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Has Decentralization in Indonesia Led to Elite Capture or Reflection of Majority Preference?

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Abstract

Elite capture in the context of decentralization and democratization is a general concern in public good provision in developing countries. In this paper, we have empirically examined this hypothesis using a large rural household survey conducted in Indonesia concerning access of households to road and electricity services. In Indonesia, prior to decentralization, local infrastructure was supplied by a centralized authority that had the potential to provide infrastructures that did not match heterogeneous local preferences. After the introduction of the decentralization, local infrastructure decision is taken by elected local authorities. It, however, runs the risks of elite capture. We have examined if access to infrastructure reflects' majority's preference or results in elite capture in the decentralized period taking the allocation under the centralized regime duly into account.

Keywords: Decentralization, rural infrastructure, elite capture, Indonesia

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Introduction

Elite capture in the decentralization context refers to the possibility of captures of public resources by local elites and local power groups. Both in theoretical literature (Bardhan and Mookherjee 2000) and in policy discussions, elite capture in the context of decentralization is now a widely discussed issue (Platteau 2004). Though the debate of local government and elite capture is not entirely new (Hamilton, Madison, and Jay 1787), it has taken the center stage in policy discussions following the recent wave of decentralization and democratization in developing countries (World Bank 1999). While the decentralization has been viewed as an improved way of delivering services to the poor (World Bank 2003), the possibility of elite capture at local level diminishes its benefits over a centralized delivery of services. In this paper, we empirically examine the extent of elite capture in the context of Indonesian decentralization. We ask the following question: has decentralization in Indonesia resulted in elite capture or reflection of majority preferences?

The need for answering this question arises from two reasons: first and foremost, in the theoretical literature, the possibility of elite capture depends on more than one crucial parameter and hence the link between decentralization and elite capture is not unambiguous. The theoretical mechanisms of elite capture in democratic systems are described in Grossman and Helpman (1996) in the context of special-interest groups and in Bardhan and Mookherjee (2000) in the context of decentralized and centralized system of governments. However, capture depends crucially on the size of elite groups, political accountability of local government leaders and the financing mechanisms of local public goods among others. Second, to our knowledge, the systematic empirical evidence is either nonexistent or very limited. Hence, answering this question has important research and policy implications.

In this paper, we answer this question and test the theory of elite capture in several ways. First, we look at the priorities set in *desa*[1] *'s* annual plan and ask the following question: do the

[1] *Desa* is the lowest level of decentralized unit in Indonesia

priorities that a *desa* sets in its annual plan have any connection with the voters' need? For this, we look at the association between priority set of a *desa* and voters' state to those priority areas. Imagine that in its annual plan in 2007 *desa d* has set drinking water as its first priority. Given this information, we look at the state of access of voters to drinking water for the *desa d*. If majority of the voters did not have access to drinking water, the priority would reflect the preference of the majority.

Second, though the above exercise seems to be indicative, priorities set at a *desa* level need to be realized at its voters' level. Imagine that our *desa d* connects itself to the local electricity grid since electricity was set as a priority in its annual plan. However, instead of majority of the voters getting connected to the grid, only few elites of the *desa d* can get connected. For this, we look at the access of voters to different public goods. Since we want to test if elites of a *desa* disproportionately capture the benefits of public goods in a decentralized regime, we examine if wealth (land, human capital) of voters influence their access to public goods.[2]

We draw the conceptual framework based on the mechanisms that have been used in Indonesia where *desa* uses a combination of its own resources and government subsidy to finance local public goods. While the information on local resource availability is known, the information on government subsidy is imperfect. For example, the total amount available to a district authority might be known but its allocation to different public goods is not. Compared to median voters, elite might have more information on it and use the informational advantage in its favor. Alternatively, it can be seen as determined by inter-village bargaining within a district where village leaders play an important role. Hence, village leader's characteristics may be important.

[2] This is similar to Arrow's impossibility theorem (Arrow 1950). Unlike in dictatorship, democracies need to solve this preference aggregation problem and one outcome that may arise is elite capture.

Given resources, the allocation among competing local public goods can be seen as determined by a political process where citizen voters participate in the decision making process and bargaining power[3] of citizens play important roles in the process. While low intra-village inequality in access to public goods makes consensus on public goods decision relatively easy, the opposite happens in the case of high inequality in access. Similarly, the higher the bargaining power of a particular class, e.g., farmers versus non-farm self employees within a village, the greater the likelihood of allocation towards that group.

Two testable hypotheses that can be drawn from here are: first, intra-desa allocation decision of public goods depends on past inequality in access and voter's bargaining power; second, voters' bargaining power, leadership's ability, local governance determine actual allocation.

Most existing empirical works on the link between decentralization and elite capture are limited to anecdotal evidence and case studies. The empirical work that bears most resemblance to our work is Bardhan and Mookherjee (2006). They have examined the elite capture hypothesis in the context of the West Bengal state of India and found it to hold for the local public good programs but not for the private good programs.

The remainder of this paper proceeds as follows: Section 2 provides a brief description of the decentralization process in Indonesia. Section 3 describes the empirical approach followed in this paper; Section 4 describes the data used; Section 5 describes the empirical results; and Section 6 concludes the paper with some possible policy implications.

1. Decentralization in Indonesia

Indonesia embarked on fiscal and political decentralization in 1999 immediately after the economic and financial crisis that swept Indonesia and most other East Asian nations in the

[3] Measuring bargaining power could be tricky – we have tried two alternative proxies – land ownership at the initial period and household head's years of schooling.

mid-nineties. In 1999, the then government boarded on a drastic reform path and the responsibility for much of the government expenditures was devolved to district governments through fiscal and political decentralization. It endowed local governments with additional fiscal and human resources, authorities and responsibilities. The transition was implemented in 2001 under strict deadlines. By law, within a year from approval, all implementing regulations were to be prepared, and by May 2001, the laws had to be implemented (Hofman and Kaiser 2006).

Prior to the current decentralization process, for most of its modern history, Indonesia was governed by a centralized system where the local governments mostly functioned as implementing agencies of policies and programs designed by the central government. Through the enactment of Law 22/1999 on regional governance, responsibility for much of the government expenditures has been decentralized to local (district) governments. The Law 22 has devolved all governance functions from the centre to the regions with the exceptions of national defense, international relations, justice, police, monetary policy, development planning, religion and finance. It has made local governments responsible for the provision of health, education, environmental and infrastructure services. The local governments can also perform any other function not explicitly reserved for the centre.

Similar to the law on governance, the Law 25/1999 on fiscal relations has significantly strengthened the local governments share in government spending. For example, the expenditure share of regional governments in overall public expenditures increased from about 17 percent in 2000 to over 30 percent after 2001. In addition, the decentralization has also reassigned some two-thirds of central civil servants to the regional governments, and regional governments are now responsible for employing over three-quarters of the civil servants.

The sweeping legislative and administrative changes in local governments introduced in 1999 have brought momentous changes on what local public infrastructures/goods will be financed and how they will be financed. Though all major tax bases, e.g., value added taxes, personal and corporate income tax, are still controlled by the central government, the local

governments receive a united transfer over which they have full discretion. Following the decentralization decision, the central government quickly delegated virtually complete responsibility for urban and rural infrastructure services to the local governments (Peterson and Muzzini 2005). In 2002, the local governments financed 44.3% of transportation development, 21% of health and social services, and 16% of education development (Eckardt and Shah 2006).

At community level (*desa*), the focus of our empirical analysis, the planning and provision of local public goods works as follows. Each *desa* has an elected local government body, known as BPD (Badan Perwakilan Desa – village representative council), that prepares an annual allocation plan of expenditures on local public goods subject to approval at a general meeting attended by all members of the *desa*. For financing of such a plan, it must raise at least 30% of the proposed expenditures from the *desa* residents through user fee or similar mechanisms. Once the plan and the financing method are approved, the *desa* governing body proposes it to the sub-district/district local governments. Given everything equal, the higher the financial contribution from a *desa*, and more the resources a district/sub-district possesses, the higher the likelihood of financing a local public good. At this stage, even though the central government distributes grant subsidies to the local governments, fiscal equalization remains incomplete in large part because the equalization formula to distribute resources is still driven by historical allocations including wages, and local governments are subject to significant disparities in per capita expenditures (Hofman and Kaiser 2006).

2. Empirical approach

The empirical approach followed in this paper is a parametric one which focuses on the relationship between voter (household) specific access to public goods and his/her bargaining power. Our approach can help to map the changes in access to public goods with bargaining

power and the effect of changes in political economy institutions at the village. The main specification is:

$$(1) \qquad INF_{id} = \alpha + \beta \bullet INF_{id}^{0} + \varphi \bullet Y_{id} + G_{d}^{'}\delta + \zeta_{d} + \varepsilon_{id}$$

Access (allocation) to public good *INF* for a household *i* living in *desa d* denoted as INF_{id} depends on access to the public good in the pre-decentralization period INF_{id}^{0}, household's bargaining power within the *desa* Y_{id}, a set of *desa* specific variables G_d that determines village governance (electoral competition, ability of the chairman, bargaining groups, participation (meeting frequency, meeting attendance as a % of village population)), village fixed effect ζ_d, and residuals ε_{id}.

We look at allocation (priority) among competing public goods at *desa* level and change in access to public goods at household level. Instead of estimating a separate equation for each of the public goods, we assume that the equations' errors are correlated and we estimate a seemingly unrelated regression (SUR) system (Zellner 1962). SUR, by weighting the estimates by the covariance of the residuals from the individual regression, produces more efficient estimates than OLS. Though not reported, a Breusch-Pagan (Breusch and Pagan 1980) test is conducted for independent equations; that is, the disturbance covariance matrix is diagonal, is rejected at 1% level of significance.

The allocation decision (priority setting) - the decision to allocate desa's resources, both desa's own resource and transfers from district authorities, to a particular public good *j* for a *desa d* depends on median voters' decision, which in turn depends on median voters' state of access to the particular public good in question. In the absences of a functioning democracy, elites of the *desa* may decide on allocation. The allocation decision is *desa*-specific, not individual voter specific in the sense that here priority among competing public goods are set for the *desa* as a unit and intra-*desa* decision are not made at this stage. Since information on

desa resources that were planned for each public good was not available to us, we are assuming that priority set in the *desa* predicts the subsequent planned allocation fairly well.

In terms of realization, the actual realization of a particular public good can be viewed as having access to the public good. In the absence of elite capture, access should be independent of bargaining power of a household. The realization of a public good can be measured at individual voter/household level.

We are also interested in the interactions of voter specific characteristics and governance. Heterogeneous effects of household's bargaining power (household's initial asset holding), initial state of access to public goods and local democracy (participation in meeting, decision making process) can be captured through interactions.

In terms of identification strategy, we are assuming that household bargaining power expressed in terms of landholding is exogenous with respect to household's public good access.[4] This requires absence of a reverse casualty of public good access on bargaining power, or of variables omitted from the estimated equation that affect both public good access and bargaining power.

3. Data

The data for this paper has come from two sources. First, the 1994/1995 PATANAS survey – a periodic survey conducted by ICASEPS (a full description of the survey can be found in Yamauchi et al. (2008). The PATANAS survey focused on agricultural production activities in 48 villages chosen from different agro-climatic zones in seven provinces. Second is the JICA's survey 2007, which was conducted as part of a study, titled *Study of Effects of Infrastructure on Millennium Development Goals in Indonesia (IMDG)*. It had a community

[4] Household head's education can be another important measure of the bargaining power, since education significantly contributed to income growth in the period of 1995 to 2007. It is well known that especially in Java where population density is high and land has been segmented, returns to land are diminished, and therefore the role of land may be overestimated. However, we have examined the education effect with and without landownership.

module that captured governance and decision making processes followed by BPD and other village level institutions that have evolved following the decentralization. The survey also included modules that accounted for access of individual households to various public goods.

The JICA survey was designed to overlap with villages in the 1994/95 PATANAS survey conducted by ICASEPS to build a household panel data. The 1994/95 PATANAS survey focused on agricultural production activities in 48 villages chosen from different agro-climatic zones in 7 provinces (Central Java, East Java, Lumpong, NTB, North Sulawesi, South Sulawesi, and South Kalimantan). In 2007, JICA's survey revisited those villages to expand the scope of research under the IMDG survey. In the 2007 round, 51 new villages were added in the 7 provinces. In the revisited villages, 20 households per village from the 1994/95 sample we re-sampled and the split households were followed up. In the new villages, 24 households from two main hamlets in each village were sampled. Since one of the 48 villages in the 1994/95 PATANAS was not accessible for security reasons in the 2007 survey (NTB province), a total of 98 villages were available for analysis.[5]

Two public goods that are chosen for this study include (intra) village road and electricity.[6] Following the decentralization, these goods are often planned and financed (partly) by *desa*. We have measured the access of each household to these two public goods; for instance, if a household has electricity at home or not. For road, it is the access of household to *desa* office. The access takes the value one if access is through paved/asphalt road and zero otherwise.[7]

[5] However, due to survey problems regarding the governance module, our actual estimation includes a subset of 62 villages. To see if there are any systematic differences between excluded 36 villages and included 62 villages in regards of public goods availability, we examined the mean differences in access and found no differences.

[6] For both road and electricity, the access at household level found in our sample is higher than the country average that we calculated in a companion paper (Chowdhury et al. 2007), where we have utilized village census data (PODES 2006).

[7] In calculating change in access, we did not consider deterioration, from positive access to negative access, since such cases were negligible (4 out of 1936 valid observations in the case of road).

For each public good, we have looked at two ways: first, if it was set as a first priority in the BPD's annual plan; second, change in access to it at household level. The priorities are set at desa level and accesses are realized at household level.

Turning to the explanatory variables, the amount of land that a household owns is used as a measure of bargaining power. Since PATANAS households and villages are by definition agrarian households, this should be a reasonable proxy for bargaining power. It is taken at 1995 in order to avoid any possible endogeneity issue. Land transaction is not very often in Indonesia and land possession does not change much over time.[8] For the village governance, variables that are taken include age of the BPD chairman[9], education and years of experience, if BPD members are elected or not, meeting frequency, and decision making mechanism (voting) at BPD.

Table 1 provide summary statistics of all the above and other variables utilized in the estimation.

[8] Inheritance to the next generation through household split process is not taken into account, since we focus on the original households in this analysis. The unit of observations in the analysis of public good access dynamics is the original household in 1995, from which some members had split in 1995-2007. However, in the analysis of village-level priority setting, we used the 2007 survey households, which include those split from the 1995 original households (who probably inherited land) and households in new sample villages included in the 2007 survey but not in the 1995 survey.

[9] In addition, gender of the BPD chair can have significant influence on the public goods and services composition. However, the number of female BPD chair was very small in our sample (only 2 out of 62) and we did not include it as a separate regressor as a result.

Table 1. Summary statistics

Variable	Mean	Std. Dev.	Min	Max
Road as the first priority	0.53	0.50	0	1
Electricity as the first priority	0.02	0.12	0	1
Change in access to road between 1995 and 2007	0.18	0.39	0	1
Change in access to electricity between 1995 and 2007	0.27	0.45	0	1
Access to Road in 2007	0.81	0.39	0	1
Access to Electricity in 2007	0.86	0.35	0	1
Access to Road in 1995	0.64	0.48	0	1
Access to Electricity in 1995	0.59	0.31	0	1
Amount of Land owned in 1995	0.75	1.52	0	20
Gender of the BPD Chair	0.03	0.17	0	1
Age of the BPD Chair	46.58	11.57	26	84
Years of Schooling of the BPD Chair	12.88	3.20	6	16
Years of Experience of the BPD Chair	3.79	2.37	0.1	8
If BPD is Elected (0,1)	0.61	0.49	0	1
Frequency of Meeting (High -1, Low-0)	0.33	0.47	0	1
Voting on BPD decision (High -1, Low-0)	0.67	0.47	0	1

Sample size is limited to 62 villages utilized in the current estimation.

Though the local governance law in Indonesia requires each *desa* to have an elected local government body, according to the survey findings, about 42% of the surveyed villages did not have an elected BPD head. In such villages, the BPD heads were made not through any majority voting process.

Meeting provides the opportunity for participation for voters, express their opinions and raise their voices. Therefore, the frequency of meeting has been taken as a proxy for the participation of voters - the higher the frequency the more the participation. If meetings take place weekly, biweekly or monthly, it takes a value of 1 and zero otherwise.

Voting is taken as a proxy for decision making mechanism at BPD. If likelihood of decision making through voting is high, it takes a value 1, and zero otherwise. Note that, unlike majority voting and participation, the role of voting in decision making is not obvious and high frequency of voting in fact may also signal a lack of consensus on village priorities.

5. Results

The empirical findings related to our first question, whether the priority setting at *desa* level reflects the household/voter's need within the *desa*, have been presented in Table 2. For electricity[10], the priority setting reflects the need of the majority of the voters. There is a negative correlation between average access to electricity within the *desa* and *desa*-level priority for this good. For road, average road access in the *desa* has positive impact on the *desa*-level priority for road. One plausible explanation is that between two public goods considered here, road is the less exclusive and average access at village level may leverage connectivity at household through network effect. The same logic does not apply for the electricity; average access at village level does not imply leveraging benefit at household level.

In terms of the interaction between BPD head characteristics and voters' access to public goods, results show a negative effect of age and a positive effect of experience on allocation to roads and electricity. One plausible explanation is that more experienced a leader is, the more likely s/he is to realize the role that roads, electricity and water play in voters' wellbeing and re-election possibility.

In terms of the interaction between voter's access to public goods and village governance (BPD elected or not), in electricity, households with access are putting priority to enhance access where BPD heads are elected instead of appointed.

[10] Note that only two villages set electricity as first priority. So results should be interpreted with cautions.

Table 2. Access to public goods and priority setting for public goods at *Desa* level, probit model

	Road as the first priority	Electricity as the first priority~
Average road access in the *desa* (0,1)	1.013***	
	(0.337)	
Road access X Education of the BPD head	0.00362	
	(0.0142)	
Road access X Age of the BPD head	-0.0356***	
	(0.0041)	
Road access X experience of the BPD head	0.170***	
	(0.0176)	
Road access X BPP elected	-0.121	
	(0.0867)	
Average electricity access in the *desa* (0,1)		-9.235***
		(1.66)
Electricity access X Education of the BPD head		0.264***
		(0.0864)
Electricity access X Age of the BPD head		-0.0980***
		(0.0251)
Electricity access X Experience of the BPD head		0.0187
		(0.0671)
Electricity access X BPD elected		7.36***
		(0.00)
Constant	0.0647	-0.439*
	(0.108)	(0.245)
Observations	61	62
R-squared	0.09	0.34

~ Only two villages set electricity as first priority. Numbers in parentheses are standard errors; *, **, ***, significant at 1%, 5%, and 10%.

Table 3 presents the findings related to the central question of elite capture or majority preferences. According to the findings, elites are not disproportionately getting access to public goods after decentralization. Change in access to public goods considered here has not disproportionately benefited the local elites proxied by landownership.

However, if the elite (the landholding class) already had access to infrastructure and the poor did not have access, these two sets of variables (landholding size, access to public goods) mean the same. We have examined the correlation between landholding size and access to public goods in pre-decentralized period. The correlation between access to electricity and land holding is 0.05, and between access to road and landholding is -0.04, and they are not statistically significant. Given this, and the empirical finding, the bargaining power represented

by the landholding size is not statistically significant in ensuring access to public goods in the decentralized regime.

Table 3 also presents the results of the interactions between households that did not have initial access to public goods and decentralization. It shows if and how the democracy at village level (BPD election, participation, voting) has affected such households. The results show that such households have been benefited from democracy. The likelihood of having access to public goods for such household is higher in an elected regime than in a non-elected regime. Similarly, there is an interaction effect of participation in meeting and access to public goods for households that did not have access in centralized regime.

Table 3. Households bargaining power and the realization of access to public goods and decentralization

Variables	Change in access to road		Change in access to electricity	
Land ownership 1995	-0.0301	0.0624	-0.00519	0.101
	(0.052)	(0.062)	(0.059)	(0.088)
Initial access to road	-2.491***	-1.878***		
	(0.29)	(0.36)		
Initial access to electricity			-3.094***	-4.784***
			(0.27)	(0.56)
No initial access to road X BPD elected	0.502***	0.754***		
	(0.19)	(0.25)		
No initial access to road X Participation	0.423*	0.889***		
	(0.22)	(0.3)		
No initial access to road X Voting	0.550**	1.144***		
	(0.22)	(0.23)		
No initial access to electricity X BPD elected			0.744***	0.921***
			(0.17)	(0.3)
No initial access to electricity X Participation			0.432**	0.559*
			(0.18)	(0.32)
No initial access to electricity X Voting			-0.0632	0.928***
			(0.19)	(0.3)
Constant	-1.635***	-2.055***	-0.750***	0.081
	(0.21)	(0.61)	(0.16)	(0.52)
Fixed effects	Province	Village	Province	Village
Observations	738	701	727	727

Numbers in parentheses are standard errors; *, **, ***, significant at 1%, 5%, and 10%.

To see if the results are robust to a change in the proxy used to measure household bargaining power, we have used household head's education instead of land ownership. As reported in Table A1 in Appendix, this does not change our basic findings – the bargaining power proxied by household head's education is not statistically significant in ensuring access to public goods in the decentralized regime.

Conclusions

Elite capture in the context of decentralized delivery of public goods has been a long held concern which has been rekindled with the decentralization and democratization experiments of developing countries. Based on Indonesian experience, our findings show that decentralization has not led to elite capture in public good provisions. Public goods that are provided under the decentralized regime rather reflect the preferences of the voters who did not have access to such public goods under the centralized provision.

Local governance seems to be important and it has been functioning. The interactions between voter's access to public goods and election, participation and voting seem to be significantly affecting actual realization of public goods at citizen level.

However, as seen, there are differences in the governing process – villages differ in terms of voting, election and other important aspects. Why the same institutional change has brought different changes in governance at village level and how the best practices can be replicated across Indonesia are important questions not answered here and may warrant further research.

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Table A1. Robustness check – bargaining power

Variables	Change in access to road		Change in access to electricity	
Land ownership 1995		-0.059		0.008
		(0.049)		(0.061)
Schooling of household head	0.0002	0.0002	0.03	0.0211
	(0.026)	(0.027)	(0.022)	(0.022)
Initial access to road	-2.365***	-2.354***		
	(0.29)	(0.3)		
Initial access to electricity			-3.071***	-3.092***
			(0.27)	(0.28)
No initial access to road X BPD elected	0.603***	0.650***		
	(0.2)	(0.21)		
No initial access to road X Participation	0.482**	0.404*		
	(0.23)	(0.24)		
No initial access to road X Voting	0.508**	0.602***		
	(0.22)	(0.23)		
No initial access to electricity X BPD elected			0.803***	0.798***
			(0.17)	(0.18)
No initial access to electricity X Participation			0.498***	0.455**
			(0.19)	(0.19)
No initial access to electricity X Voting			-0.0363	-0.0359
			(0.19)	(0.19)
Constant	-1.642***	-1.601***	-1.005***	-0.938***
	(0.25)	(0.26)	(0.22)	(0.22)
Fixed effects	Province	Province	Province	Province
Observations	710	691	702	682

*, **, ***, significant at 1%, 5%, and 10%.

Abstract (in Japanese)

要約

地方分権や民主化の過程にある開発途上国では、公共財の供給の決定において権力者層による恣意的な選択（elite capture）が行われていないかという点が懸念される。本稿では、道路や電化に着目し、インドネシアにおいて上記の懸念が成り立つかどうかを確認する。インドネシアでは地方分権の前までは農村のインフラ整備は中央主導で行われており、インフラ優先順位に関する農村内の選好の多様性を反映できていなかった可能性がある。地方分権が進んだ現在においては、農村のインフラ整備は地方自治体毎に選挙で選ばれたメンバーが意思決定を行っているが、権力者層による恣意的な選択の可能性は依然として残されている。本稿は地方分権の前と後のインフラアクセスデータと家計データを組み合わせた分析を行い、権力者層による恣意的な選択は確認されないとの示唆を導いている。

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