the Empirical Prediction

Building on the institutional context, the selection mechanism of village headmen determines the incentive for the village headmen to be intermediaries for the incumbent mayor and the effectiveness of their efforts to persuade the villagers during mayoral elections. The village headmen of *desa* are willing to support the incumbent mayor because political ties with the district is a crucial factor for their own reelection prospects. In contrast, village headmen of *kelurahan* are willing to offer political support in exchange for employment benefits; however, civil service rules limit the political efforts that can be exerted by the village headmen of *kelurahan*. Accordingly, efforts exerted by village headmen of *desa* are expected to be higher than the efforts by village headmen of *kelurahan*. In addition, the selection mechanism of village headmen affects how effective the village headmen are in

their role as intermediaries for the incumbent mayor. In particular, elected village headmen are more effective vote brokers, since they have stronger patron-client relations with the villagers.

As a result, the difference in the efforts that village headmen of *desa* and of *kelurahan* make to mobilize and persuade voters between village headmen of *desa* and of *kelurahan* should lead to differences in the electoral outcomes between *desa* and *kelurahan*; that is, the incumbent mayor should be more likely to win in *desa* than in *kelurahan*.

Figure 1 loosely illustrates the nature of the relation between the district mayor and village headmen.

3 Empirical Strategy

3.1 Estimation Strategy

The empirical analysis attempts to demonstrate that mayoral election results in *desa* differ significantly from that in *kelurahan* and that the difference is attributed to the difference in the efforts exerted by village headmen of *desa* and of *kelurahan*. Since a direct measure of efforts is not available, following Martinez-Bravo (2014), I conducted a within-district comparison of mayoral election results in *desa* and *kelurahan* after controlling for a wide array of variables that explains voting behavior. Martinez-Bravo (2014) argues that by controlling for a wide array of variables that crucially explain voting behavior, the difference in efforts exerted by village headmen to influence and mobilize voters will account for any remaining difference in the mayoral election results.

The baseline specification for the empirical model is:

$$\Pr(inc_{vd} = 1 | X_{vd}) = \alpha + \beta d_{vd} + \delta_d + X'_{vd} \theta + \epsilon_{vd} , \quad (1)$$

in which inc_{vd} denotes a dummy variable indicating the incumbent mayor performance in the mayoral election; this variable takes the value 1 if the mayor incumbent won in village v that is located in district d , and it takes 0 if the incum-

bent mayor lost. d_{vd} denotes a dummy variable indicating the village type, which takes the value 1 if village v that is located in district d is a *desa*, and it takes 0 if it is a *kelurahan*. δ_d denotes the district fixed effects. The inclusion of district fixed effects, δ_d , in the specified model is very crucial, since the empirical investigation compares mayoral election results in *desa* and *kelurahan* within a district, not across districts. Finally, X'_{vd} denotes a wide array of control variables that crucially explain voting behavior. The control variables include electoral, demographic, geographical, and public facilities indicators. Table 1 details the control variables.

The coefficient of interest, β , is expected to be positive. In order to interpret β as the difference in the electoral efforts exerted by village headmen of *desa* and of *kelurahan*, the possibility of endogeneity problem should be ruled out. Including a wide array of covariates in the estimations should already reduce the possibility of endogeneity problem caused by omitted variables. Nevertheless, I discuss how I deal with this concern further in Section 4.2.

The main econometric approach to estimate the specified model is the Linear Probability Model (LPM). The LPM might seem inadequate since the dependent variable is a binary variable. However, it is not uncommon for LPM to be used in such a model, since it provides flexibility and less complicated interpretation, particularly when the specification includes interaction terms (See e.g. Nunn and Qian 2014; Apolte and Gerling 2018), which I introduced in the estimations as the empirical analysis advanced. Nevertheless, I also verified the results of the LPM by estimating the Probit Model.

3.2 Data

I mainly employed two data sets, namely mayoral election data set and a village characteristics data set. The mayoral election data is from the National Election Commission of Indonesia (*Komisi Pemilihan Umum*, KPU). I collected mayoral election data from the third wave of regional elections, specifically, the election results in each village of all mayoral elections conducted in 2015, 2017 and 2018. I only employed data from this wave, since only in this wave was the electoral data

relatively complete and systematically available.¹⁴

The data source for village characteristics is the Censuses of Villages (*Potensi Desa*, PODES) from Statistics Indonesia (*Badan Pusat Statistik*, BPS). Censuses of villages have been conducted since 1980 every three to four years by BPS.¹⁵ The Census data is collected by interviewing village headmen and village officials nationwide. I mainly used the 2014 PODES, which covered 82,190 villages in 511¹⁶ districts. In addition, I extracted population-related data from the 2011¹⁷ PODES since it was not available in the 2014 PODES.

3.3 Descriptive Statistics

The empirical analysis attempts to demonstrate village headmen’s support for the incumbent district head. Accordingly, the estimations consider only villages located in districts in which the incumbent district mayor ran for the second term. During the third wave of regional elections, incumbent district mayors ran in 220 districts out of 508 autonomous districts (Figure 2 depicts the geographical distribution of the districts). I further excluded three districts¹⁸ since they had only a single candidate in the election. In addition, in order to ensure that results are not driven by too few observations, I dropped districts in which the number of *desa* or the number of *kelurahan* is fewer than five. As a result, the final data set contains 134 districts covering 25,163 villages, 23,181 (92.12%) of which are *desa* and 1,982 (7.88%) are *kelurahan*. Table 2 provides a general summary of the observations.

14. Mayoral elections are organized independently by District Election Commission (*Komisi Pemilihan Umum Daerah*, KPUD) in the respective districts. Therefore, data on those elections is generally held by each KPUD archives. Only after the introduction of simultaneous regional elections (*Pilkada Serentak*) in 2015 did the KPU start pooling all regional election results and making them available online via <https://infopemilu.kpu.go.id/>.

15. To date there are already 13 PODES waves, namely the 1980, the 1983, the 1986, the 1990, the 1993, the 1996, the 2000, the 2003, the 2005, the 2008, the 2001, the 2014 and the 2018 PODES.

16. Three new districts established in 2014, namely Kabupaten Buton Selatan (Province Sulawesi Tenggara), Kabupaten Buton Tengah (Province Sulawesi Tenggara) and Kabupaten Muna Barat (Province Sulawesi Tenggara), were not covered in the survey.

17. The 2011 PODES covered 77,961 villages. Therefore, the inclusion of population-related data in the estimation will slightly reduce the number of observations.

18. Kabupaten Deli Serdang (Province Sumatera Utara), Kota Tebing Tinggi (Province Sumatera Utara) and Kabupaten Buton (Province Sulawesi Tenggara).

Table 3.A.4 details all districts included in the sample.

Looking at district statistics, the number of villages per district is 188 on average, the number of *desa* per district is 173 on average and the number of *kelurahan* per district is 15 on average. The average vote share of the incumbent mayor is 44.05%. The average number of candidates is 3. Table 3 offers the district statistics.

Table 4 displays the descriptive statistics of villages. It not only provides statistics for the whole sample, but it also highlights the difference between *desa* and *kelurahan*. The first part of Table 4 shows electoral indicators. On average, an incumbent mayor is more likely to win in villages than a non-incumbent on average. When comparing between a *desa* and a *kelurahan*, an incumbent mayor is, on average, more likely to win in a *desa* than a *kelurahan*. Furthermore, on average, a *desa* generally has fewer eligible voters than a *kelurahan*. The average number of eligible voter in a *desa* and *kelurahan* are 2,390 and 3,758, respectively. Accordingly, a *desa* has, on average, fewer polling stations than a *kelurahan*, namely 6 station in a *desa* and 9 stations in a *kelurahan*.

In terms of geographical conditions, a *desa* on average is more mountainous and more remote than a *kelurahan*. In particular, a *desa* is on average located 8.70 kilometers away from the sub-district office and 60.58 kilometers away from the capital of the district, whereas a *kelurahan* is on average 2.89 kilometers away from the sub-district office and 37.87 kilometers away from the capital of the district.

With regard to population, the average village population is 3,378 people. When compared to a *kelurahan*, a *desa* is generally less populated. The average population of a *desa* is 3,212 people while the average population of *kelurahan* is 5,273 people. As expected, a *desa* is more agricultural than a *kelurahan* since, on average, it has more households in which the main occupation is in agriculture. A *desa* is also, on average, less ethnically fragmented than *kelurahan*.

The descriptive statistics also provide information about public goods provisions in villages. On average, a *desa* generally has fewer public facilities than a *kelurahan*. In particular, the number of schools, health facilities and religious facilities are lower in a *desa* than in a *kelurahan*. Table 5 presents correlations between control

variables.

As a preliminary analysis to check whether or not an incumbent mayor is more likely to win in a *desa* than in a *kelurahan*, I conducted a Two Sample t test. The result rejects the null hypothesis that the difference in mean is equal to zero ($t = -2.7002$, $p = 0.007$). This implies that electoral outcomes in a *desa* are significantly different from electoral outcomes in a *kelurahan*.

4 Estimation Results

4.1 Baseline Results

Table 6 reports the baseline results of LPM and Probit. Column (1) shows the most generous estimate, since controls and district fixed effects are not included. Starting at column (3), the estimations also control for additional variables, namely geographical indicators are added in column (3), demographic indicators in column (4), electoral indicators in column (5) and public facilities indicators in column (6).

As anticipated, the sign of the *desa* dummy is positive in all columns. Results in column (1) and (2) show a statistically significant difference in the electoral outcomes between a *desa* and a *kelurahan*. Nevertheless, when additional controls are gradually introduced, as reported in columns (3) to (6), the *desa* dummy is no longer significant. The results indicate that the significant difference in electoral outcomes between a *desa* and a *kelurahan* in column (1) and (2) might not be due to differences in village headmen electoral efforts but due to other controls that have not been included.

The results presented in Table 6 generally do not provide evidence that an incumbent mayor is more likely to win in a *desa* than in a *kelurahan*. However, the specification presumably leaves out important variables. As argued in Section 2.3, the political competitions in the district might partly explain political behavior of village headmen. In order to account for this, the estimation should include indicators that measure political competition in the district. For this reason, I used the number of candidates running for the mayoral election as an indicator of

political competitions in the district, and I interacted this indicator with the *desa* dummy. For a more practical interpretation, I centered the number of candidates at a value of 2 since a competitive election requires at least two competing candidates. Note also that the district fixed effects control for the main effect of the number of candidates. By including the interacted term, the estimations compare differences in mayoral election results from villages between a district where election is highly competitive relative to a district where election is less competitive. The results are presented in Table 7.

The first part of Table 7 shows not only that the LPM estimates of the *desa* dummy become significant but also that the magnitude increases. Most importantly, the sign and the significance are not sensitive to the inclusion of district fixed effects and additional control variables, as displayed in columns (2) to (5). In addition, the interaction term is significant. The most conservative estimation in column (5) shows that an incumbent mayor of a district where only two candidates are running in the mayoral election is, on average, 0.0592 (or 5.92 percentage points) more likely to win in a *desa* than in a *kelurahan*. The likelihood of winning is estimated to decrease by 0.0542 (or 5.42 percentage points) as the number of candidates increases by 1.¹⁹ Probit estimates displayed in the second part of the table are generally consistent with the LPM estimates.²⁰

Another important variable that might explain the behavior of village headmen is the expected performance of the incumbent mayor. In districts where the incumbent mayor is the strongest candidate, village headmen unequivocally direct their support to the incumbent mayor. The elected village headmen, in particular, are likely to put more effort into this, since they are aiming for development programs from the elected mayor. However, this is not necessarily the case when the incumbent mayor is weak or the election is close. When the incumbent mayor is likely to lose or when the election is close, village headmen might sift their support to other candidates. In order to investigate this argument, I should include a measure of the incumbent mayor's expected probability of winning in the esti-

19. For example, when there are three candidates in the mayoral election, the probability of winning in *desa* becomes $0.7830 + (0.0592 \times 1) - (0.0542 \times (3 - 2)) = 0.7880$, whereas in *kelurahan* it becomes $0.7830 + (0.0592 \times 0) - (0.0542 \times (3 - 2)) = 0.7288$

20. The outputs of Probit estimation with interaction are more challenging to interpret.

mation; however, a such measure is rarely available. Therefore, I exploited the ex post actual vote share of the incumbent mayor, assuming that the actual vote share indicates the incumbent mayor's expected probability of winning. I split the data set according to the actual performance of the incumbent mayor and examined whether the electoral results from villages are heterogeneous across different sub-samples. The specification included district fixed effects, all control variables and the interaction between the *desa* dummy with the number of candidates. The results are presented in Table 8.²¹

Table 8 column (1) reports the results when the whole sample is included, column (2) when the sample includes only districts in which the incumbent mayor won, column (3) when the sample includes only districts in which the incumbent mayor won by a landslide victory, and column (4) when the sample includes only districts in which the incumbent mayor won by a marginal victory. An incumbent mayor won by a landslide if he or she won by more than 10 percentage points. Accordingly, an incumbent mayor won marginally if he or she won by less than 10 percentage points. The table shows that when the sample considers only districts in which the incumbent mayor won and, in particular, by a landslide, the main effect of the *desa* dummy is not only significant, but its magnitude also increases. In addition, the interaction term is also significant. The effect disappears when the estimations include only districts where the election is close or where the incumbent mayor lost, as reported in columns (4) and (5).

The baseline results presented in this section generally show that an incumbent mayor is more likely to win in a *desa* than in a *kelurahan* and, however, this likelihood decreases as the election becomes more competitive. The results are generated after controlling for a wide array of covariates explaining differences in voting behavior between *desa* and *kelurahan*. Following the core argument of the paper, this should imply that the higher likelihood of the incumbent mayor to win in a *desa* is due to the higher efforts exerted by the village headman of a *desa* to mobilize and persuade voters. Nevertheless, this interpretation is not plausible if

21. Another strategy is to introduce another interaction term, namely between the *desa* dummy and the incumbent mayor's actual vote share. The results of this strategy, which are reported in Appendix Table 3.A.2, are consistent with the results in 7.

there are other sources of heterogeneity across villages that were not considered. The following section discusses how I deal with this concern.

4.2 Robustness and Sensitivity Analysis

In this section, I present robustness checks and a sensitivity analysis for the empirical results presented in the previous section. First, I investigate whether there is potential endogeneity that will confound the interpretation of the results. Second, I investigate other alternative explanations for the different voting behavior between urban and rural society and the targeted transfers. Additionally, I also conducted a regression that includes sub-district fixed effects.

4.2.1 Potential Unobserved Heterogeneity

Ideally, all determinants of voting behavior should be included in the estimation so that the remaining effect can be plausibly attributed to the difference in electoral efforts exerted by village headmen. However, a such strategy is not always feasible, for example because the data is not available or the determinants are simply not measurable. In this respect, in order to lessen the confounding factors, one could apply the Propensity Score Matching (PSM) method, first introduced by Rosenbaum and Rubin (1983). The general idea of PSM is to generate a sample in which the treated and the control group are comparable in all observed covariates. The treatment effect is then evaluated by comparing the treated and the control unit, which have the same probability of being treated given a set of observable covariates. In my context, the treatment is being classified as a *desa*, or to be precise, having a village headman who is directly elected by the villagers. The method thus compares villages which are *de facto* differently classified, either as a *desa* or as a *kelurahan*, but have identical observable characteristics and, thus, should have the same probability of being classified as *desa* (or as *kelurahan* accordingly).

The problem with applying PSM in this study is that *desa* and *kelurahan* are already systematically different. The criteria for village classification have already separated *desa* from *kelurahan* (Section 2.1). Conforming this, the logistic regressions that generate the propensity scores indicate a perfect separation problem,

which causes the likelihood maximization algorithm to fail to converge.²² In this respect, the resulted propensity scores are not reliable.

As the PSM is technically not applicable, I simply adapt its general idea of comparing villages having similar characteristics. In particular, I selected *desa* and *kelurahan* which are spatially close to one another or, to be precise, *desa* and *kelurahan* which share the same borders. The spatial proximity presumably causes these villages to share relatively similar unobserved characteristics, such as ethnicity, customs and traditions, and, thus, have similar voting attitudes. By selecting the villages spatially to control for unobserved heterogeneity and by including a wide array of covariates determining voting behavior to control for observed heterogeneity, the regression results are expected to be less confounded.

I spatially selected the villages by first locating each *kelurahan* and then identifying its neighboring villages. The identification results in clusters of villages. In many cases, a cluster of villages consists of one or more *kelurahan* in the center of the clusters and several neighboring *desa*. As an example, Figure 3 illustrates the village selection in District Kabupaten Sumba Timur, Province Nusa Tenggara Timur. This district has 156 villages consisting of 140 *desa* and 16 *kelurahan*. After locating each *kelurahan* and its neighboring villages, I found 3 clusters of villages consisting of 15 *desa* and 16 *kelurahan*.

The village selection leaves the sample to include only 5,606 villages, 3,627 (64.70%) of which are *desa* and 1,979 (35.30%) of which are *kelurahan*. Compared to the initial sample in which *desa* greatly outnumber *kelurahan* (92.12% of the observations is *desa*), the spatial selection reduces the imbalance between the number of *desa* and *kelurahan* and, thus, helps to alleviate the concern that the results are driven by too many *desa*. The descriptive statistics for this selected samples are reported in Table 9.

Table 10 gives the LPM and Probit estimates for the selected villages. Using a

22. I conducted regressions with the *desa* dummy as the outcome variable. The OLS output shows that most of the covariates that crucially explain voting behavior also strongly distinguish a *desa* from a *kelurahan*. In addition, the Probit estimations on different samples, namely the whole sample, on each province or on each district, indicate a perfect separation problem, in which for some covariates the fitted probability is numerically 0 or 1. The results of OLS and Probit for the whole sample are reported in Appendix Table 3.A.3.

similar strategy as in the baseline estimations, the fixed effects and the control variables are gradually introduced so the stability of the estimates can be seen. The results are consistent with what is reported in Table 7, in that the *desa* dummy remains positive and significant. Most importantly, the estimated coefficient of *desa* becomes significant at the 1 percent level. Overall, the results presented in this section suggest that it is less likely that the potential unobserved heterogeneity explains the baseline results, since after spatially selecting the villages the coefficient of *desa* remain positive and significant.

Another possible cause of endogeneity is simultaneity, namely that the classification of villages is driven by district political factors. Incumbent mayors might want to reclassify *kelurahan* having a large number of eligible voters as *desa*. This strategic reclassification is less likely, since village status change should be first initiated by the villagers and then subsequently approved by the district mayor.²³ Data from the 2011 PODES and the 2014 PODES also shows that village status change did not occur frequently. Between 2011 and 2014, village status change occurred in only 23 districts out of 134 districts included in the estimations. The number of villages in which the status changed is 49. Furthermore, most of village status changes were cases where *desa* villages changed into *kelurahan* villages. Out of the 49 villages which the status changed, only 3 changed their status from *kelurahan* to *desa*. Therefore, political factors are less likely to explain village reclassification between 2011 and 2014.

4.2.2 Rural versus Urban Voting Behavior

An alternative explanation for the empirical results of the paper is that voting behavior simply differs between rural and urban society. This is a likely explanation, since the main criterion for forming a *kelurahan* is the level of urbanness and, thus, *kelurahan* in general are distinguishable from *desa*. Although the spatial selection of villages conducted earlier might already help to rule out this alternative explanation, controlling for the differences in the level of urbanness will improve the precision of the econometric analysis.

23. Minister of Home Affairs Regulation No. 28 and No. 31 of 2006 regulated village formations during 2011 and 2014.

For this reason, I looked into the earlier waves of PODES. The earlier PODES waves, although they cover fewer villages, provide rural-urban classification of villages. The latest PODES wave having this classification is the 2008 PODES wave. Using urban-rural classification from the 2008 PODES, around 8.93% of *desa* covered in PODES 2014 is classified as urban, and around 24.20% of *kelurahan* is classified as rural. In addition, the 2008 PODES also provides data related to the land area, particularly total land area and total farming area. From this data, I generated two indicators, namely population density and share of farming area, and included these indicators as well as total land area in the subsequent analysis.

The estimations were conducted for the whole sample and the selected sample using LPM estimators. The results are reported in Table 11, column (1) when the rural indicator is included and column (2) when additional controls related to land area are included. Since the 2008 PODES comprises fewer villages (75,410 villages), the number of observations slightly decreases. Nevertheless, the empirical results generally remain unaffected, in that the *desa* dummy is positive and significant. In particular, the estimated coefficient increases after including rural and land-related indicators. However, they are now significant at the 5 percent level.

4.2.3 Targeted Transfers

Another potential explanation for the average higher electoral support for the incumbent mayor in *desa* is that *desa* receive more development programs than do *kelurahan*. On this account, villagers might vote for a candidate based on the development projects from which they directly benefit, not on the political campaigns and persuasions from the village headman. In order to rule out this alternative interpretation, the estimation should include an indicator measuring transfers received by a village. The 2014 PODES provides categorical data indicating whether a village received a certain transfer during the last three years (year 2012, 2013 and 2014). From this data, I constructed a dummy taking the value 1 if the village received a development program and a value of 0 if it did not.

The results are presented in Table 11, column (3) for infrastructure programs, column (4) for education facilities programs and column (5) for health facilities

programs. The table shows that the sign and the significance of the *desa* dummy remains unaffected, that is, positive and significant in all columns. Furthermore, it is worth mentioning that all the development program dummies are not statistically significant. This suggests that development projects do not explain incumbents' electoral performance at village level. This aligns with the observations by Aspinall and As'ad (2015), in that any transfers from candidates to villagers are not binding unless they are endorsed by the authoritative community leader, in particular the village headmen.

4.2.4 Additional Checks: Sub-district Fixed Effects

As an additional check, I included sub-district fixed effects in the subsequent analysis. Villages that belong to the same sub-district are geographically close and, thus, likely share identical characteristics. On this account, including sub-district fixed effects is similar to selecting villages spatially. Table 11 column (6) displays the results with sub-district fixed effects. The LPM estimate of the *desa* dummy remains positive and significant at the 5 percent level.

5 Conclusions

In this paper I study the behavior of lower-level officials as political intermediaries for the upper-level government and the consequence of this practice for the electoral outcomes. In particular, I explore the different incentives faced by elected versus appointed lower-level officials.

For the purpose of the study, I exploited a natural experiment in Indonesia during the last wave of mayoral elections in order to investigate the political relation between village headmen and the district mayor. The elected village headmen are willing to support the incumbent mayor because having close ties with the district is crucial for their own reelection prospects. In contrast, the appointed village headmen are willing to offer political support in exchange for employment benefits. While village headmen in both situations have incentives to support the incumbent mayor, the efforts that appointed village headmen put into being effective intermediaries are greatly reduced by national civil service rules. Hence,

the efforts exerted by elected village headmen to mobilize and persuade voters are expected to be higher. For this reason, the incumbent mayor is more likely to win in villages where the village headman is elected.

This paper provided econometric evidence that corroborates the conceptual arguments, that is, incumbent mayors are more likely to win in villages where the village headmen are elected by villagers than in villages where the village headmen are appointed by the mayor. The result can be attributed to the difference in the efforts exerted by the village headmen, since the estimations were conducted after controlling for various determinants of voting behavior. Furthermore, the concern of bias due to unobserved heterogeneity is mitigated by selecting villages which are geographically close to one another, assuming that these villages have similar characteristics and, thus, voting behavior. I also tested for other alternative explanations, namely urban versus rural voting behavior and targeted transfer, and I did not find evidence for these alternative explanations.

The results of this paper are relevant for understanding the importance of institutional change to economic and political outcomes. In particular, the interpretation of the results presented in this paper should relate to what has been observed by Martinez-Bravo (2014). Within the context of regimes in transition in Indonesia, Martinez-Bravo (2014) demonstrated empirical evidence implying that during the 1999 legislative election, the first democratic election after the fall of the authoritarian regime, the appointed village headmen had stronger incentives to signal stronger political alignment with the district government than did the elected village headmen. The results of this paper, which are in contrast to those of Martinez-Bravo (2014), suggest that institutional changes critically explain political agents' behavior. As political institutions evolve, the incentive structure for each political agent changes. Responding to a new set of incentive structures, political agents partake in different behavior in order to achieve their objectives. This, in turn, influences economic and political outcomes.

The results of this paper also provide insights that, while civil service reforms might weaken the bureaucratic clientelism, the pre-existing patron-client relations that are deeply embedded in the society have been well immersed in the political

competitions at the local level. Accordingly, politics at the local level are crowded with vote buying and electoral fraud. In this case, although democratic institutions exist, they feature captured democracy. On this account, the benefits of decentralizing public service delivery to local governments might be compromised by capture of these policies by local elites. This not only distorts economic policy outcomes, but it also challenges consolidation toward a well-functioning democracy.

References

- Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 91, no. 5 (December): 1369–1401.
- Acemoglu, Daron, and James A. Robinson. 2008. "Persistence of Power, Elites, and Institutions." *American Economic Review* 98, no. 1 (March): 267–93.
- Alatas, Vivi, Abhijit Banerjee, Rema Hanna, Benjamin A. Olken, Ririn Purnamasari, and Matthew Wai-Poi. 2019. "Does Elite Capture Matter? Local Elites and Targeted Welfare Programs in Indonesia." *AEA Papers and Proceedings* 109 (May): 334–39.
- Alesina, Alberto, and Guido Tabellini. 2007. "Bureaucrats or Politicians? Part I: A Single Policy Task." *American Economic Review* 97, no. 1 (March): 169–179.
- . 2008. "Bureaucrats or politicians? Part II: Multiple policy tasks." *Journal of Public Economics* 92 (3): 426–447.
- Anderson, Siwan, Patrick Francois, and Ashok Kotwal. 2015. "Clientelism in Indian Villages." *The American Economic Review* 105 (6): 1780–1816.
- Antlöv, Hans, Anna Wetterberg, and Leni Dharmawan. 2016. "Village Governance, Community Life, and the 2014 Village Law in Indonesia." *Bulletin of Indonesian Economic Studies* 52 (2): 161–183.
- Apolte, Thomas, and Lena Gerling. 2018. "Youth bulges, insurrections and labor-market restrictions." *Public Choice* 175, no. 1 (April): 63–93.

- Araujo, M. Caridad, Francisco H.G. Ferreira, Peter Lanjouw, and Berk Özler. 2008. "Local inequality and project choice: Theory and evidence from Ecuador." *Journal of Public Economics* 92 (5): 1022–1046.
- Aspinall, Edward, and Muhammad Uhaib As'ad. 2015. "The Patronage Patchwork: Village Brokerage Networks and the Power of the State in an Indonesian Election." *Bijdragen tot de Taal-, Land- en Volkenkunde* 171 (2/3): 165–195.
- Aspinall, Edward, and Noor Rohman. 2017. "Village head elections in Java: Money politics and brokerage in the remaking of Indonesia's rural elite." *Journal of Southeast Asian Studies* 48 (1): 31–52.
- Bardhan, Pranab, and Dilip Mookherjee. 2006. "Pro-poor targeting and accountability of local governments in West Bengal." Special Issue in honor of Pranab Bardhan, *Journal of Development Economics* 79 (2): 303–327.
- Besley, Timothy, and Stephen Coate. 2003. "Elected Versus Appointed Regulators: Theory and Evidence." *Journal of the European Economic Association* 1 (5): 1176–1206.
- Calvo, Ernesto, and Gergely Ujhelyi. 2012. *Political Screening: Theory and Evidence from the Argentine Public Sector*. Working Papers 201303201. Department of Economics, University of Houston.
- Coate, Stephen, and Brian Knight. 2011. "Government Form and Public Spending: Theory and Evidence from US Municipalities." *American Economic Journal: Economic Policy* 3, no. 3 (August): 82–112.
- Enikolopov, Ruben. 2014. "Politicians, bureaucrats and targeted redistribution." *Journal of Public Economics* 120 (C): 74–83.
- Finan, Frederico, and Laura Schechter. 2012. "Vote-Buying and Reciprocity." *Econometrica* 80 (2): 863–881.
- Folke, Olle, Shigeo Hirano, and James M. Snyder. 2011. "Patronage and Elections in U.S. States." *The American Political Science Review* 105 (3): 567–585.

- Frey, Anderson. 2019. "Cash transfers, clientelism, and political enfranchisement: Evidence from Brazil." *Journal of Public Economics* 176:1–17.
- Fujiwara, Thomas, and Leonard Wantchekon. 2013. "Can Informed Public Deliberation Overcome Clientelism? Experimental Evidence from Benin." *American Economic Journal: Applied Economics* 5, no. 4 (October): 241–55.
- Hicken, Allen. 2011. "Clientelism." *Annual Review of Political Science* 14 (1): 289–310.
- Kato, Tsuyoshi. 1989. "Different Fields, Similar Locusts: Adat Communities and the Village Law of 1979 in Indonesia." *Indonesia*, no. 47: 89–114.
- Keefer, Philip. 2007. "Clientelism, Credibility, and the Policy Choices of Young Democracies." *American Journal of Political Science* 51 (4): 804–821.
- Keefer, Philip, and Razvan Vlaicu. 2008. "Democracy, Credibility, and Clientelism." *Journal of Law, Economics, & Organization* 24 (2): 371–406.
- Levin, Jonathan, and Steven Tadelis. 2010. "Contracting for Government Services: Theory and Evidence from U.S. Cities." *The Journal of Industrial Economics* 58 (3): 507–541.
- Martinez-Bravo, Monica. 2014. "The Role of Local Officials in New Democracies: Evidence from Indonesia." *American Economic Review* 104, no. 4 (April): 1244–87.
- North, Douglass C. 1990. *Institutions, Institutional Change and Economic Performance*. Political Economy of Institutions and Decisions. Cambridge University Press.
- North, Douglass C., and Barry R. Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England." *The Journal of Economic History* 49 (4): 803–832.
- Nunn, Nathan, and Nancy Qian. 2014. "US Food Aid and Civil Conflict." *American Economic Review* 104, no. 6 (June): 1630–66.

- Robinson, James A., and Thierry Verdier. 2013. "The Political Economy of Clientelism." *The Scandinavian Journal of Economics* 115 (2): 260–291.
- Rosenbaum, Paul R., and Donald B. Rubin. 1983. "The central role of the propensity score in observational studies for causal effects." *Biometrika* 70, no. 1 (April): 41–55.
- Scott, James C. 1972. "Patron-Client Politics and Political Change in Southeast Asia." *The American Political Science Review* 66 (1): 91–113.
- Ujhelyi, Gergely. 2014a. "Civil service reform." *Journal of Public Economics* 118:15–25.
- . 2014b. "Civil Service Rules and Policy Choices: Evidence from US State Governments." *American Economic Journal: Economic Policy* 6, no. 2 (May): 338–80.
- Vlaicu, Razvan, and Alexander Whalley. 2016. "Hierarchical accountability in government." *Journal of Public Economics* 134 (C): 85–99.
- World Bank Group. 2017. *World Development Report 2017 : Governance and the Law*. Technical report. Washington, DC: World Bank.

Figure

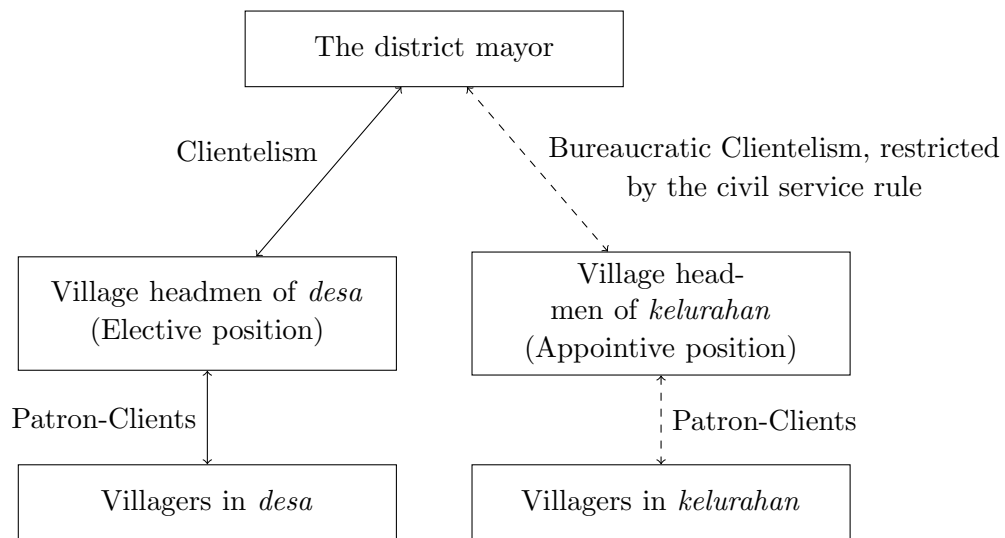


Figure 1: Relation between the District Mayor and Village Headmen

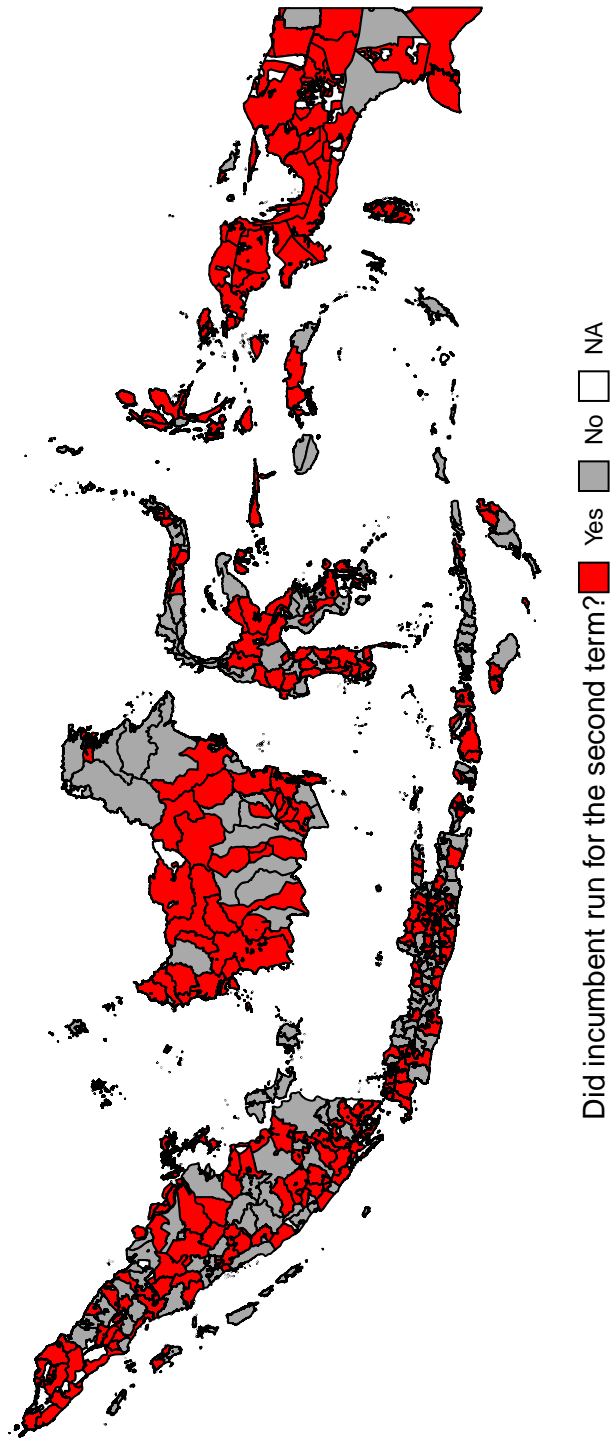
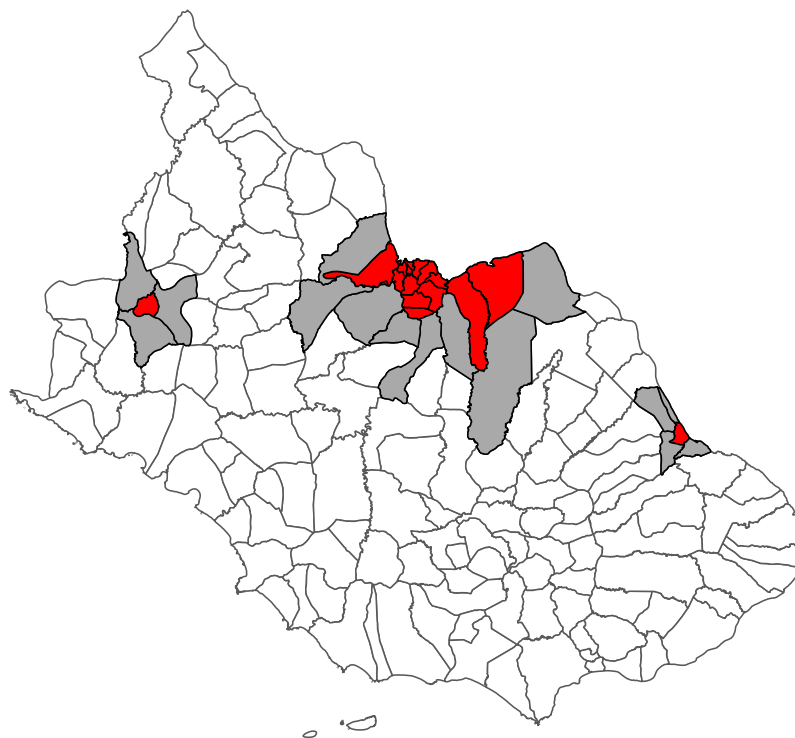
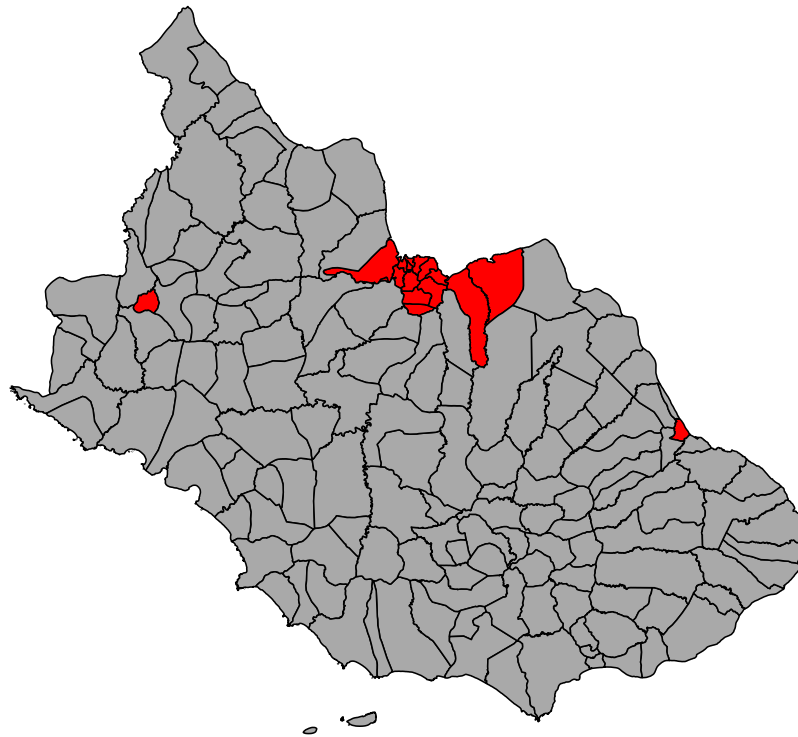


Figure 2: District where The Incumbent Ran for the Second Term



Village type ■ Kelurahan Desa

Figure 3: Selecting Villages sharing the Same Border (Illustrated using data from Kabupaten Sumba Timur, Province Nusa Tenggara Timur)

Table

Table 1: Variable Description and Source

Variable	Description	Source
<i>Electoral Indicators</i>		
Incumbent won	A dummy, 1 if incumbent mayor won in a village, 0 if lost	KPU
Eligible voters	Number of eligible voters in a village (people)	KPU
Polling station	Number of polling stations in a village (units)	KPU
<i>Geographical Indicators</i>		
<i>Desa</i>		
Topography	A dummy, 1 if a village is a <i>desa</i> , 0 if a <i>kelurahan</i>	PODES 2014
Distance to sub-district	A dummy, 1 if a village is mountainous, 0 otherwise	PODES 2014
Distance to district	The distance to sub-district office (km)	PODES 2014
	The distance to district capital (km)	PODES 2014
<i>Demographic Indicators</i>		
Population	Number of inhabitants in a village (people)	PODES 2011
Agriculture	Number of agricultural households in a village (households)	PODES 2011
Ethnic diversity	A dummy, 1 if the village is multi-ethnic, 0 otherwise	PODES 2014
<i>Education Facilities Indicators</i>		
Kindergarten	Number of kindergarten in a village (units)	PODES 2014
Primary school	Number of primary schools in a village (units)	PODES 2014
Secondary school	Number of secondary schools in a village (units)	PODES 2014
High school	Number of high schools in a village (units)	PODES 2014
<i>Health Facilities Indicators</i>		
Health center	Number of community health center/ <i>puskesmas</i> (units)	PODES 2014
Polyclinic	Number of polyclinic (units)	PODES 2014
Maternity clinic	Number of maternity clinics in a village (units)	PODES 2014
<i>Religious Facilities Indicators</i>		
Mosque	Number of mosques in a village (units)	PODES 2014
Prayer hall	Number of Muslim prayer halls in a village (units)	PODES 2014
Churches	Number of churches in a village (units)	PODES 2014
Hindus temple	Number of Hindu temple in a village (units)	PODES 2014
Buddhist temple	Number of Buddhist temple in a village (units)	PODES 2014
Confucian temple	Number of Confucian temple in a village (units)	PODES 2014

Table 2: Number of Observations

	N
No. districts	134
No. district in which incumbent won	83 (61.94 %)
No. district in which incumbent lost	51 (38.06 %)
No. subdistricts	2,126
No. villages	25,163
No. <i>desa</i>	23,181 (92.12 %)
No. <i>kelurahan</i>	1,982 (7.88 %)

Table 3: District Statistics

	Mean	SD	Min	Max
No. villages	191	97.90	24	442
No. <i>desa</i>	175	96.80	15	421
No. <i>kelurahan</i>	15.30	10.60	5	57
Incumbent won at district	0.64	0.49	0	1
Incumbent vote share at district	44.60	16.50	11.80	88.90
No. Candidates	3.04	1.01	2	4
Closeness at district ¹	17.00	15.10	0.120	77.9

¹ The difference in vote share between the winner and the runner up.

Table 4: Descriptive Statistics

Variable	Whole sample			Desa			Kecurahan		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
<i>Electoral Indicators</i>									
Incumbent Won (dummy)	25,163	0.53	0.50	23,181	0.53	0.50	1,982	0.50	0.50
Eligible Voters (people)	24,917	2,498.48	2,655.02	22,941	2,390.03	2,439.69	1,976	3,757.54	4,251.23
Polling Station (units)	24,919	6.04	5.55	22,943	5.75	5.00	1,976	9.47	9.30
<i>Geographical Indicators</i>									
Desa (dummy)	25,163	0.92	0.27	23,181	1.00	0.00	1,982	0.00	0.00
Topography (dummy)	25,163	0.21	0.41	23,181	0.22	0.41	1,982	0.12	0.33
Distance to Sub-district (km)	25,163	8.25	64.93	23,181	8.70	67.62	1,982	2.89	4.10
Distance to District (km)	25,163	58.79	405.41	23,181	60.58	401.42	1,982	37.87	449.03
<i>Demographic Indicators</i>									
Population (people)	23,400	3,378.07	3,537.77	21,518	3,212.34	3,200.92	1,882	5,272.89	5,880.63
Agriculture (households)	23,400	455.15	423.55	21,518	464.83	424.89	1,882	344.44	391.36
Ethnic Diversity (dummy)	25,163	0.75	0.43	23,181	0.73	0.44	1,982	0.95	0.22
<i>Education Facilities Indicators</i>									
Kindergarten (units)	25,163	1.60	2.01	23,181	1.54	1.82	1,982	2.34	3.44
Primary School (units)	25,163	2.42	1.84	23,181	2.36	1.74	1,982	3.15	2.63
Secondary School (units)	25,163	0.69	0.92	23,181	0.65	0.87	1,982	1.14	1.27
High School (units)	25,163	0.38	0.85	23,181	0.32	0.74	1,982	1.07	1.49
<i>Health Facilities Indicators</i>									
Community Health Center (units)	25,163	0.45	0.56	23,181	0.44	0.56	1,982	0.58	0.61
Polyclinic (units)	25,163	0.13	0.70	23,181	0.12	0.57	1,982	0.34	1.54
Maternity Clinic (units)	25,163	0.24	0.45	23,181	0.25	0.46	1,982	0.14	0.37
<i>Religious Facilities Indicators</i>									
Mosque (units)	25,163	3.87	4.76	23,181	3.83	4.67	1,982	4.33	5.72
Prayer Hall (units)	25,163	8.75	12.71	23,181	8.94	12.86	1,982	6.44	10.60
Church(units)	25,163	0.77	1.89	23,181	0.72	1.84	1,982	1.33	2.40
Buddhist Temple (units)	25,163	0.02	0.22	23,181	0.02	0.21	1,982	0.06	0.30
Hindus Temple (units)	25,163	0.22	1.96	23,181	0.22	1.97	1,982	0.26	1.87
Confucian Temple (units)	25,163	0.01	0.19	23,181	0.01	0.14	1,982	0.06	0.46

Table 5: Correlation among Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1 Incumbent won	1.00																						
2 <i>Desa</i>	0.02	1.00																					
3 Eligible Voters	0.07	-0.14	1.00																				
4 Polling Stations	0.06	-0.18	0.94	1.00																			
5 Topography	-0.05	0.06	-0.07	-0.07	1.00																		
6 Distance Sub-district	0.01	0.02	-0.04	-0.03	0.01	1.00																	
7 Distance District	-0.01	0.02	-0.05	-0.05	0.01	0.16	1.00																
8 Population	0.07	-0.16	0.95	0.93	-0.08	-0.14	-0.05	1.00															
9 Agriculture	-0.01	0.08	0.44	0.46	0.04	-0.05	-0.03	0.42	1.00														
10 Kindergarten	0.04	-0.11	0.65	0.63	-0.06	-0.03	-0.05	0.66	0.28	1.00													
11 Primary School	0.05	-0.12	0.74	0.76	-0.03	-0.03	-0.05	0.73	0.52	0.56	1.00												
12 Secondary School	0.00	-0.15	0.47	0.49	-0.05	-0.01	-0.02	0.48	0.29	0.39	0.55	1.00											
13 High School	0.00	-0.24	0.43	0.45	-0.10	-0.03	-0.02	0.45	0.15	0.37	0.44	0.59	1.00										
14 Health Center	-0.01	-0.06	0.16	0.20	-0.05	0.01	0.01	0.17	0.16	0.12	0.23	0.24	0.17	1.00									
15 Polyclinic	0.01	-0.08	0.43	0.43	-0.06	-0.01	-0.01	0.47	0.05	0.36	0.27	0.22	0.26	0.06	1.00								
16 Maternity Clinic	0.02	0.06	0.05	0.04	0.02	0.00	-0.01	0.03	0.05	0.05	0.06	0.02	0.00	-0.07	0.01	1.00							
17 Mosque	0.02	-0.03	0.60	0.62	0.06	-0.03	-0.04	0.58	0.45	0.49	0.57	0.36	0.27	0.13	0.21	0.04	1.00						
18 Prayer Hall	0.03	0.05	0.58	0.56	0.02	-0.03	-0.04	0.54	0.49	0.44	0.57	0.35	0.26	0.06	0.14	0.10	0.50	1.00					
19 Church	-0.04	-0.09	-0.04	-0.01	0.06	0.01	0.00	-0.03	-0.05	-0.03	0.01	0.04	0.04	0.10	0.03	-0.01	-0.14	-0.17	1.00				
20 Buddhist Temple	0.02	-0.05	0.09	0.10	0.01	0.00	0.00	0.10	0.04	0.07	0.09	0.05	0.06	0.02	0.03	-0.01	0.05	0.02	0.07	1.00			
21 Hindu Temple	0.07	0.00	0.10	0.08	-0.02	0.00	-0.01	0.11	0.06	0.03	0.09	0.01	0.02	0.10	0.01	-0.04	-0.07	-0.06	-0.02	0.03	1.00		
22 Confucian Temple	0.00	-0.07	0.05	0.08	-0.03	0.01	0.01	0.07	-0.02	0.03	0.05	0.05	0.05	0.03	0.03	-0.01	0.00	-0.01	0.04	0.23	0.02	1.00	
23 Ethnic Diversity	0.00	-0.14	0.07	0.10	-0.15	-0.01	0.01	0.10	-0.02	0.07	0.08	0.13	0.13	0.12	0.07	-0.01	0.04	0.02	0.07	-0.01	0.02	0.03	1.00

Table 6: Mayoral Election Results in the Villages: Baseline Specifications

	(1)	(2)	(3)	(4)	(5)	(6)
<i>I. Linear Probability Model</i>						
(Intercept)	.4980*** (.0344)	.7673*** (.0175)	.7655*** (.0180)	.7850*** (.0178)	.7822*** (.0179)	.7838*** (.0178)
<i>Desa</i>	.0315 (.0292)	.0213 (.0188)	.0190 (.0184)	.0031 (.0182)	.0052 (.0182)	.0042 (.0181)
R ²	.0003	.3446	.3450	.3518	.3543	.3557
Adj. R ²	.0002	.3411	.3414	.3480	.3505	.3514
Num. obs.	25163	25163	25163	23400	23239	23239
<i>II. Probit Model</i>						
(Intercept)	-.0051 (.0282)	.7337*** (.0775)	.7270*** (.0775)	.8042*** (.0820)	.7894*** (.0824)	.7956*** (.0828)
<i>Desa</i>	.0791*** (.0293)	.0674* (.0356)	.0586 (.0358)	-.0049 (.0389)	.0063 (.0393)	.0038 (.0401)
Marginal Effect	.0315** (.0117)	.0186* (.0098)	.0162 (.0099)	-.0013 (.0106)	.0017 (.0107)	.0010 (.0109)
AIC	34806.3966	24848.0655	24842.9982	22889.7693	22662.5393	22642.8843
BIC	34822.6629	25946.0381	25965.3701	24010.1775	23790.0415	23875.0831
Log Likelihood	-17401.1983	-12289.0328	-12283.4991	-11305.8846	-11191.2696	-11168.4421
Num. obs.	25163	25163	25163	23400	23239	23239
<i>Controls</i>						
Geography	No	No	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes
Electoral	No	No	No	No	Yes	Yes
Facilities	No	No	No	No	No	Yes
District FE	No	Yes	Yes	Yes	Yes	Yes

Notes: Part I reports the robust standard errors clustered at district. Part II reports the average marginal effects. The unit observation is village. The dependent variable is a dummy taking value 1 if the incumbent mayor won the mayoral election at the village and 0 if the incumbent mayor lost. The main explanatory variable is a dummy taking value 1 if a village is a *desa* and 0 if a village is a *kelurahan*. Details of controls included in the regression are provided in Table 1.

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

Table 7: Mayoral Election Results in the Villages:
Taking Account of Political Competitions at the District

	(1)	(2)	(3)	(4)	(5)
<i>I. Linear Probability Model</i>					
(Intercept)	.7661*** (.0174)	.7643*** (.0179)	.7845*** (.0175)	.7817*** (.0175)	.7830*** (.0174)
<i>Desa</i>	.0726** (.0294)	.0700** (.0292)	.0568** (.0284)	.0595** (.0285)	.0592** (.0288)
<i>Desa</i> \times No. Candidates	-.0499*** (.0190)	-.0496*** (.0189)	-.0532*** (.0189)	-.0537*** (.0188)	-.0542*** (.0190)
R ²	.3453	.3456	.3526	.3552	.3565
Adj. R ²	.3418	.3420	.3488	.3512	.3522
Num. obs.	25163	25163	23400	23239	23239
<i>II. Probit Model</i>					
(Intercept)	.7241*** (.0774)	.7177*** (.0775)	.7968*** (.0819)	.7811*** (.0823)	-.0927** (.0394)
<i>Desa</i>	.2422*** (.0507)	.2322*** (.0509)	.1797*** (.0532)	.1952*** (.0536)	.3820*** (.0348)
<i>Desa</i> \times No. Candidates	-.1644*** (.0339)	-.1632*** (.0339)	-.1769*** (.0347)	-.1805*** (.0348)	-.2239*** (.0093)
Marginal effect	.0171* (.0097)	.0148 (.0098)	-.0023 (.0105)	.0008 (.0106)	.0586*** (.0126)
AIC	24826.5764	24821.9115	22866.0556	22637.8370	31067.7343
BIC	25932.6821	25952.4166	23994.5243	23773.3928	31261.0204
Log Likelihood	-12277.2882	-12271.9557	-11293.0278	-11177.9185	-15509.8671
Num. obs.	25163	25163	23400	23239	23239
<i>Controls</i>					
Geography	No	Yes	Yes	Yes	Yes
Demography	No	No	Yes	Yes	Yes
Electoral	No	No	No	Yes	Yes
Facilities	No	No	No	No	Yes
District FE	Yes	Yes	Yes	Yes	Yes

Notes: Part I reports the robust standard errors clustered at district. Part II reports the the average marginal effects. The unit observation is village. The dependent variable is a dummy taking value 1 if the incumbent mayor won the mayoral election at the village and 0 if the incumbent mayor lost. The main explanatory variable is a dummy taking value 1 if a village is a *desa* and 0 if a village is a *kelurahan*. For the interaction, the number of candidates is centered at two. Details of controls included in the regression are provided in Table 1.

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

Table 8: Mayoral Election Results in the Villages: Heterogenous effects

	Whole Sample (1)	Incumbent Mayor Won (2)	Incumbent Mayor Won Landslide victory (3)	Marginal victory (4)	Incumbent Mayor lost (5)
<i>I. Linear Probability Model</i>					
(Intercept)	.7830*** (.0174)	.7853*** (.0215)	.7805*** (.0282)	.5926*** (.0404)	.0126 (.0332)
<i>Desa</i>	.0592** (.0288)	.0645* (.0343)	.0772** (.0383)	.0511 (.0739)	.0439 (.0532)
<i>Desa</i> × No. Candidates	-.0542*** (.0190)	-.0516** (.0231)	-.0757** (.0349)	-.0320 (.0342)	-.0567 (.0343)
R ²	.3565	.1632	.1143	.0483	.1241
Adj. R ²	.352	.1575	.1078	.0386	.1162
Num. obs.	23239	15281	10203	5078	7958
<i>II. Probit Model</i>					
(Intercept)	-.0927** (.0394)	.7800*** (.0883)	.7693*** (.1008)	.1893 (.1337)	-5.3176 (35.8735)
<i>Desa</i>	.3820*** (.0348)	.2191*** (.0650)	.2996*** (.0825)	.1363 (.1091)	.0950 (.1020)
<i>Desa</i> × No. Candidates	-.2239*** (.0093)	-.1682*** (.0433)	-.2981*** (.0712)	-.0833 (.0595)	-.1979*** (.0601)
Marginal effect	.0005 (.0108)	.0134 (.0142)	.0223 (.0156)	.0060 (.0297)	-.0309* (.0163)
AIC	31067.7343	15798.8260	8891.4362	6883.3478	6772.3311
BIC	31261.0204	16600.4344	9440.9494	7223.0468	7275.0303
Log Likelihood	-15509.8671	-7794.4130	-4369.7181	-3389.6739	-3314.1656
Num. obs.	23239	15281	10203	5078	7958
<i>Controls</i>					
Geography	No	Yes	Yes	Yes	Yes
Demography	No	No	Yes	Yes	Yes
Electoral	No	No	No	Yes	Yes
Facilities	No	No	No	No	Yes
District FE	Yes	Yes	Yes	Yes	Yes

Notes: Part I reports the robust standard errors clustered at district. Part II reports the average marginal effects. The unit observation is village. The dependent variable is a dummy taking value 1 if the incumbent mayor won the mayoral election at the village and 0 if the incumbent mayor lost. The main explanatory variable is a dummy taking value 1 if a village is a *desa* and 0 if a village is a *keurahan*. For the interaction, the number of candidates is centered at 2. Details of controls included in the regression are provided in Table 1.

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

Table 9: Descriptive Statistics of Geographically Close Villages

Variable	Whole sample			Desa			Kelurahan		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
<i>Electoral Indicators</i>									
Incumbent won (dummy)	5,606	0.51	0.50	3,627	0.52	0.50	1,979	0.50	0.50
Eligible Voters (people)	5,598	2,832.96	3,527.76	3,621	2,328.76	2,942.33	1,977	3,756.44	4,251.04
Polling Stations (units)	5,600	7.04	7.66	3,623	5.73	6.22	1,977	9.46	9.30
<i>Geographical Indicators</i>									
<i>Desa</i> (dummy)	5,669	0.65	0.48	3,667	1.00	0.00	2,002	0.00	0.00
Topography (dummy)	5,670	0.17	0.37	3,667	0.19	0.39	2,002	0.12	0.33
Distance to Sub-district (km)	5,670	5.42	13.81	3,667	6.81	16.74	2,002	2.86	4.03
Distance to District (km)	5,670	42.80	398.85	3,667	45.68	370.17	2,002	37.53	446.78
<i>Demographic Indicators</i>									
Population (people)	5,372	3,942.55	5,008.82	3,466	3,208.37	4,302.12	1,905	5,280.12	5,857.65
Agriculture (households)	5,372	373.47	376.17	3,466	389.52	366.30	1,905	344.38	391.99
Ethnic Diversity (dummy)	5,670	0.86	0.35	3,667	0.81	0.40	2,002	0.95	0.22
<i>Education Facilities Indicators</i>									
Kindergarten (units)	5,670	1.74	2.54	3,667	1.42	1.81	2,002	2.34	3.43
Primary School (units)	5,670	2.54	2.14	3,667	2.20	1.74	2,002	3.15	2.62
Secondary School (units)	5,670	0.80	1.06	3,667	0.61	0.87	2,002	1.14	1.27
High School (units)	5,670	0.61	1.17	3,667	0.36	0.85	2,002	1.08	1.49
<i>Health Facilities Indicators</i>									
Community Health Center (units)	5,670	0.51	0.59	3,667	0.47	0.58	2,002	0.58	0.61
Polyclinic (units)	5,670	0.20	1.09	3,667	0.13	0.73	2,002	0.34	1.53
Maternity Clinic (units)	5,670	0.18	0.41	3,667	0.20	0.43	2,002	0.14	0.37
<i>Religious Facilities Indicators</i>									
Mosque (units)	5,670	3.70	5.00	3,667	3.36	4.53	2,002	4.34	5.71
Prayer Hall (units)	5,670	5.78	9.93	3,667	5.43	9.55	2,002	6.42	10.56
Church (units)	5,670	1.12	2.50	3,667	1.00	2.55	2,002	1.33	2.39
Buddhist Temple (units)	5,670	0.03	0.21	3,667	0.01	0.14	2,002	0.06	0.30
Hindus Temple (units)	5,670	0.29	2.19	3,667	0.31	2.35	2,002	0.26	1.86
Confucian Temple (units)	5,670	0.03	0.30	3,667	0.01	0.16	2,002	0.06	0.46

Table 10: Mayoral Election Results in the Geographically Close Villages

	(1)	(2)	(3)	(4)	(5)
<i>I. Linear Probability Model</i>					
(Intercept)	.7441*** (.0134)	.7408*** (.0152)	.7499*** (.0188)	.7517*** (.0193)	.7505*** (.0201)
<i>Desa</i>	.0833*** (.0258)	.0805*** (.0254)	.0695*** (.0247)	.0687*** (.0249)	.0699*** (.0254)
<i>Desa</i> × No. Candidates	-.0528*** (.0165)	-.0532*** (.0164)	-.0541*** (.0167)	-.0547*** (.0167)	-.0541*** (.0169)
R ²	.3694	.3703	.3696	.3700	.3720
Adj. R ²	.3538	.3544	.3527	.3529	.3533
Num. obs.	5606	5606	5315	5301	5301
<i>II. Probit Model</i>					
(Intercept)	.6397*** (.1194)	.6323*** (.1198)	.6638*** (.1302)	.6669*** (.1306)	.6595*** (.1318)
<i>Desa</i>	.3033*** (.0624)	.2956*** (.0631)	.2512*** (.0663)	.2528*** (.0670)	.2597*** (.0686)
<i>Desa</i> × No. Candidates	-.1866*** (.0413)	-.1873*** (.0414)	-.1904*** (.0425)	-.1945*** (.0427)	-.1903*** (.0430)
Marginal effect	.0242** (.0115)	.0220* (.0117)	.0106 (.0128)	.0098 (.0129)	.0129 (.0133)
AIC	5551.0232	5551.2340	5274.8102	5259.9067	5269.2604
BIC	6452.9198	6473.0254	6195.7705	6187.0734	6281.9106
Log Likelihood	-2639.5116	-2636.6170	-2497.4051	-2488.9533	-2480.6302
Num. obs.	5606	5606	5315	5301	5301
<i>Controls</i>					
Geography	No	Yes	Yes	Yes	Yes
Demography	No	No	Yes	Yes	Yes
Electoral	No	No	No	Yes	Yes
Facilities	No	No	No	No	Yes
District FE	Yes	Yes	Yes	Yes	Yes

Notes: The sample is *desa* villages and *kelurahan* villages which are geographically close to one another. Part I reports the robust standard errors clustered at district. Part II reports the average marginal effects. The dependent variable is a dummy taking value 1 if the incumbent mayor won the mayoral election at the village and 0 if the incumbent mayor lost. The main explanatory variable is a dummy taking value 1 if a village is a *desa* and 0 if a village is a *kelurahan*. For the interaction, the number of candidates is centered at 2. Details of controls included in the regression are provided in Table 1.

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

Table 11: Sensitivity Analysis

	Rural	Total land & Farm Area	Government Program			Subdistrict Fixed Effects
	(1)	(2)	Infrastructure (3)	Education (4)	Health (5)	(6)
<i>I. The Whole Sample</i>						
(Intercept)	.7593*** (.0211)	.7544*** (.0332)	.7602*** (.0233)	.7590*** (.0210)	.7600*** (.0209)	.9822*** (.0204)
<i>Desa</i>	.0592** (.0290)	.0647* (.0329)	.0592** (.0290)	.0591** (.0290)	.0592** (.0290)	.0498** (.0233)
Rural	.0212* (.0111)	.0195* (.0103)	.0212* (.0111)	.0212* (.0111)	.0211* (.0111)	.0163 (.0102)
<i>Desa</i> \times No. Candidates	-.0542*** (.0192)	-.0652*** (.0233)	-.0542*** (.0192)	-.0542*** (.0192)	-.0542*** (.0192)	-.0364*** (.0141)
R ²	.3648	.3759	.3648	.3648	.3648	.5558
Adj. R ²	.3604	.3702	.3604	.3604	.3604	.5116
Num. obs.	21681	16850	21681	21681	21681	21681
<i>II. The Geographically Close Villages</i>						
(Intercept)	.7472*** (.0264)	.6988*** (.0462)	.7410*** (.0307)	.7432*** (.0263)	.7494*** (.0266)	.9964*** (.0363)
<i>Desa</i>	.0666** (.0273)	.0767** (.0314)	.0663** (.0274)	.0656** (.0274)	.0667** (.0275)	.0570** (.0229)
Rural	.0093 (.0193)	.0021 (.0245)	.0093 (.0193)	.0092 (.0194)	.0092 (.0194)	.0145 (.0208)
<i>Desa</i> \times No. Candidates	-.0508*** (.0176)	-.0614*** (.0225)	-.0508*** (.0177)	-.0505*** (.0178)	-.0509*** (.0177)	-.0354** (.0148)
R ²	.3805	.3795	.3805	.3807	.3806	.6023
Adj. R ²	.3606	.3522	.3605	.3606	.3605	.5118
Num. obs.	4853	3582	4853	4853	4853	4853
<i>Controls</i>						
Geography	Yes	Yes	Yes	Yes	Yes	Yes
Demography	Yes	Yes	Yes	Yes	Yes	Yes
Electoral	Yes	Yes	Yes	Yes	Yes	Yes
Facilities	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	No

Notes: The sample is *desa* villages and *kelurahan* villages which are geographically close to one another. Table reports the robust standard errors clustered at district. The dependent variable is a dummy taking value 1 if the incumbent mayor won the mayoral election at the village and 0 if the incumbent mayor lost. The main explanatory variable is a dummy taking value 1 if a village is a *desa* and 0 if a village is a *kelurahan*. For the interaction, the number of candidates is centered at 2. Details of controls included in the regression are provided in Table 1.

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

Appendix 3.A Additional Tables

Table 3.A.1: *Desa* Governance

	Law No. 5 of 1979	Law No. 22 of 1999	Law No. 32 of 2004	Law No. 6 of 2014
Definition of <i>desa</i>	A territorial entity.	A legal community.	Idem.	Idem.
Name	Mandatorily addressed as <i>desa</i> . The village headman is addressed as <i>kepala desa</i> .	Districts can legislate for the use of traditional names for the village and the village headman.	Idem.	Idem.
Establishment	Initiated by the sub-district government, approved by the district government.	Initiated by villagers, approved by the district government and the district parliament.	Idem.	Initiated by the district government.
Government	The village headman and the appointed village legislative body (LMD) as partners.	The village headman and the elected village legislative body (BPD) as separate entities, but partners.	The village headman and the appointed village legislative body (BPD) as separate entities, but partners.	Idem.
Head of <i>desa</i>	Directly elected, appointed by and accountable to the district government. The term limit is two eight-year terms.	Directly elected, appointed by and accountable to the village legislative body (BPD), after approval from the district government. The term limit is two five-year terms.	Directly elected, approved by and accountable to the district government. The term limit is two six-year terms.	Directly elected, approved by and accountable to the district government. The term limit is two six-year terms.
<i>Desa</i> Officials	Appointed by the village headman, approved by the district government, access to communal land.	Elected or appointed, approved by BPD, unclear salaries.	Appointed by the village headman. The village secretary is a civil service employee.	Appointed by the village headman.
Legislation and Budget	Drafted by the village headman and the village legislative body (LMD), approved by the sub-district government.	Drafted and approved by the village legislative body (BPD) together with the village headman.	Drafted by the village legislative body (BPD) and the village headman, approved by the district government.	Drafted and approved by headman together with the village legislative body (BPD), evaluated by the district government.
Funding	Grants from the district government, plus INPRES programs from the central government.	Grants from the district government, assistance from the central, provincial or district government, and local sources.	Idem.	The national budget allocations, transfers from the district government, assistance from the central, provincial or district government, and local sources.
<i>Desa</i> Planning	Not regulated.	Not regulated.	Regulated <i>RPJM-Desa</i> and <i>Musrenbang Desa</i> .	Idem.

Notes: Column 1 to 4 are from Hans Antlöv and Sutoro Eko, Village and Sub-District Functions in Decentralized Indonesia.

Table 3.A.2: Mayoral Election Results at Village:
Taking Account of Political Competitions at the District and Incumbent
Mayor's Expected Probability of Winning

	(1)	(2)	(3)	(4)	(5)
<i>I. Linear Probability Model</i>					
(Intercept)	.7715*** (.0184)	.7696*** (.0189)	.7879*** (.0191)	.7856*** (.0190)	.7858*** (.0189)
<i>Desa</i>	.0770** (.0337)	.0743** (.0335)	.0598* (.0318)	.0629* (.0319)	.0617* (.0323)
<i>Desa</i> × No. candidates	−.0543** (.0233)	−.0539** (.0233)	−.0561** (.0222)	−.0570** (.0222)	−.0565** (.0225)
<i>Desa</i> × Incumbent vote	−.0005 (.0010)	−.0005 (.0010)	−.0003 (.0009)	−.0004 (.0009)	−.0003 (.0009)
R ²	.3453	.3457	.3526	.3552	.3565
Adj. R ²	.3418	.3420	.3487	.3512	.3522
Num. obs.	25163	25163	23400	23239	23239
<i>II. Probit Model</i>					
(Intercept)	.7265*** (.0862)	.7193*** (.0862)	.7887*** (.0906)	.7761*** (.0909)	.7744*** (.0914)
<i>Desa</i>	.2440*** (.0584)	.2333*** (.0586)	.1734*** (.0614)	.1913*** (.0618)	.1868*** (.0624)
<i>Desa</i> × No. candidates	−.1662*** (.0440)	−.1643*** (.0440)	−.1709*** (.0453)	−.1767*** (.0454)	−.1736*** (.0454)
<i>Desa</i> × Incumbent vote	−.0002 (.0035)	−.0001 (.0035)	.0007 (.0036)	.0005 (.0036)	.0010 (.0036)
Marginal Effect	.0171* (.0097)	.0148 (.0098)	−.0023 (.0105)	.0008 (.0106)	.0005 (.0108)
AIC	24828.5725	24823.9099	22868.0132	22639.8208	22619.8744
BIC	25942.8113	25962.5481	24004.5425	23783.4302	23868.1804
Log Likelihood	−12277.2862	−12271.9549	−11293.0066	−11177.9104	−11154.9372
Num. obs.	25163	25163	23400	23239	23239
<i>Controls</i>					
Geography	No	Yes	Yes	Yes	Yes
Demography	No	No	Yes	Yes	Yes
Electoral	No	No	No	Yes	Yes
Facilities	No	No	No	No	Yes
District FE	Yes	Yes	Yes	Yes	Yes

Notes: The sample is *desa* villages and *kelurahan* villages which are geographically close to one another. Part I reports the robust standard errors clustered at district. Part II reports the average marginal effects. The dependent variable is a dummy taking value 1 if the incumbent mayor won the mayoral election at the village and 0 if the incumbent mayor lost. The main explanatory variable is a dummy taking value 1 if a village is a *desa* and 0 if a village is a *kelurahan*. For the interactions, the number of candidates is centered at 2 and the incumbent vote is centered at mean. Details of controls included in the regression are provided in Table 1.

*** Significant at the 1 percent level

** Significant at the 5 percent level

* Significant at the 10 percent level

Table 3.A.3: Differences between *Desa* and *Kelurahan*

	OLS	Probit
(Intercept)	.9603*** (.0067)	1.2625*** (.1234)
Topography	.0285*** (.0080)	.3305*** (.0562)
Distance to sub-district	.0018*** (.0005)	.0876*** (.0050)
Distance to District	.0000 (.0000)	.0100*** (.0007)
Population	-.0000 (.0000)	-.0001*** (.0000)
Agriculture	.0001*** (.0000)	.0006*** (.0001)
Ethnic Diversity	-.0556*** (.0082)	-.7250*** (.0581)
Kindergarten	.0020 (.0015)	.0067 (.0096)
Primary School	-.0063* (.0036)	-.0564*** (.0138)
Secondary School	-.0024 (.0032)	-.0484** (.0217)
High School	-.0483*** (.0052)	-.1945*** (.0190)
Community Health Center	.0063 (.0049)	-.0172 (.0294)
Polyclinic	.0106 (.0074)	-.0794*** (.0293)
Maternity Clinic	.0239*** (.0070)	.2283*** (.0440)
Mosque	.0014 (.0013)	.0007 (.0064)
Prayer Hall	.0027*** (.0006)	.0270*** (.0029)
Church	-.0016 (.0021)	-.0073 (.0097)
Hindus Temple	.0077** (.0032)	.0642*** (.0177)
Buddhist Temple	-.0092 (.0128)	-.0587 (.0586)
Confucian Temple	-.0515*** (.0154)	-.2490*** (.0803)
Eligible Voters	.0000** (.0000)	.0001*** (.0000)
Polling Stations	-.0177*** (.0030)	-.0778*** (.0095)
District FE	Yes	Yes
Num. obs.	23239	23239

Notes: The dependent variable is a dummy taking value 1 if a village is a *desa* and 0 if a village is a *kelurahan*. OLS reports the robust standard errors clustered at district. Probit suffers perfect separation problem. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level

Table 3.A.4: List of Districts included in the Sample

No	Id	District	Province	Election Year	No. Villages		
					Total	<i>Desa</i>	<i>Kelu- rahan</i>
1	1202	Kabupaten Mandailing Natal	Sumatera Utara	2015	404	376	28
2	1205	Kabupaten Tapanuli Utara	Sumatera Utara	2018	252	241	11
3	1209	Kabupaten Simalungun	Sumatera Utara	2015	413	386	27
4	1213	Kabupaten Langkat	Sumatera Utara	2018	277	240	37
5	1219	Kabupaten Batu Bara	Sumatera Utara	2018	151	141	10
6	1223	Kabupaten Labuhan Batu Utara	Sumatera Utara	2015	90	82	8
7	1277	Kota Padangsidimpuan	Sumatera Utara	2018	79	42	37
8	1373	Kota Sawah Lunto	Sumatera Barat	2018	37	27	10
9	1403	Kabupaten Indragiri Hilir	Riau	2018	224	186	38
10	1405	Kabupaten Siak	Riau	2015	131	122	9
11	1409	Kabupaten Rokan Hilir	Riau	2015	175	160	15
12	1502	Kabupaten Merangin	Jambi	2018	215	205	10
13	1503	Kabupaten Sarolangun	Jambi	2017	158	149	9
14	1504	Kabupaten Batang Hari	Jambi	2015	113	100	13
15	1508	Kabupaten Tebo	Jambi	2017	112	107	5
16	1509	Kabupaten Bungo	Jambi	2015	153	141	12
17	1602	Kabupaten Ogan Komering Ilir	Sumatera Selatan	2018	326	313	13
18	1603	Kabupaten Muara Enim	Sumatera Selatan	2018	143	138	5
19	1606	Kabupaten Musi Banyuasin	Sumatera Selatan	2017	240	227	13
20	1701	Kabupaten Bengkulu Selatan	Bengkulu	2015	158	142	16
21	1703	Kabupaten Bengkulu Utara	Bengkulu	2015	220	215	5
22	1707	Kabupaten Lebong	Bengkulu	2015	104	93	11
23	1708	Kabupaten Kepahiang	Bengkulu	2015	117	105	12
24	1806	Kabupaten Lampung Utara	Lampung	2018	231	226	5
25	1810	Kabupaten Pringsewu	Lampung	2017	131	126	5
26	1901	Kabupaten Bangka	Kep. Bangka Belitung	2018	71	62	9
27	1902	Kabupaten Belitung	Kep. Bangka Belitung	2018	49	42	7
28	1904	Kabupaten Bangka Tengah	Kep. Bangka Belitung	2015	63	56	7
29	2103	Kabupaten Natuna	Kep. Riau	2015	76	67	9
30	3202	Kabupaten Sukabumi	Jawa Barat	2015	386	381	5
31	3204	Kabupaten Bandung	Jawa Barat	2015	280	270	10
32	3205	Kabupaten Garut	Jawa Barat	2018	442	421	21

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No	Id	District	Province	Election Year	No. Villages		
					Total	<i>Desa</i>	<i>Kelu- rahan</i>
33	3207	Kabupaten Ciamis	Jawa Barat	2018	265	258	7
34	3209	Kabupaten Cirebon	Jawa Barat	2018	424	412	12
35	3210	Kabupaten Majalengka	Jawa Barat	2018	320	307	13
36	3211	Kabupaten Sumedang	Jawa Barat	2018	277	270	7
37	3212	Kabupaten Indramayu	Jawa Barat	2015	317	309	8
38	3213	Kabupaten Subang	Jawa Barat	2018	253	245	8
39	3216	Kabupaten Bekasi	Jawa Barat	2017	187	182	5
40	3279	Kota Banjar	Jawa Barat	2018	25	16	9
41	3301	Kabupaten Cilacap	Jawa Tengah	2017	284	269	15
42	3302	Kabupaten Banyumas	Jawa Tengah	2018	331	301	30
43	3304	Kabupaten Banjarnegara	Jawa Tengah	2017	278	266	12
44	3307	Kabupaten Wonosobo	Jawa Tengah	2015	265	236	29
45	3308	Kabupaten Magelang	Jawa Tengah	2018	372	367	5
46	3310	Kabupaten Klaten	Jawa Tengah	2015	401	391	10
47	3311	Kabupaten Sukoharjo	Jawa Tengah	2015	167	150	17
48	3313	Kabupaten Karanganyar	Jawa Tengah	2018	177	162	15
49	3315	Kabupaten Grobogan	Jawa Tengah	2015	280	273	7
50	3320	Kabupaten Jepara	Jawa Tengah	2017	195	184	11
51	3321	Kabupaten Demak	Jawa Tengah	2015	249	243	6
52	3322	Kabupaten Semarang	Jawa Tengah	2015	235	208	27
53	3323	Kabupaten Temanggung	Jawa Tengah	2018	289	266	23
54	3327	Kabupaten Pemalang	Jawa Tengah	2015	222	211	11
55	3328	Kabupaten Tegal	Jawa Tengah	2018	287	281	6
56	3329	Kabupaten Brebes	Jawa Tengah	2017	297	292	5
57	3503	Kabupaten Trenggalek	Jawa Timur	2015	157	152	5
58	3504	Kabupaten Tulungagung	Jawa Timur	2018	271	257	14
59	3507	Kabupaten Malang	Jawa Timur	2015	390	378	12
60	3508	Kabupaten Lumajang	Jawa Timur	2018	205	198	7
61	3510	Kabupaten Banyuwangi	Jawa Timur	2015	217	189	28
62	3511	Kabupaten Bondowoso	Jawa Timur	2018	219	209	10
63	3513	Kabupaten Probolinggo	Jawa Timur	2018	330	325	5
64	3515	Kabupaten Sidoarjo	Jawa Timur	2015	349	320	29
65	3516	Kabupaten Mojokerto	Jawa Timur	2015	304	299	5

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No	Id	District	Province	Election Year	No. Villages		
					Total	<i>Desa</i>	<i>Kelu- rahan</i>
66	3525	Kabupaten Gresik	Jawa Timur	2015	356	330	26
67	3526	Kabupaten Bangkalan	Jawa Timur	2018	281	273	8
68	3579	Kota Batu	Jawa Timur	2017	24	19	5
69	5101	Kabupaten Jembrana	Bali	2015	50	41	9
70	5104	Kabupaten Gianyar	Bali	2018	70	64	6
71	5105	Kabupaten Klungkung	Bali	2018	59	53	6
72	5108	Kabupaten Buleleng	Bali	2017	148	129	19
73	5171	Kota Denpasar	Bali	2015	43	27	16
74	5202	Kabupaten Lombok Tengah	Nusa Tenggara Barat	2015	139	127	12
75	5203	Kabupaten Lombok Timur	Nusa Tenggara Barat	2018	254	239	15
76	5205	Kabupaten Dompu	Nusa Tenggara Barat	2015	81	72	9
77	5302	Kabupaten Sumba Timur	Nusa Tenggara Timur	2015	156	140	16
78	5303	Kabupaten Kupang	Nusa Tenggara Timur	2018	170	153	17
79	5304	Kabupaten Timor Tengah Selatan	Nusa Tenggara Timur	2018	267	256	11
80	5307	Kabupaten Alor	Nusa Tenggara Timur	2018	175	158	17
81	5309	Kabupaten Flores Timur	Nusa Tenggara Timur	2017	250	229	21
82	5310	Kabupaten Sikka	Nusa Tenggara Timur	2018	160	147	13
83	5311	Kabupaten Ende	Nusa Tenggara Timur	2018	259	237	22
84	5312	Kabupaten Ngada	Nusa Tenggara Timur	2015	151	135	16
85	5313	Kabupaten Manggarai	Nusa Tenggara Timur	2015	162	145	17
86	5314	Kabupaten Rote Ndao	Nusa Tenggara Timur	2018	89	82	7
87	5315	Kabupaten Manggarai Barat	Nusa Tenggara Timur	2015	169	164	5
88	5318	Kabupaten Nagekeo	Nusa Tenggara Timur	2018	113	97	16
89	5319	Kabupaten Manggarai Timur	Nusa Tenggara Timur	2018	176	158	18
90	6105	Kabupaten Sanggau	Kalimantan Barat	2018	169	163	6
91	6201	Kabupaten Kotawaringin Barat	Kalimantan Tengah	2017	94	81	13
92	6202	Kabupaten Kotawaringin Timur	Kalimantan Tengah	2015	185	168	17
93	6203	Kabupaten Kapuas	Kalimantan Tengah	2018	231	214	17
94	6204	Kabupaten Barito Selatan	Kalimantan Tengah	2017	93	86	7
95	6205	Kabupaten Barito Utara	Kalimantan Tengah	2018	102	92	10
96	6209	Kabupaten Katingan	Kalimantan Tengah	2018	161	154	7
97	6301	Kabupaten Tanah Laut	Kalimantan Selatan	2018	135	130	5
98	6308	Kabupaten Hulu Sungai Utara	Kalimantan Selatan	2017	219	214	5

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No	Id	District	Province	Election Year	No. Villages		
					Total	<i>Desa</i>	<i>Kelu- rahan</i>
99	6309	Kabupaten Tabalong	Kalimantan Selatan	2018	130	120	10
100	6310	Kabupaten Tanah Bumbu	Kalimantan Selatan	2015	149	144	5
101	6405	Kabupaten Berau	Kalimantan Timur	2015	110	100	10
102	6409	Kabupaten Penajam Paser Utara	Kalimantan Timur	2018	54	30	24
103	6502	Kabupaten Bulungan	Kalimantan Utara	2015	81	74	7
104	6504	Kabupaten Nunukan	Kalimantan Utara	2015	97	89	8
105	7102	Kabupaten Minahasa	Sulawesi Utara	2018	270	227	43
106	7103	Kabupaten Kepulauan Sangihe	Sulawesi Utara	2017	167	145	22
107	7104	Kabupaten Kepulauan Talaud	Sulawesi Utara	2018	153	142	11
108	7106	Kabupaten Minahasa Utara	Sulawesi Utara	2015	131	125	6
109	7108	Kabupaten Siau Tagulandang Biaro	Sulawesi Utara	2018	93	83	10
110	7174	Kota Kotamobagu	Sulawesi Utara	2018	33	15	18
111	7202	Kabupaten Banggai	Sulawesi Tengah	2015	322	279	43
112	7205	Kabupaten Donggala	Sulawesi Tengah	2018	167	158	9
113	7206	Kabupaten Toli-Toli	Sulawesi Tengah	2015	103	97	6
114	7207	Kabupaten Buol	Sulawesi Tengah	2017	115	108	7
115	7208	Kabupaten Parigi Moutong	Sulawesi Tengah	2018	257	252	5
116	7304	Kabupaten Jenepono	Sulawesi Selatan	2018	113	82	31
117	7305	Kabupaten Takalar	Sulawesi Selatan	2017	100	76	24
118	7307	Kabupaten Sinjai	Sulawesi Selatan	2018	80	67	13
119	7314	Kabupaten Sidenreng Rappang	Sulawesi Selatan	2018	106	68	38
120	7318	Kabupaten Tana Toraja	Sulawesi Selatan	2015	159	110	49
121	7322	Kabupaten Luwu Utara	Sulawesi Selatan	2015	173	166	7
122	7326	Kabupaten Toraja Utara	Sulawesi Selatan	2015	151	111	40
123	7403	Kabupaten Konawe	Sulawesi Tenggara	2018	329	272	57
124	7404	Kabupaten Kolaka	Sulawesi Tenggara	2018	135	102	33
125	7406	Kabupaten Bombana	Sulawesi Tenggara	2017	137	115	22
126	7407	Kabupaten Wakatobi	Sulawesi Tenggara	2015	100	75	25
127	7408	Kabupaten Kolaka Utara	Sulawesi Tenggara	2017	132	126	6
128	7410	Kabupaten Konawe Utara	Sulawesi Tenggara	2015	137	126	11
129	7502	Kabupaten Gorontalo	Gorontalo	2015	196	182	14
130	7601	Kabupaten Majene	Sulawesi Barat	2015	82	62	20
131	7602	Kabupaten Polewali Mandar	Sulawesi Barat	2018	167	144	23

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No	Id	District	Province	Election Year	No. Villages		
					Total	<i>Desa</i>	<i>Kelu- rahan</i>
132	8171	Kota Ambon	Maluku	2017	50	30	20
133	8272	Kota Tidore Kepulauan	Maluku Utara	2015	89	49	40
134	9409	Kabupaten Biak Numfor	Papua	2018	244	238	6
					25,163	23,181	1,982

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