Do Education Systems Trust Decentralization? Evidence from Survey Experiments in Nepal

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How does an education system respond during early stages of big-bang decentralization? We examine this in Nepal which undertook rapid education decentralization in late 2017. Through survey experiments in 2018, we investigate trust between different tiers of education service delivery. Trust can serve as a useful litmus test for the legitimacy of the newly-formed local governments; and an early detector of potential roadblocks to the smooth transition of power. We find that local governments are seen as legitimate and trustworthy by headteachers and teachers, both in absolute and relative terms (vis-à-vis the center). However, they are concerned about the accountability of local governments and their potential politicization in certain educational tasks. We also find that local governments trust the center and are looking to them for capacity building and support. Finally, teacher management is the single most contentious roadblock to effective decentralization. There is significant disagreement between teachers, head-teachers, elected and non-elected local government officials about whether teacher hiring and promotion should be managed at the center or at the local level. We also discuss policy implications of these findings.

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1. INTRODUCTION

Identifying the optimal degree of centralization in service delivery has been an important question in development economics (Bardhan 2002, Bardhan and Mookherjee 2006,). Meaningful decentralization – which entails the devolution of decision-making power to the local-level - can be disruptive (Kremer et al. 2003, Prud'Homme 1995). It involves re-configuring ossified government systems; re-negotiating complex relationships of power, autonomy, and accountability; and getting new actors to take on new responsibilities – and more problematically existing actors to relinquish their established roles.

At the end of this tumultuous process, it has the potential to significantly reshape the way service delivery is managed (Ahmad et al. 2005, Kahkonen and Lanyi 2001). International experience suggests that decentralization can improve the efficiency of public service delivery. But this will likely only take place under specific conditions, including sufficient local government autonomy, capacity to deliver services aligned with local needs, strong accountability, good governance, and a sufficient degree of expenditure and revenue decentralization. (World Bank, 2021; Channa and Faguet, 2016; Ahmad and Brosio, 2009). It is because of its promise meaningful change that decentralization remains a debated but nonetheless popular policy choice, especially for developing countries like Nepal (Bird and Vaillancourt 2008, Bardhan 2002).

According to Bardhan (2002), one goal of decentralization in developing countries can be to diffuse unrest among disadvantaged minority groups. This is the case for Nepal, where years of high inequality, exclusion, and other government failures have created a strong push for decentralization (Jha 2014, Lawoti and Hangen 2013, Whelpton 2005). Nepal adopted a new federal constitution in 2015. This constitution adopts a 'big bang' approach to state restructuring, creating three tiers of government at the federal, provincial and local levels with significant devolution of decision-making and resources to local governments. Newly elected local governments have taken full responsibility for education service delivery up to high school in one-full swoop in 2018.

How can this process be best supported to maximize positive outcomes? One can assume that there is a window of opportunity to establish credible relationships and set this transition on a positive trajectory. However, it is difficult to concretely identify promising areas of entry. To address this gap, we study 'trust' between citizens and local government and between local governments and central government at the earliest stage of education decentralization in Nepal. During early phases of transition, trust in the decentralization process can be a useful proxy of how effective local democracy and the institutions of decentralization are likely to be (Tang and Huhe 2016, Pose et al. 2015).

Citizen trust in government is necessary for political leaders to secure compliance without coercion (Levi 1996, 1997; Scholz and Lubell 1998; Scholz and Pinney 1995; Tyler 1990). Higher trust in government is associated with compliance with the law and support for domestic policy (Hetherington 1998; Scholz and Lubell 1998). It also affects civic participation and interpersonal trust, both key elements in the array of attitudes that constitute social capital (Brehm and Rahn 1997). On the other hand, low trust in government reflects skepticism, an unwillingness to presume that political authorities should be given the benefit of the doubt (Cook and Gronke, 2005; Mishler and Rose, 1997).

There has been some research on the impact of decentralization on citizen trust. Exploiting variation across states within the United States, Dincer (2010) finds that trust in persons is higher in states

where there are a larger number of local governments or where revenue and expenditure decentralization rates are higher. For Brazil and Indonesia, de Mello (2011) uses decentralization reforms to show that fiscal decentralization is positively associated with pro-voice attitudes, which in turn are related to trust in persons. Kincaid and Cole (2010) document public attitudes and trust in various orders of government for the three North American federations Canada, Mexico, and the United States. Ligthart and van Oudheusden (2015) find that decentralization increases trust in government and also in other political institutions such as political parties and parliaments.

This paper makes two contributions. First, it examines the early phase of big-bang decentralization in a developing country. There is limited data on this aspect, despite tremendous policy and research interest on the topic of decentralization. Second, it explores the role of 'trust' between different tiers of education service delivery as a potentially useful proxy for the overall health of decentralization process and for identifying potential roadblocks and challenges.

We study two dimensions of trust in the early-phase of education decentralization in Nepal. First, we investigate how much local governments trust the center. This can help in the early detection of potential issues in the smooth transition of power. Second, we investigate the degree to which head-teachers and teachers trust local governments, both in absolute terms and also in relative terms (vis-à-vis the center). This provides an early litmus test of the strength of the legitimacy of local governments in education service delivery. These lines of inquiry can have predictive power for the future success of Nepal's ongoing experiment with big-bang decentralization. It can illuminate promising areas of support and intervention.

We study trust through a battery of survey experiments administered to nearly 200 local government officials, 300 head-teachers, and 550 teachers in Nepal. These data are supplemented with detailed surveys. Experiments reveal that local governments have strong trust in central government for building their capacity and providing technical guidance. In fact, head-teachers have stronger trust in local governments than the central government. At the same time, head-teachers and teachers are concerned about the technical capacity of local governments and about the accountability and political motivations of local governments. These findings suggest the urgency of building capacity and creating reliable information and accountability platforms to ensure a strong and positive transition to a decentralized education system in Nepal.

We also find that the biggest threat to the smooth transition of power comes lies in the question of who should be responsible for hiring and managing teachers? Elected local officials overwhelming believe this responsibility should lie with them, while head-teachers, teachers, and non-elected local officials believe teacher hiring should be the responsibility of the center; their opinion is more divided on teacher promotion. These results suggest that early consensus-building, clarity, transparency, and careful communication on the issue of teacher management is an important ingredient for smooth transition of power in education decentralization.

The rest of the paper is structured as follows. Section 2 discusses the process of education decentralization in Nepal. Section 3 presents research questions, experimental design, and data. Section 4 examines perceptions regarding decentralization, at different levels of education service delivery. Section 5 uses the experiment to establish the extent of trust between frontline service providers, local governments, and the central government in the early phase of decentralization. Section 5 lays out limitations and caveats around this work and Section 6 concludes.

2. DECENTRALIZATION IN NEPAL

Nepal has seen vocal public demand for greater devolution of power to the local level since the 1950s (Karki and Edrisinha, 2014). This issue was central to Nepal's civil conflict from 1996 to 2006 (Boex, 2012). This conflict came to an end when the government proposed to amend the constitution to guarantee more power to local governments (Karki and Edrisinha, 2014). Accordingly, in 2017, 753 local government units¹ and 7 provincial units were created, followed by the first local level elections in twenty years.

The emergence of local government units in Nepal with authority to manage resources carries important implications for service delivery and for broader social and political cohesion. The expectation is that this shift in the management of education service delivery will make the government more responsive and efficient.

Following this change, local governments now have the "exclusive responsibility" for delivering basic and secondary education. Since 2018 local governments have assumed the responsibility of education service delivery, primarily through taking over the task of monitoring and managing schools ². Local governments have ownership and responsibility over school facilities. The deployment of teachers has become a local responsibility (although teachers remain civil servants). In parallel, the central and district-level staff have been reallocated to local governments and (to a lesser extent) to provincial governments. The massive degree of decentralization can be gleaned from Annex 1, where the new responsibilities are laid out.

The central government retains role of guiding education policy and setting standards, and the federal and provincial governments are responsible for higher education. There is also no change in the frontline actors in service delivery at the school level. Head-teachers and school management committees continue to manage school level activities and providing overall quality assurance.

Note that the new 2015 Constitution of Nepal has not clearly defined more specific functions such as teacher management including hiring teachers, curriculum and textbooks development, examinations and assessment, among different levels of the government. This has created confusion and frictions among the different tiers of education. In particular, teacher management remains a contested area across different levels of the government (this is discussed further in the results section). This is especially true around decisions of hiring temporary and permanent teachers and of determining teacher allocation within local levels. The Federal Education Act which is expected to be tabled in the National Parliament in the near future is expected to provide further clarity on the roles of the federal, provincial and local governments. This act is still being debated.

3. SETTING, DATA, AND EXPERIMENTAL DESIGN

3.1 Setting

This paper examines three research questions regarding trust between different tiers of education service delivery during early decentralization, as follows:

¹ The local governments are called rural municipalities (Gaupalika) and urban municipalities (Nagarpalika).

² The extent of this is evident in fund flows. in FY21, 64 percent of education expenditures have been budgeted for local levels (33 percent for federal level and 3 percent for provincial level). However, because much of the local level budgets for education are in the form of conditional grants, the federal government in practice maintains a certain level of control or influence on the education sector.

- 1) Trust Dimension 1: Do local governments trust the central government?
- 2) Trust Dimension 2: Do frontline service providers trust local governments relative to the central government?
- 3) Trust Dimension 3: Do frontline service providers trust local governments, in absolute terms?

In addition, we present survey data on perceptions of frontline service providers and local government officials around decentralization.

Sample Selection and Data

The study targets different layers of education service delivery, across multiple districts in Nepal, using a multi-phase approach, with each phase building on the other. The different phases are:

Phase	Respondent	Sample Size	Methodology	Timing
1	Head-teachers	448	Survey	Dec 2017
2	Head-teachers	130	Focus Group Discussions	Jan 2018
3	Local Government officials	196 LG	Survey Experiments	Sept – Dec 2018
	(LGs), Head-teachers (HT)	286 HT		
	and Teachers (T)	540 T		

Phase 1 includes a survey from 368 government and 80 private schools across 8 districts in 3 provinces³. Within selected districts, schools were identified through a two-stage random sampling method. First from each district, two resource centers were randomly selected,⁴ then 28 schools were randomly selected from each resource center. Random selection of schools within resource centers included stratification by public (23 schools) and private (5 schools). Phase 2, involving focus group discussions with head-teachers, was undertaken in a sub-sample of Phase 1 schools.

Phase 3 involving survey experiments with local government officials, head-teachers, and teachers was implemented from September to October 2018. Around 286 schools across 5 districts in 4 provinces⁵ (out of Nepal's 7 provinces) were visited. The head-teacher and 2 teachers from each school were surveyed, leading to a total of 286 head-teachers and 540 teachers in the sample⁶ ⁷. The sample also included 196 local government officials comprising elected officials (Mayor, Deputy Mayor and Ward Chairperson), non-elected officials⁸ (Chief Administrative Officer and Head of the Education Unit) and school management committee heads from 40 rural and urban municipalities. We set out to select 8 municipalities from each of our 5 districts. We first selected those municipalities that fell in our surveyed schools and in case of any shortfall, we randomly sampled among the remaining municipalities in the given district. Figure 1 maps the districts covered in Phases 1 and 3.

³ Province 1: Morang and Sunsari. Province 3: Lalitpur, Bhaktapur, Kathmandu and Kavre and Province 4: Kaski and Syanja districts

⁴ Kavre district had 26 RCs (highest) and Bhaktapur had 8 RCs (lowest)

⁵ Province 1: Morang, Province 2: Dhanusha, Province 3: Lalitpur and Kavre and Province 4: Kaski district.

⁶ Around 23 community schools interviewed from phase I survey were re-interviewed and 7 additional schools were randomly chosen from remaining schools in each district.

⁷ Only 1 teacher per school were interviewed in 31 schools, largely because the randomly sampled teacher was not available in the school when the enumerators were in the school.

⁸ Some are selected by the public service commission while others are former teachers. They do not have term limits but are transferable.

Experimental Design

This paper relies on a series of randomized survey experiments through which we examine trust between different tiers of education management in the early phases of education decentralization in Nepal (Phase 3). Details of each experiment are as follows:

Trust Dimension 1: Do local governments trust central/provincial governments?

We test this first by exploring if local governments resist direct top-down '*capacity building*' from the center. This is tested through <u>a framing experiment</u>, delivered across two randomized groups of local government officials, as follows.

Are respondents more likely to support center's intervention, if the question is framed as:

- a) 'central/provincial government builds capacity' (high-trust scenario) vs. 'central/provincial government supports local leaders in building their own capacity.' (low-trust scenario)
- b) Ministry of Education implements a training program 'to build the capacity of local governments to develop education plans' (high-trust scenario) vs. 'to help local government officials set the agenda for developing local education plans (low-trust scenario)

If there is trust, then the framing of whether center '*builds*' capacity or whether center helps local governments '*build their own capacity*' should make no difference.

Another way we test whether local governments trust the center is by exploring if local governments are more or less likely to accept policy ideas if they know the center supports them. This is tested through <u>a framing experiment</u>, delivered across two randomized groups of local government officials, as follows.:

Are respondents more likely to support a policy idea if it is known that center is supporting it (high-trust scenario) vs. center is not mentioned (low-trust scenario). We test this for three policy ideas: early childhood education; public expenditure tracking survey; and performance-based financial bonus for teachers.

<u>Trust Dimension 2: Do frontline service providers trust local governments, in relative terms (visà-vis central government)?</u>

To examine this, we rely on <u>vignette experiments</u>. Here we present frontline service providers with a hypothetical scenario with suggestive information about positive action on the part of a specific agent. We create two randomized groups of head-teachers and teachers, such that:

- a) The '*agent*' is local government
- b) The 'agent' is district education officers (who report to central government)

The respondents are asked about whether they attribute positive action to the agent. If there is equal trust, then the respondent should be equally likely to attribute positive action to the agent irrespective of whether they are local or central government. If, on the other hand, respondents put greater trust in local government, then they would be more likely to ascribe positive action to local government than to central government (and vice versa).

A related dimension we explore is the extent to which local governments choose the course of action, when asked how they would act versus how they think the center (Ministry of Education) should act. This question is framed in relation to a politically expensive policy option – sanctioning low-performing teachers. This serves to provide a checkpoint on how likely local governments are to act

in the way they expect the center to act in the face of politically expensive choices. So in a sense it provide some suggestive evidence on whether the relative faith in local governments is entirely merited.

Trust Dimension 3: Do frontline service providers trust local governments, in absolute terms?

One way to examine this is to test whether frontline service providers' optimism about decentralization is mediated by the question of accountability. To do this, we conduct a <u>sequencing</u> <u>experiment</u>, with two randomized groups of head-teachers and teachers, who are asked:

- a) How optimistic they were about local governments' ability to improve education service delivery followed by a question about their views regarding the suitability of different accountability measures targeted at local governments.
- b) The order of the two questions reversed.

If there is trust, then the sequencing should make no difference. On the other hand, if trust is an issue, then priming respondents with the idea of 'accountability' will be salient and reduce the degree of optimism in Group (b).

On this dimension too, we explore how local governments are likely to behave. Here we test whether local governments are more likely to support a policy option if it is backed by technical evidence versus it being backed by politically salient messaging. By doing so, we provide some suggestive evidence on whether the absolute faith in local governments in entirely merited.

Empirical strategy

A simple regression analysis allows us to test the three different hypotheses laid out above – trust between local and central government, trust between frontline service providers and local government in relative and in absolute terms. For each of these dimensions, the proxy of trust is the dependent variable and we regress it on the treatment variable associated with the corresponding survey experiment. We also include relevant control variables:

$$(Trust Proxy)_{ij} = \alpha + \rho * Treatment_{ij} + \delta X_i + \varepsilon_{ij}$$

Where *Trust Proxy* is a dummy variable which indicates a specific dimension of trust in the context of education decentralization; *Treatment* is a dummy variable that equals 1 for high-trust and 0 for low-trust scenario; and *X* is a vector of control variables⁹. In this equation, *i* indexes respondent (teacher, head-teacher, local government official) and *j* indexes school (for teacher and head-

⁹ For dimension 1a the control variables are: Age of the respondent and dummy variables for: (i) Type of local government (rural or urban), (ii) Gender, (iii) School Leaving Certificate (SLC) qualification, (iv) Higher than SLC qualification and (v) Elected/non-elected official. We also control for vote share received when restricting the regression to only elected officials.

For dimensions 2 and 3 the control variables are: Age of the respondent, number of periods taught per week, highest grade taught, teaching experience in years and dummy variables for: (i) Teacher or Head-Teacher, (ii) Gender, (iii) Permanent or Temporary Teacher, (iv) Nepali or English Medium School and (v) Type of local government (rural or urban)

teacher)/local government (for local government official). Standard errors are clustered at the local government (for Trust Dimension 1) or school level (for Trust Dimensions 2 and 3).

Our dependent variables are binary. Consequently, a linear probability model (OLS) or a probit model helps estimate the effect of the survey experiment(s). One drawback of these non-linear models, however, is that their estimation is through maximum likelihood which sometimes do not converge. Linear models are free of this problem, although it has its own drawbacks – principally, its predictions can lie outside the (0,1) range. Since we are not interested in predicting probabilities but in isolating coefficient estimates, we use linear probability models.

Our main interest lies in estimating the coefficient ρ from Equation (1). If ρ is negative and statistically significant – we interpret this as indicative of the low-trust scenario on that dimension.

Trust Dimension	Treatment		
	a) 'Central/provincial government builds capacity'		
	(high-trust scenario) = 1		
	'Central/provincial government supports local leaders in		
	building their own capacity'		
1 Local Government Official	(low-trust scenario) = 0		
(trust towards center)	b) Ministry of Education is planning a training program 'to		
	build the capacity of local governments to develop		
	education plans'		
	(high-trust scenario) = 1		
	Ministry of Education is planning a training program 'to		
	help local government officials set the agenda for		
	developing local education plans'		
	(low-trust scenario) = 0		
2 Teacher / Head-Teacher	The ' <i>agent</i> ' is local government = 1		
(relative trust towards local	The ' <i>agent</i> ' is district education officer = 0		
government)			
	Question on accountability asked before optimism in local		
3 Teacher / Head-Teacher	government's ability to improve education = 1		
(absolute trust towards local	Question on optimism in local government's ability to improve		
government)	education asked before accountability = 0		

Summary of Treatments for each Dimension

Summary Statistics and Balance

In Table 2 we present the summary statistics of covariates used for two different survey. Panel A shows statistics for local government officials. Only 4 percent of local government officials were female while 71 percent had an educational qualification higher than secondary leaving certificate. The mean age among officials was 47 and about 29 percent confirmed that they would run again for office. Panel B shows summary statistics for teachers and head-teachers. Here around 36 percent were female and 60 percent were permanent with mean teaching experience of 21 years.

Given that we cross three independent survey experiments – each associated with a different dimension of trust - we measure balance for each survey experiment across various covariates. This is done by testing for statistical differences in our covariates across treatment groups. In Table 3 we

show balance across our treatment groups. We can see except for two variables: *belonging to urban municipality* and *vote share received*, the randomization process has ensured balance across treatment groups amongst most covariates for local government officials¹⁰ (Panel A). Balance is also strong among teachers and head-teachers (Panel B). Regardless we control for these covariates in our regression analysis. Accordingly, ρ can be interpreted as the causal effect of being randomized into different survey experiment groups.

4. PERCEPTIONS ON EDUCATION DECENTRALIZATION: NON-EXPERIMENTAL EVIDENCE

Frontline Service Providers

Findings from all three phases of data collection suggest a high degree of optimism around education decentralization among frontline service providers. When asked to rate how optimistic respondents were that local government officials would improve education service delivery in their *municipality*, 74 percent of head-teachers and 79 percent of teachers responded they were "very optimistic" or "somewhat optimistic".

This optimism is tied to the idea of being 'heard'. This can be seen from some of the comments in the focus group discussions:

"The chances of us getting neglected or our concerns getting bypassed will be minimized. They will be compelled to listen to our concerns."

"Since the local office is closer, I think it will make things easier for us."

"Having competent authorities closer is more useful than having highly qualified ones afar."

Most head-teachers and teachers (nearly 86 percent) also felt that local governments would be more accountable to them, as compared to the central government. The optimism is seen in both public and private schools and also across all the districts studied.

Head-teachers are also optimistic about the timely delivery of inputs under the decentralized system. Most head-teachers expect textbooks (59 percent), salaries (59 percent) and scholarship grants (52 percent) – based on EMIS (Education Management Information System) data to arrive sooner. In the case of school renovation grants that require identifying beneficiary schools, only 46 percent of head-teachers believe funds will arrive sooner from their local offices. Also, there is significant district level variation - in six out of the eight districts studied, more head-teachers are optimistic about timely delivery of inputs than not; but this is not the case for two districts.

Given that this is the early phase of decentralization, there is some concern about lack of clarity. Nearly 38 percent of public-school head-teachers and 30 percent of private school head-teachers expressed concern that decentralization will make it confusing to figure out who to report problems to. Most head-teachers (80 percent) also expect their workload to increase under decentralization.

Expectations on whether local governments will directly engage frontline service providers in determining ways to improve service delivery are modest. Nearly 40 percent of head-teachers and teachers do not expect local governments to seek feedback from them on education spending, teacher management or improving access and quality.

¹⁰ The joint F-test indicates that taken together, the covariates are balanced.

Local Government Officials

Local government officials were asked about who should be responsible for hiring, placing and promoting teachers (Table 1). There is considerable divergence of opinions between elected and non-elected officials¹¹ about who should be responsible for the hiring of permanent teachers. For example, 88 percent of non-elected officials would like the center to be in charge of hiring permanent teachers. This figure is only 45 percent among elected officials. With regards to promotion of permanent teachers also, elected officials want this to be under their jurisdiction while majority of the other actors prefer this role to be continued with the Center

There is more agreement between these actors on who should be responsible for placement of teachers within the local government, as more than two-third in each group prefer local governments to be in-charge of this. Also 68 percent of head-teachers say local governments ought to be responsible.

5. TRUST DURING EARLY-PHASE EDUCATION DECENTRALIZATION: EXPERIMENTAL EVIDENCE

Trust Dimension 1: Do local governments trust central government?

Results from the local officials survey indicate that local governments trust the central government for overall capacity building. We see this is in the framing experiment with high- and low-trust scenarios. When asked about their preferences when one option is to have the 'central government build their capacity' (high-trust scenario) vs. have the 'central government support them in building their own capacity' (low-trust scenario); local officials were significantly more likely to support the high-trust scenario (see Table 4). Results remain robust when we add controls for official characteristics and official type.

We also see no evidence of mistrust in the framing experiment testing whether local officials are more or less likely to support policy ideas when they know center is supporting it¹². Both for increasing spending on early childhood development and implementing public expenditure tracking surveys, local government officials were just as likely to support these policies if they knew central government was also supporting them, as they were without this information (see Table 5).

There are three important nuances to this overall trust exhibited by local officials towards center. First, the degree of trust exhibited by local officials towards the center may be somewhat lower for elected officials compared to non-elected officials¹³ (see Table 4, Panel B).

Second, the degree of trust towards the center may be higher for the older, more seasoned local officials. Older local government officials (those above the median age of 47) are slightly more likely to lend support if they know the center is also supporting this policy (see Table 5, Panel C).

Third, local official trust towards center may be lower for the more controversial aspects of service delivery, such as teacher management. Elected officials are somewhat less likely to support

¹¹ Some are selected by the public service commission while others are former teachers. They do not have term limits but are transferable.

¹² In one randomized group local officials are told the center supports a policy, in the other group center is not mentioned. Then each group is asked about their support for the policy. Given the randomization, if the degree of support varies systematically between the two groups, we can surmise that center's support for the policy mediates local officials support for it.

¹³ See footnote 11 above

performance-based bonus for teachers, if they know that the center is supporting it (see Table 5, Panel B). This could reflect elected officials' preference for showing independence from the central government when it comes to teacher management; which is the most contentious issue in Nepal's decentralization as described in section 4.

This last finding is corroborated by descriptive data. Data from local government officials reveal that majority of local officials want autonomy in implementing key education activities and this preference is strongest for supervising teaching quality. For reference, while around 59 percent and 54 percent of local government officials prefer to independently (of center) implement *performance-based school grants* and *early grade reading programs* respectively; nearly 72 percent prefer to implement *teacher supervision* independently of center. However, despite low trust, they still want technical capacity building from center on teacher supervision. Local officials were asked to rank the top three areas in which they needed support from the central government. The most popular category was teaching supervision, with nearly 60 percent of respondents ranking it among their top three areas.

The big-take away seems to be that local governments trust central government and look to the center for their capacity building. However, the degree of trust may be lower among elected local officials (as opposed to non-elected officials) and the desire for independence from center is strongest for teacher management

Trust Dimension 2: Do frontline service providers trust local governments more than central government)?

In Section 4, we already saw that most head-teachers and teachers (nearly 86 percent) believe that local governments would be more accountable to them in service delivery as compared to the central government. This is further corroborated by experimental results which directly show that head-teachers put more trust in local governments than in the central government to address service delivery problems.

We see this in two ways. First, in a vignette experiment, the same hypothetical situation¹⁴ around teacher absenteeism in a fictional municipality is described to head-teachers and teachers and questions of responsibility and action are framed either around District Education Officers (DEOs who are center-appointed) or local governments. We find that teachers and head-teachers were more likely to trust local governments compared to central governments to combat issues of teacher absenteeism and low teacher performance (see Table 6, Panel A). Also, in direct survey questions, head-teachers are significantly more likely to believe that local leaders will be less afraid to sanction teachers than DEOs in the event of high teacher absenteeism. Head-teachers and teachers also believe that local governments face more salient accountability pressures compared to DEOs (see Figure 2). However, teachers are worried that local governments will use them for political ends as compared to the central government (see Table 6, Panel A).

Is the faith of head-teachers in the ability of local governments to improve teacher performance wellplaced? Perhaps not entirely. We test this through a randomized vignette where we ask one

¹⁴ Respondents were told to situate themselves as residents of a hypothetical municipality called *Nirmal* and were asked to express their agreement to several statements (Table 6) after being given the following scenario: "The school system in Nirmal is dealing with a problem of high rates of teacher absenteeism. Now the goal is to improve teacher attendance and create more accountability among teachers to the performance of students. Last year saw an 8% increase in number of parental complaints against teachers, and 5% increase in teacher absenteeism."

randomized group of local government officials how they would tackle teacher under-performance and in the other group we ask how local governments would want the center to tackle teacher underperformance. Overall there is no difference in the responses, but for elected local government officials there is a significant divergence. Elected local government officials are significantly more likely to favor sanctioning low performing teachers when it is center doing it, than when it is the local government doing it. (see Table 7)

Trust Dimension 3: Do frontline service providers trust local governments, in absolute terms?

Despite signaling stronger trust in local governments vis-à-vis the center, experimental results indicate that frontline service providers have concerns about local governments accountability in absolute terms.—This is seen from the results of the sequencing survey experiment. Head-teachers and teachers are significantly less likely to report that they are optimistic about whether local government officials will be able to improve education service delivery if they are primed with reminders of accountability measures than when they are not (see Table 8, Panel A). Accountability measures include providing data to the public on education budget spent by local governments, audits of local government performance by the MoE every six months and community meetings to discuss the performance of local leaders in education. Results from Table 8, Panel B suggest that this concern is driven largely by teachers rather than head-teachers.

Head-teachers and teachers are at least somewhat concerned about the political economy challenges around local government decision making. Specifically, they are concerned that local governments may prioritize political pressure over technical need. This is best summarized in the following quote from focus group discussions:

"Mayors/local leaders are interested in being re-elected...so, people (teachers) will hold power over local leaders. If the leader wants to be re-elected, he/she cannot take strict action against teachers...this is a big problem."

- Public school head-teacher, Morang district

In surveys, head-teachers and teachers were presented a hypothetical scenario in which a political leader asks to place a new math teacher in one out of two schools – school A in which there are fewer math teachers per student and is over two hours away from the local government office, and school B that has more math teachers but is only 20 minutes away from the local government office. Nearly 53 percent of head-teachers and teachers expected their local government official to place the new teacher in school B which is closer to the local government center over school A that faces more severe teacher shortages but is harder to reach. In another hypothetical scenario, respondents were asked how they expected their local government officials to spend additional resources of Rs. 50,000 between two possible options – nearly 68 percent of respondents expect local governments to spend the money on procuring a new projector for the local government office over using the money for purchasing science kits for schools that lack such kits.

They are also concerned that local government will be prone to overlooking the needs of disadvantaged and marginalized students. A higher percentage of teachers and head-teachers believe that local government officials are more likely to provide additional resources to schools where students are performing well in class or if it is a high performing school compared to schools where learning levels are low, students are lagging behind or if teachers are frequently absent due to poor teacher motivation. This can be seen from Figure 3.

There is some evidence that these concerns about potential 'politicization' of education issues may be well-founded. Experimental results from local governments suggest that they are more likely to respond to political messaging than just technical evidence. We test whether local governments are more likely to support a policy option if they are provided information on technical evidence vs. if it is backed by politically salient messaging.¹⁵ Local government officials were significantly more likely to strongly agree with allocating additional resources for early childhood development when primed with politically supportive messaging versus when given research evidence on the positive impacts of early childhood development (see Table 9).

How best to build accountability for local governments? Teachers, head-teachers and local government officials prefer show more confidence in direct public accountability rather than via accountability mechanisms that run through the center (although there is high support for both). Respondents show more significantly more optimism in accountability mechanisms through community meetings and public data to technical audits of local governments by the center (Ministry of Education); see Figures 4 and 5.

6. CONCLUSION

We analyze the degree of trust between different tiers of education service delivery at the start of massive education decentralization in Nepal. To do this we use: focus group discussions, surveys, and a survey experiments with teachers, head-teachers, and local government officials (both elected and non-elected).

Using the 'trust' as a proxy for the health of the decentralization process is useful in two specific ways. First, it can serve as a litmus test for the legitimacy of newly formed local governments as managers of education service delivery. Second, it can help highlight specific areas where the decentralization process may run into trouble, either in technical or political ways.

We find that local governments are seen as legitimate and trustworthy by headteachers and teachers, both in absolute and relative terms (vis-à-vis the center). They exhibit optimism around: being heard by local government; being able to hold them accountable; and having local governments tackle service delivery and teacher under-performance issues. However, they are also concerned about accountability platforms and potential politicization of education service delivery. This suggests while the legitimacy of local governments within the service delivery chain is strong, to set education decentralization on a positive trajectory it is important to create reliable information and accountability platforms. Head-teachers and teachers are somewhat more likely to prefer that local government accountability platforms function through the public channel (community meetings and open data) rather than through the center (audits by the center).

¹⁵ Specifically, a randomized group of respondents were presented with the information that there is increasing emphasis on ECD with catchy slogans on the importance of ECD such as "All children deserve to be happy, healthy, and safe", and "Want to change the future? Start with the children!". Another set of respondents were not primed with this information but were instead given research evidence on the positive impacts of ECD on brain development. Both groups were then asked if they would be willing to allocate additional resources for teacher training for early childhood education at the expense of other programs.

We also find that local governments trust the center and are looking to them for capacity building and support. However, this trust is somewhat lower in elected local government officials (as opposed to non-elected ones).

One of our key findings is that teacher management is the single most contentious roadblock to effective decentralization. Most teachers, headteachers, and non-elected local officials believe center should be responsible for hiring of teachers; while elected local officials believe local governments should play this role. There is a similar divide on who should be responsible for teacher promotion, although in this case the consensus among teachers, headteachers, and non-elected local officials is less strong. Also, teacher management is the one area where elected local government officials exhibit mistrust of the center. Finally, head-teachers and teachers openly express concern that local government officials may use teacher management processes for political ends.

These results suggest that the success of education decentralization may be enhanced in three ways –clear and transparent rule-setting about teacher management with checks and balances; provision of technical capacity building by the center to local governments; and building platforms that help schools and parents keep local governments accountable.

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FIGURES AND TABLES

Figure 1: Surveyed districts for Phase 1 and 3



Figure 2: Perception of Accountability Pressures faced by Local Governments (vis-à-vis outgoing Center-appointed District Officers)





Figure 3: Local Governments view of circumstances under which schools should get more resources

Figure 4: Effectiveness of Accountability Measures (Teachers/Head-Teachers)





Figure 5: Effectiveness of Accountability Measures (Local Government Officials)

Respondents	Hiring of Permanent	Placement of teachers	Promotion of
	Teachers	within local	Teachers
		governments	
Local Officials			
(Elected)	45%	6.3%	27.5%
(N=80)			
Local Officials	88.2%	19.7%	63.2%
(Non-Elected)			
(N=76)			
SMC Heads	75%	20%	52.5%
(N=40)			
Head-Teacher	83.9%	31.8%	64.7%
(N=286)			
Teacher	74.1%	33.3%	55.2%
(N=540)			

Table 1: Percentage of respondents who feel Central Government should be responsible for the following tasks

Note: SMC stands for School Management Committee

Panel A: Local Government officials								
	Mean	SD	Min	Max	Ν			
Urban Municipality	0.48	0.50	0	1	196			
Female	0.04	0.20	0	1	196			
Age	47	10	25	78	196			
Less than SLC	0.10	0.30	0	1	196			
SLC	0.19	0.40	0	1	196			
More than SLC	0.71	0.46	0	1	196			
Elected Officials	0.41	0.49	0	1	196			
Run for office (Yes)	0.29	0.46	0	1	80			
Vote Share received	0.41	0.13	0	0.96	80			
Panel B: Head-teachers	Panel B: Head-teachers and Teachers							
	Mean	SD	Min	Max	Ν			
Urban Municipality	0.88	0.32	0	1	840			
Female	0.36	0.48	0	1	840			

Table 2: Summary Statistics

Female 0.36 0.48 Head_Teacher 0.48 0.35 Age Permanent Teacher

Permanent Teacher	0.60	0.49	0	1	840	
Periods Per Week	29	9	1	62	840	
Highest Class Teaching	7	3	0	12	840	
Experience	21	10	0	42	840	
Nepali Medium School	0.43	0.50	0	1	840	
Note: SLC stands for school leaving certificate examinations (end of grade 12)						

Table 3: Balance Table

Panel A: Local Govern						
	D	imension 1	а	Dimension 1b		
	High	Low		High	Low	
	Trust	Trust	Diff	Trust	Trust	Diff
Urban Municipality	0.55	0.41	-0.14**	0.42	0.54	0.12*
Female	0.05	0.03	-0.02	0.03	0.05	0.02
Age	47.33	46.42	-0.91	46.15	47.63	1.48
Less than SLC	0.11	0.08	-0.03	0.08	0.11	0.03
SLC	0.17	0.21	0.04	0.24	0.15	-0.09*
More than SLC	0.71	0.70	-0.01	0.68	0.74	0.06
Elected Officials	0.41	0.41	0.00	0.40	0.42	0.02
Run for office (Yes)	0.25	0.33	0.07	0.33	0.25	-0.07
			-			
Vote Share received	0.46	0.37	0.09***	0.40	0.43	0.03
Ν	98	98	196	100	96	196
Joint F Test			0.245			0.068

Panel B: Head-teachers and Teachers

Taner D. fiedd teachers and reachers						
)	2	D	imension 3		
	High	Low		High	Low	
	Trust	Trust	Diff	Trust	Trust	Diff
Urban Municipality	0.88	0.89	0.01	0.87	0.89	0.02
Female	0.38	0.34	-0.04	0.34	0.38	0.04
Age	44.01	43.77	-0.24	43.57	44.23	0.66
Head_Teacher	0.35	0.34	-0.00	0.34	0.35	0.01
Permanent Teacher	0.60	0.61	0.01	0.60	0.61	0.01
Periods Per Week	29.77	29.04	-0.73	28.99	29.84	0.84
Highest Class						
Teaching	7.09	6.99	-0.10	7.10	6.97	-0.14
Experience	20.81	20.59	-0.22	20.45	20.96	0.51
Nepali Medium						
School	0.40	0.46	0.06	0.42	0.44	0.02
Ν	413	413	826	420	406	826
Joint F Test			0.317			0.622

Note: p-values are shown for the F-Test for joint significance. SLC stands for school leaving certificate examinations (end of grade 12). The symbols *, ** and *** represent significance at the 10, 5 and 1 percent, respectively.

Panel A: All				
		Capacity		
		Building		
	Capacity Building	(Education	Capacity Building	Capacity Building
	(Overall)	Plan)	(Overall)	(Education Plan)
Treat 1a	0.143**	-0.092	0.137**	-0.086
	(0.060)	(0.065)	(0.060)	(0.066)
Ν	196	196	196	196
R-squared	0.028	0.011	0.058	0.032
Dep Var Mean	0.765	0.750	0.765	0.750
Controls	No	No	Yes	Yes
Panel B: Only Electe	ed Officials			
		Capacity		
		Building		
	Capacity Building	(Education	Capacity Building	Capacity Building
	(Overall)	Plan)	(Overall)	(Education Plan)
Treat 1a	0.250**	-0.225**	0.237**	-0.208*
	(0.104)	(0.106)	(0.116)	(0.106)
Ν	80	80	80	80
R-squared	0.078	0.062	0.137	0.148
Dep Var Mean	0.725	0.713	0.725	0.713
Controls	No	No	Yes	Yes

Table 4 Dimension 1: Do local govts. trust center?

Note: Panel A provides results for all respondents and panel B is for elected officials only. Controls include: urban municipality dummy, female dummy, age, SLC passed dummy, more than SLC dummy and elected official dummy. In panel B additional control for vote share received in last election is added. Options for the dependent variables include, Strongly Support, Support, Neutral, Oppose and Strongly Oppose. Given that Strongly Support and Support is answered by 99% of the respondent, we code Strongly Support as 1 and remaining responses as 0. Standard errors are clustered at municipality level and are in parenthesis. The symbols *, ** and *** represent significance at the 10, 5 and 1 percent, respectively.

Table 5: Dimension 1						
Supporting Policy Idea	as					
Panel A: All						Dorf
	ECD	PETS	Perf Bonus	ECD	PETS	Bonus
Treat 1b	0.026	0.021	0.033	0.031	0.024	0.040
	(0.055)	(0.015)	(0.027)	(0.058)	(0.017)	(0.026)
Ν	196	196	196	196	196	196
R-squared	0.001	0.011	0.006	0.017	0.022	0.039
Dep Var Mean	0.857	0.990	0.954	0.857	0.990	0.954
Controls	No	No	No	Yes	Yes	Yes
Panel B: Only Electe	ed Officials	_				5
	ECD	DETC	David Davida	ECD	DETC	Perf
ш 41	ECD	PEIS	Perf Bonus	ECD	PE15	Bonus
Treat 1b	0.100	0.025	-0.075*	0.132	0.043	-0.075*
	(0.085)	(0.025)	(0.042)	(0.096)	(0.037)	(0.041)
Ν	80	80	80	80	80	80
R-squared	0.020	0.013	0.039	0.107	0.124	0.102
Dep Var Mean	0.850	0.988	0.963	0.850	0.988	0.963
Controls	No	No	No	Yes	Yes	Yes
Panel C:						
Older Officials						
						Perf
	ECD	PETS	Perf Bonus	ECD	PETS	Bonus
Treat 1b	0.183**	0.019	-0.002	0.204**	0.015	-0.004
	(0.077)	(0.019)	(0.029)	(0.092)	(0.016)	(0.026)
Ν	101	101	101	101	101	101
R-squared	0.062	0.009	0.000	0.085	0.020	0.028
Dep Var Mean	0.842	0.990	0.980	0.842	0.990	0.980
Controls	No	No	No	Yes	Yes	Yes

Note: Panel A provides results for all respondents and panel B is for elected officials only. Panel C is for respondents above the median age (47 years). Controls include: urban municipality dummy, female dummy, age, SLC passed dummy, more than SLC dummy and elected official dummy. In panel B vote share received in last election is added as an additional control. All dependent variables are coded as 1 if the answer is Strongly Support and Support and 0 otherwise (Neutral, Oppose, Strongly Oppose). ECD stands for Early Childhood Development; PETS stands for Public Expenditure Tracking Survey. Standard errors are clustered at municipality level and are in parenthesis. The symbols *, ** and *** represent significance at the 10, 5 and 1 percent, respectively.

Table 6

Dimension 2: Do head-teachers/teachers trust local govts. (relative terms)

Panel A: All

	Effective Leader	Improve Education	Sanction Teachers	Use Teachers for politics	Effective Leader	Improve Education	Sanction Teachers	Use Teachers for politics
Treat 2	0.050*	0.056	-0.040	0.113***	0.055*	0.064*	-0.046	0.116***
	(0.029)	(0.035)	(0.039)	(0.033)	(0.029)	(0.035)	(0.039)	(0.034)
Ν	826	826	826	826	819	819	819	819
R-squared Dep Var	0.004	0.004	0.002	0.016	0.015	0.020	0.017	0.023
Mean	0.171	0.277	0.600	0.735	0.171	0.278	0.600	0.735
Controls	No	No	No	No	Yes	Yes	Yes	Yes

Panel B:

Head-Teachers

				Use				Use
				Teachers				Teachers
	Effective	Improve	Sanction	for	Effective	Improve	Sanction	for
	Leader	Education	Teachers	politics	Leader	Education	Teachers	politics
Treat 2	0.082*	0.108**	0.176***	0.060	0.100**	0.133**	0.200***	0.062
	(0.044)	(0.054)	(0.058)	(0.054)	(0.046)	(0.055)	(0.059)	(0.057)
Ν	286	286	286	286	280	280	280	280
R-squared	0.012	0.014	0.032	0.004	0.036	0.048	0.062	0.030
Dep Var								
Mean	0.168	0.294	0.580	0.706	0.168	0.296	0.579	0.707
Controls	No	No	No	No	Yes	Yes	Yes	Yes

Note: Panel A provides results for all respondents and panel B is for head-teachers only. Controls include: head-Teacher dummy, female, age, permanent teacher dummy, number of periods per week teaching, highest class teaching, teaching experience in years, Nepali medium school and urban municipality dummy. All dependent variables are coded as 1 if the answer is Strongly Support and Support and 0 otherwise (Neutral, Oppose, Strongly Oppose). Standard errors are clustered at School level and are in parenthesis. The symbols *, ** and *** represent significance at the 10, 5 and 1 percent, respectively.

Table 7: Dimension 2 Tackling Teacher Under-performance Panel A: All

	Teacher Absent: take action (Yes=1)	Teacher Absent: take action (Yes=1)
Treat 3	0.013	0.009
	(0.074)	(0.069)
Ν	196	196
R-squared	0.000	0.047
Dep Var Mean	0.367	0.367
Controls	No	Yes

Panel B: Elected Officials

	Teacher Absent: take action (Yes=1)	Teacher Absent: take action (Yes=1)
Treat 3	-0.200*	-0.188*
	(0.110)	(0.100)
Ν	80	80
R-squared	0.041	0.144
Dep Var Mean	0.425	0.425
Controls	No	Yes

Note: Panel A provides results for all respondents and panel B is for elected officials only. Controls include: urban municipality dummy, female dummy, age, SLC passed dummy, more than SLC dummy and elected official dummy. In panel B additional control for vote share received in last election is added. Standard errors are clustered at municipality level and are in parenthesis. The symbols *, ** and *** represent significance at the 10, 5 and 1 percent, respectively.

Table 8
Dimension 3: Do head-teachers/teachers
trust local govts. (absolute terms)

Panel A: All

	Share Education Data	Performance Discussion	Audit every 6 months	Improve Edu/Optimistic	Share Education Data	Performance Discussion	Audit every 6 months	Improve Edu/Optimistic
Treat 3	0.024*	-0.005	-0.046*	-0.056*	0.025*	-0.005	-0.043*	-0.062*
	(0.014)	(0.008)	(0.027)	(0.033)	(0.014)	(0.008)	(0.026)	(0.032)
Ν	826	826	826	826	819	819	819	819
R-squared Dep Var	0.004	0.000	0.004	0.004	0.014	0.006	0.026	0.040
Mean	0.959	0.988	0.851	0.776	0.958	0.988	0.852	0.777
Controls	No	No	No	No	Yes	Yes	Yes	Yes

Panel B: Head-Teachers

	Share Education Data	Performance Discussion	Audit every 6 months	Improve Edu/Optimistic	Share Education Data	Performance Discussion	Audit every 6 months	Improve Edu/Optimistic
Treat 3	0.007	0.007	-0.033	-0.031	0.011	0.008	-0.025	-0.025
	(0.018)	(0.012)	(0.045)	(0.052)	(0.019)	(0.014)	(0.045)	(0.053)
Ν	286	286	286	286	280	280	280	280
R-squared Dep Var	0.001	0.001	0.002	0.001	0.051	0.016	0.031	0.048
Mean	0.976	0.990	0.829	0.745	0.975	0.989	0.829	0.746
Controls	No	No	No	No	Yes	Yes	Yes	Yes

Note: Panel A provides results for all respondents and panel B is for head-teachers only. Controls include: head-teacher dummy, female, age, permanent teacher dummy, number of periods per week teaching, highest class teaching, teaching experience in years, Nepali medium school and urban municipality dummy. All dependent variables are coded as 1 if the answer is Strongly Support and Support and 0 otherwise except Improve Edu/Optimistic =1 Standard errors are clustered at School level and are in parenthesis. The symbols *, ** and *** represent significance at the 10, 5 and 1 percent, respectively.

Table 9: Dimension 3
Political Messaging vs. Technical Evidence

Panel A: All

	Additional resources to ECD	Additional resources to ECD
Treat 3	0.142**	0.149**
	(0.069)	(0.066)
Ν	196	196
R-squared	0.020	0.050
Dep Var Mean	0.546	0.546
Controls	No	Yes

Panel B: Elected Officials

	Additional resources to ECD	Additional resources to ECD
Treat 3	0.125	0.090
	(0.091)	(0.084)
Ν	80	80
R-squared	0.016	0.104
Dep Var Mean	0.537	0.537
Controls	No	Yes

Note: Panel A provides results for all respondents and panel B is for elected officials only. Controls include: urban municipality dummy, female dummy, age, SLC passed dummy, more than SLC dummy and elected official dummy. In panel B additional control for vote share received in last election is added. ECD importance variable is coded as 1 if Strongly agree and 0 otherwise. ECD stands for Early Childhood Development. Standard errors are clustered at municipality level and are in parenthesis. The symbols *, ** and *** represent significance at the 10, 5 and 1 percent, respectively.

ANNEX 1

Exclusive and concurrent powers in education

Federal Powers	Provincial Powers	Local Powers		
 Central universities Central-level academies Universities standards and regulation Central libraries 	 Provincial-level universities Higher education Libraries and museums 	 Basic and secondary education Collection of local statistics and records 		
Concurrent Federal and Provinc	ial Powers			
 Scientific research Science and technology Human resources developm Concurrent Federal, Provincial, a 				
Education				
Source: Adapted from Nepal Law Commission. 2015.				