

Election Fairness and Government Legitimacy in Afghanistan*

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Abstract:

Elections provide a key potential means of creating state "legitimacy." One mechanism is by improving citizens' attitudes toward government and so increasing their willingness to comply with rules and regulations. We investigate whether election fairness affects attitudes towards government in a fragile state. We find that a randomly assigned fraud-reducing intervention in Afghan elections leads to both improvement in two indexes, one on attitudes toward government, and another on compliance. The results imply that reducing electoral fraud can be a practical and cost-effective method to stabilize governance in a fragile state.

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1. Introduction

Half of the world's extreme poor now live in fragile states, often with governments that lack popular legitimacy.¹ Correspondingly, international development efforts now increasingly focus on strengthening weak or fragile states. Creating legitimacy, broadly defined as supporting citizen compliance and cooperation with governance, is an important step. Elections could help achieve this purpose. The general idea is to improve citizens' attitudes toward institutions by making them more accountable and clearly supported by a fair electoral process. Many fragile countries lack core features of the Weberian state, such as a monopoly on violence, the capacity to correct market failures, and the ability to tax and provide services to the population. This both impedes economic development, and, in extreme cases, can lead to "ungoverned spaces" or "limited statehood" from which non-state groups can threaten local, regional, and global security.^{2,3} One argument is that elections, by legitimating governments, can

¹ Economists generally avoid the term legitimacy. Dewatripont and Roland (1992), an exception, use it to mean "agenda-setting authority, over the nature and sequence of proposals put to a vote." (p. 300), in the sense of Romer and Rosenthal (1979). They assume that the public complies (costlessly) with a government bringing proposals of tax, subsidy and reallocation, subject to a vote. What we mean by legitimacy is an attitude which induces compliance with laws and regulations, including taxation, and cooperation with security forces at low cost to government. See discussion below for details.

² Although the concept has driven US foreign policy, the term "ungoverned spaces" has a raft of critics. Krasner prefers "limited statehood" which means "those areas of a country in which central authorities (governments) lack the ability to implement and enforce rules and decisions and/or in which the legitimate monopoly over the means of violence is lacking." Krasner and Risse (2014), p.549.

³ There are several other competing hypotheses that have been offered to explain the development of states in the historical record, including: (i) the availability of resources, and the ease with which they can be extracted, determine the initial set of institutions (Diamond, 1998; Gallup et al, 1999; McArthur and Sachs, 2001; Acemoglu et al, 2001); (ii) natural terrain, and the military advantage it affords indigenous groups, make full colonization impractical in some regions (Fearon and Laitin, 2003; Nunn and Puga, 2012); and (iii) it is both efficient, and easier, to maintain order in such regions through a system of indirect governance (Padrò I Miquel and Yared, 2012; Scott, 2009).

make it easier for governments to perform core functions, such as raising taxes and enforcing laws, because citizens are more willing to comply.

In this paper, we test whether improving election fairness can induce improved attitudes, and in particular compliant attitudes, towards government. Our data come from a nationwide field experiment during the 2010 lower house (*Wolesi Jirga*) parliamentary elections in Afghanistan. We find that survey respondents in areas that held fairer elections—due to an experimental fraud reduction treatment—were both more likely to favorably view their government in general and more likely to hold compliant attitudes.⁴ We measure these attitudes using two indices, each aggregating responses to four and five statements. For example, citizens living near treated polling stations were more likely to report that (1) Afghanistan is a democracy and that (2) members of parliament provide services, two measures of general perceptions of government. On compliance, they were more likely to report that (3) paying taxes is somewhat or very important and that (4) one should report insurgent behavior to state security forces.⁵

This study joins a group of experiments testing whether government service delivery can increase citizens' support for the government in nascent democracies (Burde, Middleton, and Samii, 2016; Casey, Glennerster, and Miguel 2012; Fearon, Humphreys, and Weinstein 2009, 2012; Humphreys and Weinstein 2012; Beath et al 2012). Separately, several experiments have attempted to improve electoral processes through direct observation (Callen and Long, 2015; Callen, Gibson, Jung, and Long, 2016; Hyde, 2007; Hyde 2009; Enikolopov et al

⁴ This paper, therefore, builds on a prior study reported in (Callen and Long, 2015).

⁵ Importantly we find that these treatment effects are meaningful and significant for both our Perceptions of Government and Support for Government indices as well as an index that combines all 9 statements. We take these indices as our primary outcomes to assuage concerns about multiple hypothesis testing.

2013; Asunka et al 2014), generally finding improved electoral integrity. To our knowledge, however, ours is the first to link efforts to improve the *fairness* of national elections to attitudes toward government.⁶

According to a common view, legitimacy derives from a perception of procedural fairness (Levi, Sacks and Tyler 2009; Tyler 1990, 2006; Paternoster, Brame, Bachman, and Sherman 1997; Sunshine and Tyler 2003; Tyler and Huo 2002). Alternately, legitimacy may depend on policy outcomes, or the competent provision of public goods (Bernstein and Lü 2003; Fjeldstad and Semboja 2000; Guyer 1992; O'Brien 2002; Levi 2006).

A minimalist definition of legitimacy, from the state-building literature, is this: an attribute of political authority which captures residents' acceptance that state institutions have "the right to issue certain commands, and that they, in turn, have an obligation or duty to comply" (Lake 2010).⁷ This definition is especially appropriate for Afghanistan, where state institutions are weak and multiple actors compete for political authority (Lyall, Blair and Imai 2013). Compliance is particularly important to state-building because it reduces governance costs for the state, costs that would be prohibitively expensive if all laws were enforced through direct observation and punishment.

⁶ Grossman and Baldassarri (2012) provide evidence from a lab-in-the-field experiment that subjects electing their leaders contribute more in a public goods game and that the same relationship between the perceived legitimacy of authority and cooperation exists non-experimentally in decisions related to the farmer cooperatives to which subjects belong.

⁷ When this acceptance translates into actual compliance with an authority's rules, it constitutes "behavioral" legitimacy (Hurd 1999; Kelman and Hamilton 1989; Levi, Sacks, and Tyler 2009; Tyler 2006).

With a few notable exceptions, discussions of legitimacy mainly reside in state-building, policy, and political science literatures.⁸ Yet this subject has clear connections to economic research on social cooperation (Rodrik 1999, 2000; Dixit et al 2000; Rodrik and Wacziarg 2005), and on forces that undermine weak democracies (Padro-i-Miquel 2007). In addition, because the world's extreme poor will primarily be concentrated in fragile states in the years to come, state building will be increasingly important for development economics.

Correspondingly, our goal in this paper is to devise an empirical test of whether electoral fairness contributes to attitudes of government legitimacy. In this sense, we are directly motivated by Lake (2010), which aims to use 'positive definitions of legitimacy' as a basis for bridging the gap between these other literatures and applied economics. Our survey questions are based directly on ideas from this literature. Our hope from the outset in designing this field experiment was that the monitoring intervention would reduce fraud, providing an opportunity to test whether it affected measures of legitimacy.

Our finding that electoral fairness affects attitudes is of potential interest for three reasons. First, Afghans had plenty of reasons to be cynical about their government that summer; the elections were held in a setting fraught with vote-rigging, by what is by all accounts one of the world's most corrupt and dysfunctional governments. It is remarkable, therefore, that attitudes were plastic. The intervention we used was also highly cost-effective relative to traditional election monitoring and was suited to implementation during a violent election (Callen and Long, 2015), and has been used to fight fraud in South Africa, Kenya, and in more recent elections in Afghanistan. We successfully visited 471 polling

⁸ Exceptions include Romer and Rosenthal (1979), Dewatripont and Roland (1992), Fearon, Humphreys, and Weinstein (2009), Casey, Glennerster, and Miguel (2012).

centers, with a budget of just over US\$100,000. By contrast, the largest foreign mission during this election reached about 85 polling centers, spanning much less of the country, with a budget of approximately US\$10 million.

Second, these results challenge the view that Afghan political opinion operates solely along pre-existing ethnic, class, religious, or ideological lines. Instead, these results suggest that citizens themselves believe that democratic reforms could have real political effects, even in a country with weak institutions and a history of informal governance outside of the formal central state.

Third, in this setting compliance with the critical needs of security forces, including the need for information about insurgent activities, could be critical to the very survival of government.⁹

When considering these reasons, it is important to acknowledge that our attitude measures are based on stated preference survey questions, and so may not reflect respondents' true beliefs and thus the real actions they might take. However, multiple literatures document the link between stated preference questions similar to those in our survey and important economic outcomes. One literature links stated responses to surveys on cultural norms, such as the World Value Survey, to real-world outcomes such as conflict, public good provision, and work and fertility decisions (Fortin 2005, Alesina, Giuliano, and Nunn 2013;

⁹ Berman et al (2011) summarizes this literature: "Mao Tse-Tung (1937) famously describes the people as "the sea in which rebels must swim," a perspective reinforced by a generation of twentieth-century counterinsurgency theorists (Trinquier 1961; Galula 1964; Taber 1965; Clutterbuck 1966; Thompson 1966; Kitson 1977). Twenty-first century scholarship by practitioners of counterinsurgency reinforces the enduring relevance of noncombatants (Sepp 2005; Petraeus 2006; Cassidy 2008; McMaster 2008). The most prevalent explanation for the importance of garnering popular support is that parties to insurgent conflicts use it to gain critical information and intelligence. Kalyvas (2006) demonstrates that this information increases the effectiveness of both defensive and offensive operations" (p. 771).

Desmet, Ortuno-Ortin and Wacziarg 2017). Additionally, a recent study finds that the stated views of Pakistani men towards the United States correlate with both their revealed anti-Americanism in the lab setting as well as their actual political affiliation with a more anti-American political party (Bursztyn, Callen, Ferman, Gulzar, Hasanain, and Yuchtman 2016). Finally, drawing from multiple sources, Berman, Felter, and Shapiro (forthcoming) document that survey based measures of civilian attitudes towards government (including willingness to share tips with authorities) respond to violence suffered by civilians the same way that subsequent attacks on government forces do.

The rest of the paper proceeds as follows. Section 2 outlines our research questions, providing a basis for multiple hypothesis testing adjustments. Section 3 describes the context and why it is suited to examining questions of state legitimacy. Section 4 describes our data and research strategy. Section 5 provides results and section 6 concludes.

2. Research questions

We seek to contribute to prior studies by answering the research questions: (i) *does enhancing the fairness of elections improve legitimacy through improved perceptions of government?* and (ii) *does enhancing the fairness of elections improve legitimacy through more compliant behavior towards government?*

While we seek to distinguish between legitimacy related to perceptions of government and compliant behavior towards government, our specific survey questions may straddle the concepts. As such, in addition to answering these two research questions separately, we answer the more general: *does enhancing the fairness of elections improve legitimacy through improved attitudes towards government.*

Our questions stem from several lines of research. The first argues that the source of legitimacy may be **procedural**. Consider an election in a nascent or conflict-affected state, where the legitimacy of governance might be questioned. Proponents of early elections after civil wars argue that establishing elected authorities allows for a more peaceful way for parties to compete for office, thus increasing the possibility that a country will consolidate as a democracy (Diamond 2006). Even if poorly run or beset with violence, elections may allow leaders and voters to begin the practice of democratic choice and ultimately lead to better future elections (Berman 2007; Carothers 2007; Lindberg 2003). The promise of elections may also induce the international community to commit peacekeeping forces and development assistance necessary to help legitimize a fragile post conflict government (Doyle and Sambanis 2006; Fortna 2008; Lyons 2002).¹⁰

A second literature argues that residents may confer legitimacy on an authority based on their assessment of **outcomes**, such as public service delivery and overall economic and political performance (Cook, Hardin, and Levi 2005; Gilley 2009; Levi 1988, 1997; Levi, Sacks and Tyler 2009; Rothstein 2005;

¹⁰ Despite the important role that elections may serve in establishing legitimacy, the evidence is mixed. Recent research identifies many problems associated with holding elections in post-conflict environments. Brancati and Snyder (2011) find that calling for an election too soon is associated with an increased likelihood of renewed fighting. A quick election may increase the probability that one side or the other will ignore a loss at the ballot box and return to war, or may result in an elected government which pursues policies that impede further reform and instead rekindle conflict (Brancati and Snyder 2011; de Zeeuw 2008; Mansfield and Snyder 2007; Paris 2004). Further, early elections are often fraudulent for a number of reasons, including the interests of those staging the elections, a lack of trustworthy electoral institutions, and the disorganization of the opposition (Bjornlund 2004; Hyde 2011; Kelley 2011). Elections in societies divided along racial, ethnic, or other social lines are also more likely to produce immoderate campaigns, violence, and breakdown (Snyder 2000; Horowitz 1985; Rabushka and Shepsle 1972). Indeed, Collier, Hoeffler, and Söderbom (2008) find no evidence that elections in post conflict environments reduce the risk of further war, and instead should be “promoted as intrinsically desirable rather than as mechanisms for increasing the durability of the post-conflict peace” (p. 471).

Sarsfield and Echegaray 2006; van De Walle and Scott 2009). To build outcome legitimacy, foreign governments, policymakers, and international organizations concerned with state-building in post conflict areas have demonstrated a strong interest in helping nascent governments establish the competent delivery of basic services to their citizens (Batley and McLoughlin 2010; Beath et al 2012; Carment et al 2010; Paris and Sisk 2009; Cole and Hsu 2009). If an authority cannot provide goods and services, individuals may turn to other groups that can, including insurgents, international military forces (especially to provide security), and/or non-governmental organizations (Berman 2009; Brinkerhoff et al 2009; OECD 2010; Vaux and Visman 2005).

Regardless of their source, attitudes toward government play an important role in public economics. The concept of "tax morale"—a social norm of voluntary compliance with taxation, reducing costs of enforcement—links directly to ideas of legitimacy in political science. A recent survey (Luttmer and Singhal 2014) demonstrates the importance of the phenomenon. For instance, US firms owned by individuals from low tax morale countries are much less likely to pay their US taxes. (Yet experiments in improving attitudes toward tax compliance have yielded mixed results.) A parallel literature in criminology finds that voluntary compliance with law enforcement similarly allows improved effectiveness, especially in a community policing setting (Bayley, 1994; Akerlof and Yellen 1994; Kennedy et al 2001 (p. 10)). The literature on asymmetric insurgency has even higher stakes—it emphasizes the importance of civilian attitudes favoring either government or rebels as decisive in conflict outcomes (Mao 1937), deciding whether the government will survive at all. In that setting, as in the tax morale and community policing literature, a key policy question is the pliability of attitudes (Berman and Matanock 2015).

Whether the source of legitimacy is based on procedures or outcomes, and regardless of mechanism, the fairness of elections can potentially enhance it. Elections allow individuals to choose their leaders through a procedure that hews to clear and impartial rules. A well-organized and implemented election---which is inherently public---might signal that the government is more likely to capably produce public services. Moreover, a fair election may select and incentivize politicians more answerable to the public on outcomes. Fairness may play an indirect role, since compliant attitudes allow governance with less (expensive) coercion, leaving more resources to spend on public goods.

3. Background to Afghanistan's 2010 *Wolesi Jirga* election

Promoting elections has been a core component of the United States' policy in Afghanistan. After the US invasion and the fall of the Taliban in 2001, Coalition forces immediately began developing democratic institutions, hoping to promote stability by establishing a functioning central government that had been undermined by two previous decades of internecine conflict, civil war, and Taliban rule. Soon after the invasion, Coalition forces empaneled a *Loya Jirga* to create a new constitution. In 2005, Afghans voted in the first elections for the lower house of parliament (*Wolesi Jirga*). In 2009, Hamid Karzai won re-election as president amid claims of rampant election fraud (Callen and Weidmann 2013). General Stanley McChrystal, in an official communication to President Obama requesting troops to support a "surge," expressed his belief that the failure of the 2009 elections created a "crisis of confidence" in the government, which would ultimately undermine the war effort without more troops (McChrystal 2009).

We study the effects of a fraud-reducing intervention implemented during the 2010 *Wolesi Jirga* elections, which occurred amid a growing insurgency and a U.S. commitment to begin withdrawing troops in July 2011. The international

community viewed these elections as a critical benchmark in the consolidation of democratic institutions given doubts about the Karzai government's ability to exercise control in much of the country and the growing influence of the Taliban. Despite a direct threat of violence, roughly five million voters (about 37 percent of those registered) cast ballots on election day.

Afghanistan's 34 provinces serve as multi-member districts that elect members of the *Wolesi Jirga*. Each province is a single electoral district. The number of seats allocated to a province is proportional to its estimated population. Candidates run “at large” within the province, without respect to any smaller constituency boundaries. Voters cast a Single Non-Transferable Vote (SNTV) for individual candidates, nearly all of whom run as independents.¹¹ Winning candidates are those who receive the most votes relative to each province's seat share. For example, Kabul province elects the most members to Parliament (33) and Panjsher province the fewest (2). The candidates who rank one through 33 in Kabul and one through two in Panjsher win seats to the *Wolesi Jirga*.

SNTV rules create strong incentives for fraud. SNTV with large district magnitudes and a lack of political parties creates a wide dispersion of votes across candidates. The vote margins separating the lowest winning candidate from the highest losing candidate are thus often small. This creates a high expected return for even small manipulation for many candidates. (In contrast, electoral systems with dominant parties guarantee victory with large vote margins, and so non-viable candidates are less likely to rig results.) These strong incentives to manipulate voting were compounded by a weak election commission, which had failed to prevent widespread fraud during the 2009 presidential election. We

¹¹ SNTV systems provide voters with one ballot that they cast for one candidate or party when multiple candidates run for multiple seats. If a voter's ballot goes towards a losing candidate, the vote is not re-apportioned.

document clear evidence of election fraud in the experimental sample studied in this paper during the 2010 parliamentary contest.

4. Research design and data

The results in this paper use data from a randomized evaluation of an original anti-fraud monitoring package that we conducted during Afghanistan's 2010 *Wolesi Jirga* election (Callen and Long, 2015), and which we recount here. In this section, we revisit that anti-fraud monitoring experiment as a prelude to our investigation of the effect of that fraud reduction on measures of support for the Afghan government. This paper, therefore, describes a downstream experiment focused on the effects of the anti-fraud intervention on attitudes toward government.

On election day, and again on the day after, a team of Afghan researchers traveled to an experimental sample of 471 polling centers (7.8 percent of polling centers operating on election day).¹² Because Afghanistan was an active war zone during this period, we selected polling centers that met three criteria to ensure the safety of our staff: (i) achieving the highest security rating given by the International Security Assistance Force (ISAF) and the Afghan National Police (ANP); (ii) being located in provincial centers, which are much safer than rural areas;¹³ and (iii) being scheduled to operate on election day by the Independent Electoral Commission (IEC). Figure 1 maps our experimental sample.

¹² We stratified treatment on province and, in the 450 polling centers for which we had baseline data (we added an additional 21 to the experimental sample after baseline on obtaining additional funding), we also stratified treatment on the share of respondents from the baseline survey reporting at least occasional access to electricity and on respondents reporting that the district governor carries the most responsibility for keeping elections fair.

¹³ Given budget and security issues, we could only deploy researchers in 19 of 34 provincial centers. Thus the sample is not nationally representative but biased towards safer areas. Our

[Figure 1 about here]

In a randomly chosen 238 of those polling centers, researchers delivered a letter to Polling Center Managers (PCMs) between 10AM and 4PM, during voting. Researchers then visited all 471 polling centers the following day to photograph the publicly posted election returns forms.¹⁴ The letter delivery constituted the experimental treatment. The letter announced to PCMs that researchers would photograph election returns forms the following day (September 19) and that these photographs would be compared to results certified by the IEC. Neither treatment nor control sites would be affected by measurement the day after the election, as polling staff were absent. Figure 2 provides a copy of the letter in English (an original in Dari is attached as Figure 3). PCMs were asked to acknowledge receipt by signing the letter. PCMs at seventeen polling centers (seven percent of centers receiving letters) refused to sign. A polling center was designated as treated if the PCM received a letter (*Letter Delivered = 1*).¹⁵

To measure the fairness of the election, researchers also investigated whether election materials were stolen or damaged during polling. We also examined the reason that materials went missing. Our field staff were careful to investigate irregularities by interviewing local community members while not engaging IEC staff, so as not to create an additional treatment. We received reports of candidate agents stealing or damaging materials at 62 (13 percent) of the 465 operating polling centers, a clear violation of the law. We define *Election*

sample does however cover each of Afghanistan's regions, including those with a heavy Taliban presence. See Figure 1.

¹⁴ Of 471 polling centers, six did not open on election day. We drop these from our analysis.

¹⁵ Results below are robust to redefining treatment as both receiving and signing a letter.

Returns Form Removed as an indicator equal to one if materials were reported stolen or damaged by a candidate agent at a given polling center.

We have several reasons to think that stealing or damaging tallies reflects an intention to manipulate the ballot aggregation process. Many of the Electoral Complaints Commission (ECC) complaints reported in (Callen and Long, 2015) speculated that the purpose of stealing materials was to take them to a separate location, alter them, and then reinsert them into the counting process. Alternatively, candidates might seek to destroy all evidence of the polling center count, and then manufacture an entirely new returns form at the Provincial Aggregation Center.

These activities also could plausibly send a signal to communities in the vicinity of the polling center regarding the fairness of the election. Figure 4 provides a picture of citizens looking at tally sheet depicting the polling outcomes.

The treatment (i.e., delivery of a notification letter) induced dramatic reductions in three separate measures of fraud: the removal or defacement of a required provisional vote tally return form (*Election Returns Form Removed*); votes for candidates likely to be engaged in fraud based on their political connections¹⁶ (*Votes*); and that same candidate gaining enough votes to rank among the winning candidates in that polling station (*Enough Votes to Win Station*). Table 1 reports estimates of the effect of treatment on these three measures, reproducing results reported in (Callen and Long, 2015), adjusted to include only the sample of polling centers where we conducted our post-election

¹⁶ The political connections of candidates were coded in advance. We surmised that a connection to a provincial polling aggregator was a predictor of engagement in fraud. See (Callen and Long, 2015) for details.

survey. Treatment reduced the damaging and theft of forms by about 11 percentage points (columns 1 - 3), votes for candidates likely to be engaged in fraud ($Treat \times Provincial\ Aggregator\ Connection = 1$) by about seven (columns 4 – 6) and the likelihood that those candidates would rank among winning candidates by about 11 percentage points (columns 7 – 9). These results represent large treatment effects of the intervention on measures of fraud. They suggest that other types of highly visible electoral malfeasance (deviations from the counting protocol, early closings of polling centers, etc.) may similarly have been reduced. It is therefore plausible that the treatment changed the polling process in ways that are clearly visible to citizens.

[Table 1 about here]

The Post-Election Survey

To measure the effect of increased election fairness on attitudes toward government, the focus of this paper, we combine the results of the letter intervention with data from a post-election survey. We conducted the survey in December 2010, roughly three months after the election, deliberately timing field activities to be immediately after the Independent Election Commission certified final results. This timing ensured that election outcomes would be both finalized and still potentially salient in the minds of voters. Respondents came from households living in the immediate vicinity of 450 of the 471 polling centers in our experimental sample, for a total of 2,904 respondents. To obtain a representative sample of respondents living near polling centers---generally neighborhood landmarks such as mosques, schools or markets---enumerators employed a random walk pattern starting at the polling center, with random selection of every fourth house or structure until either six or eight subjects had been surveyed. In keeping with Afghan custom, men and women were

interviewed by field staff of their own gender. Respondents within households were randomly selected using Kish grid. The survey had 50 percent female respondents. Enumerators conducted the survey in either Dari or Pashto.

We measure attitudes toward government using individuals' responses to nine questions. The first four questions (1 through 4 below) probe attitudes that might contribute to outcome legitimacy due to positive perceptions of government; the remaining five questions (5 through 9 below) measure attitudes directly related to compliance with governance. We use four and five questions respectively to our primary two research questions since any single question is unlikely to fully capture citizen's attitudes completely. We also use all nine questions to answer our third more general research question.¹⁷ In all three cases, we design indices following Kling, Liebman, and Katz (2007) and Casey, Glennerster, and Miguel (2012)—we standardize outcomes by subtracting their mean and dividing by their standard deviation so that all outcomes are measured in standard deviation units. Indices are then simply the arithmetic average of the standardized outcomes within each hypothesis.¹⁸

1. *Who is mainly responsible for delivering services in your neighborhood (RANDOMIZE ORDERING): the central government, your Member of Parliament, religious or ethnic leaders, the provincial government, or the community development council?*

¹⁷ We did not specify these two sets of outcomes in a registered pre-analysis plan, although we designed these survey questions to measure the effect of election fraud on attitudes related to legitimacy. The timing of the survey (immediately after election outcomes were certified) and its' content (principally questions on attitudes toward government) should also indicate that our intent was to measure attitudes related to legitimacy of government.

¹⁸ We have also weighted these indices according to the covariance of the standardized outcomes within each index. No results in the paper change meaningfully in terms of magnitude or significance from such weighting.

The variable *MP Provides Services* is equal to one if individuals responding “Member of Parliament” to this question. This question is intended to capture whether or not an individual links service provision to a possibly legitimate elected government official who was voted on in this particular election, rather than more traditional local religious or ethnic leaders and rather than other bodies that are largely unelected and whose legitimacy should not be as directly affected by the 2010 elections—the central government, provincial government, and community driven councils.¹⁹

2. *In your opinion, is Afghanistan a democracy or not a democracy?*

Afghanistan is a Democracy is an indicator equal to one for individuals responding “is a democracy” to this question. This question could be interpreted by respondents narrowly, in the technical sense of democratic procedures being followed, or broadly as a positive endorsement of government. We cautiously chose the latter interpretation.

3. *Do you think that voting leads to improvements in the future or do you believe that no matter how one votes, things never change?*

Voting Improves Future is an indicator equal to one for individuals responding “improvements” to this question. This measure aims to capture whether citizens believe that voting materially impacts their future. If the government is viewed as incompetent, or elections are viewed as hopelessly marred by fraud and mismanagement, then citizens should not hold this belief.

¹⁹ Note that the “central government” is generally understood to be the unelected central bureaucracy and not the national parliament or the two combined. The same is true for the provincial government.

4. *Does the central government do an excellent, good, just fair or poor job with the money it has to spend on services?*

Gov. Ext. or Good Job of Prov. Serv. Is an indicator equal to one for individuals responding “excellent” or “good” to this question. This question directly assesses whether citizens believe the government is effectively providing services, a hallmark of any government that will be viewed as legitimate.

5. *In your opinion, how important is it for you to share information about insurgents to the Afghan National Security Forces (ANSF) (for example, pending IED attacks or the location of weapons caches): is it very important, somewhat important, or not at all important?*

Important to Report IED to ANSF is an indicator equal to one for individuals responding “very Important” or “somewhat Important” to this question. The question is intended to measure whether or not citizens comply with ANSF requests for information, a critical component of the ANSF’s ability to provide security to a highly vulnerable and war-torn population. A substantial policy and research literature related to counterinsurgency argues that citizens’ support for the government, and, consequently, their willingness to undertake the costly action of providing information to government forces, crucially determines who wins intrastate conflicts (Berman, Felter, and Shapiro 2011).

If you had a dispute with a neighbor, who would you trust to settle it (RANDOMIZE ORDERING): head of family, police, courts, religious leaders, shura, elders, ISAF, or other?

Police Should Resolve Disputes is an indicator equal to one for individuals responding “police” to this question. This question reflects compliance with police adjudication of disputes, as opposed to informal dispute adjudication

mechanisms (which might include the Taliban). Courts are in principle another relevant institution, but much less so in Afghanistan, because they essentially do not exist in much of the country.

Nonetheless, we consider the potential relevance of courts, defining *Courts Should Resolve Disputes* as an indicator equal to one for individuals responding “courts” to this question.

8. *In your opinion, how important is it for you to pay taxes to the government: is it very important, somewhat important, or not at all important?*

Paying Taxes is Some. or Very Imp't is an indicator equal to one for individuals responding “very important” or “somewhat important” to this question. More than any other question, voluntarily willingness to pay taxes is a critical measure of citizens support for the government (and reflection of whether they view the government as legitimate). This directly measures whether they voluntarily comply with a government rule that otherwise would be impossibly costly for the government to enforce.

9. *Let us suppose that your friend has been accused of a crime. Who do you trust to determine whether your friend is guilty: head of your qawm or the Afghan government?*

Trust Afg. Gov. to Determine Guilt is an indicator equal to one for individuals responding “Afghan government” to this question. This measures whether citizens trust the government to make costly determinations regarding a persons innocence.

[Table 2 about here]

Table 2 reports summary statistics for these variables from the post-election survey. The data depict a country with uneven support for government. About 67 percent of respondents view Afghanistan as a democracy, while only 18 percent prefer the police as their primary means of dispute adjudication. 20 percent of respondents believe that the Member of Parliament is responsible for providing services, while 93 percent respond that reporting an impending attack to the ANSF is important.²⁰ 61 believe voting will improve their future, 83.6 percent believe that paying taxes is somewhat or very important, and 53 percent would trust the Afghan government to determine the guilt of a friend.

In Table 2, we also find a high incidence of electoral malpractice at the polling stations linked to survey respondents. At 13.5 percent of polling stations our staff recorded a report of candidate agents removing tallies (*Election Results Form Removed*). A similar picture emerges from the baseline interviews, collected in August 2010, which we return to below.²¹ Our data also include two important descriptors of the environment that the elections were held in: the number of local military events tracked as by International Security Assistance Force (ISAF) (from their Combined Information Data Network Exchange (CIDNE) database), with a mean of 2.5; and whether or not the polling station was visited by an international monitor on election day, which occurred in 16.3 percent of the sample (from Democracy International).

²⁰ For ease of exposition, we restrict our sample in Tables 2 through 5 to respondents who provide some response to the nine questions used across our two hypotheses. This keeps the number of observations fixed across outcomes. Results without this restriction are reported in Appendix Tables 2 through 5. There are no meaningful differences. Furthermore, Appendix Table 1 reports that there is no differential attrition by treatment status into the restricted sample used in Tables 2 through 5.

²¹ Similar to the endline survey, we sampled respondents for the baseline, enumerators were told to begin at the polling center and survey either 6 or 8 subjects. Surveys were conducted in individuals' homes. Enumerators adhered to the right hand rule random selection method and respondents within houses were selected according to a Kish grid (Kish, 1949).

[Table 3 about here]

Table 3 reports summary statistics and verifies balanced randomization of our anti-fraud intervention between treatment and control polling stations, using our baseline survey of August 2010. Treatment status is balanced across baseline measures for all key outcomes used in the study including our nine key outcomes examined in Tables 4 and 5, which we expect given random assignment to treatment.²² We find no evidence of imbalance on other measures that might be relevant to attitudes, including military events in the vicinity and visits by international monitors. We note that our pre-election and post-election survey are not longitudinal but rather a repeated cross-section of surveys in the same neighborhoods. We did not collect identifying information from respondents because of the sensitive nature of the question and general concerns about having enumerators transport such information. Baseline balance on our key outcomes of interest, while not necessarily for the same sample of respondents, supports the argument that the change in attitudes results from treatment.

5. Estimation Strategy and Results

Assignment to treatment is random. So the following equation consistently estimates the effect of delivering the letter (which alerts the polling station manager of monitoring) on our measures of attitudes:

$$Attitude_{ic} = \gamma_1 + \gamma_2 LetterDelivered_c + \gamma_3 X_{ic} + \varepsilon_{ic}$$

²² The only exception is that we did not collect baseline data for the “Trust Afghan Government to Determine Guilt” question in the baseline. For reasons of safety, we did not collect identifying information from our subjects so the respondents in our post-election (December 2010) survey are likely to not be the same respondents as in our pre-election (August 2010) survey. The same sampling protocol was maintained across both waves. We therefore view baseline balance on our key outcome measures as an additional indication that the measured treatment effect is not due to pre-existing differences between the treatment and control samples.

where i denotes an individual respondent, c indexes a polling center (specifically, the neighborhood in the immediate vicinity of the polling center), attitudes are measured as described in the discussion of Table 2 above, $LetterDelivered_c$ is an indicator equal to one for polling centers that received the letter and X_{ic} is a vector of covariates described in Table 2. All specifications reflect our assignment strategy, by including stratum dummies as suggested by Bruhn and McKenzie (2009).²³ All regressions cluster standard errors at the polling center level.

[Table 4 about here]

Table 4 reports our main results, testing whether notification letters improved (i) perceptions of government, (ii) compliant attitudes towards government, and (iii) attitudes towards government in general. Since assignment of the fraud-reducing treatment is randomized, we are not concerned with selection bias or other omitted variable biases driving our results.

We answer all three research questions in the affirmative. Columns (1), we find notification letters improved perceptions of government by 0.054 standard deviations. This result is statistically significant and robust to the addition of a broad set of controls, as reported in columns (2) and (3) (as expected with random assignment to treatment). In columns (4), we similarly find notification letters improved compliant behavior towards government by 0.068 standard deviations. It is not surprising then that we find a 0.062 standard deviation increase in general attitudes when using the All Outcomes Index.

²³ Alternatively, we have tried collapsing our data to polling center level averages to create a pseudo-panel of polling centers. This allows us to run a difference-in-difference version of the same estimating equation, but with polling center fixed effects, where the first difference is between treatment and control polling centers and the second difference is between baseline and endline. We find very similar results taking this approach (results available on request). This is not surprising, given the high degree of balance we find on baseline outcomes in Table 3.

Table 5 reports the results of estimating standardized treatment effects for our three indices as well as for each attitude individually. In addition to reporting treatment effects, we report multiple hypothesis-adjusted p-values for each hypothesis test. We adjust across the two primary Hypotheses H_1 and H_2 indices to control the familywise error rate (FWER) computed following Westfall and Young (1993) and Anderson (2008); within each hypothesis group, we adjust to control the false discovery rate (FDR) computed following Benjamini, Krieger and Yekutieli (2006) and Anderson (2008). We find that in the case of all nine outcomes, the estimated treatment effect is positive. This effect remains significant or very close (0.11) with adjusted p-values in three cases---MP Provides Services,²⁴ Impt to Rept IED to ANSF, and Paying Taxes is Some. or Very Imp't. We view these outcome-level results as exploratory and thus will not interpret them individually.

[Table 5 about here]

All told, we find strong experimental evidence that the fraud-reduction intervention improves attitudes toward government. Taken together, these results indicate that even in a nascent democracy with weak institutions such as Afghanistan, improving electoral fairness has consequential effects on such attitudes.

²⁴ We also estimated treatment effects on dummy variables set equal to one when respondents indicate supporting the Central Government, Provincial Government, religious or ethnic leaders, or local Community Development Council as the unit that should provide services. These results can be found in Appendix Table 6. The only significant positive effect is on indicating Member of Parliament. There is also significant negative treatment effect on indicating the Provincial Government. This negative effect is not surprising since these choices are exclusive—there is a simple adding up constraint. We might be more concerned if the negative treatment effect on Central Government offsets the positive effect on MPs if people might think of the Central Government and MPs as interchangeable. However, if we combine these two indicators, the result in Table 5 on the Perceptions of Government Index weakens but remains significant at the 10 percent level.

Does Enhanced Fairness Improve Attitudes if Perceived As A Result of External Intervention?

Last, we explore whether the effect of election fairness on attitudes is negated if the external nature of the intervention is observed by respondents. One might imagine that an intervention known to be external (and therefore temporary) should not change attitudes. Voters would not confer more legitimacy on their government if they believed that a non-governmental actor, such as foreign election monitors or foreign donors, contributed to fair and competent administration of the election. Furthermore, they might also turn to government less for services should they perceive that it was a non-governmental actor that facilitated fair and competently administered elections.

Our survey asked respondents if they had knowledge of the researcher team or their actions in providing the letter treatment. About 7 percent responded that they were aware. Appendix Table 7 repeats the analysis of Table 4, estimating the same equation with an added indicator variable *Aware of Delivery_{ic}*, which takes the value one if the respondent is in the treated sample and responded that they had knowledge about the treatment.

We do not find that being aware of delivery negates the treatment effect found on all three indices. Of course, these estimates are *not* experimental, since awareness was not randomly assigned within the treatment group. They are subject to possible selection bias, since those aware of treatment might have *a priori* different outcomes. That would be true, for instance, if the aware were keen observers of local politics and were therefore more cynical about Afghan democracy. In addition, there are no means to identify the comparison group in the control sample who would have been aware of treatment had they been treated.

6. Conclusion

We have presented experimental evidence showing that attitudes toward government are not set in stone. Electoral fraud is associated with worse attitudes toward government, and in particular with less compliant attitudes. Reducing electoral fraud causally improves attitudes toward government in general – suggesting enhanced legitimacy, and causally improves stated attitudes towards compliant behavior. These findings are new to the literature and are potentially compelling given the setting: even in an extremely fragile context, with a raging insurgency and with an ineffective government rife with corruption, electoral fairness seems to contribute to state legitimacy in Afghanistan, and, to the extent that information is a vital asset for forces fighting the insurgency, it may contribute to the very survival of that government.

These findings speak both to policy and to the study of legitimacy in nascent democracies. From a policy perspective, our results reinforce the notion that domestic legitimacy, and therefore the stability of government, can be enhanced by interventions that improve the fairness of elections, an assumption that undergirds the current emphasis the international community places on holding elections in fragile states and the considerable investments it makes to ensure electoral integrity.

Our results cannot provide guidance on *how fair* elections must be in order to legitimize a government, when compared to the counterfactual of no elections (Höglund et al 2009). Electoral processes in these contexts frequently suffer fraud (Bjornlund 2004; Hyde 2011; Kelley 2011), can incite violence (Horowitz 1985; Hyde and Marinov 2012; Snyder 2000; Wilkinson 2004), and may institutionalize former combatants into uncompromising political parties. In such circumstances,

staging unfair elections in an attempt to increase state legitimacy may instead undermine it. That remains an important question for future research.

Legitimacy plays a key role in theories of political development. It must also be relevant for understanding economic development: the government's ability to impose rules is a necessary precondition for taxation, service provision, protection of human rights, enforcement of property rights, correcting market failures, and the implementation of development programs. Assuming that this authority can be expressed without cost is a glaring weakness of conventional models. Measuring attitudes towards compliance with that authority, and exploring interventions that improve those attitudes is a first step toward correcting that weakness.

These findings show that at least some attitudes toward government are plastic: though they may be built on a base of unconditional loyalties (e.g., ideological, religious, or ethnic), attitudes **are** affected by citizens' perceptions of the integrity of elections. That mechanism may be due to procedural fairness affecting attitudes directly, or to an expectation that fair elections will induce better governance---outcome legitimacy. Our evidence cannot adjudicate between those possibilities. Future experiments which enhance election integrity might attempt to do so.

Along these lines, future research might explore the cost-effectiveness of electoral fraud reduction in improving attitudes, as compared to interventions that improve other aspects of service delivery or governance in fragile states. Enhancing policing, justice, health, education, security, or other basic services should increase legitimacy, according to theories of outcome legitimacy. Yet fraud reduction in elections is a remarkably low cost approach to conferring

legitimacy, compared to expensive interventions such as security force assistance and large infrastructure projects.²⁵

²⁵ On this note, our fraud-reduction intervention is remarkably inexpensive, and has been successfully replicated in two subsequent elections. (Callen and Long, 2015) report results from the first experiment, and Callen, Gibson, Jung, and Long, 2016 report results from the replication in Uganda.

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Table 1: Effect of Treatment on Fraud - Three Measures

Dependent Variable:	Election Returns Form Removed (=1)			Votes			Enough Votes to Win Station (=1)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Letter Treatment (=1)	-0.110*** (0.032)	-0.109*** (0.031)	-0.111*** (0.032)	-0.039 (0.192)	0.008 (0.046)	0.026 (0.048)	0.003 (0.004)	0.003 (0.002)	0.004 (0.002)
Provincial Aggregator Connection (=1)				23.318*** (2.680)	20.624*** (2.491)	20.622*** (2.492)	0.415*** (0.027)	0.408*** (0.027)	0.408*** (0.027)
Treat x Provincial Aggregator Connection				-6.919** (3.306)	-6.887** (3.044)	-6.883** (3.046)	- 0.112*** (0.037)	- 0.114*** (0.036)	- 0.114*** (0.036)
Mean of DV in controls	0.191	0.191	0.191	1.417	1.417	1.417	0.085	0.085	0.085
R-squared	0.026	0.218	0.241	0.036	0.095	0.095	0.008	0.019	0.019
Stratum FEs	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Additional Covariates	No	No	Yes	No	No	Yes	No	No	Yes
# Observations	459	459	459	375457	375457	375457	375457	375457	375457
# Clusters				451	451	451	451	451	451

Notes: The level of analysis corresponds to the level at which we observe the dependent variable. Columns (1) - (3) report OLS specifications estimated at the polling center level. Columns (4) - (9) are estimated at the candidate - polling station level. Correspondingly, robust (White) standard errors are reported in parentheses for columns (1) - (3) (not clustered since data are already aggregated to the polling center level) and robust standard errors are clustered at the polling center level in columns (4) - (9). Levels of significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. The "additional covariates" are the number of military events within 1KM of the polling center, whether the polling center was visited by international monitors, and the average response within the polling center catchment from our baseline survey fielded in August 2010 to whether the respondent is employed, years of education, general happiness (1-10), gender, marital status, and age. For descriptive statistics see Table 1 of (Callen and Long, 2015).

Table 2: Summary Statistics

	Mean	Standard Dev.	Observations
<i>Demographics:</i>			
Employed (=1)	0.524	0.500	2403
Age (years)	32.500	12.221	2403
Female (=1)	0.469	0.499	2403
Married (=1)	0.690	0.463	2403
Education (years)	7.090	5.412	2403
General Happiness (1-10)	4.450	1.694	2403
<i>Beliefs:</i>			
MP Provides Services (=1)	0.196	0.397	2403
Afghanistan is a Democracy (=1)	0.674	0.469	2403
Voting Improves Future (=1)	0.610	0.488	2403
Gov. Ext. or Good Job of Prov. Serv. (=1)	0.456	0.498	2403
Impt to Rept IED to ANSF (=1)	0.934	0.248	2403
Police Should Resolve Disputes (=1)	0.183	0.387	2403
Courts Should Resolve Disputes (=1)	0.082	0.274	2403
Paying Taxes is Some. or Very Imp't (=1)	0.836	0.370	2403
Trust Afg. Gov. to Determine Guilt (=1)	0.529	0.499	2403
<i>Elections and Violence:</i>			
Military Events within 1KM	2.542	7.335	459
Visited by Int'l Monitor (=1)	0.163	0.369	459
Aware of Treatment (=1)	0.069	0.146	447
Election Returns Form Removed (=1)	0.135	0.342	459
Votes	1.391	8.436	375507
Enough Votes to Win Station (=1)	0.087	0.281	375507
Votes for Candidate Connected to Provincial Aggregator	24.276	49.375	1846
Enough Votes to Win Station (Connected to Aggregator)	0.447	0.497	1846

Notes: Military event data are from International Security Assistance Force (ISAF) Combined Information Data Network Exchange (CIDNE) database. Data on international monitor visits are provided by Democracy International. Vote counts are from a web scrape performed on October 24, 2010 of the Independent Election Commission of Afghanistan website. Remaining data are from our endline survey fielded in December 2010. MP is a member of the national parliament. An IED is an improvised explosive device, generally a roadside bomb. ANSF are the Afghan National Security Forces, including police and military. The survey sample is restricted to the respondents who provide some response to the questions corresponding to all Beliefs variables.

Table 3. Randomization Verification

	No Letter	Letter	Difference	P-value	# Control	# Treatment
<i>Demographics:</i>						
Employed (=1)	0.573 (0.014)	0.557 (0.013)	-0.017 (0.019)	0.379	1198	1194
Age (years)	33.303 (0.356)	33.560 (0.368)	0.257 (0.512)	0.616	1198	1194
Female (=1)	0.477 (0.014)	0.483 (0.014)	0.006 (0.020)	0.777	1198	1194
Married (=1)	0.708 (0.015)	0.705 (0.014)	-0.003 (0.021)	0.897	1198	1194
Education (years)	6.703 (0.201)	6.814 (0.192)	0.111 (0.278)	0.689	1198	1194
General Happiness (1-10)	4.992 (0.086)	4.956 (0.086)	-0.035 (0.122)	0.773	1198	1194
<i>Beliefs:</i>						
MP Provides Services (=1)	0.164 (0.015)	0.151 (0.013)	-0.014 (0.020)	0.501	1198	1194
Afghanistan is a Democracy (=1)	0.669 (0.019)	0.652 (0.017)	-0.017 (0.025)	0.499	1198	1194
Voting Improves Future (=1)	0.683 (0.019)	0.696 (0.019)	0.013 (0.026)	0.617	1198	1194
Gov. Ext. or Good Job of Prov. Serv. (=1)	0.547 (0.021)	0.579 (0.021)	0.032 (0.030)	0.281	1198	1194
Impt to Rept IED to ANSF (=1)	0.959 (0.008)	0.972 (0.005)	0.012 (0.009)	0.184	1198	1194
Police Should Resolve Disp (=1)	0.205 (0.016)	0.233 (0.016)	0.027 (0.023)	0.229	1198	1194
Courts Should Resolve Disputes (=1)	0.130 (0.013)	0.122 (0.012)	-0.008 (0.018)	0.657	1198	1194
Paying Taxes is Some. or Very Imp't (=1)	0.851 (0.014)	0.859 (0.014)	0.009 (0.020)	0.664	1198	1194
<i>Elections and Violence:</i>						
Military Events within 1KM	2.759 (0.609)	2.618 (0.416)	-0.141 (0.738)	0.848	216	225
Visited by Int'l Monitor (=1)	0.153 (0.025)	0.186 (0.026)	0.033 (0.036)	0.354	216	225

Notes: Standard errors clustered at the polling center level reported in parentheses. Survey data are from the baseline survey fielded in August 2010. Military event data are from International Security Assistance Force (ISAF) Combined Information Data Network Exchange (CIDNE) database. Data on international monitor visits are provided by Democracy International. MP is a member of the national parliament. An IED is an improvised explosive device, generally a roadside bomb. ANSF are the Afghan National Security Forces, including police and military. The survey sample is restricted to the respondents who provide some response to the questions corresponding to all Beliefs variables.

Table 4: Effect of Treatment on Measures of Legitimacy---Primary Indices

Dependent Variable:	Perceptions of Government Index			Compliant Behavior Towards Government Index			All Outcome Index		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Delivered Letter (=1)	0.054* (0.031)	0.059** (0.025)	0.057** (0.025)	0.068*** (0.024)	0.062*** (0.020)	0.064*** (0.021)	0.062*** (0.020)	0.061*** (0.017)	0.061*** (0.017)
Mean of DV in controls	0.018	0.018	0.018	0.002	0.002	0.002	0.009	0.009	0.009
R-squared	0.002	0.125	0.152	0.006	0.099	0.119	0.007	0.090	0.118
Stratum FEs	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Additional Covariates	No	No	Yes	No	No	Yes	No	No	Yes
# Observations	2403	2403	2403	2403	2403	2403	2403	2403	2403
# Clusters	459	459	459	459	459	459	459	459	459

Standard errors clustered at the polling center level in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Perceptions of Government Index is a z-score index of four dummy variables: MP Provides Services, Afghanistan is a Democracy, Voting Improves Future, and Gov. Ext. or Good Job of Prov. Serv. Compliant Behavior Towards Government Index is a z-score index of five dummy variables: Impt to Rept IED to ANSF, Police Should Resolve Disp, Courts Should Resolve Disputes, Paying Taxes is Some. or Very Imp't, and Trust Afg. Gov. to Determine Guilt. All Outcome Index is a z-score index of all nine of these variables. The "additional covariates" are the number of military events within 1KM of the polling center, whether the polling center was visited by international monitors, and the average response within the polling center catchment from our baseline survey fielded in August 2010 to whether the respondent is employed, years of education, general happiness (1-10), gender, marital status, and age. See Table 2 for an explanation of variables. The survey sample is restricted to the respondents who provide some response to the questions corresponding to all nine variables.

Table 5: Standardized Treatment Effects for All Variables Measuring Legitimacy

	Mean in Controls	Treatment Effect	Naïve P- Value	Adjusted P-value
Perceptions of Government Index	0.015 (0.019)	0.059** (0.025)	0.019	0.024
MP Provides Services (=1)	0.000 (0.031)	0.120** (0.047)	0.010	0.043
Afghanistan is a Democracy (=1)	0.025 (0.033)	0.047 (0.044)	0.283	0.396
Voting Improves Future (=1)	0.006 (0.029)	0.009 (0.041)	0.822	0.608
Gov. Ext. or Good Job of Prov. Serv. (=1)	0.030 (0.035)	0.059 (0.049)	0.222	0.396
Compliant Behavior Towards Government Index	0.004 (0.015)	0.062*** (0.020)	0.002	0.009
Impt to Rept IED to ANSF (=1)	0.020 (0.030)	0.08** (0.039)	0.040	0.110
Police Should Resolve Disp (=1)	0.018 (0.032)	0.048 (0.047)	0.306	0.299
Courts Should Resolve Disputes (=1)	-0.035 (0.025)	0.014 (0.036)	0.693	0.403
Paying Taxes is Some. or Very Imp't (=1)	-0.004 (0.035)	0.103** (0.046)	0.027	0.110
Trust Afg. Gov. to Determine Guilt (=1)	0.022 (0.035)	0.066 (0.049)	0.172	0.209
All Outcomes Index	0.009 (0.013)	0.061*** (0.017)	0.000	

Notes: Standard errors clustered at polling center level reported in parentheses. Significance levels (naïve p-value) indicated by *p < .10, **p < .05, ***p < .01. Treatment effects are standardized regression coefficients from a regression of the dependent variable, normalized by subtracting the mean and dividing by the standard deviation, on an indicator for treatment and stratum fixed effects. Indices take an average of all of the variables listed within the given hypothesis group, or across all nine variables in the case of the All Outcomes Index. P-values are corrected for multiple hypothesis testing as follows---we adjust across the two primary H1 and H2 indices to control the familywise error rate (FWER) computed following Westfall and Young (1993) and Anderson (2008); within each hypothesis group, we adjust to control the false discovery rate (FDR) computed following Benjamini, Krieger and Yekutieli (2006) and Anderson (2008). The survey sample is restricted to the respondents who provide some response to the questions corresponding to all nine variables.

Figure 1: Experimental Sample in Afghanistan

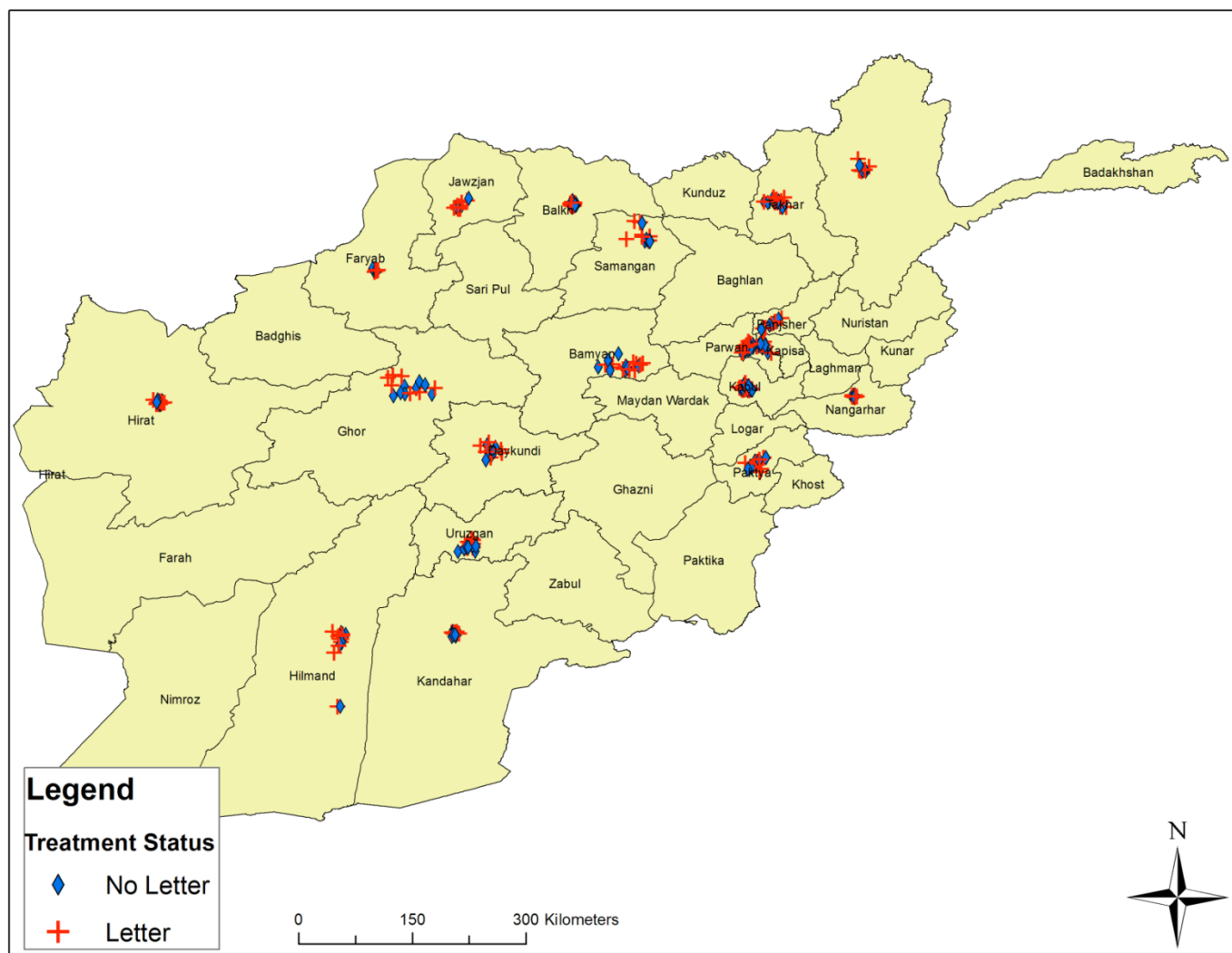


Figure 2: Announcement of Monitoring

Polling Center Name:
Polling Center Code:.....
Date:

Dear Sir or Madam-

Greetings! I am an official election observer with the Opinion Research Center of Afghanistan (ORCA). My organization is providing this letter to collect some important information about your polling center and share it with our main office. Your polling center has been randomly selected from among polling centers in this province.

In our attempts to help Afghanistan have free and fair elections, I will return to this polling center tomorrow morning in order to take pictures of the results for every candidate in every station on the tally sheets after they have been posted.

The information will be posted on a website that belongs to local and international election observers so that it will be used by the people of Afghanistan, the international community, and local and international media. We will also compare the photos taken with the tally certified by the IEC in Kabul.

As recognition that you have read and understood this letter, please sign here: _____

Thank you kindly for your help and cooperation.

Sincerely,
Haj Abdul Nabi Barakzai
Deputy Head of ORCA

Name and Signature of manager of polling station:.....

Figure 3: Announcement of Monitoring (Dari)



نام مرکز رای دهی: _____
تاریخ: _____
مرکز رای دهی: _____ کد

به حضور محترم آقای / خانم

همینولیت نظارت 472 مرکز رای بهر حسب توافقنامه کمیسیون مستقل انتخابات دفتر اورکا دهی را بهر عهده دارد.

میباشد و برای او (ORCA) دفتر به مربوط یک تن از نظارت کننده گان رسمی دارنده مکتوب معلومات تا بتواند مرکز رای دهی تسلیم نمودن این تا این مکتوب را وظیفه سپرده شده است. این مرکز دفتر مرکزی شریک بسازد جمع لوری نموده و با مرکز رای دهی این و دققی را از موشق این ولایت تمام مرکز رای دهی میانبه صورت تصادفی از گر به شمول چندین مرکز دیری دهی انتخاب شده است.

فردا صبح. ناظر ما یک انتخابات آزاد و مشروع در افغانستان کمک خواهیم کرد تقویت برای ما. نصب میگردند اخذ نماینده مرکز رای دهی این که در این نتایج کان دیدن است آمد تا تصویب از دخواه.

گذشته مربوط به ناظرین انتخابات داخلی و خارجی این نتایج در سایت اینترنتی تصاویر از این نتایج، موسسات خارجی، و مطبوعات داخلی و خارجی خواهد شد تا تمام مردم افغانستان نتایج را با نتایج که از طرف این تصاویر حاصله از ناظر حیطه استفاده کنند. و همچنین ما انتخابات در کابل نشر می شود مقایسه خواهیم کرد. مستقل کمیسیون

در پائین ایده برای نتایج این که این مکتوب بدسترس شما قرار گرفت و شما انرا مطالعه نموده مضایق نمائی. لطف نموده ا

از همکاری شما قبلاً اظهار سپاس.

با احترام

حاجی عبدالنبی بارکزی

معاون دفتر اورکا

یامضایم و

آمر محترم مرکز رای دهی: _____

Appendix Table 1: Ensuring There is No Differential Attrition into Consistent Sample

Dependent Variable:	In Consistent Sample (=1)		
	(4)	(5)	(6)
Letter Treatment (=1)	-0.002 (0.022)	0.003 (0.016)	0.001 (0.016)
Mean of DV in controls	0.800	0.800	0.800
R-squared	0.000	0.159	0.199
Stratum FEs	No	Yes	Yes
Additional Covariates	No	No	Yes
# Observations	3010	3010	3009
# Clusters	462	462	462

Standard errors clustered at the polling center level are reported in parentheses. Data is from our endline survey fielded in December 2010. In Consistent Sample is equal to one for respondents who provide some response to the questions corresponding to all Beliefs variables reported in Table 2. The "additional covariates" are the number of military events within 1KM of the polling center, whether the polling center was visited by international monitors, and the average response within the polling center catchment from our baseline survey fielded in August 2010 to whether the respondent is employed, years of education, general happiness (1-10), gender, marital status, and age.



Figure 4: Voters viewing results on the tally form

Appendix Table 2: Summary Statistics for Unrestricted Sample

	Mean	Standard Dev.	Observations
<i>Demographics:</i>			
Employed (=1)	0.492	0.500	3010
Age (years)	32.654	12.367	3009
Female (=1)	0.500	0.500	3010
Married (=1)	0.696	0.460	3010
Education (years)	6.593	5.470	3009
General Happiness (1-10)	4.382	1.724	3010
<i>Beliefs:</i>			
MP Provides Services (=1)	0.187	0.390	2965
Afghanistan is a Democracy (=1)	0.666	0.472	2706
Voting Improves Future (=1)	0.600	0.490	2763
Gov. Ext. or Good Job of Prov. Serv. (=1)	0.434	0.496	2900
Impt to Rept IED to ANSF (=1)	0.925	0.263	2930
Police Should Resolve Disp (=1)	0.173	0.378	2994
Courts Should Resolve Disputes (=1)	0.091	0.288	2994
Paying Taxes is Some. or Very Imp't (=1)	0.831	0.375	3010
Trust Afg. Gov. to Determine Guilt (=1)	0.514	0.500	2907
<i>Elections and Violence:</i>			
Military Events within 1KM	2.619	7.517	462
Visited by Int'l Monitor (=1)	0.162	0.368	462
Aware of Treatment (=1)	0.066	0.135	460
Election Returns Form Removed (=1)	0.134	0.341	462
Votes	1.402	8.445	376893
Enough Votes to Win Station (=1)	0.087	0.282	376893
Votes for Candidate Connected to Provincial Aggregator	24.230	49.331	1850
Enough Votes to Win Station (Connected to Aggregator)	0.446	0.497	1850

Notes: Military event data are from International Security Assistance Force (ISAF) Combined Information Data Network Exchange (CIDNE) database. Data on international monitor visits are provided by Democracy International. Vote counts are from a web scrape performed on October 24, 2010 of the Independent Election Commission of Afghanistan website. Remaining data are from our endline survey fielded in December 2010. MP is a member of the national parliament. An IED is an improvised explosive device, generally a roadside bomb. ANSF are the Afghan National Security Forces, including police and military. The survey sample is restricted to the respondents who provide some response to the questions corresponding to all Beliefs variables.

Appendix Table 3. Randomization Verification for Unrestricted Sample

	No Letter	Letter	Difference	P-value	# Control	# Treatment
<i>Demographics:</i>						
Employed (=1)	0.566 (0.012)	0.556 (0.012)	-0.01 (0.017)	0.575	1410	1456
Age (years)	33.291 (0.335)	33.577 (0.336)	0.285 (0.474)	0.547	1410	1456
Female (=1)	0.5 (0.013)	0.5 (0.013)	0 (0.019)	1.000	1410	1456
Married (=1)	0.706 (0.014)	0.71 (0.013)	0.004 (0.019)	0.815	1410	1456
Education (years)	6.462 (0.193)	6.565 (0.182)	0.103 (0.266)	0.699	1410	1456
General Happiness (1-10)	4.949 (0.084)	4.913 (0.086)	-0.035 (0.120)	0.768	1410	1456
<i>Beliefs:</i>						
MP Provides Services (=1)	0.163 (0.014)	0.142 (0.012)	-0.021 (0.019)	0.259	1396	1440
Afghanistan is a Democracy (=1)	0.655 (0.019)	0.643 (0.017)	-0.011 (0.025)	0.654	1286	1307
Voting Improves Future (=1)	0.68 (0.018)	0.69 (0.018)	0.01 (0.025)	0.687	1339	1367
Gov. Ext. or Good Job of Prov. Serv. (=1)	0.54 (0.021)	0.563 (0.020)	0.024 (0.028)	0.406	1384	1413
Impt to Rept IED to ANSF (=1)	0.956 (0.007)	0.961 (0.006)	0.005 0.01	0.592	1390	1418
Police Should Resolve Disp (=1)	0.202 (0.015)	0.217 (0.015)	0.015 (0.021)	0.480	1410	1456
Courts Should Resolve Disputes (=1)	0.14 (0.013)	0.133 (0.012)	-0.008 (0.018)	0.654	1410	1456
Paying Taxes is Some. or Very Imp't (=1)	0.826 (0.015)	0.836 (0.014)	0.01 0.02	0.611	1410	1456
<i>Elections and Violence:</i>						
Military Events within 1KM	2.747 (0.606)	2.617 (0.413)	-0.13 (0.733)	0.860	217	227
Visited by Int'l Monitor (=1)	0.152 (0.024)	0.184 (0.026)	0.032 (0.035)	0.365	217	227

Notes: Standard errors clustered at the polling center level reported in parentheses. Survey data are from the baseline survey fielded in August 2010. Military event data are from International Security Assistance Force (ISAF) Combined Information Data Network Exchange (CIDNE) database. Data on international monitor visits are provided by Democracy International. MP is a member of the national parliament. An IED is an improvised explosive device, generally a roadside bomb. ANSF are the Afghan National Security Forces, including police and military.

Appendix Table 4: Effect of Treatment on Measures of Legitimacy---Primary Indices, Unrestricted Sample

Dependent Variable:	Perceptions of Government Index			Compliant Behavior Towards Government Index			All Outcome Index		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Delivered Letter (=1)	0.049 (0.030)	0.056** (0.024)	0.053** (0.024)	0.046** (0.023)	0.045** (0.019)	0.048** (0.019)	0.062*** (0.020)	0.061*** (0.017)	0.061*** (0.017)
Mean of DV in controls	0.020	0.020	0.020	0.001	0.001	0.001	0.009	0.009	0.009
R-squared	0.002	0.126	0.156	0.003	0.101	0.125	0.007	0.090	0.118
Stratum FEs	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Additional Covariates	No	No	Yes	No	No	Yes	No	No	Yes
# Observations	2488	2488	2488	2841	2841	2841	2403	2403	2403
# Clusters	459	459	459	462	462	462	459	459	459

Standard errors clustered at the polling center level in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Perceptions of Government Index is a z-score index of four dummy variables: MP Provides Services, Afghanistan is a Democracy, Voting Improves Future, and Gov. Ext. or Good Job of Prov. Serv. Compliant Behavior Towards Government Index is a z-score index of five dummy variables: Impt to Rept IED to ANSF, Police Should Resolve Disp, Courts Should Resolve Disputes, Paying Taxes is Some. or Very Imp't, and Trust Afg. Gov. to Determine Guilt. All Outcome Index is a z-score index of all nine of these variables. The "additional covariates" are the number of military events within 1KM of the polling center, whether the polling center was visited by international monitors, and the average response within the polling center catchment from our baseline survey fielded in August 2010 to whether the respondent is employed, years of education, general happiness (1-10), gender, marital status, and age. See Table 2 for an explanation of variables.

Appendix Table 5: Standardized Treatment Effects for All Variables Measuring Legitimacy, Unrestricted Sample

	Mean in Controls	Treatment Effect	Naïve P-Value	Adjusted P-value
Perceptions of Government Index	0.016 (0.018)	0.056** (0.024)	0.023	0.032
MP Provides Services (=1)	-0.006 (0.029)	0.083* (0.042)	0.050	0.252
Afghanistan is a Democracy (=1)	0.007 (0.030)	0.049 (0.042)	0.242	0.321
Voting Improves Future (=1)	-0.010 (0.028)	0.003 (0.039)	0.936	0.478
Gov. Ext. or Good Job of Prov. Serv. (=1)	-0.012 (0.033)	0.058 (0.045)	0.193	0.321
Compliant Behavior Towards Government Index	0.001 (0.014)	0.045** (0.019)	0.020	0.032
Impt to Rept IED to ANSF (=1)	-0.003 (0.027)	0.062 (0.037)	0.100	0.332
Police Should Resolve Disp (=1)	-0.001 (0.028)	0.029 (0.042)	0.490	0.581
Courts Should Resolve Disputes (=1)	0.004 (0.024)	0.001 (0.034)	0.988	0.737
Paying Taxes is Some. or Very Imp't (=1)	-0.002 (0.031)	0.071* (0.041)	0.086	0.332
Trust Afg. Gov. to Determine Guilt (=1)	-0.001 (0.031)	0.050 (0.044)	0.254	0.342
All Outcomes Index	0.009 (0.013)	0.061** (0.017)	0.000	

Notes: Standard errors clustered at polling center level reported in parentheses. Significance levels (naive p-value) indicated by * $p < .10$, ** $p < .05$, *** $p < .01$. Treatment effects are standardized regression coefficients from a regression of the dependent variable, normalized by subtracting the mean and dividing by the standard deviation, on an indicator for treatment and stratum fixed effects. Indices take an average of all of the variables listed within the given hypothesis group, or across all nine variables in the case of the All Outcomes Index. P-values are corrected for multiple hypothesis testing as follows---we adjust across the two primary H1 and H2 indices to control the familywise error rate (FWER) computed following Westfall and Young (1993) and Anderson (2008); within each hypothesis group, we adjust to control the false discovery rate (FDR) computed following Benjamini, Krieger and Yekutieli (2006) and Anderson (2008).

Appendix Table 6: Treatment Effects on Who is Mainly Responsible for Delivering Services

Main Provider Selected:	Central Government	Member of Parliament	Religious or Ethnic Leaders	Provincial Government	Community Driven Council
	(1)	(2)	(3)	(4)	(5)
Delivered Letter (=1)	-0.050 (0.044)	0.120** (0.047)	0.043 (0.046)	-0.076** (0.038)	-0.022 (0.045)
Mean of DV in controls	0.019	0.007	-0.033	0.008	-0.010
R-squared	0.171	0.071	0.067	0.118	0.066
Stratum FEs	Yes	Yes	Yes	Yes	Yes
Additional Covariates	Yes	Yes	Yes	Yes	Yes
# Observations	2403	2403	2403	2403	2403
# Clusters	459	459	459	459	459

Standard errors clustered at the polling center level in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. The "additional covariates" are the number of military events within 1KM of the polling center, whether the polling center was visited by international monitors, and the average response within the polling center catchment from our baseline survey fielded in August 2010 to whether the respondent is employed, years of education, general happiness (1-10), gender, marital status, and age. See Table 2 for an explanation of variables. The survey sample is restricted to the respondents who provide some response to the questions corresponding to all nine legitimacy variables in Table 5.

Appendix Table 7: Impact of Awareness of International Involvement

Dependent Variable:	Perceptions of Government Index			Compliant Behavior Towards Government Index			All Outcome Index		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Delivered Letter (=1)	0.061*	0.065**	0.062**	0.084***	0.080***	0.085***	0.074***	0.073***	0.075***
	(0.034)	(0.029)	(0.029)	(0.026)	(0.022)	(0.022)	(0.021)	(0.019)	(0.019)
Treat X Aware of Delivery	-0.004	-0.011	0.004	-0.027	0.000	-0.044	-0.017	-0.005	-0.022
	(0.052)	(0.049)	(0.051)	(0.037)	(0.036)	(0.037)	(0.031)	(0.031)	(0.031)
Mean of DV in controls	0.018	0.018	0.018	0.002	0.002	0.002	0.009	0.009	0.009
R-squared	0.002	0.125	0.152	0.006	0.099	0.119	0.007	0.090	0.118
Stratum FEs	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Additional Covariates	No	No	Yes	No	No	Yes	No	No	Yes
# Observations	2403	2403	2403	2403	2403	2403	2403	2403	2403
# Clusters	459	459	459	459	459	459	459	459	459

Standard errors clustered at the polling center level in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. Perceptions of Government Index is a z-score index of four dummy variables: MP Provides Services, Afghanistan is a Democracy, Voting Improves Future, and Gov. Ext. or Good Job of Prov. Serv. Compliant Behavior Towards Government Index is a z-score index of five dummy variables: Impt to Rept IED to ANSF, Police Should Resolve Disp, Courts Should Resolve Disputes, Paying Taxes is Some. or Very Imp't, and Trust Afg. Gov. to Determine Guilt. All Outcome Index is a z-score index of all nine of these variables. The "additional covariates" are the number of military events within 1KM of the polling center, whether the polling center was visited by international monitors, and the average response within the polling center catchment from our baseline survey fielded in August 2010 to whether the respondent is employed, years of education, general happiness (1-10), gender, marital status, and age. See Table 2 for an explanation of variables. The survey sample is restricted to the respondents who provide some response to the questions corresponding to all nine variables.