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The Economic Society of Australia warmly welcomes you to the Gold Coast, Queensland, Australia for the 37th Australian Conference of Economists.

The Society was formed 83 years ago in 1925. At the time, the Society was opposed to declarations of policy and instead focused on open discussions and encouraging economic debate. Nothing has changed today, with the Society and the conference being at the forefront of encouraging debate.

This year we have a large number of papers dealing with Infrastructure, Central Banking and Trade.

Matters of the greatest global importance invariably boil down to be economic problems. Recent times have seen an explosion of infrastructure spending, after world-wide population growth has seen demand outpace aging supply. The world has become more globalised than at any time since World War I but the benefits of this (and the impact on our climate) has been questioned by some.

At the time of preparing for this conference we could not have known that it would have been held during the largest credit crisis since the Great Depression. The general public and politicians both look to central banks for the answers.

We are also very pleased to see a wide selection of papers ranging from applied economics to welfare economics. An A – Z of economics (well, almost).

Another feature of this conference is that we have gone out of our way to bring together economists from all walks of life, in particular from academia, government and the private sector. We are grateful to all of our sponsors, who are as diverse as the speakers.

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Has Decentralization in Indonesia Led to Elite Capture or Reflection of Majority Preference?[1]

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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 households survey conducted in Indonesia concerning access of households to road, electricity, and drinking water 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.

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1. 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 AER 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, the theoretical literature does not provide any unambiguous answer on the link between decentralization and elite capture. 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. Under certain conditions such as… (), . Second, to our knowledge, the systematic empirical evidence is either nonexistence or very limited.

In this paper, we answer this question and test the theory of elite capture in more than one ways. First, we look at the priorities set in *desa's* annual plan and ask the following question: do the 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 does not have access to drinking water, the priority would reflect the preference of the majority.

Second, though the above exercise seems to be indicative, setting priority is a necessary but not a sufficient condition. 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* gets 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 income or wealth of voters influence their access to public goods.

The debate on the possibility of elite capture at local level in a decentralized government goes back to centuries in the context of the United States.[4] However, the debate has got new momentum following the decentralization and democratization experiments in developing countries that started in late 1980s and early 1990s.

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 be hold for the local public good programs but not to be hold 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 builds a model that links decentralization of decision making to elite capture and voter's preferences. The main implications are that past inequality and access determine present infrastructure allocation decision, and voters' bargaining power, local government's ability, district resource determine actual allocation. Section 4 describes the empirical approach followed in this paper; Section 5 describes the data used; Section 6 describes the empirical results; and Section 7 concludes the paper with some possible policy implications.

2. 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 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

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[4] See the Federalist Papers (1787) cited in Bordhan and Mookherjee (2000).

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 is 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 is still driven by historical allocations including wages, and local governments are subject to significant disparities in per capita expenditures (Hofman and Kaiser, 2006).

3. Conceptual issues

4. 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. This 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:

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

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 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.

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 whole 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* maps the 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. 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, and are unrelated to the decision making mechanism of public goods allocation under decentralized governance.

5. 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 JBIC's survey 2007, which was conducted as a part of a study titled *Study of Effects of Infrastructure on Millennium Development Goals in Indonesia (IMDG)*. It had a community 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 JBIC 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, JBIC'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.

Three public goods that are chosen for this study include village road, electricity, and water. Following the decentralization, these goods are often planned and financed (partly) by *desa*. We have measured the access of each household to these three public goods. For instance, if a household has electricity at home or not, water or not etc. For road, it is the access to paved/asphalt 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. For the village governance, variables that are taken include gender of the BPD chairman, his/her age, education and years of experience, if BPD members are elected or not, meeting frequency, and decision making mechanism at BPD.

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

Table 1: Summary Statistics

Variable	N	Mean	Std. Dev.	Min	Max
Road as the first priority	2053	0.536	0.499	0	1
Electricity as the first priority	2053	0.024	0.153	0	1
Water as the first priority	2053	0.035	0.184	0	1
Change in access to road between 1995 and 2007	1931	0.166	0.372	0	1
Change in access to electricity between 1995 and 2007	1987	0.262	0.440	0	1
Change in access to water between 1995 and 2007	1806	0.025	0.158	0	1
Access to Road in 2007	2160	0.827	0.378	0	1
Access to Electricity in 2007	2266	0.883	0.322	0	1
Access to Water in 2007	2204	0.735	0.441	0	1
Access to Road in 1995	1970	0.673	0.469	0	1
Access to Electricity in 1995	1999	0.629	0.483	0	1
Access to Water in 1995	1867	0.734	0.442	0	1
Amount of Land owned in 1995	2183	0.798	1.526	0	20
Gender of the BPD Chair	1846	0.024	0.153	0	1
Age of the BPD Chair	1820	46.319	10.773	26	84
Years of Schooling of the BPD Chair	1824	12.822	3.140	6	16
Years of Experience of the BPD Chair	1729	3.824	2.325	0.1	8
If BPD is Elected (0,1)	1813	0.582	0.493	0	1
Frequency of Meeting (High -1, Low-0)	1797	0.398	0.490	0	1
Voting on BPD decision (High -1, Low-0)	1024	0.704	0.457	0	1

6. Results

The empirical findings related to our first question, if the priority setting at *desa* level reflect the household/voter's need of the *desa*, have been presented in Table 2. With the exception of road, the priority setting reflects the need of the majority of the voters for two other public goods – electricity and water. There is a negative correlation between access to electricity and water and priority for these two goods. For road access does not have any significant impact on the priority for road.

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. Local governance seems to be important and 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.

Table 2: Voters' Access to Public Goods and Priority Setting for Public Goods at *Desa* Level, Seemingly Uncorrelated Regression

COEFFICIENT	Road as the first priority	Electricity as the first priority	Water as the first priority	Road as the first priority	Electricity as the first priority	Water as the first priority
Household/Voter's road access (0,1)	0.0166			-0.0317		
	(0.03)			(0.034)		
Household/Voter's electricity access (0,1)		-0.0357***			-0.0620***	
		(0.012)			-0.012	
Household/Voter's water access (0,1)			-0.0206***			-0.0365***
			(0.007			(0.0087)
BPD Chairman Chateristics						
Gender (male=1)	-0.646***	-0.0575**	-0.0142	-0.750***	-0.0466	-0.0641*
	(0.077)	(0.027)	(0.02)	(0.11)	(0.033)	(0.034)
Age	-0.00611***	-0.00336***	0.00101***	-0.00491***	-0.00169***	0.00104***
	(0.0011)	(0.0004)	(0.00029)	(0.0012)	(0.00037)	(0.00037)
Years of Schooling	0.0279***	-0.00520***	0.00567***	0.0160***	0.00463***	0.00486***
	(0.0039)	(0.0014)	(0.001)	(0.0044)	(0.0013)	(0.0013)
Years of experience	0.0366***	0.00838***	0.00572***	0.0753***	-0.000975	0.00685***
	(0.0052)	(0.0018)	(0.0013)	(0.0059)	(0.0017)	(0.0017)
Village governance						
BPD elected (0,1)				-0.0479	0.0352***	-0.0601***
				(0.029)	(0.0085)	(0.0088)
Meeting/participation of voters (0,1)				0.117***	-0.0382***	-0.0254***
				(0.03)	(0.0088)	(0.009)
Constant	0.331***	0.256***	-0.111***	0.302***	0.0883***	-0.0459
	(0.084)	(0.032)	(0.022)	(0.1)	(0.031)	(0.03)
Observations	1527	1527	1527	1141	1141	1141
R-squared	0.11	0.06	0.05	0.17	0.07	0.11

Table 3: Households Bargaining Power and the Realization of Access to Public Goods and

VARIABLES	Change in access to road	Change in access to electricity	Change in access to water
Land ownership	-0.0563	-0.035	0.0703
	(0.0772)	(0.0978)	(0.0792)
Initial access to road	-5.659***		
	(0.574)		
Initial access to electricity		-6.723***	
		(0.698)	
Initial access to water			
Road Access* BPD elected	4.017***		
	(0.759)		
Road Access*Participation	2.604**		
	(1.029)		
Road Access*Voting	4.615***		
	(1.025)		
Electricity Access* BPD elected		7.998***	
		(2.268)	
Electricity Access*Participation		6.666***	
		(2.524)	
Electricity Access*Voting		5.631***	
		(1.36)	
Water Access* BPD elected			0.49
			(1.846)
Water Access*Participation			-0.384
			(2.335)
Water Access*Voting			5.549**
			(2.297)
Constant	-2.131***	-0.833**	-5.035*
	(0.325)	(0.327)	(2.824)
Observations	738	727	471

*** p<0.01, ** p<0.05, * p<0.1
Standard errors in parentheses

7. 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 majority.

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