Fault Lines:
The Effects of Bureaucratic Power on Electoral Accountability

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January 22, 2018

Abstract

This paper introduces a new explanation for why citizens may fail to vote based on government performance. We argue that when politicians have limited capacity to control bureaucrats, citizens will not know whether government performance is a good signal of the incumbent's type. We develop a selection model of elections in which policy is jointly determined by a politician and a bureaucrat. When politicians have limited power over policy, elections perform poorly at separating good and bad types of incumbents. We test the model's predictions using survey experiments conducted with nearly 9,000 citizens and local officials in Uganda. We find that citizens and officials allocate more responsibility to politicians when they are perceived as having more power than bureaucrats. The allocation of responsibility has electoral consequences: when respondents believe that bureaucrats are responsible for performance, they are less likely to expect that government performance will affect the incumbent's vote share.[1]

1 Introduction

An enduring puzzle in political economy is when governments will act in the best interest of their citizens. Standard democratic theory argues that elections help citizens hold governments accountable.[2] Under elections, citizens can observe government performance and, based on that signal, decide whether to re-elect incumbent. However, citizens often face significant challenges in evaluating the information they receive about government performance. If multiple officials are responsible for outcomes, or if signals are noisy, it may not be clear whether a particular official should be re-elected.

When government policy is determined by multiple actors, accountability will be stronger when when citizens can clearly identify which political actors are responsible for performance (Fiorina, 1981; Powell Jr and Whitten, 1993; Tavits, 2007; Harding, 2015). When citizens cannot attribute credit and blame clearly, the link between performance and electoral outcomes can break down. This can occur when power is shared across levels of government, or between parties and actors within a government (Powell Jr and Whitten, 1993; Berry, 2008; Malhotra and Kuo, 2008; Fan, Lin and Treisman, 2009; Lago-Peñas and Lago-Peñas, 2010). Previous work has focused on clarity of attribution across different politicians or parties.[3] However, politicians typically rely heavily on bureaucrats to help implement policy and supply public goods.

This paper introduces a new mechanism that affects clarity of attribution: the balance of power between politicians and bureaucrats. In standard electoral accountability theories, voters hold politicians accountable both for their own actions, and those of the bureaucrats they supervise. This is often borne out in reality. For example, Presidents Bush and Obama were held responsible for scandals in the Veterans Health Administration (VA): citizens believed that each president failed to properly supervise the department (YouGov, 2014).

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[2]We define an accountable government as one that provides citizens with their preferred policies efficiently and without corruption or mismanagement (Fearon, 1999).

[3]An exception is Malhotra and Kuo (2008), which examines blame allocation across both politicians and bureaucrats.

While this may make sense in the American context, there are many cases where politicians have limited power over bureaucrats, either because of legal institutions or because politicians lack the capacity to monitor bureaucrats effectively. If citizens recognize these limitations, they may be unsure whether to attribute policy outcomes to politicians or to bureaucrats. This in turn may make citizens less willing to electorally punish politicians for poor outcomes or reward them when conditions improve, weakening the link between performance and electoral outcomes.

There are many settings in which politicians lack the capacity, training, or official power to monitor bureaucrats (Weber, 1922; Niskanen, 1975; Lupia and McCubbins, 1998), especially at the subnational level (Raffler, 2017). These problems are exacerbated in developing countries, where candidates for local office are often poorly educated and lack experience in government. In Uganda, for example, local politicians may at best have finished secondary school, and often lack critical skills such as being able to read a budget or understand local government processes. In contrast, even low-level bureaucrats are college-educated and tend to hold their jobs for long periods of time. As a result, politicians have limited capacity to understand the bureaucrats' actions or uncover whether corruption is taking place. Similar dynamics occur in many other low-income countries. In a survey of politicians and bureaucrats conducted by one of the authors in eight districts in Malawi, 3% of district politicians had college degrees, compared to 50% of district bureaucrats.

We develop a selection model of elections in which policy outcomes are jointly determined by a bureaucrat and a politician; citizens have incomplete information about the type of each actor, and must decide based on a noisy signal whether to re-elect the incumbent. We show that, as power over policy shifts away from the politician and towards the bureaucrat, the link between politicians' policy choices and electoral outcomes breaks down. When bureaucrats have significant power over what policy is enacted, citizens become less likely to re-elect politicians who share their preferences, and more likely to keep politicians with incongruent preferences.

While our theory could apply in many settings, we expect the lack of bureaucratic oversight to be most pronounced in developing countries where overall government capacity and human capital are lower. To test the model's predictions in a developing-country context, we use survey experiments on citizens and local government officials in Uganda. To the best of our knowledge, this is the first data on beliefs about attribution from a sample of elected or appointed officials. Respondents were given a short vignette in which they were told about a hypothetical local government in which the quality of roads was either good or bad, then asked who they believed was most responsible for the quality of the roads. The results show that, in both cases, a significant percentage of respondents allocate responsibility to the local bureaucrat, rather than the local politician.

We then create exogenous variation in the balance of power in the hypothetical subcounty using an information treatment that randomly varies the identity of the local bureaucrat; we show that increasing the power of the bureaucrat reduces the percentage of respondents who perceive the politician as responsible for policy outcomes. Both respondents' initial beliefs about responsibility, and a randomized information treatment about responsibility, have significant downstream effects on perceived electoral outcomes: there is a strong link between whether a politician receives blame or credit, and whether respondents believe that he will lose or gain votes in the next election.Our results are remarkably consistent across our citizen and elite samples, alleviating concerns that our results are driven by uninformed citizens who are unaware of local political dynamics.

Our findings suggest a novel explanation for why citizens may re-elect incumbents even in cases of poor performance, as documented in de Kadt and Lieberman (N.d.). They also help to explain why clientelism and ethnic voting are so prevalent in developing countries: if politicians have limited capacity to affect policy, citizens have few incentives to vote based on policy promises. This may make it more likely that citizens vote along other dimensions that politicians can more credibly commit to, such as clientelistic transfers. While this paper does not explicitly test that claim, it is consistent with the findings in Gottlieb (2016) that

improving citizens' beliefs about government capacity may decrease willingness to vote based on clientelism or ethnic ties, and merits further theoretical and empirical exploration.

2   Accountability and Split Responsibility

In a basic model of electoral accountability, citizens observe some signal of government policy and on this basis decide whether to re-elect an incumbent or vote for a challenger.[4] A citizen's utility is increasing in the extent to which government policy is aligned with his or her ideal point; citizens use elections to maximize the probability that they get their preferred policy over the course of multiple elections (Fearon, 1999). This paper assumes a selection model of retrospective voting, in which citizens use observed policy as a signal about the politician's true preferences and vote for the incumbent when they believe that she is more likely than the challenger to share citizens' preferences. Electoral accountability is increasing in the extent that "good" politicians (who pick citizens' preferred policies) are re-elected and "bad" types (who pick policies less preferred by citizens) are swiftly removed.

Any factor that weakens the connection between incumbent behavior and vote share therefore undermines electoral accountability. In practice, policy is typically jointly determined by multiple actors. A critical determinant of electoral accountability is citizens' ability to attribute responsibility for observed outcomes to the correct officials (Fiorina, 1981; Powell Jr and Whitten, 1993; Tavits, 2007). Within a single level of government, attribution is easier when one party has a clear majority, or when formal institutions clearly indicate which party is responsible (Powell Jr and Whitten, 1993). Decentralization can improve accountability (Tiebout, 1956), but if national and local governments share responsibility for policy, accountability may worsen unless institutions or budgets clearly signal which levels of government are responsible for which outcomes (Rodden, 2006; Tavits, 2007; Berry, 2008; Fan, Lin and Treisman, 2009; Lago-Peñas and Lago-Peñas, 2010; Harding, 2015). Na-

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[4]The signal could be the level of public goods provision, degree of rent-seeking or corruption, distribution of the budget, tax rate, or any other unidimensional policy.

tional politicians may even choose to decentralize as a way of allowing more blame-shifting (Agrawal and Ostrom, 2001; Rodden, 2004; Gélineau and Remmer, 2006; Malhotra and Kuo, 2008; Marsh and Tilley, 2010; Tilley and Hobolt, 2011; Mortensen, 2012). Individual characteristics also matter; partisanship affects both how citizens evaluate performance and to whom they attribute responsibility (Malhotra and Kuo, 2008; Marsh and Tilley, 2010; Tilley and Hobolt, 2011), and "sophisticated" voters may be better able to interpret signals about performance (Gomez and Wilson, 2001; Tilley and Hobolt, 2011).

Previous work on clarity of attribution has focused almost exclusively on the allocation of responsibility between different politicians. Much less attention has been paid to the fact that, while politicians are typically responsible for initial policy decisions, bureaucrats play a key role in actually implementing those decisions and producing observed policy.[5] Bureaucrats who are dishonest or incompetent, or who simply do not share politicians' preferences, can have a significant impact on the outcomes citizens observe. Most work on accountability does not deal with this issue explicitly, instead implicitly assuming that politicians, whose responsibilities often include monitoring bureaucrats, should be held accountable for not only their own failures and successes but also those of bureaucrats.[6]

There are many contexts where politicians have strong enough control over the bureaucracy that citizens can effectively ignore bureaucrats as independent political actors. However, there are also many contexts where politicians have less control over bureaucrats. To provide an intuition for how this could have serious implications for electoral accountability, we consider the case of Uganda.In Uganda, local elected officials often lack the skills—such as the ability to speak English fluently or read a budget—that would allow them to fully engage with government.[7] This allows local bureaucrats, all of whom are college educated, to effectively circumvent and shut out even well-meaning politicians. Anecdotally, corrupt

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[5]Malhotra and Kuo (2008) examines the allocation of blame across elected and appointed officials following Hurricane Katrina, but does not examine the effects of blaming bureaucrats on politicians' electoral survival.

[6]This is consistent with the two-stage principal-agent structure described in Olken and Pande (2012).

[7]See discussion in Section 3.

bureaucrats withhold financial documents and monitoring funds from politicians, preventing them from uncovering wrongdoing. This imbalance is exacerbated by Uganda's bureaucratic institutions; local politicians cannot fire local bureaucrats, but rather must petition higher-level bureaucrats for any desired personnel changes.[8] This dynamic is not unique to Uganda. In Malawi, for example, a recent survey by one of this paper's authors found that 3% of district politicians had college degrees, compared to 50% of bureaucrats. Being a bureaucrat in Malawi is also more lucrative than holding elected office: district politicians' median household income was MK175,000 per month, compared to MK300,000 for bureaucrats.

The shortcomings of local elected leaders in Uganda, as elsewhere, are no secret. Citizens know that local politicians lack many qualifications, and often view local bureaucrats as the real power in local government. Ideally, citizens would respond by replacing low-capacity incumbents with better-educated challengers. Unfortunately, such a pool of high-quality candidates does not always exist. In Uganda, overall levels of education are low, especially in rural areas, and a college-educated citizen is unlikely to choose the low remuneration and prestige of local government over joining the bureaucracy or working in the private sector. Thus the balance of power between bureaucrats and politicians is likely to be fixed, at least in the short term. Citizens can attempt to use elections to select between honest and corrupt politicians, but not between high-capacity and low-capacity types.

In this setting, citizens will therefore be unsure whether replacing an incumbent will be effective at improving policy outcomes: it could be that the politician is honest and shares citizens' preferences, but cannot control the corrupt bureaucrat. This could lead to an unwillingness to kick out the incumbent, especially if organizing to vote for the opposition incurs higher collective action costs.Likewise, if citizens observe good government performance, it will be unclear whether this occurred because, or in spite, of the politician, reducing incentives to electorally reward incumbents for good performance. Over time, this will result in weaker electoral accountability. The model in the following section formalizes this logic,

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[8]For more detail on the limited capacity of local Ugandan politicians, see excerpts from qualitative interviews in Appendix A.

developing a set of testable hypotheses regarding how split responsibility will affect electoral accountability.

2.1   Formal model

To see how split responsibility for policy affects electoral accountability, we develop a retrospective voting model with incomplete information, based on the two-period selection model in Fearon (1999).[9] In the original model, an Incumbent politician selects a policy; a unified group of Citizens then observes a noisy signal of this policy choice and decides whether to re-elect the Incumbent or vote for a Challenger. The winner of the election selects the policy in period two. The model can be used to represent any unidimensional policy space, for example the tax rate, level of public goods provision, or degree of rent seeking.[10] We extend the Fearon model by making the policy a function of a contest between two separate actors within the government. While here we call these the Politician and the Bureaucrat, the model could also apply to cases where policy is jointly decided by politicians and the judiciary, or when responsibility is split between two politicians or parties.

In our model, the Politician's and Bureaucrat's policy decisions are represented by $x_P \geq 0$ and $x_B \geq 0$, respectively. Nature randomly draws which policy will be enacted. With probability $\gamma \in [0,1]$ the Incumbent's policy x_P is enacted; with probability $(1 - \gamma)$ the Bureaucrat's policy x_B is enacted.[11] The parameter γ represents the balance of power between the incumbent and the bureaucrat; it is the main parameter of interest in our model. The Citizens observe a policy, $z \in \mathbb{R}$ in each period that is a noisy signal of the two officials' choices. In expectation, the policy Citizens observe is:

$$z = \gamma(-x_P^2) + (1 - \gamma)(-x_B^2) + \epsilon \tag{1}$$

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[9]An alternative approach would be a nested principal-agent model. We prefer the retrospective voting model because it focuses on our main dynamic of interest—citizens' perceptions and voting decisions—rather than the interactions between politicians and bureaucrats.

[10]Our survey experiments vary the quality of roads.

[11]The main comparative statics of the model also hold if the observed policy is a weighted average of x_P and x_B.

where the error term, ϵ, represents the fact that observed policy may also be affected by random shocks; ϵ is drawn from some distribution $f(\cdot)$ that is mean-zero, symmetric, and unimodal at zero.[12] Citizens are therefore uncertain about whose preferences the observed policy represents, but know that when γ is high, the observed policy is more likely to reflect the Politician's preferred option. Citizens get utility of z in each period; they prefer $x_P = x_B = 0$.

All Politicians and Bureaucrats are either "good" or "bad" types: a good type shares citizens' preferences and sets $x_i = 0$, while a bad type sets $x_i = \hat{x} > 0$. Citizens have no power over the Bureaucrat, but at the end of period 1 can choose whether to keep the Incumbent or, at no cost, replace them with a Challenger. The Citizens' prior is that the Incumbent and Challenger are each good with probability $\alpha \in [0, 1]$, and the Bureaucrat is good with probability $\beta \in [0, 1]$. In the second period, the Bureaucrat and the Politician in power implement their preferred policy, and payoffs are realized. The Citizens wish to maximize the probability that the Politician in period 2 is a good type; the Bureaucrat will always remain in office for both periods.

The model makes two main assumptions. First, we assume that the Politician has no direct power to alter the Bureaucrat's decision. However, the γ term incorporates the degree to which the Politician can monitor the Bureaucrat; as the Politician's power increases, the ability of a good (bad) Bureaucrat to positively (negatively) affect policy decreases. When $\gamma = 1$, the Politician has sole control over policy, and the model is identical to the original Fearon model; this is also observationally equivalent to a world where politicians can ensure that bureaucrats share their preferences, for example through monitoring and the power to hire or fire bureaucrats at will.

Second, we assume that Politicians vary in their preferred policy x_P, but not in their power γ: for Politicians in a particular government (local or national), γ is constant for all potential candidates, and the value of this parameter is common knowledge to all play-

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[12]A normal distribution satisfies these requirements.

ers.[13] This could be because there are structural factors limiting politicians' control of bureaucrats—in Uganda, local politicians cannot unilaterally fire appointed officials—or because all candidates have approximately the same formal training and capacity for monitoring and control. This is in line with the actual pool of candidates in many local elections, especially in developing countries; due to low general education and training levels, there often does not exist a willing and able pool of high-quality candidates who could increase γ, and so citizens assume that it is fixed.[14]

Recall that the probability that the Bureaucrat is a bad type and sets $x_B = \hat{x} > 0$ is $1 - \beta$. To increase tractability, we assume that citizens use the expected value of x_B, given β, when they update their belief about the likelihood that the Incumbent is a good type. The observed policy z, in expectation, can now be written as:

$$z = -\gamma x_P^2 - (1 - \gamma)(1 - \beta)\hat{x}^2 + \epsilon \tag{2}$$

Citizens' optimal strategy is to observe the policy outcome, z, and apply Bayes' rule to update their belief that the Incumbent is a good type. The online appendix shows that Citizens will keep the Incumbent when, given $\epsilon \sim f(\cdot)$, the probability that the policy was decided by a good type is higher than the probability that it was decided by a bad type.[15] Citizens will therefore keep the incumbent when:

$$f(z + (1 - \beta)(1 - \gamma)\hat{x}^2) \geq f(z + (1 - \beta)(1 - \gamma)\hat{x}^2 + \gamma\hat{x}^2) \tag{3}$$

Recall that $f(\epsilon)$ is uni-modal at zero, symmetric, and mean-zero. If $z > 0$, the condition in Equation 3 will always hold. If $z < 0$, it will only hold when $-z - (1 - \beta)(1 - \gamma)\hat{x}^2 \leq z + (1 - \beta)(1 - \gamma)\hat{x}^2 + \gamma\hat{x}^2$. Solving generates a voting threshold for the Citizens; they will

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[13]It is likely that γ varies by level of government, even within a country. In general, higher-level officials are likely to be higher capacity and thus have higher values of γ.

[14]See discussion in Section 3.

[15]Formally, when $Pr(x_P = 0|z) > Pr(x_P = \hat{x}|z)$.

keep the Incumbent when

$$z \geq -\hat{x}^2 * [(1 - \beta)(1 - \gamma) + \frac{\gamma}{2}] = k^* . \tag{4}$$

We now examine the probability that each type of Politician is re-elected, given Citizens' voting threshold k^*. Our main comparative static is how γ affects electoral accountability. Accountability is increasing in the probability that a good type is kept in office, or a bad type removed from office. The probability an Incumbent is re-elected is the probability that $z \geq k^*$, given $\epsilon \sim F(\cdot)$ and x_P. A good Incumbent sets $x_P = 0$, and the probability they are re-elected is

$$Pr(-(1 - \gamma)(1 - \beta)\hat{x}^2 + \epsilon \geq k^*). \tag{5}$$

Simplifying, the probability a good Incumbent is kept is $1 - F(-\frac{\gamma}{2}\hat{x}^2)$. Following a similar process for a bad Incumbent, we find that the probability of re-election is $1 - F(\frac{\gamma}{2}\hat{x}^2)$.[16]

This brings us to the main comparative static of the model: as γ increases, $1 - F(-\frac{\gamma}{2}\hat{x}^2)$ increases, while $1 - F(\frac{\gamma}{2}\hat{x}^2)$ decreases. This means that, as the Politician gains more power over the Bureaucrat, electoral accountability improves—the probability that a good type is re-elected increases, while the probability that a bad type is re-elected decreases. When γ is low, electoral accountability is worse. Good types are more likely to be mistakenly removed from office, and bad types are more likely to be kept. As γ approaches zero, the probability that either type is kept converges to one half, and elections can no longer separate good and bad types.

2.2 Discussion

When politicians' ability to determine policy outcomes is limited, citizens may struggle to assign responsibility for government performance outcomes. This in turn may weaken the link between performance and vote choice. Our model shows that when citizens know the

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[16]See online appendix for full derivation of these probabilities.

balance of power between politicians and bureaucrats, but are uncertain about the true policy preferences (type) of each, there is a direct relationship between the perceived balance of power and electoral accountability. When an incumbent is strong, she can either directly set policy, or sufficiently monitor the bureaucrat to ensure that her preferred policy is enacted. In this setting, citizens will be likely to re-elect good types, and bad types will lose office. As power shifts away from politicians and towards bureaucrats—either because politicians lack necessary skills, or because formal institutions grant politicians limited oversight—this process breaks down. Citizens become more likely to mistakenly remove good types from office or keep bad types. Poor electoral accountability does not mean that incumbents are always re-elected: in the extreme case where $\gamma = 0$, both good and bad types lose office 50% of the time, which is consistent with the high electoral turnover we see in many developing countries. In this case electoral accountability is low because the probability of re-election is not correlated with politicians' actual policy decisions.

Our theory does not directly examine the possibility that politicians (or bureaucrats) may attempt to effectively manipulate citizens' perceptions of γ through credit-claiming or blame-shifting. Both behaviors are well-documented (Groseclose and McCarty, 2001; Grimmer, Messing and Westwood, 2012; Guiteras and Mobarak, 2015; Bueno, N.d.), and in our context either could occur. When γ is low, a politician may wish to claim responsibility for good outcomes, leading citizens to believe that the politician is more powerful. In the short term this could offset the effects of γ on electoral accountability; politicians could still increase their vote share from good work by the bureaucrat. Similarly, when γ is high and performance is low, politicians may attempt to shift blame onto bureaucrats, lowering perceptions of γ.

While we do not directly test the possibility of blame-shifting or credit-claiming in this paper, one of the treatments in our experiments does allow us to test a closely-related concept: how giving citizens information about actual responsibility affects the perceived electoral consequences of performance. In Section 5, we measure citizens' prior beliefs about

11

attribution, then randomly assign them new information about who was actually responsible for government performance. We show that, even when information on responsibility is given to respondents, prior beliefs still impact electoral accountability; shifting responsibility can mitigate, but not eliminate, prior beliefs. This suggests that, even if responsibility can be shifted, citizens' beliefs about the balance of power within a government are still relevant.

The following sections use data from Uganda to test the model's assumptions and implications. The key assumption of the model is that in settings where politicians are weak relative to bureaucrats, citizens will split responsibility between the two actors:

> **Assumption:** When politicians have limited control over the bureaucracy, citizens will split blame and credit between the bureaucrat and the politician.

Our model posits that the degree to which citizens blame (credit) the politician will be driven by the perceived division of power between the politician and bureaucrat. As γ decreases, bureaucrats will receive a larger share of responsibility for service provision or other policy outcomes.

> **Hypothesis 1:** The degree of credit (blame) that bureaucrats receive will increase as the balance of power shifts away from the politician and towards the bureaucrat.

In the experiments below, we test Hypothesis 1 using a randomized treatment that indirectly induces exogenous variation in the balance of power between the politician and bureaucrat.

Finally, the model's main implication is that electoral accountability will be conditioned on the apportionment of blame and credit between politicians and bureaucrats. Our experiments test this using both citizens' priors on attribution, and an informational treatment. The informational treatment can also be thought of as simulating the effects of blame-shifting or credit-claiming by politicians.

> **Hypothesis 2a:** When citizens blame the politician for poor service provision, he will lose more votes than when the bureaucrat receives blame.

12

Hypothesis 2b: When citizens credit the politician for good service provision, he will gain more votes than when the bureaucrat receives credit.

3 Political Context in Uganda

We expect that politicians in developing countries, and at the local level, will be most likely to struggle to control bureaucrats. Local government in Uganda possess several characteristics that makes it a good test case for our theory. First, governance in Uganda is heavily decentralized, with elected and appointed officials at the national, district, and subcounty levels. We focus our analysis on the subcounty level (also called "Local Council 3" (LC3) level), the lowest level of institutionalized government in Uganda.[17] Each of Uganda's 1,403 subcounties serves an average of 25,000 citizens. Their primary task is the delivery of basic services including the construction and maintenance of feeder roads, bore holes, and latrines.

Ugandan subcounty governments are neatly divided into an elected political and an appointed bureaucratic wing. The political wing is headed by the LC3 Chairperson, who presides over the elected council. All council members are directly elected for five-year terms in partisan first-past-the-post elections, and there are no term limits. The council is tasked with passing bylaws and policies and approving budget allocations; these are then implemented by the bureaucratic wing. The head bureaucrat, called the Subcounty Chief, is responsible for administering money, implementing the policies decided on by the council and providing technical advice.[18] The Subcounty Chief oversees a small technical staff, typically consisting of two to four members, and is directly appointed by the Chief Administrative Officer (CAO) of the next highest level of government, the district. The CAO, in turn, is appointed by the central government. Thus, while local bureaucrats are officially agents of their elected counterparts, local politicians have limited power to actually enforce their wishes. They cannot directly hire or fire recalcitrant officials, and bureaucrats may also act

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[17]Village governments receive no budget and no bureaucratic support.

[18]The Subcounty Chief is an appointed position that is distinct from traditional chiefs.

as agents of their higher-level counterparts.

Third, subcounty politicians struggle to control bureaucrats. Compared to local bureaucrats, who are university-educated career civil servants, councilors have low education levels and socio-economic status. On average, councilors have completed 10 years of formal education compared to 17 years among their bureaucratic counterparts. Furthermore, bureaucrats have often spent many years in the administrative system. A high-quality pool of candidates for office is typically not available, due to the limited incentives to run for office. The only council member receiving a (low) salary is the chairperson, and subcounty bureaucrats typically make much more than subcounty politicians. Local politicians report an average monthly household income of 590,000 UGX (about USD 230), compared to 1,650,000 UGX (USD 640) for bureaucrats. This imbalance results in severe limitations to political oversight.[19] Appendix A includes quotes from Ugandan subcounty politicians on their perceived lack of power to control bureaucrats.

Finally, while Uganda's national political space has become more autocratic in recent years, there is more opportunity for political competition at the local level, and ordinary voters tend to speak their mind openly. This allows us to gain insight on the thought processes of both voters and local officials regarding the accountability process at the subcounty level.

4 Methodology

To test the theory introduced in Section 2 we conducted a set of survey experiments on samples of citizens (*citizen survey*) and subcounty government officials (*officials survey*) in Uganda. Hypotheses and specifications for analysis of the citizen survey were pre-specified and registered at the AEA registry prior to the authors having access to the survey data.[20] We use data from the citizen survey as the main test of our theory, and show results from

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[19]All figures are based on the survey of subcounty officials described in section 4.2.
[20]The registration ID is AEARCTR-0000767.

the survey with government officials – which was collected earlier – to validate findings from the citizen sample.

4.1 Survey experiments

To test our hypotheses, we designed a vignette experiment about the provision of feeder roads in a hypothetical subcounty. Using a hypothetical subcounty alleviates concerns that responses are driven by the peculiarities of each respondent's home area, and made the questions less politically sensitive. Feeder roads are a good test case for several reasons. First, their maintenance is the responsibility of subcounties, the level of government we focus on. Second, the formal allocation of responsibilities for roads is typical of local public goods in Uganda. Politicians allocate funds to maintenance and decide which roads to prioritize, and are supposed to monitor implementation of these choices. Bureaucrats are responsible for overseeing maintenance, but often in practice also heavily influence politicians' allocation decisions, especially where politicians lack good information about where repairs are needed. Finally, road maintenance is a salient issue for rural citizens, who rely on these roads to reach markets, hospitals and schools.

The vignette had two parts. In the first part, respondents were given information about the quality of roads in a hypothetical nearby subcounty. As described further below, this vignette incorporated two cross-cutting treatments. Respondents were then asked whether the local politician, or local bureaucrat, was more responsible for the quality of roads. This binary variable, *Prior*, represents citizens' initial allocation of *primary* responsibility; our main assumption is that at least some respondents will assign primary responsibility to the bureaucrat, not the politician. In the second part of the vignette, respondents were given a randomized information treatment about who was actually responsible for the quality of roads in this instance: the politician or the bureaucrat. Respondents were then asked how they thought the quality of roads would affect the vote share of the politician in the next election, if at all. This variable, *VoteChg*, was measured on a 5-point scale ranging from -2

15

(would lose a lot of votes) to 2 (would gain a lot of votes). Appendix C reports the full text of the vignette.

The first stage of the vignette incorporated two cross-cutting randomized treatments.First, we randomly varied whether roads were good ("credit" condition) or bad ("blame" condition). This allows us to test whether our hypotheses hold for both high and low government performance. The second cross-cutting treatment was designed to indirectly prime respondents on the balance of power between the politician and bureaucrat using the geographic origin of the bureaucrat: the bureaucrat was either an insider "from the same district" or an outsider "from another district". Section 5 discusses the logic behind this choice, and provides support for our contention that this is a proxy for power. Thus, respondents could receive a vignette about good roads where the bureaucrat is relatively powerful; good roads where the bureaucrat is relatively less powerful; bad roads where the bureaucrat is relatively powerful; or bad roads where the bureaucrat is relatively less powerful. We expect that, on average, more respondents will allocate responsibility to the politician (as measured by the Prior variable) when the bureaucrat is less powerful.

The first part of the vignette reads:

> Let me give you an imaginary example about a subcounty in a nearby district. In that subcounty, the feeder roads are [**not being/well**] maintained and [**are in very bad condition - people cannot pass, and the sick cannot get to the health centre in time/people can get to town and the health centre easily**]. Both the LC3 chairperson and the subcounty chief have some power over roads. Both have been in office all term. [**The subcounty chief comes from another district, the LC3 chairperson is from that same district/Both are from that same district**].
>
> IN YOUR OPINION, who is more at fault that the roads are not maintained – the subcounty chief, who is from [that same/another] district, or the LC3 chairperson, who is from that same district?

16

In the second stage of the vignette, we randomly assigned respondents to receive information that either the politician or bureaucrat was *in fact* responsible for the state of the roads in the scenario; randomization was blocked on treatment assignment in the first part of the vignette. The state of the roads (good or bad) and the relative power of the bureaucrat was reiterated in this part of the vignette. We then asked respondents "How do you think this situation will affect the next election, if at all?"; the five response options ranged from "the [politician] loses a lot of votes" to "the [politician] gains a lot of votes". Figure 1 depicts the eight possible treatment arms for the entire experiment.
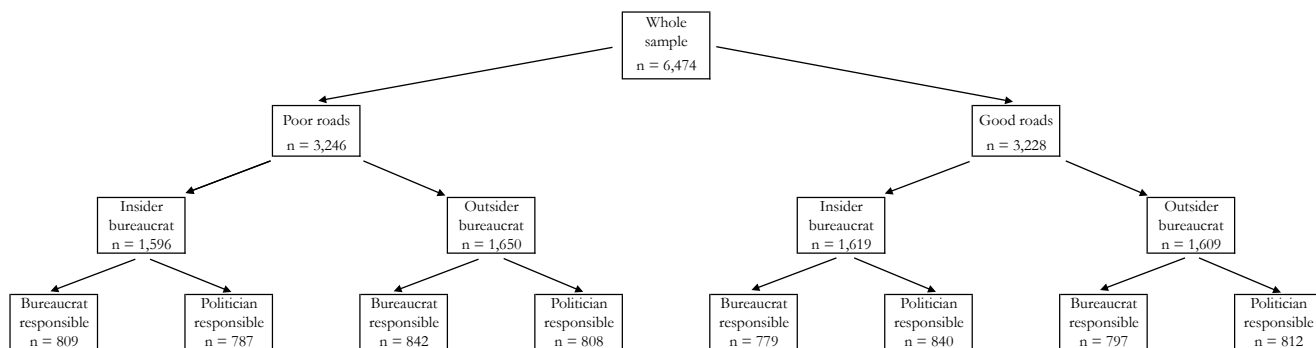
Figure 1: Treatment arms for citizen survey

4.2   Sampling

Citizen survey   The citizen survey was conducted with a cross-section of 6,474 predominantly female Ugandan heads of households in rural and peri-urban areas. The survey was embedded in the baseline survey of an unrelated field experiment, conducted by one of the authors, in the catchment area of 159 government run health centers across six Ugandan districts in November and December of 2014.[21]   For each health center, the closest three

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[21]The field experiment assessed the impact of a community monitoring intervention in the health sector. The study protocol has been approved by several Institutional Review Boards. The study protocol has been approved by the IRB of Innovations for Poverty Action (Protocol #497), by the IRB of the Uganda National Council for Science and Technology (UNCST) (Protocol # ARC157) and by UNCST itself (Protocol # SS3559).

villages within the same parish were selected. Enumerators listed all households in the three villages. Forty households from the universe of households with children under five from each health center catchment area were randomly selected, and the female head of household interviewed. In households without a female head, the male head of household was interviewed. Having a predominantly female sample is unusual. To demonstrate that results hold across genders, we show results for male respondents only in Appendix F.

Government official survey The officials survey was conducted with 2,497 local government officials in 219 subcounties, distributed across 25 districts from all four regions of Uganda.[22] About eleven officials per subcounty were interviewed, including both appointed bureaucrats (the Subcounty Chief and the Sub-Accountant, a lower ranking appointed official) and elected politicians (the chairperson and councilors).[23] The survey module was embedded in the baseline survey for a separate field experiment.[24] Data collection for the officials survey took place in June and July of 2014.

Having results from both citizens and government officials helps us overcome several limitations of survey research. First, recent research has raised concerns over the replicability of survey experiments. Testing our theory on multiple samples increases confidence in our findings. Second, while neither of our samples is representative, having both samples ameliorates concerns that our theory only holds for a specific subgroup of individuals. Finally, if citizens have limited information about politics, then their survey responses may not be good proxies for how they behave in "real-world" political settings. The fact that government officials gauge voter perceptions and responses very similarly to the citizen sample bolsters our confidence in our findings. Elected officials have strong career incentives to think about citizen

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[22]The officials survey was embedded in another field experiment conducted by one of the authors.

[23]Councilors were randomly sampled, with priority given to parish councilors, who are more directly responsible for monitoring service delivery, over councilors representing special groups such as women or youth.

[24]Districts were selected for regional spread, the absence of large interventions aimed at improving accountability, and relatively high performance with regard to budget reporting. Within study districts, nearly all rural subcounties were included in the sample, excluding a handful for logistical reasons, such as location on a remote island.

perceptions and voting behavior, and bureaucrats have typically observed voter behavior for many years,

5   Results

Our model predicts that, as the perceived balance of power shifts away from the politician and towards the bureaucrat, voters will assign less responsibility for the quality of service delivery to the politician, and the link between government performance and electoral outcomes will be weaker. We test this argument in two steps. First, we show that respondents do believe that responsibility is split between politicians and bureaucrats, and that there is a positive relationship between perceptions of the politician's power over bureaucrats (γ in our model) and the degree to which a politician is held to be responsible for the quality of roads. Second, we show that lower perceived responsibility results in weaker perceived electoral punishments and rewards for poor and good service delivery, respectively.

This section reports the results of surveys with citizens and officials. All specifications except t-tests are presented with district fixed effects and a pre-specified set of demeaned control variables.[25] Since randomization took place at the individual level we do not cluster standard errors. For ease of interpretation and to follow our pre-analysis plan, our primary specification is always ordinary least squares (OLS). All results are robust to alternative specifications (see Section 5.6.

5.1   Responsibility is split

A critical assumption of our theory is that citizens recognize the limited oversight capacity of politicians over the bureaucracy and, in response, distribute blame for bad services and credit for good services between politicians and bureaucrats.[26] To test this assumption, we

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[25]Control variables include education, gender, and a wealth index. The wealth index was created using primary components analysis on data from an asset module. Missing values (less than 10 percent) are set equal to the sample mean.

[26]In terms of our model, $\gamma < 1$.

asked respondents who they thought was more responsible for the condition of the roads in the vignette.[27] For analysis we turned this into an indicator variable, *Prior*, that takes value 1 if a respondent says that the politician was primarily responsible, and 0 otherwise.[28]

Table 1: Distribution of Perceived Responsibility by Respondents

Sample	% Politician responsible	% Bureaucrat responsible	% Indifferent/Missing	n
Citizens	67.21	26.49	6.30	6,474
Local Politicians	82.25	15.77	1.98	2,073
Local Bureaucrats	47.17	41.98	10.85	424

"Indifferent" includes respondents who were not even leaning one way. "Missing" refers to those who replied Don't Know or refused to answer the question. Citizen responses are consistent across the credit and blame conditions.

As shown in Table 1, sizable fractions of each sample consider the bureaucrat as primarily responsible. While 67% of citizens consider the politician as primarily responsible for the quality of the roads, 26% consider the bureaucrat to be primarily responsible, and 6% are indifferent, refused to answer, or did not know. In the officials survey, 16% of politicians and 42% of bureaucrats consider bureaucrats to be primarily responsible. This lends support to the idea that citizens and officials both recognize the weak oversight capacity of local politicians in Uganda.[29]

5.2 Shifting perceived oversight capacity

In order to test whether the balance of power between politicians and bureaucrats (γ) affects the attribution of responsibility, we sought to alter the perceived balance of power without priming respondents on it directly. We do so by taking advantage of an empirical fact:

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[27] "In your opinion, who is [more at fault/deserves more credit] that the roads are [not/well] maintained – the subcounty chief, who is from [another/the same] district or the LC3 chairperson, who is from that same district?" Respondents who said they were indifferent received the following probe: "Is that slightly more the LC3 Chairperson, slightly more the SC chief, or truly indifferent?"

[28] In the main operationalization of the variable, "truly" indifferent respondents are coded as 0. Table 6 in Appendix F shows that results hold when we assign missing values to indifferent respondents instead.

[29] The discrepancy between the responses of bureaucrats and politicians could suggest that each type of official is biased to believe that they are responsible for government performance, or that they are subject to social desirability bias when they are effectively being asked whether their position is important for subcounty outcomes.

In Uganda, bureaucrats are sometimes assigned to subcounties in their home district, and sometimes assigned to subcounties in other parts of the country. Our fieldwork suggests that bureaucrats who hail from other districts (*outsiders*) are perceived as having poor information about local conditions and, more generally, as being less powerful compared to bureaucrats working within their home district (*insiders*).[30] Insider status is one of the most easily observable characteristic of a bureaucrat, making it a good choice for a survey context.

In the survey experiment, we leverage this perception by randomly varying the *insider* versus *outsider* status of a bureaucrat in order to exogenously manipulate the average respondent's *expectation* of the power of the bureaucrat. Since we are not providing any cues to manipulate the expected leverage of the politician, a manipulation of the type of the bureaucrat should then translate into a change in the expected *relative* leverage of bureaucrats and politicians in the hypothetical local government. This manipulation then helps us tease out how attribution is affected by perceptions of the relative leverage of each official.

5.3 Perceptions of insider and outsider bureaucrats

First, we show that outsider bureaucrats are indeed perceived as having less power than insider bureaucrats. We asked a random subset of the citizen sample (n=3,031) to what extent they agreed with the statement that the hypothetical local bureaucrat in their vignette, who was randomly assigned to be either an insider or outsider, had "a lot of power". Among respondents who were asked about an insider bureaucrat, 78.6% agreed with the statement, compared to 72.9% among respondents who were asked about an outsider bureaucrat. The difference is statistically significant at the 1% level (two-sided t-test).[31] Additional questions provide leverage on why outsiders are seen as less powerful: they are perceived as having less information and being of lower capacity overall; see Appendix D for further descriptive results. We conclude that the insider-outsider treatment successfully altered the perceived

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[30]We remain agnostic as to whether this perception is rooted in reality or in stereotypes.

[31]Responses were coded on a six-point Likert scale, with 1 indicating strong disagreement and 6 indicating strong agreement. The difference is also statistically significant at the 1% level when considering the six-point Likert scale.

power balance between bureaucrats and politicians.

5.4   The perceived balance of power affects attribution

Table 2 demonstrates that the insider-outsider treatment is a significant predictor of attribution: citizens are 7.2 percentage points more likely to think that the politician is *primarily responsible* for the quality of services delivered when the hypothetical bureaucrat is originally from another district and thus relatively less powerful. Note that the outcome variable, a binary indicator for who is primarily responsible for the quality of service delivery, only reflects changes around the 50% threshold and is therefore hard to move.

Table 2: Blame and Bureaucrat's Identity

Dependent variable:	Perceive politician as primarily responsible			
Sample:	Citizens	All Officials	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)
Outsider bureaucrat	0.072*	0.036*	0.016	0.153**
	(0.012)	(0.016)	(0.016)	(0.052)
Assigned to bad roads	0.019	-0.083**	-0.073**	-0.106*
	(0.012)	(0.016)	(0.016)	(0.052)
Constant	0.660**	1.097**	0.920**	0.060
	(0.014)	(0.030)	(0.033)	(0.220)
Observations	6,251	2,410	2,032	378
R-squared	0.011	0.088	0.044	0.116

The dependent variable is an indicator for whether the respondent's prior is that the politician is primarily responsible for the quality of service delivery. The independent variable is whether the local bureaucrat was described as from another district (*Outsider*) as opposed to being posted in his home district. Outsider bureaucrats are perceived as less powerful. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

The officials survey validates these findings. The effect is even stronger among bureaucrats themselves; in this sample, the share of respondents who think the politician is primarily to blame is 15.3 percentage points higher when the hypothetical bureaucrat is an outsider. The direction of effects in the politician sample is consistent but smaller (1.6 percentage points) and insignificant, which may be due to ceiling effects (note that the constant is 0.92 in this sample).[32]

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[32]In non-parametric terms, 83% of elected politicians assigned to the insider condition thought the politi-

A pilot survey, conducted on a sample of 377 small business owners in peri-urban areas, provides further evidence that those who attribute responsibility to bureaucrats do so because they perceive them as more powerful. In the pilot survey, we asked respondents to explain why they thought the politician or bureaucrat was more to blame for poor roads.[33] These open-ended responses were coded into pre-determined categories by the enumerators. The three most common reasons given for blaming the bureaucrat all relate to his perceived power: 35% explained that the bureaucrat "is in charge of implementing and overseeing government programs"; 24% said that the bureaucrat was "the boss", or is "formally in charge of government"; and 15% said that the bureaucrat "is part of government / is connected to higher-level government." In contrast, the three most common reasons given for thinking the politician was to blame all relate to his perceived link to citizens: "is elected" (39%), "comes from the same area" (17%), or "has more information about what citizens need" (17%)). Only 4% of the reasons given for blaming the politician were "has more power / is the head of the subcounty." Table 5 in the Appendix presents the full results for this question.

5.5 Blame and credit attribution has electoral implications

Having demonstrated that politicians are perceived as less responsible when bureaucrats are more powerful, we now show that this undermines electoral accountability. We hypothesized that poor service provision will be less likely to lead to electoral losses when the politician is *not* directly blamed for poor service delivery, and vice versa for good service provision. This connection is not automatic; it is possible that voters will punish politicians for poor performance regardless of who is "at fault", as a politician's responsibilities include monitoring bureaucrats.

To test the effects of attribution on vote share, we experimentally manipulated the information respondents receive about who was in fact responsible for the quality of service

cian was responsible, leaving only a small portion of the sample who can potentially be moved by the treatment.

[33]The pilot did not include a credit condition.

delivery in the hypothetical subcounty. After gathering respondents' prior belief about the allocation of responsibility, we informed them that either the local politician or the local bureaucrat held responsibility in this particular instance, stressing that the community was aware of this.[34] The information treatment was randomized at the individual level; for analysis we code this treatment as a binary variable, *Info*, that takes a value of 1 if a respondent was told that the politician was actually responsible. This treatment can also be interpreted as similar to what a politician or bureaucrat might do in an attempt to shift credit or blame.

We then asked a random subset of respondents in both the citizen and officials sample what effect they believed good/poor roads would have on the vote share of the incumbent politician in the next election, with responses collected on a five-point Likert scale. For analysis we transform this into a variable, *VoteChg*, measuring the net expected change in votes. It takes a value of -1 if a respondent expects a politician to lose votes, 0 if no change in votes is expected, and 1 if a vote gain is expected.[35]

Our main analysis examines the effect of the information treatment on expected vote change. To take into account respondents' priors on who is responsible, we control for their prior assessment before they had received any information on responsibility. The equation we estimate is thus:

$$VoteChg_i = \alpha + \beta_1 * Prior_i + \beta_2 * Info_i + \gamma * X_i + \epsilon_i$$

where the subscript i indicates the individual respondent, $Prior_i$ takes the value 1 if a respondent's prior was that the politician was primarily responsible, and $Info_i$ takes the value 1 if a respondent received information that the politician was actually at fault for poor service delivery. X_i is a vector of control variables and ϵ_i is the error term. We estimate

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[34]The exact wording was "Now, say that the [LC3 Chairperson/SC Chief who is from another district/SC Chief who is from that same district] is actually at fault for the roads not being maintained, and that the community knows this."

[35]The exact wording of the question was: "How do you think this situation will affect the next election, if at all? The LC3 Chair loses a lot of votes, the LC3 Chair loses some votes, there is no effect on voting, the LC3 Chair gains some votes, or the LC3 Chair gains a lot of votes." Results with the five-point Likert scale as dependent variable are reported in Tables 12 and 13 in Appendix F.

this equation separately for the blame and credit conditions. In the blame condition we expect the politician to be more likely to lose votes when s/he is responsible; $Prior$ and $Info$ should have negative coefficients. In the credit condition, the opposite is true; $Prior$ and $Info$ should have positive coefficients.

Overall, 74% of citizens and 92% of officials thought that the local politician would lose at least some votes in the case of poor public service provision. Conversely, 65% of citizens and 70% of officials thought that the local politician would gain votes in the case of good public service provision. As expected, these numbers vary dramatically based on information about actual responsibility. Table 3 presents the regression results for the citizen and officials samples.

Columns 1-3 of Table 3 show the analysis for respondents in the blame condition, while columns 4-6 show the results for the credit condition. Recall that the dependent variable takes value -1 if a respondent expects a politician to lose votes in the next election as a result of the quality of service delivery, 0 if no change is expected, and 1 if a gain in votes is expected. As expected, both Prior and Info have significant effects on perceived electoral outcomes among citizens. When roads are poor, the politician is perceived as significantly more likely to lose votes when he is responsible for performance; in the credit condition attribution increases the electoral gains from good performance.

The sign and magnitude of the effect of information on anticipated electoral consequences are remarkably consistent across the different samples. Among bureaucrats, the effect in the blame condition is large but just fails to reach standard levels of significance (p=0.054) in the pre-specified OLS specification; this is likely a power issue due to the small sample of bureaucrats. In the alternative specifications using ordered probit (Table 11), or the five-point Likert scale with OLS (Table 12) or ordered probit (Table 13), the effect is significant at the 5% level.

Table 3: Expected Change in Future Votes

DV:	Net expected change in votes					
	Bad roads			Good roads		
Sample:	Citizen	Politicians	Bureaucrats	Citizen	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)	(5)	(6)
Info: Politician responsible	-0.238**	-0.106**	-0.171	0.360**	0.625**	0.402**
	(0.047)	(0.026)	(0.088)	(0.052)	(0.046)	(0.096)
Prior: Politician responsible	-0.120*	-0.018	-0.108	0.130*	-0.011	0.048
	(0.052)	(0.033)	(0.088)	(0.056)	(0.064)	(0.101)
Constant	-0.376**	-0.825**	-0.657**	0.136*	0.169**	0.395**
	(0.050)	(0.033)	(0.067)	(0.054)	(0.063)	(0.078)
Observations	982	1,013	193	999	1,057	224
R-squared	0.037	0.033	0.157	0.063	0.217	0.255

The dependent variable takes the value -1 if a respondent expects a politician to lose votes, 0 if no change in votes is expected, and 1 if a vote gain is expected. *Prior* is an indicator variable for whether the respondent's initial belief was that the politician was responsible. *Info* is an indicator for whether the respondent was subsequently assigned to be told that the politician was actually responsible. Standard errors in parentheses. ** p<0.01, * p<0.05.

As further demonstrated in Table 10 in Appendix F, the effects are substantively large: citizens in the blame condition whose prior and information treatment agreed that the politician was to blame were 22.7 percentage points more likely to believe that the politician would lose at least some votes, compared to those for whom both prior and information agreed that the bureaucrat was to blame. Similarly, in the credit condition, citizens whose prior and information both agreed that the politician deserved credit were 29 percentage points more likely to believe that the politician would at least gain some votes, compared to those for whom both prior and information agreed that the bureaucrat deserved the credit.

Among citizens, both *Prior* and *Info* are significant predictors of the anticipated electoral consequences of government performance. When the bureaucrat is seen as the one responsible, electoral repercussions are expected to be less likely. This finding suggests that not only do citizens' personal beliefs about the proper allocation of responsibility matter for electoral accountability, but that providing additional information about government performance may have a significant impact on electoral accountability.

5.6 Discussion

Our results are robust to a number of alternative specifications. The online appendix replicates the results in Table 2 using probit, and the results in Table 3 using ordered probit. We also show results with alternative operationalization of the respective dependent variables; for Table 2, we code those who were indifferent between blaming bureaucrats and politicians as missing; for Table 3 we replicate results using a five-point Likert scale. With all these alternative specifications, the results in Table 3 for bureaucrats are significant despite the small sample; the results also remain significant for the citizen and politician samples. As our citizen sample is primarily female, we also report the results broken down by gender; while the small number of men makes our estimates imprecise, the coefficients of interest do not vary by gender.

We find remarkably consistent results across our two samples – citizens and officials. Replicating our findings across two independent samples increases confidence in the results, and also allows us to overcome some of the limitations of each sample. For example, while the citizen survey is not representative, finding similar perceptions among officials alleviates concerns that our results are driven by a particular subsample of citizens. The results of the officials survey also demonstrates that our results are not driven by poor overall information among citizens, or by citizens who do not fully understand that formal structure of governance.

Finally, we note the stickiness of priors among citizens. Even when citizens receive information that the bureaucrat was in fact the one to blame for poor roads, their prior on whether the politician was primarily responsible still significantly predicts anticipated electoral consequences. The same is true for the credit condition. This suggests that blame-shifting and credit-claiming cannot completely erase citizens' initial beliefs about responsibility.

6 Conclusion

Electoral accountability is strongest when there is a clear relationship between government performance and vote share: citizens should reward incumbents who perform well, and penalize those who do poorly. However, most government policy incorporates the decisions of multiple actors, and citizens may struggle to correctly attribute responsibility for performance to the correct official. Without clarity of attribution, electoral accountability will suffer. This paper introduces and tests a new mechanism that affects clarity of attribution: the degree to which politicians can effectively monitor and control their bureaucratic counterparts. If politicians lack skills and power relative to bureaucrats, citizens may attribute credit and blame for government performance to bureaucrats; this can result in weaker electoral accountability. Using data from Uganda, we find that citizens and government officials alike are less likely to attribute responsibility to local politicians when local bureaucrats are more powerful, and are less likely to punish or reward politicians for the quality of roads when they believe that the bureaucrat holds more responsibility.

One limitation of our empirical strategy is that we can show that the balance of power affects attribution, and that attribution affects electoral accountability, but are not set up to directly test the causal effect of the balance of power on electoral accountability. This is due to the necessary trade-offs of our research design. To create a realistic manipulation of the balance of power between bureaucrats and politicians, we implemented the relatively indirect insider-outsider treatment. While it is a strong enough treatment to move perceptions of attribution, it was not designed to be strong enough to move a significant fraction of individuals' perceptions of electoral outcomes; our pre-analysis plan specifies that we did not expect it to have a discernible effect on electoral accountability. The randomized information treatment—necessary to get causal identification of attribution on electoral accountability—may have compounded the weak treatment problem. However, we have confidence in our overall results: it is difficult to think a realistic scenario in which the balance of power affects attribution, and attribution affects electoral accountability, but the balance of power would

28

not affect electoral accountability.

Our results are likely to hold in a wide range of settings, especially at the local level. Many countries have decentralized in the past two decades, placing substantial administrative responsibility with relative new local governments. In areas where public office is not financially attractive, and where overall levels of education are low, it may not be realistic to expect a pool of high-quality candidates to emerge, especially when working as a bureaucrat or in the private sector is associated with higher wages and more prestige. In these cases, governments may need to invest in training and education for newly-elected incumbents in order to empower politicians and give them the skills they need to be effective administrators.

A critical implication of our results is that, in situations where politicians are weak and bureaucrats are strong, citizens have few incentives to vote based on government performance. This suggests two alternatives. First, voters could simply be less likely to vote at all; weak politicians may lead to lower voter turnout. Second, citizens could vote on a basis other than policy. For example, in many low- and medium-income countries, clientelism and ethnic voting are common. Our results suggest that, if citizens believe that the politician in power has little impact on government performance, it may be rational to accept clientelist transfers or ethnic appeals. While we do not claim this to be the single driving force behind clientelism and ethnic voting, we believe it to merit further theoretical and empirical exploration.

From a policy perspective, our findings suggests that initiatives aimed at strengthening or insulating local bureaucrats may have the unintended consequence of weakening electoral accountability.

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Online Appendix

A   Qualitative Data

Below are excerpts from qualitative interviews conducted by one of the authors with local council (LC3) members–local politicians–in eight subcounties across four Ugandan districts in May 2016.

Interview ID: DI3

"It has been very tough since they brought in the new chief. With the old chief we used to have meetings, but the new one just says 'There is no money', also for monitoring. This makes it very difficult for councilors to be involved. [...] The chief does not give us the budget, there is no transparency. It is quite very difficult for us to monitor. For us, as parish councilors, they take you like you are not important. If you ask for detailed info, they hide it."

Interview ID: CI2

"Here at the subcounty it's hard to get [budget and expenditure] documents from the technical personnel, they keep telling us it's above us and that we should do things as per our level."

Interview ID: CII1

"The technical people know that nothing can move without money, so they use their financial power to control everything. The main problem is that the council and committees don't meet [formal meetings require budget allocations for allowances]. Yet that is where you track progress. When the council is not meeting we can't know how much money has come."

What about ledger books and bank statements – can you access those?

"[Laughter.] You cannot get them! If you start inquiring so much they say 'do you want to do my job?!' There are things that are hidden.Technocrats don't want us to see the bank statements because it shows how much local revenue was collected, which they use for their ends. The information remains sheltered among technocrats, all the way from the district. They don't want us to see it. The district technocrats protect their people. They may also get their money from there."

Interview ID: CI1

How are things in this subcounty?

"We have technocrats who take their own decisions. We had planned for the council to construct a road, but the technocrats that diverted money to buy land for school. They informed the councilor only later and told them the district would support the road. Hence, the council approved the divergence of the money.

Since the councilors are not in the know, the technocrats just do shoddy work and the councilors face the problems. We suspect that the technocrats and the contractors are conniving and eat a lot of money.

The land was bought at 4 million but they do not have any evidence how much money was actually spent because the technocrats do not share the documents. They just give us block figures, but no details. 'I'm not ready, I'm not ready' is what they say when we asked for council minutes."

[. . .]

"We have less influence on budget formulation because the technical people say that the government has guidelines on what the budget is supposed to look and if we don't follow them the district will get the penalty. They are the technical people so they know the rules. The technocrats write the budget, including the location of projects such as roads, boreholes etc. When we complain they say the direction comes from the district. Yet we are on the

ground and know best so we should be consulted.

Initially, we had powers of deciding which villages get boreholes. We still send priorities, but they often don't follow them and don't even inform us. After we've decided we go to the villages and inform them "we have lobbied for a borehole for you". And then they see other villages get boreholes! This makes us look very bad. It'd be better if all those decisions were just taken at the district, instead of giving out the mandate and then not following it. We are just wasting our time!

There is nothing we can do at the local level! We have lost confidence. We have complained many times about the [subcounty] chief to the CAO [head bureaucrat at the district] yet he says: 'there is nowhere I can transfer the chief, no one wants him.'"

Interview ID: BII1

What are some of the challenges you face in this subcounty, besides lack of funds?

"Relationships between councilors and technocrats are not good. As councilors, we bring the views from the villages to the technocrats so that they implement. When technocrats fail to implement our resolutions without any reason then that means there is an issue."

How easy is it to get financial information?

"It's not easy. They dodge, dodge you. You only get it if you persist. But you may get it when it is useless – they delay until the information is old. It is intentional.

We have local revenue here. Councilors get their allowances from that. We can also use that money for programs. So we want to get that information [about local revenue]. The sources for local revenue are many. But they don't want to share the report. I am suspecting that the chairperson and the chief know. The money is not coming directly into the treasury.

The technocrats want their things in the corner, corner [hidden]. So if they see someone [a politician] who is very strict and wants something worked on immediately, they don't like

it."

B Full Solution of the Model

B.1 The Citizen's Voting Decision

Given that they observe some policy z, Citizens will re-elect the Incumbent if $Pr(x_P = 0|z) \geq \alpha$. Using Bayes' rule, we can derive this condition. Given the signal z, the citizen's posterior will be:

$$P(x_P = 0|z) = \frac{P(z|x_P = 0) * P(x_P = 0)}{P(z)} \tag{6}$$

The three individual components are:

$$P(z|x_P = 0) = f(z + (1 - \beta)(1 - \gamma)\hat{x}^2) \tag{7}$$

$$P(x_P = 0) = \alpha \tag{8}$$

$$P(z) = \alpha * f(z + (1 - \beta)(1 - \gamma)\hat{x}^2) + (1 - \alpha) * f(z + \gamma\hat{x}^2 + (1 - \beta)(1 - \gamma)\hat{x}^2) \tag{9}$$

The citizen will therefore keep the incumbent when

$$\alpha * \frac{f(z + (1 - \beta)(1 - \gamma)\hat{x}^2)}{\alpha * f(z + (1 - \beta)(1 - \gamma)\hat{x}^2) + (1 - \alpha) * f(z + \gamma\hat{x}^2 + (1 - \beta)(1 - \gamma)\hat{x}^2)} \geq \alpha \tag{10}$$

which simplifies to:

$$f(z + (1 - \beta)(1 - \gamma)\hat{x}^2) \geq f(z + \gamma\hat{x}^2 + (1 - \beta)(1 - \gamma)\hat{x}^2) \tag{11}$$

B.2 The likelihood Good and Bad Types are Re-elected

A Good politician sets $x_P = 0$, and the probability they are re-elected is the probability that, given γ, β, and $f(\epsilon)$,

$$z = -(1-\gamma)(1-\beta)\hat{x}^2 + \epsilon \geq k^* \tag{12}$$

As $k^* = -\hat{x}^2 * ((1-\beta)(1-\gamma) + \frac{\gamma}{2})$, we can therefore write the probability that the Good politician is kept as:

$$Pr(-(1-\beta)(1-\gamma)\hat{x}^2 + \epsilon \geq -\hat{x}^2 * ((1-\beta)(1-\gamma) + \frac{\gamma}{2})) \tag{13}$$

$$Pr(\epsilon \geq \hat{x}^2[(1-\beta)(1-\gamma) - (1-\beta)(1-\gamma) - \frac{\gamma}{2}]) \tag{14}$$

$$= 1 - Pr(\epsilon \leq -\frac{\gamma}{2}\hat{x}^2) \tag{15}$$

$$= 1 - F(-\frac{\gamma}{2}\hat{x}^2) \tag{16}$$

Let $A_G = -\frac{\gamma}{2}\hat{x}^2$. As γ increases, A_G decreases. This implies that $F(A_G)$ also decreases, and so $1 - F(A_G)$ increases. Therefore, as power shifts towards the Incumbent, the likelihood that a Good type is re-elected increases.

We can follow a similar process for a "Bad" Incumbent, who is kept when

$$Pr(-\gamma\hat{x}^2 - (1-\beta)(1-\gamma)\hat{x}^2 + \epsilon \geq k^*) \tag{17}$$

$$= Pr(\epsilon \geq (\gamma - \frac{\gamma}{2})\hat{x}^2) \tag{18}$$

$$= 1 - F(\frac{\gamma}{2}\hat{x}^2) \tag{19}$$

Let $A_B = \frac{\gamma}{2}\hat{x}^2$. Now as γ increases, A_B increases and so $F(A_B)$ also increases. This means that as γ increases $1 - F(A_B)$ decreases: when the Incumbent has more power, the likelihood a Bad type is re-elected decreases.

C Vignette and Survey Questions

This section reports the full text of the vignette experiment used in the citizen and officials survey. For enumeration the vignette was translated into the dominant local language.

Vignette Text:

Let me give you an imaginary example about a subcounty in a nearby district. In that subcounty, the feeder roads are [not being/well] maintained and [are in very bad condition - people cannot pass, and the sick cannot get to the health centre in time/people can get to town and the health centre easily]. Both the LC3 chairperson and the subcounty chief have some power over roads. Both have been in office all term. [The subcounty chief comes from another district, the LC3 chairperson is from that same district/Both are from that same district.]

IN YOUR OPINION, who is more at fault that the roads are not maintained – the subcounty chief, who is from [that same/another] district, or the LC3 chairperson, who is from that same district?

Now, recall that in this example the roads in the subcounty are poor. While the LC3 Chairman, who is from that same district, and the Subcounty Chief], who is from [that same/another] district, both have power over roads, in this case it is primarily the [LC3 Chairperson/Chief] who deserves [credit/blame] for the quality of the roads. How do you think this situation will affect the next election, if at all? The LC3 Chair loses a lot of votes, the LC3 Chair loses some votes, there is no effect on voting, the LC3 Chair gains some votes, or the LC3 Chair gains a lot of votes.

Text of module testing perceptions of insider and outsider bureaucrats Now I will read you a number of statements about a Subcounty Chief who is from [that same district where he works/another district than where he works]. We are not talking about this subcounty but in general. For each statement, please tell me how much you agree

or disagree – strongly agree, agree, somewhat agree, somewhat disagree, disagree, strongly disagree.

. . . will use any opportunity to give jobs and development projects to his people, instead of thinking of the entire subcounty.

. . . will work hard to use limited resources efficiently.

. . . has strong social ties with people in the community.

. . . will have good information about what citizens in the subcounty need.

. . . has a lot of power over what happens in the subcounty.

. . . will work hard to lobby the district for more resources to the subcounty.

. . . will feel ashamed if he or she does not work hard to meet citizens' needs.

. . . will listen to and respect the local citizens.

. . . would embezzle subcounty money if he had the chance.

. . . will be neutral and objective in how he allocates resources and deals with citizens.

D Perception of Outsider Bureaucrats

To assess perceptions of insider and outsider bureaucrats, we asked a random subset of the citizen sample five questions about the quality and influence of a hypothetical local bureaucrat, who was either an insider or outsider. To avoid survey fatigue, respondents were randomly selected to receive one of two possible sets of five questions; each question was answered on a 6-point agree/disagree scale. Three questions related to the perceived influence of the hypothetical bureaucrat: whether the hypothetical bureaucrat is expected to have power over the subcounty ($HasPwr$), to have good social ties with locals ($SocTies$), and to have good information about citizens' needs ($HasInfo$). The remaining variables relate to quality, or type: whether the hypothetical bureaucrat is expected to be likely to engage in patronage ($Patron$, entering negatively), to work hard ($WorkHrd$), to lobby hard for the subcounty ($Lobby$), to feel shame for doing his job poorly ($Shame$), to listen to local

citizens (*Listens*), to embezzle funds (*Embez*, entering negatively), and to be neutral and objective when making decisions (*Neutral*). To increase power, we use the responses from both the Credit and Blame treatments for the perceptions analysis, but add an indicator variable for the Blame treatment to the analysis.

Figure 2 summarizes the results. Compared to a hypothetical insider bureaucrat, outsiders are viewed as less powerful and – mostly – as of lower quality.
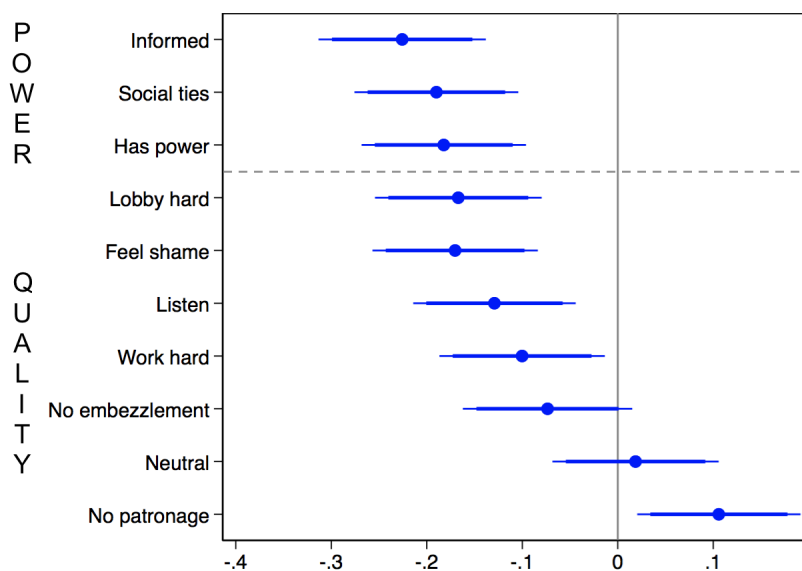
Figure 2: Perception of Outsider Bureaucrats

Displaying average treatment effects of a hypothetical bureaucrat coming from another district, as compared to coming from the same district, on perceived power and quality among citizens. Outcome variables are agreements/disagreements with statements about the hypothetical bureaucrat, measures on a six-point scale. Showing 95% (bold) and 90% (thin) confidence intervals.

The differences in assessments of insider and outsider bureaucrats are significant in eight of the ten questions. Of those eight questions, the insider is perceived as better than the outsider in seven. Respondents do not appear to perceive significant differences in the likelihood that insiders or outsiders will embezzle funds or be neutral in how they do their job. Differences in perceptions are starkest in the three measures relating to perceived power.

Dependent variable:	Power (1)	Social Ties (2)	Good Info (3)	Has Power (4)	Quality 1 (5)	No Patro (6)	Work Hard (7)	Quality 2 (8)	Feel Shame (9)	Listens (10)	No Embezzle (11)	Neutral (12)
Outsider bureaucrat	-0.20**	-0.19**	-0.23**	-0.18**	0.00	0.11*	-0.10*	-0.11**	-0.17**	-0.13**	-0.07	0.02
	(0.035)	(0.044)	(0.045)	(0.044)	(0.027)	(0.044)	(0.044)	(0.028)	(0.044)	(0.043)	(0.045)	(0.044)
Info: Politician responsible	-0.14**	-0.16*	-0.09	-0.13*	-0.01	0.08	-0.11	-0.02	0.04	-0.07	0.07	0.00
	(0.050)	(0.062)	(0.063)	(0.062)	(0.038)	(0.062)	(0.063)	(0.040)	(0.062)	(0.061)	(0.064)	(0.063)
Assigned to bad roads	-0.30**	-0.36**	-0.25**	-0.28**	-0.02	0.26**	-0.31**	-0.24**	-0.17**	-0.29**	-0.20**	-0.30**
	(0.050)	(0.063)	(0.064)	(0.063)	(0.038)	(0.062)	(0.063)	(0.040)	(0.063)	(0.062)	(0.064)	(0.063)
Pol. responsible*Bad roads	0.16*	0.11	0.16	0.16	0.03	-0.07	0.14	0.12*	0.11	0.20*	0.07	0.10
	(0.070)	(0.088)	(0.089)	(0.088)	(0.054)	(0.087)	(0.088)	(0.056)	(0.088)	(0.087)	(0.090)	(0.089)
Constant	0.29**	0.35**	0.23**	0.31**	-0.01	-0.24**	0.26**	0.21**	0.12	0.29**	0.06	0.14*
	(0.050)	(0.062)	(0.063)	(0.062)	(0.038)	(0.062)	(0.063)	(0.040)	(0.063)	(0.061)	(0.064)	(0.062)
Observations	2,102	2,043	2,039	2,045	2,087	2,041	2,000	2,120	2,074	2,080	1,973	2,013
R-squared	0.053	0.056	0.026	0.033	0.002	0.044	0.050	0.044	0.019	0.031	0.028	0.030

Z-score indices (in bold) and their standardized components. Standard errors in parentheses. ** $p < 0.01$, * $p < 0.05$.

Table 4: Perception of bureaucrats based on insider status

E   Reasoning for Allocation of Responsibility

Why is it the Chief's fault? (n=141)	
%	Response
35%	Is in charge of implementation & oversight of government projects
24%	Is the boss/formally in charge of subcounty
15%	Is part of government/is connected to higher-level government
9%	Has power over finances
8%	Is a professional/is neutral/is not part of politics
4%	Has more information about the subcounty
1%	Is from another district
1%	Because the LC3 is powerless
1%	Is well educated
1%	He does it on purpose

Why is it the LC3's fault? (n=236)	
%	Response
39%	He/she is elected
17%	Comes from the same area
17%	Has more information about what citizens need
14%	LC3s make promises during campaigns
5%	They are supposed to monitor government projects
4%	Has more power/is the head of the subcounty
2%	Should pass on information/lobby the district or MPs
1%	Is easier to access

Table 5: Open-ended responses for why the bureaucrat or politician is to blame, citizens (pilot)

F Robustness Checks

F.1 Robustness Checks of Table 2 (Effect of insider-outsider treatment on attribution)

Table 6: Blame and Bureaucrat's Identity - Indifferent responses treated as missing values

Dependent variable:	Perceive politician as primarily responsible			
Sample:	Citizens	All Officials	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)
Outsider bureaucrat	0.060**	0.036*	0.016	0.153**
	(0.012)	(0.016)	(0.016)	(0.052)
Assigned to bad roads	0.013	-0.083**	-0.073**	-0.106*
	(0.012)	(0.016)	(0.016)	(0.052)
Constant	0.691**	1.097**	0.920**	0.060
	(0.014)	(0.030)	(0.033)	(0.220)
Observations	6,066	2,410	2,032	378
R-squared	0.010	0.088	0.044	0.116

Replication of Table 2 (OLS). The dependent variable is a dummy for whether the respondent's prior is that the politician is primarily responsible for the quality of service delivery, *now assigning missing values to indifferent respondents*. The independent variable is whether the local bureaucrat was described as coming from another district (*Outsider*) as opposed to being posted in his home district. The specification includes covariates and district fixed effects. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

Table 7: Blame and Bureaucrat's Identity - Probit

Dependent variable:	Perceive politician as primarily responsible			
Sample:	Citizens	All Officials	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)
Outsider bureaucrat	0.207**	0.131*	0.067	0.429**
	(0.033)	(0.060)	(0.069)	(0.140)
Assigned to bad roads	0.054	-0.307**	-0.318**	-0.288*
	(0.033)	(0.060)	(0.070)	(0.140)
Constant	0.381**	1.734**	1.157**	-1.382*
	(0.058)	(0.173)	(0.204)	(0.704)
Observations	6,251	2,410	2,032	378
Pseudo R-squared	0.009	0.085	0.052	0.091

Probit estimation of Table 2. The dependent variable is a dummy for whether the respondent's prior is that the politician is primarily responsible for the quality of service delivery. The independent variable is whether the local bureaucrat was described as coming from another district ($Outsider$) as opposed to being posted in his home district. The specification includes covariates and district fixed effects. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

Table 8: Blame and Bureaucrat's Identity - No covariates

Dependent variable:	Perceive politician as primarily responsible			
Sample:	Citizens	All Officials	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)
Outsider bureaucrat	0.072**	0.039*	0.017	0.149**
	(0.012)	(0.017)	(0.016)	(0.052)
Assigned to bad roads	0.019	-0.084**	-0.073**	-0.111*
	(0.012)	(0.017)	(0.016)	(0.052)
Constant	0.651**	0.803**	0.867**	0.455**
	(0.010)	(0.014)	(0.014)	(0.045)
Observations	6,251	2,410	2,032	378
R-squared	0.010	0.035	0.042	0.098

Replication Table 2 without covariates (OLS). The dependent variable is a dummy for whether the respondent's prior is that the politician is primarily responsible for the quality of service delivery. The independent variable is whether the local bureaucrat was described as coming from another district ($Outsider$) as opposed to being posted in his home district. The specification includes district fixed effects. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

Table 9: Blame and Bureaucrat's Identity - Citizen Sample Restricted to Men

| Dependent variable: | Perceive politician as primarily responsible | |
| Sample: | All citizens | Men only |
	(1)	(2)
Outsider bureaucrat	0.072**	0.094*
	(0.012)	(0.040)
Assigned to bad roads	0.019	-0.060
	(0.012)	(0.040)
Constant	0.660**	0.727**
	(0.014)	(0.034)
Observations	6,251	510
R-squared	0.011	0.022

OLS. The dependent variable is a dummy for whether the respondent's prior is that the politician is primarily responsible for the quality of service delivery. The independent variable is whether the local bureaucrat was described as coming from another district (*Outsider*) as opposed to being posted in his home district. Standard errors in parentheses. ** p<0.01, * p<0.05.

F.2 Robustness Checks of Table 3 (Effect of attribution on electoral accountability)

Table 10: Expected Change in Future Votes - Binary Outcome

DV:	Expected vote loss			Expected vote gain		
Condition:	Bad roads			Good roads		
Sample:	Citizen	Politicians	Bureaucrats	Citizen	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)	(5)	(6)
Info: Politician responsible	0.144**	0.074**	0.099	0.212**	0.346**	0.242***
	(0.028)	(0.016)	(0.056)	(0.030)	(0.026)	(0.055)
Prior: Politician responsible	0.083**	-0.005	0.064	0.082**	0.016	0.032
	(0.031)	(0.020)	(0.055)	(0.032)	(0.035)	(0.058)
Constant	0.602**	0.899**	0.779**	0.484**	0.504**	0.634**
	(0.030)	(0.020)	(0.042)	(0.031)	(0.035)	(0.045)
Observations	982	1,013	193	999	1,057	224
R-squared	0.040	0.039	0.163	0.064	0.236	0.257

OLS. The dependent variable *expected vote loss* takes value 1 if respondents expect a politician to *lose* some or a lot of votes, 0 otherwise. Conversely, the dependent variable *expected vote gain* takes value 1 if respondents expect a politician to *gain* some or a lot of votes, 0 otherwise. *Prior* is an indicator variable for whether the respondent's initial belief was that the politician was responsible. *Info* is an indicator for whether the respondent was subsequently assigned to be told that the politician was actually responsible. Our theory predicts that the coefficients on Info and Prior should be positive in all columns. The specification includes covariates and district fixed effects. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

Table 11: Expected Change in Future Votes - Ordered Probit

DV:	Net expected change in votes					
	Bad roads			Good roads		
Sample:	Citizen	Politicians	Bureaucrats	Citizen	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)	(5)	(6)
Info: Politician responsible	-0.431**	-0.608**	-0.576*	0.551**	1.132**	1.077**
	(0.085)	(0.136)	(0.275)	(0.081)	(0.090)	(0.244)
Prior: Politician responsible	-0.220*	-0.046	-0.366	0.210*	0.055	0.197
	(0.093)	(0.165)	(0.274)	(0.085)	(0.118)	(0.235)
Observations	982	1,013	193	999	1,057	224
Pseudo R-squared	0.025	0.075	0.185	0.037	0.150	0.219

Ordered Probit. The dependent variable takes the value -1 if a respondent expects a politician to lose votes, 0 if no change in votes is expected, and 1 if a vote gain is expected. *Prior* is an indicator variable for whether the respondent's initial belief was that the politician was responsible. *Info* is an indicator for whether the respondent was subsequently assigned to be told that the politician was actually responsible. The specification includes covariates and district fixed effects. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

Table 12: Expected Change in Future Votes - Likert scale (OLS)

DV:	Expected change in votes (5-point Likert scale)					
	Bad roads			Good roads		
Sample:	Citizen	Politicians	Bureaucrats	Citizen	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)	(5)	(6)
Info: Politician responsible	-0.373**	-0.368**	-0.407*	0.612**	1.083**	0.676**
	(0.076)	(0.052)	(0.162)	(0.084)	(0.080)	(0.170)
Prior: Politician responsible	-0.278**	-0.097	-0.235	0.186*	0.018	0.077
	(0.085)	(0.066)	(0.161)	(0.090)	(0.111)	(0.178)
Constant	-0.652**	-1.285**	-1.023**	0.210*	0.327**	0.737**
	(0.081)	(0.065)	(0.123)	(0.088)	(0.109)	(0.139)
Observations	982	1,013	193	999	1,057	224
R-squared	0.041	0.075	0.185	0.069	0.229	0.241

OLS. The dependent variable is a five-point Likert scale, taking value 1 if a respondent expects the politician to loose a lot of votes, 5 if expected to gain a lot of votes. *Prior* is an indicator variable for whether the respondent's initial belief was that the politician was responsible. *Info* is an indicator for whether the respondent was subsequently assigned to be told that the politician was actually responsible. The specification includes covariates and district fixed effects. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

Table 13: Expected Change in Future Votes - Likert scale (Ordered probit)

DV:	Expected change in votes (5-point Likert scale)					
	Bad roads			Good roads		
Sample:	Citizen	Politicians	Bureaucrats	Citizen	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)	(5)	(6)
Info: Politician responsible	-0.326**	-0.693**	-0.542**	0.504**	0.962**	0.688**
	(0.072)	(0.083)	(0.189)	(0.069)	(0.076)	(0.174)
Prior: Politician responsible	-0.274**	-0.153	-0.302	0.149*	0.051	0.080
	(0.079)	(0.102)	(0.191)	(0.074)	(0.102)	(0.176)
Observations	982	1,013	193	999	1,057	224
Pseudo R-squared	0.016	0.064	0.104	0.024	0.096	0.103

Ordered probit. The dependent variable is a five-point Likert scale, taking value 1 if a respondent expects the politician to loose a lot of votes, 5 if expected to gain a lot of votes. *Prior* is an indicator variable for whether the respondent's initial belief was that the politician was responsible. *Info* is an indicator for whether the respondent was subsequently assigned to be told that the politician was actually responsible. The specification includes covariates and district fixed effects. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

Table 14: Expected Change in Future Votes - No covariates

DV:	Net expected change in votes					
	Bad roads			Good roads		
Sample:	Citizen	Politicians	Bureaucrats	Citizen	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)	(5)	(6)
Info: Politician responsible	-0.238**	-0.107**	-0.181*	0.361**	0.625**	0.410***
	(0.047)	(0.026)	(0.087)	(0.052)	(0.046)	(0.098)
Prior: Politician responsible	-0.120*	-0.016	-0.098	0.128*	-0.008	0.029
	(0.052)	(0.033)	(0.087)	(0.056)	(0.064)	(0.101)
Constant	-0.375**	-0.826**	-0.656**	0.138*	0.167**	0.397**
	(0.050)	(0.033)	(0.067)	(0.054)	(0.063)	(0.079)
Observations	982	1,013	193	999	1,057	224
R-squared	0.036	0.032	0.147	0.062	0.216	0.220

OLS. The dependent variable takes the value -1 if a respondent expects a politician to lose votes, 0 if no change in votes is expected, and 1 if a vote gain is expected. *Prior* is an indicator variable for whether the respondent's initial belief was that the politician was responsible. *Info* is an indicator for whether the respondent was subsequently assigned to be told that the politician was actually responsible. The specification includes district fixed effects. Standard errors in parentheses. ** $p<0.01$, * $p<0.05$.

Table 15: Expected Change in Future Votes - No covariates and no district fixed effects

DV:	Net expected change in votes					
	Bad roads			Good roads		
Sample:	Citizen	Politicians	Bureaucrats	Citizen	Politicians	Bureaucrats
	(1)	(2)	(3)	(4)	(5)	(6)
Info: Politician responsible	-0.239**	-0.102**	-0.128	0.360**	0.631**	0.455**
	(0.047)	(0.026)	(0.082)	(0.052)	(0.047)	(0.095)
Prior: Politician responsible	-0.117*	-0.018	-0.096	0.131*	-0.033	0.041
	(0.052)	(0.032)	(0.082)	(0.056)	(0.065)	(0.096)
Constant	-0.376**	-0.827**	-0.681**	0.137*	0.185**	0.371**
	(0.049)	(0.033)	(0.064)	(0.054)	(0.064)	(0.078)
Observations	982	1,013	193	999	1,057	224
R-squared	0.031	0.015	0.020	0.049	0.145	0.094

OLS. The dependent variable takes the value -1 if a respondent expects a politician to lose votes, 0 if no change in votes is expected, and 1 if a vote gain is expected. *Prior* is an indicator variable for whether the respondent's initial belief was that the politician was responsible. *Info* is an indicator for whether the respondent was subsequently assigned to be told that the politician was actually responsible. Standard errors in parentheses. ** $p < 0.01$, * $p < 0.05$.

Table 16: Expected Change in Future Votes - Sample Restricted to Men

DV:	Net expected change in votes			
	Bad roads		Good roads	
Sample:	All citizens	Men only	All citizens	Men only
	(1)	(2)	(3)	(4)
Info: Politician responsible	-0.238**	-0.223	0.360**	0.212
	(0.047)	(0.167)	(0.052)	(0.243)
Prior: Politician responsible	-0.120*	-0.105	0.130*	0.011
	(0.052)	(0.196)	(0.056)	(0.276)
Constant	-0.376**	-0.566*	0.136*	0.497
	(0.050)	(0.265)	(0.054)	(0.361)
Observations	982	86	999	66
R-squared	0.037	0.072	0.063	0.095

The dependent variable takes the value -1 if a respondent expects a politician to lose votes, 0 if no change n votes is expected, and 1 if a vote gain is expected. *Prior* is an indicator variable for whether the respondent's initial belief was that the politician was responsible. *Info* is an indicator for whether the respondent was subsequently assigned to be told that the politician was actually responsible. Standard errors in parentheses. ** $p < 0.01$, * $p < 0.05$.