The effect of passive observation methods on Azerbaijan's 2008 presidential election and 2009 referendum

Erik S. Herron*

University of Kansas, Department of Political Science, 1541 Lilac Lane, Blake Hall, Lawrence, KS 66044-3177, USA

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A B S T R A C T

Election observation is used by domestic and international groups to assess election quality and deter fraud. However, a limited amount of research has assessed its effectiveness. This article adds to the literature by analyzing how a passive monitoring tool affected the process and outcome of voting in two elections in Azerbaijan. The analysis shows that the placement of webcams in polling stations is consistently associated with lower reported turnout and inconsistently associated with lower regime support.

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1. Introduction

Election observation has been a growth industry since the collapse of communism in Eastern Europe and Eurasia. From 1989 to 2002, international election observer teams were deployed to evaluate 86 percent of national elections in 95 countries (Bjornlund, 2004, 43), assessing the quality of administration, providing technical assistance, and serving as a deterrent to fraud.1 Observation teams continue to be deployed all over the world by an assortment of international actors.

Because they involve personnel on site, visits by observation teams constitute “active” methods of oversight; the monitors are physically present and those under scrutiny know that they are being watched, by whom, and when. However, “passive” methods of oversight, in which the objects of monitoring do not know if they are being watched (or by whom) have been introduced into the toolkit of election observers. This article extends the analysis of election observation’s effects by investigating how passive monitoring tools may influence behavior.

At a press conference in October 2008, the director of Azerbaijan’s Central Electoral Commission (CEC) announced that his country would pioneer the use of passive oversight methods. 2 Five hundred precincts, around 9% of the polling stations in the country, would be fitted with webcams that would broadcast live feeds of activities on election day. Anyone in the world with an adequate Internet connection could view polling station activities on a website maintained by the CEC. Azerbaijan’s use of webcams presents an opportunity to test the effects of passive monitoring in a country where elections have not been deemed free and fair. A measurable effect of passive monitoring – especially under the conditions present in

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1 International missions in post-communist space have typically involved technical assistance, observation of election processes, and completion of reports on the quality of election administration. However, international organizations can be more actively involved in the process. For example, in Bosnia-Herzegovina in the 1990s, the OSCE managed polling stations. See Bjornlund (2004) for a detailed discussion of the differences among the terms “supervision,” “monitoring,” and “observation.”

2 The author attended the press conference in which the CEC director stated that Azerbaijan was the first country “in Europe” to use webcams with open access into the electoral process. While the director did not mention the Republic of Georgia specifically, it installed closed-circuit cameras in an earlier election but did not make the video footage publicly available.
Azerbaijan — would suggest that these tools may be effective in modifying behavior.

This article addresses the empirical question: does outcomes in monitored polling stations differ from those in unmonitored polling stations? It replicates and extends earlier work on the effects of monitoring (Hyde, 2007) by assessing another form of election observation in a neighboring, but decidedly different institutional, cultural, and political setting. The paper is divided into four sections. The first section addresses how the research question is connected to the electoral studies literature. The second section outlines the differences between active and passive monitoring, and how the presence of passive monitoring tools may influence behavior. The third section provides contextual information about Azerbaijan and its history of election administration. The fourth section discusses the data, presents the results of data analysis, and evaluates the implications.

2. Election observation in the electoral studies literature

The study of election observation is situated at the nexus of research about democratization, the quality of elections, and mechanisms of oversight. The democratization literature extensively addresses how political institutions define the boundaries of competition, provide incentives to politicians and citizens to pursue particular strategies, and can initiate a tradition of peaceful, orderly conflict resolution. Electoral practices loom large in studies of democratization, with some scholars expressing concern about the “electoral fallacy”: interpreting the presence of elections as equivalent to the satisfactory presence of democracy. Scholars and political observers recognized that while newly independent states — like those emerging from the ruins of the Soviet Union — held elections, these elections often fell short of free and fair practices. Research in democratization increasingly began to address democratic deficits and the rise of seemingly stable semi-authoritarian regimes (cf., Levitsky and Way, 2002).

At the same time, researchers turned their attention to the quality of elections, assessing how fraud influences the casting, counting, and compiling of votes. While scholarship addressing election fraud is not a new phenomenon, it expanded in recent years beyond studies of the United States and United Kingdom (e.g., Cox and Kousser, 1981; Argersinger, 1985—1986; Bensel, 2004; Campbell, 2005) to encompass many world regions (e.g., Callahan and McCargo, 1996; Mikhailov, 1999, 2000; Myagkov and Ordeshook, 2001; Lehoucq and Molina, 2002; Lehoucq, 2003; Myagkov et al., 2005, 2007; Alvarez et al., 2008; Buzin and Lyubarev, 2008). Scholars have used diverse sources to analyze election quality, such as surveys, ethnographic work, memoirs, formal complaints and legal cases, news accounts, and reports from civil society (Lehoucq, 2003). Some research efforts have concentrated on using election data as a source material to evaluate election quality. Several approaches, with varied assumptions and methods of interacting with the data, have appeared in the literature, including those that trace the movement of votes from one election to another (Myagkov and Ordeshook, 2001), evaluate other markers of fraud such as turnout (Myagkov et al., 2007), apply number distribution principles from mathematics (Nigrini, 1999, 2006; Mebane, 2006), or focus on special precincts (Herron and Johnson, 2008).

While research on election fraud often notes the presence (or absence) of oversight mechanisms, it typically does not account directly for the effects of oversight. Much of the traditional research on oversight has emphasized Congress’ role in monitoring agencies in the United States. Some researchers have extended these principles to the study of election observation, assessing its history and evolution (Padilla and Houppert, 1993; Beigbeder, 1994; Bjornlund, 2004) and commenting on observation’s perceived effectiveness (e.g., Carothers, 1997; Elklit and Svensson, 1997). The deterrent function of observation missions has been under-studied, with Hyde’s (2007) work on Armenia’s 2003 presidential election as a notable exception. By assessing the effects of a different type of oversight mechanism in a country whose election processes have been deemed problematic in the past, this article speaks to all three strands of the literature.

3. Active vs. passive monitoring

Most election observation is active, typically involving long-term and/or short-term observation teams. Long-term observation teams are placed in-country several weeks before the election and remain after election day. Short-term observation teams focus on election day activities, arriving a few days before the election, visiting polling stations and constituency electoral commissions on election day, and departing soon after the ballots have been counted.

A diverse set of international actors organizes missions, and actors vary in their methods of planning and implementation. In the post-Soviet region, several international groups commonly participate in election observation, including the Commonwealth of Independent States (CIS), European Union (EU), Parliamentary Assembly of the Council of Europe (PACE), and the Organization for Security and Cooperation in Europe (OSCE). Alongside these groups, non-governmental organizations such as the European Network of Election Monitoring Organizations (ENEMO), and the US-based National Democratic Institute (NDI) and International Republican Institute (IRI) also deploy election observers.

While each mission may coordinate its observer deployment plans internally, efforts to coordinate across organizations seem to be limited. Moreover, logistical

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4 See Cox (1868).
6 OSCE activities are coordinated by its Office of Democratic Institutions and Human Rights (ODIHR).
7 The author investigated local-level efforts to coordinate deployment in Ukraine and found limited and ad hoc efforts to collaborate on observer deployments in one municipality. The failure to coordinate sometimes led to different international observer teams arriving at the same polling stations simultaneously.
planning varies across organizations, with some attempting to sample polling stations based on several criteria, and others targeting potentially problematic polling stations. International observers may be able to leverage their institutional weight to gain better access than local observers, but international teams tend to visit polling stations for a short period of time, and each team observes a single polling station during the vote-counting process. While their coverage is wide, the impact may be short-term.8

Domestic actors also participate in election observation activities. Party- or candidate-affiliated observers, representatives of domestic NGOs, and the media are often permitted in polling stations. These observers, especially party or candidate representatives, tend to be present in a polling station for the duration of election day and the election night counting processes. They tend to have language skills and awareness of the local political terrain, making them particularly sensitive to subtle efforts of vote manipulation. However, local observers who represent election contestants primarily may be motivated to provide services to the candidate or party employing them. Domestic observers, especially those representing opposition interests, may also confront impediments to performing their functions and effectively filing and following up on challenges to the process.9

In passive monitoring, a stationary device collects information. Video cameras are the most obvious example, but audio recording devices or other tools could be used, in principle, to gather information about polling station processes. Passive observation potentially alters the calculation of individuals inclined to commit fraud. The presence of a video camera raises the costs of some forms of fraud, such as inflating turnout data. While Azerbaijan’s Internet video cameras did not capture audio, and limited sight-lines prevented the cameras from covering entire polling stations, anyone could watch the proceedings live. Consequently, polling station officials did not know when they were being watched, or by whom.

Active and passive approaches could vary in their effectiveness at detecting and deterring fraud. Because human observers are present and mobile, active monitoring may be more likely to detect voter intimidation and ballot box stuffing that takes place outside of the main polling station facility. Due to their constant presence, passive monitoring tools may be better suited to the detection of overt fraud, especially the inflation of turnout figures. Passive tools could also serve as a general deterrent to improper behavior because their presence implies increased oversight.

In Azerbaijan’s 2008 presidential election, the Central Electoral Commission (CEC) registered 1233 international observers and 28 international media representatives, including delegations from the CIS, EU, PACE, OSCE, European Parliament, foreign embassies, and NGOs.10 The CEC registered 2672 local observers and Constituency Electoral Commissions (ConECs) registered 43,100 local observers.11 The CEC placed webcams in 500 polling stations.

The 2009 referendum featured a smaller contingent of international observers (172) and media (20). The OSCE did not participate while the Council of Europe and PACE sent a handful of observers. The largest mission was from the CIS (42 observers).12 In the referendum, the CEC registered 2148 local observers and ConECs registered 44,918 local observers. As in the presidential election, the CEC placed webcams in 500 polling stations.

4. Context of Azerbaijan’s elections

A small, resource-rich, post-Soviet country on the Caspian Sea, Azerbaijan seems to be an unlikely source for policies designed to enhance the integrity of electoral processes. After a period of political distress in the early 1990s, exacerbated by a war with Armenia over the disputed Karabakh region, the former First Secretary of Azerbaijan’s Communist Party in the Soviet period, Heydar Aliyev, regained power. After ousting the ineffective elected president through a referendum, Aliyev gained the post and consolidated power. Aliyev ruled Azerbaijan from 1993 until his death in 2003 when his son Ilham succeeded him as president. The Aliyevs have been supported by their party-of-power, the New Azerbaijan Party, which has dominated the Milli Majlis (parliament). Azerbaijan’s authorities have been accused of abuses against the opposition, media, and others who challenge their power. Freedom House’s evaluation of political rights and civil liberties, and Transparency International’s Corruption Perceptions Index have consistently characterized Azerbaijan as an authoritarian society with deep corruption.13

Azerbaijan has held nine nationwide votes under the Aliyevs,14 but none of them have met international

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8 Hyde (2007, 2008), however, finds a persistent effect. Others have argued that a shortcoming of international observers is their short-term presence (see, for example, Carothers, 1997).
9 Because their work often implicitly challenges incumbent regimes, domestic groups have been accused of partisanship and their assessments dismissed as biased (Carothers, 1997).
11 Information about observers is based on a personal conversation with an NGO official, and a news report available online: http://en.trend.az/news/important/top/1442116.html.
standards according to the OSCE.\textsuperscript{15} OSCE observers have found deficiencies in the construction of voter lists, inconsistent ballot access, biased electoral commission decisions, unequal media coverage, improper campaigning practices, voter coercion, ballot box tampering or stuffing, protocol tampering, and inconsistent ballot invalidation.\textsuperscript{16}

Despite its status as an authoritarian government according to Freedom House, officials have made high profile efforts to emphasize that electoral practices should be fair. After the 2000 parliamentary election, allegations of fraud resulted in the invalidation of results in eleven districts and some alleged perpetrators were prosecuted (OSCE, 2001). In 2005, results were annulled in 625 polling stations and ten districts, and officials in 108 polling station commissions and six constituency commissions were fired, along with local administration leaders (OSCE, 2006). While these efforts could have been cynical attempts to curry favor with foreign governments and international organizations promoting democracy, government actions raise the possibility that lower-level bureaucrats could be punished for abuses of election rules.

The 2008 presidential election pitted the incumbent, Ilham Aliyev, against six minor challengers. Major opposition figures such as Rasul Guliyev and Isa Gambar did not contest, lowering the stakes.\textsuperscript{17} The conventional wisdom circulating among political observers was that the election of Aliyev for a second term was a fait accompli; the main question was whether or not he would be able to claim a mandate through high turnout.\textsuperscript{18} The official results gave Ilham Aliyev 88.7%, with reported turnout of 75.6%,\textsuperscript{19} higher than the turnout for his initial election in 2003.

Following Ilham Aliyev’s October victory, questions arose about potential presidential successors once Ilham’s second term expired in 2013. According to Azerbaijan’s constitution, the president was limited to two terms in office. A possible solution to the succession problem was quickly proposed: the Milli Majlis called for a referendum to change the constitution. Of the 29 questions on the ballot in March 2009, the key issue was question 21: eliminating presidential term limits. The vote yielded pro-regime victories across all substantive questions, with the strongest support for the elimination of term limits which garnered 92% yes votes.

The use of passive observation techniques in Azerbaijan presents an interesting puzzle to investigate. Its authoritarian status, and past practices of implementing elections that failed to meet international standards, suggest that monitoring techniques might have little effect on behavior. That is, election officials might be motivated to “deliver the goods” for the regime in response to pressure or to show loyalty. However, the government’s efforts to demonstrate a commitment to improving election administration, evidenced by invalidation of results in hundreds of polling stations in the 2000 and 2005 parliamentary elections and punishment of officials for alleged violations of proper procedure, may create countervailing pressures for election administrators. Egregious acts of falsification, especially those that could be viewed on the webcams, could result in individual punishments, raising the stakes for administrators in monitored polling stations.

5. Data and hypotheses

Polling stations constitute the “front lines” of the election process. In addition to managing voter lists, and addressing pre-election complaints, polling station commissions are responsible for overseeing the casting and counting of ballots. In Azerbaijan, voters enter the polling station, have their fingers checked for ink marks (that indicate if the voter has already cast a ballot), and proceed to the registration table. After presenting documents and signing the registration book, voters receive and cast their ballots. While webcams did not capture fine details of polling station activities, basic procedures and the flow of voters were visible to viewers.

The polling station-level data in this analysis were acquired from Azerbaijan’s CEC. According to Azerbaijan’s Election Code, polling stations are formed by ConECs and range in size from 50 to 1500 voters. Special polling stations may be designated in hospitals, rest homes, oil rigs, or on ships; under certain circumstances, special military polling stations are also permissible (see Chapter 6 of the Election Code). Voters cast ballots in 5359 polling stations during the presidential election and in 5367 polling stations during the referendum.

Webcams were installed in 500 polling stations located in 81 of Azerbaijan’s 125 constituencies. The selection criteria for webcam placement were not revealed, but they likely included practical considerations such as adequate physical layout and technical capacity to operate the technology, as well as proximity to the ConEC offices. While random assignment of cameras would be optimal, the analysis controls for polling station features that seem to differentiate unmonitored and monitored polling stations in two ways. The multivariate analysis includes covariates that may differentiate polling stations from one another, notably polling station size. In addition, following Ho et al. (2007), polling station data were pre-processed and matched to approximate random assignment of the treatment.

As Table 1 illustrates, monitored polling stations tended to be larger than unmonitored polling stations, with 1293 registered voters (on average) in the presidential election and 1298 in the referendum, compared with 867 and 877, respectively. The smallest polling stations had 32

\textsuperscript{15} The OSCE deployed observer missions to the 1995, 2001, and 2005 parliamentary elections, 2006 repeat parliamentary elections, and the 1998, 2003, and 2008 presidential elections. Other organizations, such as the CIS, have issued more positive assessments of Azerbaijan’s election processes.


\textsuperscript{17} Campaigns were low-profile, and some reporters even noted that a portrait of the incumbent president hung in the headquarters of a challenger (Synovitz, 2008).

\textsuperscript{18} The author’s personal conversations with political observers in Baku focused on turnout. The opposition’s planned boycott also raised the possibility of poor turnout. See, for example, Radio Free Europe/Radio Liberty (2008).

(presidential) and 36 (referendum) registered voters; the smallest monitored polling stations had 234 (presidential) and 176 (referendum) registered voters.

Expectations about the potential behavioral effects of webcams depend upon the identity of the actors who are likely to respond to their presence. As suggested above, the installation of webcams could induce election administrators to more carefully manage administrative processes, resisting pressures to inflate outcomes while still striving to deliver the vote. Local political observers offered an alternate set of expectations based on a cultural approach to understanding behavior and a different target: voters. The alternate explanation suggests that voters, especially older or less educated citizens, might treat the announcement of camera installation as a signal that their activities would be monitored, thereby encouraging them to come to the polls and support the pro-regime position on the ballot. This explanation anticipates an enduring effect of Soviet-era socialization in which citizens were expected to participate and support the pro-regime position on the ballot. This analysis includes controls for elements of the election process that could also be associated with unusually strong turnout or pro-regime outcomes, and control variables are discussed below. The following section presents the results of several empirical evaluations of the hypotheses under investigation.

6. Empirical tests

In the context of Azerbaijan’s presidential election and referendum, two outcomes are particularly relevant to assess. The expectations of behavioral modifications described above suggest that monitored polling stations provide incentives for election officials to moderate pro-regime outcomes, or voters to attend and support the regime. This section addresses turnout and vote outcomes separately.

6.1. Turnout

As noted above, the conventional wisdom in Baku at the time of the presidential election and referendum was that turnout would be more contested than the final vote outcome. The CEC provided polling station-level reports of turnout throughout the day, as well as final numbers in the completed protocols. Polls opened at 8 a.m., and polling stations reported the flow of voters at 10 a.m., noon, 3 p.m., 5 p.m., and 7 p.m. Assessing the data using two-sample t-tests with equal variance shows that results in monitored and unmonitored precincts diverge. In both elections, turnout in unmonitored polling stations exceeded reports in monitored polling stations for every reporting period, and the gap widened throughout the day. In the presidential election, final turnout reported in the protocol was, on average, 12.2 percentage points higher in unmonitored polling stations. In the referendum, final turnout was, on average, 6.9 percentage points higher in unmonitored polling stations.

| Table 1 |
| Characteristics of the presidential election and referendum. |
| Number of precincts | Presidential election | Referendum |
| Number of webcam-monitored precincts | 5359 | 5367 |
| Mean precinct size – unmonitored precincts | 867.2 | 877.1 |
| Mean precinct size – monitored precincts | 1292.7 | 1298.3 |
| National turnout | 75.64% | 70.83% |
| Turnout – unmonitored precincts | 77.40% | 73.91% |
| Turnout – monitored precincts | 65.19% | 67.05% |
| Pro-regime vote | 88.73% | 91.76% |
| Pro-regime vote – unmonitored precincts | 87.40% | 91.97% |
| Pro-regime vote – monitored precincts | 87.06% | 90.35% |

The expectations of behavioral modifications described above suggest that monitored polling stations provide incentives for election officials to moderate pro-regime outcomes, or voters to attend and support the regime. This section addresses turnout and vote outcomes separately.

20 The author’s conversations with local political observers and activists included this observation. Also see the voter’s comment in Zeynalova and Heil (2008). For the cameras to affect participation in specific polling stations, citizens would have to be provided information about which stations were being monitored. Camera locations were not emphasized in the civic education literature or media reports that were disseminated prior to the election. However, voters could “spread the word” that cameras were present, potentially inflating local turnout especially as the day progressed.

22 Or, the effects of behavioral influences on administrators and voters cancel each other out; an unlikely outcome.

23 The results for the t-tests were: presidential election: ts (5351) = 22.28, P > |t| = 0.00; and referendum ts (5367) = 15.34, P > |t| = 0.00. A supplementary table including results from the CEC’s five reporting periods is posted online at http://www.vse-na-vybory.blogspot.com. The table includes tests based on CEC data from the five reporting periods, and a test based on turnout reported in the final protocols.
The comparison of means tests is instructive, but does not control for other possible effects on outcomes. The multivariate analysis incorporates other explanatory variables related to conditions in polling stations and the administrative process that could influence outcomes, particularly if officials are falsifying the vote. The dependent variable in this assessment is reported final turnout, measured as the proportion of ballots cast by citizens registered in the polling station and those added to the list.24

If passive monitoring influences behavior in polling stations, and undermines efforts to manufacture pro-regime outcomes, the analysis should also control for other factors that may influence election processes and may be associated with falsification. Like Hyde (2007), this analysis controls for polling station size with a variable that assesses the natural log of polling station size.25 Polling stations with small numbers of voters are often located in villages or in special polling facilities (e.g., hospitals). In these polling stations, voters are often less “anonymous” and may be pressured to participate and support the regime.26

In addition, certain balloting options may be associated with attempts to artificially inflate outcomes. Azerbaijan’s election data provide insight into two of these options: the mobile ballot box and absentee certificates. Mobile ballot boxes are used to accommodate citizens who cannot travel to a polling station; polling officials take a small ballot box to the voter’s home and the voter casts a ballot. Voters who can come to the polls, but are temporarily living away from their home polling station, may request an absentee certificate that permits the voter to cast a ballot in any polling station on election day. Excessive use of mobile ballot boxes and absentee ballots has been associated with falsification in several post-Soviet elections (Herron, 2009). Both variables are coded to reflect the proportion of voters casting ballots by these methods.

Ballot invalidation can also provide circumstantial evidence of falsification. Some voters inevitably make errors and invalidate ballots, but intentional invalidation may be a tool to reduce the vote tallies received by opponents (Sobyanin and Sukhovolskiy, 1995). In cases where ballot box stuffing takes place, invalidation rates can be artificially low as the perpetrators of fraud reduce the proportion of invalid votes by stuffing the box with “valid” ballots. While these two mechanisms could affect election results in different ways, both approaches could inflate turnout. The variable is coded to reflect the proportion of ballots that were deemed invalid.

As noted above, the lack of random assignment for the treatment could undermine causal inference. To account for this challenge, data were pre-processed via MatchIt and analyzed using Ordinary Least Squares and tobit in Zelig (Imai et al., 2007a,b).27 The matching process produced a dataset that is more balanced in the key variables.28 While it is unlikely that the treatment was randomly assigned, the analysis of data approximating random assignment produces results that closely follow the analysis of the full dataset. This finding suggests that assignment of polling stations has not affected results, and the analysis can proceed as if the assignment were random.

Table 2 shows the results of the turnout analysis for the presidential election and referendum.29 Even with controls added to the analysis, unmonitored polling stations continue to report higher turnout than monitored polling stations. Turnout was, on average, seven percentage points lower in monitored polling stations in the presidential election, and three percentage points lower in the referendum. The results suggest an average effect smaller than the t-tests produced, but statistically significant and in the expected direction. Results for the control variables were not fully consistent across the two votes. Polling station size and absentee ballots both exerted a negative effect on turnout.30 Higher levels of mobile ballot box usage and

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Results for turnout in Azerbaijan’s presidential election (2008) and referendum (2009) using matched data.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DV: turnout (presidential)</td>
</tr>
<tr>
<td>Monitored</td>
<td>–0.077* (0.006)</td>
</tr>
<tr>
<td>Polling station size (logged)</td>
<td>–0.155* (0.017)</td>
</tr>
<tr>
<td>Mobile ballot box</td>
<td>–0.576* (0.068)</td>
</tr>
<tr>
<td>Absentee certificates</td>
<td>–0.553* (0.055)</td>
</tr>
<tr>
<td>Invalid ballots</td>
<td>–0.323* (0.121)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.864 (0.124)</td>
</tr>
<tr>
<td>N</td>
<td>1500</td>
</tr>
<tr>
<td>N2</td>
<td>326.1*</td>
</tr>
</tbody>
</table>

Note: * = significant at the .05 level. Standard errors in parentheses.

24 Citizens using absentee ballots were added to the list in the polling station that they visited. The turnout calculation in this analysis accounts for the movement of citizens using absentee ballots. The multivariate analysis includes a variable for the proportion of absentee ballots cast in polling stations as well, to capture areas with high use. Observers have noted that the use of absentee ballots could be a marker of fraud, with voters traveling to multiple polling stations to cast votes.

25 Hyde (2007) controls for precinct size and the number of votes cast; this analysis includes the natural log of precinct size, as the effect is likely to be stronger in small precincts and diminish as precinct size increases.


27 Analysis with the matched data produced results that were statistically and substantively similar to analysis conducted without matching, although some discrepancies emerged. Because the matching process eliminates many observations, I also report the results using data from all precincts online at: [http://www.vse-na-vybory.blogspot.com/](http://www.vse-na-vybory.blogspot.com/).

28 In the presidential election dataset, the percent improvement for the variables were: precinct size (96.47%), mobile ballot box (52.71%), absentee certificates (35.44%), invalid ballots (68.95). Matching produced similar improvements in the referendum dataset: precinct size (96.60%), mobile ballot box (38.51%), absentee certificates (15.51%), and invalid ballots (48.6%).

29 The table reports tobit results, but analysis using OLS was substantively and statistically equivalent. OLS results are available online at: [http://www.vse-na-vybory.blogspot.com/](http://www.vse-na-vybory.blogspot.com/).

30 This outcome may be an artifact of the dependent variable’s calculation. In another analysis, I used a modified turnout figure. Instead of including additions to the voter list, I assessed turnout by dividing the number of ballots cast in the precinct by the number of registered voters only. The statistical and substantive results were similar to the analysis using turnout figures that include voters on the additional list as part of the total number of registered voters, but two notable differences surfaced in the analysis of presidential results. Specifically, the sign of mobile ballot boxes flipped; it was positive as expected. In addition, invalid ballots were significant and negative, indicating that lower levels of invalid ballots were associated with higher turnout.
higher levels of invalid ballots were associated with lower turnout in the presidential election, and the opposite in the referendum. The analytical results support the expectations set forth in the hypotheses: monitored polling stations reported results statistically and substantively different from unmonitored polling stations. The results provide further preliminary support for the proposition that the behavioral effects influenced election administrators.

7. Pro-regime outcomes

The dependent variables in this section are the proportion of votes supporting the regime. For the presidential election, the dependent variable is the proportion of votes recorded for incumbent President Ilham Aliyev. For the referendum, the dependent variable is the proportion of votes recorded in support of an end to presidential term limits. The independent variables are identical to those used in the analysis of reported turnout.

Difference of means tests suggest that the effect of monitoring varies across the two elections. In the presidential election, support for President Aliyev is not statistically different in monitored or unmonitored polling stations, nor is support for the opposition. However, the proportion of invalidated ballots is slightly higher in monitored polling stations. In the referendum, however, regime support is slightly higher in unmonitored polling stations for all 29 questions. The question addressing the lifting of term limits on the president yields the highest difference: regime support is 1.6 percentage points higher, on average, in unmonitored polling stations. Opposition to the referendum question and invalid ballots are also higher in monitored polling stations.

The results of the multivariate analysis are reported in Table 3. Monitored polling stations are associated with slightly lower regime support in the referendum. By contrast, monitored polling stations produce a substantively small, but positive, coefficient that reflects elevated support in mixed pro-regime outcomes. The analysis of pro-regime outcomes provides mixed support for the hypotheses under investigation. Monitored polling stations yielded slightly lower levels of regime support in the referendum, but a slightly higher level of regime support in the presidential election (at the .10 level of significance).

8. Conclusion

International and domestic political actors have expended significant resources to mobilize and deploy election observation missions all over the world. The underlying assumption has been that oversight activities can improve electoral practices by pointing out deficiencies and deterring improper behavior. Limited research has investigated the effectiveness of observation, however. This article provides some evidence that observation activities may exert the intended effect by showing that polling stations monitored by video cameras produced different outcomes than unmonitored stations.

Azerbaijan provided a valuable test case for the effects of passive monitoring tools. While its election processes have not been deemed free and fair in the past, government authorities have meted out punishments to local officials for allegedly perpetrating fraud. Under these circumstances, election officials should face countervailing pressures to deliver the vote and moderate outcomes in monitored polling stations. The analysis demonstrated that reported turnout was lower in both the presidential election and referendum when webcams were present. Pro-regime outcomes were slightly lower in the referendum in monitored polling stations. In the presidential election, the analysis produced a positive coefficient, but the substantive effect was small and it did not rise to conventional levels of statistical significance. These outcomes are generally consistent with the narrative anticipating a behavioral effect on election administrators and challenge expectations that webcams might enhance turnout and pro-regime outcomes by exerting a psychological effect on voters.

Passive techniques limit the range of behaviors that can be observed, but extend the time period of observation. Officials do not know who is watching or when they are being watched. The analysis suggests that oversight of election administrators can be effective, even in authoritarian societies. Further, it supports the idea that election observation via webcams can be a useful and potentially low-cost tool for domestic and international democracy-promotion groups.

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