## effectiveness of election observation

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### 12.1 Introduction

The world has witnessed a dramatic expansion of democracy since the 1970s. Huntington's "Third wave" of democratic transition begun in Southern Europe and then spread to Latin America, Asia, Eastern and Central Europe, and continued through the 1990s in Africa. Along with this expansion of democracy and after the fall of the Berlin Wall, American, European, and multilateral governmental or non-governmental organizations have put in place fundamental democratization initiatives in the fields of diplomacy, foreign aid, and technical assistance, with the aim of supporting and strengthening those democratic transitions. Their work has focused mainly on sustaining political parties and civil society, training judges, conducting civic education campaigns, developing new constitutions and (above all) electoral laws, and observing elections. While it is still not clear if this growth of international democracy promotion can be considered an effect or a cause of the numerous democratic transitions, it can be claimed with a good probability of not being disowned by facts that such assistance efforts have reinforced and sustained the global trend toward more democracy.

Despite the huge support for human rights, rule of law, mass media, and civil society programs, the bulk of the international democracy assistance has been devoted to elections. According to Bjornlund (2004), the reasons are straightforward. First, elections are a necessary, constitutive element of democracy (though not a sufficient one). Second, elections attract much attention of international agencies and donors. Third, the end of the Cold War, removing the justification for supporting authoritarian regimes, brought about an international consensus on the importance of democracy and elections. Fourth, elections marking the end of a civil war in which struggling democrats challenge

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autocratic incumbents capture the international audiences, in particular as international aid is often conditional on holding of free and fair elections. Fifth, elections have been expected, rightly or wrongly, to play a major role in helping to resolve long-standing conflicts or in initiating or consolidating a democratic transition. While this last reason sounds a little naïf (there are a number of other actors, factors and processes involved), we should not forget that elections are an essential part of democracy, and must be treated as such.

With this strong emphasis on elections, the industry of election observation (both international and domestic) has developed in scope, extent and influence. The importance given to elections has both resulted from and contributed to making election observation a common, accepted, international democracy promotion initiative. The amount of money devoted to this enterprise has increased enormously during the 1990s, and election observation has evolved from an ad hoc activity of experts, politicians and academics under the umbrella of American and European governmental and non-governmental organizations, into an institutionalized practice, a *sine qua non* for conferring international legitimacy to democratizing regimes.

Election observation is not perceived as essential in established democracies. It is not accepted in authoritarian regimes. But it has become the norm in democratizing countries and hybrid regimes. In such countries, election observation is considered a prerequisite for elections to be considered legitimate. It is increasingly difficult for countries in transition to explicitly refuse international observation. Governments that refuse observers tend to pay a significant price in terms of international legitimacy. Therefore, governments that lack a genuine commitment to full transparency have preferred to try to restrict who can observe or what observers can do, thus manipulating not only the election, but also the observation process.

Along with resources, demands on and the influence of election observation have also grown. Internal and external political actors, journalists, academics and common citizens rely on their assessments. However, very often too much is expected of the work of election observers. We should not forget that their task is limited to observing and reporting on the electoral process. International actors, domestic politicians and citizens in general, however, often expect international observers to deter (not only detect) fraud, to provide, with their mere presence, a fair political field, and, furthermore, to guarantee the integrity of the process.

Obviously, observers do not have all this influence and power. Actually, they have no formal or legal role in the process and they must not be involved at all if we want them to be truly neutral. At most, they can have some positive spill-over effects, or unintended consequences, as deterring election-day fraud thanks to simply being there (Bjornlund, 2004, pp. 9–12). This chapter will be devoted to the analysis of an empirical case which will allow us to check the hypothesis, often advanced by practitioners, that international election observation missions are able to deter election-day fraud.

# **12.2** Observe and report, detect and deter

The question I would like to answer relates to the "effect of international election observation on election-day fraud". This means trying to discover the influence of the simple presence of observers on the behaviour of candidates, electoral staff, and voters. Even if proponents of election observation promote this instrument claiming its potential to reduce fraud, that capability (that must first be proved) can be classed among the "unintended consequences" of international election observation, since the stated role of observers is simply to "observe and report" on an electoral process. Its potential is to reassure the electorate that it is safe for them to vote and run for office and/or to deter fraud. While this is a fundamental element of the role of observers, it is not technically part of the observers' job. They are some of the "positive" spill-over effects or unintended consequences, something that the mere presence of observers can provoke under certain circumstances without explicitly meaning to.

Is it true that electoral observation can bring cleaner elections, as proponents of this costly enterprise assert? The answer to this question is of fundamental importance to the evaluation of the effectiveness of election observation. We want to know if we are spending our limited resources (in time, money, staff, etc.) well, if our efforts are worth doing, if our actions have the expected consequences. Therefore, the question we should answer is: *What is the effect of international election observation on election-day fraud?* Many scholars and practitioners assert that the mere presence of electoral observers works as a deterrent, helping to reduce election-day fraud. Is it empirically valid? Can this assertion be tested?

What we are studying therefore is the observer effect on the behaviour of the actors involved in the electoral process, mainly on actors committing fraud on Election Day. While election irregularities (fraud, manipulation or violence) may take place before and after Election Day, and may be more effective in the pre- and post-election period, I am concentrating on election-day fraud<sup>1</sup>). Candidates or parties engage in various election

<sup>1)</sup> Actually, there is an intrinsic difficulty in measuring the effect of observers on election irregularities taking place, for example, during the campaign period or the adjudication of election-related disputes. irregularities in order to win an election that would otherwise have an uncertain result<sup>2)</sup>. It is not my intention to check if the presence of observers has an effect on all of them, because that would be difficult and misleading. Most irregularities occur well before election-day, such as intimidating candidates, hindering their participation in the election, putting undue pressure on mass media or manipulating voter lists. Other irregularities may take place after the election, during the resolution of election-related disputes or in the process of result aggregation.

For empirical leverage, the design of this study is limited to irregularities that can occur on Election Day in and around polling stations. So what I want to concentrate on in this analysis are attempts to unduly influence the outcome of the election in and around polling stations. Election-day fraud ranges from voter intimidation to stuffing the ballot box, from denying particular voters or groups the right to vote to manipulating the counting of the votes, etc. All these forms of fraudulent behaviour have the same goal: increasing the share of votes for the party/candidate committing the fraud.

It is exactly this kind of fraud that electoral observers are keen to detect and deter. The behaviour of internal political actors may be influenced by the physical presence of international election observers inside and around polling stations. What I'd like to test is whether the presence of observers reduces election-day fraud: If international election observation reduces election-day fraud, then the candidate or party sponsoring fraud should get a lower average share of the votes in the polling stations where observers were present than in polling station where they were not present. If the presence of international election observed polling stations. Therefore, the measurable effect of the presence of observers on election-day fraud must be the lower share of the votes for the candidate or party sponsoring fraud must be the lower share of the votes for the candidate or party sponsoring fraud. Actually, that candidate or party should perform worse on average in the observed polling stations.

The scope of the scientific literature on international observation issues is quite narrow. They are case studies (among them, Anglin 1995 and 1998; Bjornlund, Bratton, and Gibson 1992, Laakso 2002), or research about election fraud (Alvarez, Hall, and Hyde 2008; Myagkov, Ordeshook, and Shakin 2009; Lehoucq 2003; Schedler 2002, etc.), on how to define and operationalize the concept of "free and fair elections" (Elklit and Reynolds 2005;

<sup>&</sup>lt;sup>2)</sup> Andreas Schedler, "The Menu of Manipulation", Journal of Democracy, 13, 2, 2002, pp. 36–50. R. Michael Alvarez, Thad Hall, and Susan D. Hyde, Eds., Election Fraud: Detecting and Deterring Electoral Manipulation, Washington, DC: Brookings Institution Press, 2008. M. Myagkov, P. C. Ordeshook, and D. Shakin, The Forensics of Election Fraud: Russia and Ukraine. Cambridge, UK: Cambridge University Press, 2009. Fabrice Lehoucq, "Electoral Fraud: Causes, Types, and Consequences", Annual Review of Political Science, 2003, pp. 233–256. Fabrice E. Lehoucq, Ivan Molina, Stuffing the Ballot Box, Cambridge, Cambridge University Press, 2002.

Elklit and Svensson 1997; etc.) and international standards regarding elections and election observation (Goodwin-Gill 2006, European Commission and NEEDS 2007; etc.). To the best of my knowledge, the only attempt to assess the effectiveness of observation in deterring election-day fraud empirically is Susan Hyde's work (2007 and 2010). Following her research, I will try to replicate her natural experiment (with some adjustments) on a new case to see if the results remain the same, i.e. in support of the observation enterprise.

### **12.3** Polling station by polling station

The only strategy to assess the effectiveness of international observation missions in deterring election-day fraud is through a micro-level analysis. This is because any study comparing two or more countries would be stained by endogeneity problems. Therefore, in order to assess the causal effect of international observation missions we need to analyse a quasi-experiment in which observers are assigned to polling stations in a way that approximates randomization. This quasi or "natural" experiment<sup>3)</sup> allows us to check if international election observation has some effects on the behaviour of domestic political actors. By comparing election results of polling stations visited by observers with the results of those not visited, we can see if the presence of observers caused a reduction in election-day fraud. This way we can evaluate the "observer effect" at the sub-national level. In other words, if international election observation reduces election-day fraud directly, the party/candidate who is cheating gets fewer votes in polling stations visited by observers than in those not visited, all else being equal.

The experimental nature of this research proposal lies in the random assignment of observers to polling stations. I will not discuss at length to what extent this research design can be considered experimental<sup>4</sup>), but I invite interested readers to see Hyde (2007, pp. 45–50). It suffices to point out that, although professional observer organizations such as the OSCE/ODIHR do not assign observers using random number tables or similar methods, the resulting distribution of observers to polling stations is highly unlikely to be

<sup>3)</sup> In natural experiments, the researcher does not directly assign the treatment to randomly selected cases, but s/he observes cases where the independent variable is assigned "as if" it were random. Here, the burden of the proof rests on the researcher: s/he must demonstrate that the treatment can be regarded as randomly assigned.

<sup>4)</sup> Actually, I checked, in the case studied here if the treatment can be considered near random. What is fundamental is that observer distribution does not follow a clear pattern that would predict voting distribution. Much of regional difference in observation coverage was due to voter density: there is, in fact, a relative balance in voters per observed polling station within each control group. For example, in round one, observers visited 1,834 "big" and 396 "small" polling stations. As big polling stations have more voters, the more intensive observation coverage was due to voter density, and the voters per observed polling station ratio was quite similar across control groups in all three rounds.

systematically different from a pure randomization. In fact, the observation methodology guarantees that there is no geographical or other kind of bias, such as visiting "interesting" or "convenient" polling stations, in the distribution of observers to polling stations. And, more importantly, the choice of polling stations to visit is not driven by information about polling-stations attributes concerning voting patterns.

Otherwise the assignment of the treatment could not be considered near random. Each short-term team is given an area of deployment to carry out its work. Inside this area, observers are free to visit the number of polling stations they deem appropriate. They can stay in a single polling station for as long as they deem necessary for a considered judgment, and they can return to any polling station if necessary. Moreover, it is standard practice for highly regarded international observation missions not to make public which polling stations they will observe on Election Day. This restricts the possibility of openly cheating in polling stations where international observers are not expected, and makes it difficult to anticipate their arrival.

## **12.4** Ukraine and its 2004 presidential election

To which case will this analysis be applied? The choice of the case is an important part of the research. Unfortunately, due to the scarcity of data, not all elections observed by the European Union or the OSCE/ODIHR are suitable to the application of this design. They must have at least four characteristics: first, there must be a candidate or a party trying to cheat; second, there must be election results accessible at the polling station level; third, international observers must have been assigned in a way that approximates random assignment; and fourth, a list of polling stations visited by observers must be available<sup>5)</sup>. The Ukrainian 2004 presidential election, which was observed by the OSCE/ODIHR, is an excellent case for testing the hypothesis.

I took into account two further characteristics that made Ukrainian 2004 presidential elections a good case to analyse. First of all, it was a two-round election, which makes it

<sup>&</sup>lt;sup>5)</sup> I really thank the OSCE/ODIHR for giving me the possibility of running this analysis, even though it was not possible for them to give the list of observed polling stations directly to me. Actually, due to the sensitivity of the data, Professor Hans Schmeets, an OSCE/ODIHR statistician, built the dataset and run the statistical analysis on STATA following the design of this research.

possible to test also for "lasting" effects (see below). Moreover, the second round was repeated because the Supreme Court of Ukraine declared the second round invalid due to the widespread election irregularities during the runoff. This allowed a further analysis. Second, the presence of observers was massive: during the first round, OSCE/ODIHR election observers submitted 2,578 reports; during the second round, there were 2,489 reports. During the repeated second round, observers submitted 5,920 report forms. This made it the largest mission in the OSCE/ODIHR history. For the 2004 presidential elections the national territory was divided into 225 Territorial Election Districts (TEDs), which administered the election locally through the formation of more than 33 thousands polling stations: 33,101 in the first round; 33,077 in the second; and 33,059 in the repeated second<sup>6)</sup>. OSCE/ODIHR observers visited 2,203 polling stations during the first round, 1,998 during the second, and 4,856 during the repeated second round<sup>7)</sup>.

The incumbents at the time of the 2004 presidential elections were President Leonid Kuchma and Prime Minister Viktor Yanukovych. President Kuchma had already served two terms in office so he could no longer run. The incumbent candidate, supported by the President and by the Russian Federation was Prime Minister Viktor Yanukovych, who stood as the candidate of the Party of Regions and promoted closer ties with Russia. Yanukovych ran against Viktor Yushchenko, leader of the Our Ukraine faction in the Ukrainian parliament and former Prime Minister, who stood as a "self-nominated" independent candidate. He called for Ukraine to turn its attention westward and eventually join the European Union. Before the elections, on 2 July 2004 Viktor Yushchenko and Yulia Tymoshenko (of the Yulia Tymoshenko Bloc) formed the People's Power, an electoral coalition to win the 2004 presidential elections. Viktor Yushchenko promised to nominate Yulia Tymoshenko as Prime Minister if he were to win the October 2004 presidential election.

While 24 candidates contested the election, pre-election polls clearly indicated that only Viktor Yanukovych and Viktor Yushchenko enjoyed extensive popular support. Two other candidates led parties that passed the 4% representation threshold in the 2002 parliamentary elections: Petro Symonenko (Communist Party) and Oleksandr Moroz (Socialist Party). The election was held in a tense atmosphere. Yanukovych and

<sup>&</sup>lt;sup>6)</sup> Polling stations part of the 226<sup>th</sup> TED (i.e. polling stations outside Ukraine) are not included in this analysis. In fact, they did not have an equal chance of being visited (no observers were sent there); moreover, because very few votes were cast in these polling stations (0.22 percent of the total votes cast in the first round, 0,31 percent in the second round and 0.35 percent in the repeated second round), they are quite negligible. Furthermore, voter turnout was quite low: 23.7 in the first, 30.3 in the second and 29.6 percent, in the repeated second round (versus 74.5, 80.4 and 77.2 percent inside Ukraine). However, I did perform the analysis including these polling stations as well and the results did not change substantially.

<sup>7)</sup> The number of reports does not exactly match the number of polling stations visited by observers: in fact, observers can return to a polling station on the same election day if necessary. The OSCE/ODIHR Final Report provides more observed polling stations (pp. 25, 27, and 36) than the figures presented here. This is due to polling stations observed more than once by the same team of observers or by different teams during the same election day. The OSCE/ODIHR considers each as a single observation and counts them as such. For the purpose of this study, however, a polling station is either visited or not visited on the same election day, regardless of the number of visits.

Kuchma used their control of the government and state apparatus to intimidate Yushchenko and his supporters. Yushchenko was even poisoned with dioxin under mysterious circumstances in September 2004. However, he survived and continued with the election campaign, but the poisoning undermined his health and his disfigured face had altered his appearance dramatically.

The first round was held on 31 October 2004. The two main candidates achieved very similar results: Yanukovych got 39.27 percent of the votes and Yushchenko 39.91 percent. There were many complaints about voting irregularities in favour of Yanukovych. However, since neither Yanukovych nor Yushchenko was able to reach 50 percent of the votes, challenging the first-round results would not have prevented the run-off<sup>8)</sup>. So the complaints were not actively pursued and both candidates concentrated on the upcoming second round, scheduled for 21 November 2004.

The results of the second round saw Yanukovych winning the election with 49.47 percent of the votes, whereas Yushchenko fell short with the 46.61 percent. Protests began as soon as second-round election results were released, as the official count differed markedly from the exit poll results. These showed that Yushchenko was the winning candidate with an 11% advantage. While Yanukovych's supporters justified this disparity by claiming that it was due to Yushchenko's connections to the Ukrainian media, Yushchenko's team presented a great deal of evidence of election fraud in favour of Yanukovych, witnessed by many local and foreign observers.

Massive peaceful protests began on 22 November in a number of cities across Ukraine. This became known as "the Orange Revolution". On 24 November 2004, the Central Election Commission (CEC), which was itself accused of tampering with the electoral results, officially declared Yanukovych the winner of the elections. This meant the end of negotiations between Yushchenko and the incumbent President Leonid Kuchma intended to peacefully resolve the situation. The day after, Yushchenko asked his supporters to begin a series of mass protests, general strikes and sit-ins with the aim to force Yanukovych to concede defeat.

The political deadlock was finally broken, on 3 December 2004 by the Supreme Court, which decided that it was impossible to establish the results of the presidential elections with certainty because of the scale of the electoral fraud. Therefore it ordered a revote of the run-off election to be held on 26 December 2004. The 26 December re-vote attracted conspicuous international attention and was held under intense scrutiny of local and international observers. The preliminary results announced by the Central Election

 $^{8)}$  According to the Ukrainian law, a run-off vote was to be held since no candidate obtained more than 50 percent of the ballots cast.

Commission gave Yushchenko +5% and Yanukovych -5% in respect to the November election. Yanukovych attempted to legally complain before the Supreme Court of Ukraine and in the Central Election Commission, but all complaints were dismissed as without merit. The results of the run-off were officially made public on 10 January 2005 by the Central Election Commission. It declared Yushchenko the winner of the presidential election with 52 percent of the votes.

# **12.5** Testing the "Observer effect" through election results

In order to examine if the presence of international observers reduces election-day fraud and, if so, to what extent, we must perform a difference of means test (t-test). This test compares two groups of polling stations (observed vs. unobserved polling stations). Then it tests the hypothesis that the means of the two groups are the same. If observers have a measurable deterrent effect on election-day fraud, reducing fraud at the polling stations they visit, then, all else being equal, their presence should decrease the share of the votes for the fraud-sponsoring candidate or party, i.e. they should perform worse in polling stations that were visited.

If we had been facing an internationally observed two-round presidential election, we would have had to consider two rounds of treatment (polling stations observed) and a separate voting distribution for each round. We must bear in mind that observers, choosing polling stations near-randomly, can either visit a polling station only during the first round, only during the second round or during both rounds. This creates a fourfold sample of polling-station-level election results: one group of polling stations is never observed, another is observed only during the first round, another only during the second, and another during both rounds.

Therefore, in cases of two-round elections, it is also possible to test if a first-round observation has had a lasting effect on the second round. The presence of international election observers, in fact, can have "immediate" or "lasting" effects. The first term suggests that observers are able to deter fraud, but only during the election they are observing (in this case, the first round). The second term suggests that the observers have a lasting effect on the actors' behaviour in the second-round. To test if there are immediate effects we need to compare the share of the votes that the fraud-sponsoring candidate or party

got in the first round in unobserved and observed polling stations (not in the second round because there could be lasting effects at work). Instead, to test if the presence of observers in the first round generates lasting effects in the second round we must compare the second round vote share between the group of polling stations observed only in the first round and the group of never observed polling stations.

Our analysis is carried out on the vote share for the fraud-sponsoring candidate. In the case of the Ukrainian presidential election of 2004, this share is drawn from three different election results: first round (R1), second round (R2), and repeated second round (R3). Because of these three rounds, the natural experimental design entails a separate study of the vote share for each round. However, the "treatment" varies with each dependent variable (vote share): in fact, international observers went to different polling stations in different rounds but there was some overlap between rounds.

Specifically, the statistical population of the 2004 presidential election polling-stationlevel results can be divided into a number of experimental groups, according to the round considered and to the "treatment" of international observation during the course of the Election Day:

- considering the round-one vote share, the population can be divided into two experimental groups: one group of polling stations was observed ("observed in R1"), and one was not ("not observed in R1");
- 2. considering the round-two vote share, the population can be divided into four experimental groups: one group of polling stations was observed only in the first round ("observed only in R1"), one was observed only in the second round ("observed only in R2"), one was observed in the first and in the second round ("observed in R1R2"), and one was never observed ("never observed");
- 3. considering the repeated second round vote share, the population can be divided into eight experimental groups: one group of polling stations was observed only in the first round ("observed only in R1"), one was observed only in the second round ("observed only in R2"), one was observed only in the repeated second round ("observed only in R3"), one was observed in the first and in the second round ("observed in R1R2"), one was observed in the first and in the second round ("observed in R1R2"), one was observed in the first and in the repeated second round ("observed in R1R2"), one was observed in the second and in the repeated second round ("observed in R1R3"), one was observed in the second and in the repeated second round ("observed in R2R3"), one group was observed in all three rounds ("observed in R1R2R3") and one group was never observed ("never observed")<sup>9</sup>.

<sup>9)</sup> Warning: depending on which vote share is used (R1, R2 or R3), the names of the comparison groups, while remaining the same, change in content. For example, "never observed" using R2 vote share means polling stations not observed in R1, not observed in R2, and not observed in R1R2, while "never observed" using R3 vote share means polling stations not observed in R1, not observed in R2, not observed in R2R3, not observed in R2R3, not observed in R1R2, and not observed in R2R3, not observed in R1R3, and not observed in R1R2R3.

Through a series of difference of means tests I investigated whether international observers reduce election-day fraud and if so to what extent. Actually, I performed 19 tests, each of them in 7 sub-groups (see below), for a total of 133 tests. However, to further corroborate results, each test was performed using both the vote share of the fraud sponsoring candidate, Yanukovych, and of the main opposition candidate, Yushchenko. So this resulted in a total of 266 tests. For reasons of space, I will not show all of them, but only the ones that are easiest to interpret. The remaining tests, although meaningful, significant and still corroborating the main hypothesis, will be left for future publication.

## **12.6** All else being equal: what does it mean?

The results of the analysis can be biased if we do not take a number of controls into account. Following Hyde (2007), I controlled for three variables. The first is a measure of the urban-rural divide. If a candidate (or a party) performs very well in urban areas and the sample of visited polling stations includes a disproportionate number of rural polling stations, then the candidate/party's disproportionate support in urban areas will bias the results. To control for this source of bias, we can divide polling stations into urban vs. rural and perform the means test inside each group to see if the relation still holds<sup>10</sup>.

The second control is the size of the polling station. This is highly correlated to the difficulty of reaching it. The smaller the polling station is in terms of registered voters, the more difficult it is to reach for observers (and voters). If observers have systematic difficulty in getting to small polling stations, the mean difference between observed and unobserved polling stations can be the result of systematic dissimilarities between easy and hard to reach polling stations. The results of the tests would be biased if voters in small inaccessible polling stations systematically support a particular party or candidate. The effect of the observers' presence must be robust as to the inclusion of measures of polling station size<sup>11</sup>.

<sup>&</sup>lt;sup>10)</sup>Polling stations located in cities with more than 50,000 inhabitants (according to the 2001 Ukrainian census) are considered urban; all the others are considered non-urban.

<sup>&</sup>lt;sup>11)</sup> Polling stations were divided in two groups: small polling stations where the number of registered voters was below the mean, and big polling stations where the number of registered voters was above the mean.

The third control variable is in line with the first: the rationale is the same, but instead of the urban-rural divide it is assumed that a candidate may have a particularly strong electoral support in certain areas (maybe in his/her birth place, or among people of the same ethnicity, religion, etc.). Therefore, if a high proportion of unobserved polling stations is located in those areas, the results of the mean difference can be driven by this bias. This problem is solved through the same mechanic as the urban-rural divide. In the Ukrainian case, 77.8 percent of inhabitants are ethnic Ukrainians, but there is a sizable Russian minority (17.3%). Since Yanukovych's campaign platform included the proposal of making Russian the second official language in Ukraine, in order to guarantee the support of the sizable Russian minorities in Eastern and Southern regions, he got great support in those regions. Therefore, polling stations were divided into two groups according to the presence of sizable Russian minorities: regions with more Russian native-speakers than the national mean (17.3%), according to the 2001 Ukrainian census<sup>12</sup>, and regions with up to 17.3% of Russian minority<sup>13</sup>.

#### The first round

During the first round, the two main candidates, Yanukovych and Yushchenko, gained 39.42 percent and 39.71 percent of the national vote<sup>14</sup> respectively. While their national percentages were very similar, their voting distribution was geographically very different. Yushchenko had strong support in the North-West, while Yanukovych dominated in the South-East. The first round is the easiest to analyse. Actually, polling stations in round one can only be observed or not, making it impossible to check for lasting effects, therefore limiting the investigation to immediate effects. The first test performed, therefore, compares Yanukovych's first round share of the votes<sup>15</sup> between observed and unobserved polling stations (observed vs. unobserved in R1) to check if observers have an immediate effect. If the presence of observers reduces election-day fraud, then the percentage of votes in favour of the cheating candidate should be significantly lower.

Difference of means tests that compared treatment and control groups were performed using round one vote share are shown in table 12.6.1 (test 1)<sup>16</sup>. However, before going to the analysis of the results, let me explain how these tables work because they will be the main

<sup>&</sup>lt;sup>12)</sup> People who declare Russian as their native-tongue, http://www.ukrcensus.gov.ua/

<sup>&</sup>lt;sup>13)</sup> No other "ethnic" issue played a role in Ukrainian politics. Not even religious issues. The dominant religion is Eastern Orthodox Christianity among the Ukrainians and the Russian minorities.

<sup>&</sup>lt;sup>14)</sup> The small differences with the data presented by the Ukrainian Central Election Commission are due to the exclusion, for the purpose of this analysis, of TED 226, the foreign election district.

<sup>&</sup>lt;sup>15)</sup> For reasons of space, I will not show the results of tests using Yushchenko's vote share. They mirror Yanukovych's (what Yanukovych gained, Yushchenko lost) and therefore they represent a further confirmation of the fraud-reducing effect of observers, thus supporting our conclusions.

<sup>&</sup>lt;sup>16)</sup> Data used in the tables are taken from the website of the Central Election Commission of Ukraine (http://www.cvk.gov.ua); data were downloaded at disaggregated level (polling station by polling station) and were then re-aggregated to construct graphs and tables.

instruments used to present the results. They report the results of unpaired two-sample t-tests with unequal variance.

Tests are numbered from 1 to 19 (I will show only some of them for reasons of space; other tests results are available upon request). Column one ("Type of polling stations") refers to the test type: the same test can be performed in 4 different ways: using all polling stations, controlling for polling station size, controlling for polling stations in regions with sizeable Russian minorities, and controlling for the urban/rural divide. Therefore, this column specifies to which groups of polling stations the test is applied: to all polling stations ("Total"), to polling stations with more registered voters than the mean ("Big"), to polling stations in regions without significant Russian minorities ("Without Russians minorities"), to polling station in region with significant Russian minorities ("With Russians minorities"), to polling stations located in non-urban areas ("Non-urban"), or to polling stations located in urban areas ("Urban").

The next columns ("Average vote share among polling stations") indicate which subgroups of polling stations will be compared by the t-test and the respective mean percentage vote shares for the candidate concerned. Column four present the mean difference between the percentages of the two sub-groups listed in the previous columns (in absolute terms) and, in parenthesis, the value of this mean difference compared to the candidate's vote share in unobserved polling stations (thus, in relative terms)<sup>17)</sup>; based on the value of the Student's t-statistic, the level of significance is shown (column "Sign.") and finally, in the last column, the number of observations is reported.

Starting with table 12.6.1, we can see the effect of election observation on the share of the votes in the first round for Yanukovych, the fraud-sponsoring candidate. The first comparison involves the average share of the votes Yanukovych got in round one in unobserved polling stations versus the average share he got in observed polling stations. The results presented in table 1 clearly show that the presence of international observers reduced his share by an average of more than 4.6 percent (representing the 11.73% of Yanukovych's share of the votes). This result is statistically significant at the 1% confidence level<sup>18</sup>, allowing a rejection of the (null) hypothesis that there is no difference between observed and unobserved polling stations.

Let's analyze these results in more detail. Test 1 compares vote shares in round one among

<sup>&</sup>lt;sup>17)</sup> Let's explain the utility of this further computation with an example. Suppose that Yanukovych gets 20% of the votes in unobserved polling stations and 10% in observed ones . The difference between the means is 10%. However, this 10% difference represents the 50% of Yanukovych's vote share in unobserved polling stations [in fact: (10\*100)/20=50]. Suppose that in another case, Yanukovych gets the 40% of the votes in unobserved polling stations and 30% in observed ones. The difference is still 10%, but, this time, it represents the 25% [(10\*100)/40=25] of Yanukovych's vote share in unobserved polling stations.

<sup>&</sup>lt;sup>18)</sup> The confidence level generally adopted in this research, as in most studies, is 5%.

polling stations that were/were not observed in the first round. This test reveals the immediate effect of observation, that is, the effect of observation on the election results. So, by comparing the first round performance of the fraud-sponsoring candidate in the observed and unobserved polling stations, we can check if there is any statistically significant difference in performance. In this case there was a difference and it was quite strong (4.66% in absolute terms, 11.73% if compared to Yanukovych's performance in unobserved polling stations). This is statistically significant at the 1% confidence level since Yanukovych did about 4.7 percent better in polling stations without international observers (increasing his vote share by 11.73%), suggesting that the presence of international observers in the first round reduced election-day fraud by more than 4.6 percent all else being equal (and Yanukovych's share of the votes by more than 11.7%).

| Type of polling station                | Average vote share among polling stations: |                     | Difference |          | Sign | N (polling<br>stations)<br>n |
|--|--|---------------------|------------|----------|------|------------------------------|
|  |  |                     |            |          |      |                              |
| 1 Yanukovych's first round vote share  |  |                     |            |          | -    |                              |
|  | Not observed in R1                         | Observed in R1      |            |          |      |                              |
| Total                                  | 39.74                                      | 35.08               | 4.66       | (11.73)  | **   | 33,101                       |
| Big                                    | 42.20                                      | 35.48               | 6.72       | (15.92)  | **   | 13,893                       |
| Small                                  | 34.04                                      | 30.68               | 3.35       | (9.84)   | *    | 19,208                       |
| Without russian minorities             | 24.15                                      | 23.26               | 0.89       | (3.68)   |      | 20,559                       |
| With russian minorities                | 58.50                                      | 49.09               | 12.41      | (21.21)  | **   | 12,542                       |
| Non-urban                              | 35.20                                      | 30.82               | 4.38       | (12.44)  | **   | 17,424                       |
| Urban                                  | 43.13                                      | 37.08               | 6.06       | (14.05)  | **   | 15,677                       |
| 2 Yanukovych's second round vote share |  |                     |            |          |      |                              |
| ,                                      | Never observed                             | Observed only in R2 |            |          |      |                              |
| Total                                  | 50.23                                      | 47.52               | 2.71       | (5.39)   | **   | 30,874                       |
| Big                                    | 54.26                                      | 47.75               | 6.50       | (11.98)  | **   | 12,224                       |
| Small                                  | 40.97                                      | 45.23               | -4.26      | (-10.40) |      | 18,650                       |
| Without Russian minorities             | 29.77                                      | 32.37               | -2.60      | (-8.73)  |      | 19,425                       |
| With Russian minorities                | 73.09                                      | 60.64               | 12.44      | (17.02)  | **   | 11,449                       |
| Non-urban                              | 43.72                                      | 42.11               | 1.61       | (3.68)   |      | 16,625                       |
| Urban                                  | 55.09                                      | 49.75               | 5.34       | (9.69)   | **   | 14,249                       |
| 3 Yanukowch's second round vote share  |  |                     |            |          |      |                              |
|  | Never observed                             | Observed only in R1 |            |          |      |                              |
| Total                                  | 50.23                                      | 46.09               | 4.14       | (8.24)   |      | 31,079                       |
| Big                                    | 54.26                                      | 47.01               | 7.26       | (13.38)  | **   | 12,351                       |
| Small                                  | 40.97                                      | 37.56               | 3.40       | (8.30)   | *    | 18,728                       |
| Without Russian minorities             | 29.77                                      | 28.55               | 1.21       | (4.06)   |      | 19,535                       |
| With Russian minorities                | 73.08                                      | 61.29               | 11.80      | (16.15)  | **   | 11,544                       |
| Non-urban                              | 43.72                                      | 38.79               | 4.93       | (11.28)  | **   | 16,732                       |
| Urban                                  | 55.09                                      | 49.48               | 5.61       | (0.18)   | **   | 14,347                       |

#### 12.6.1 Difference of means tests using Yanukovych's vote share\*

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#### 12.6.1 Difference of means tests using Yanukovych's vote share\*

| Type of polling station   | Average vote share a  | Average vote share among polling stations:  |  | Difference   |                 | N (polling<br>stations)   |
|---|---|---|--|--|-----------------|---|
|   | %   |   |  |  |                 | n   |
| 4 Yanukovych's second round vote sha  | are   |   |  |  | -               |   |
| Total   | 50.23   | 41.20   | 9.03   | (17.98)  | **              | 29,842  |
| Big   | 54.26   | 41.19   | 13.07  | (24.09)  | **              | 11,542  |
| Small   | 40.97   | 41.59   | -0.62  | (-1.51)  |                 | 18,318  |
| Without Russian minorities  | 29.77   | 32.98   | -3.21  | (-10.78)   |                 | 18,866  |
| With Russian minorities   | 73.09   | 48.39   | 24.69  | (33.78)  | **              | 10.976  |
| Non-urban   | 43.72   | 37.92   | 5.81   | (13.29)  |                 | 16,261  |
| Urban   | 55.09   | 42.68   | 12.41  | (22.53)  | **              | 13,581  |
| 7 Yanukovych's second round vote sha  | are   |   |  |  |                 |   |
|   | Never observed  | Observed only in R1   | , or only in R   | 2, or only in  | R1R2            |   |
| Total   | 50.23   | 45.93   | 4.30   | (8.56)   | **              | 33,077  |
| Big   | 54.26   | 46.39   | 7.87   | (14.50)  | **              | 13.917  |
| Small   | 40.97   | 41.15   | -1.85  | (-4.51)  |                 | 19,160  |
| Without Russian minorities  | 29.77   | 30.74   | -0.97  | (-3.26)  |                 | 20 558  |
| With Russian minorities   | 73.09   | 5911  | 13.98  | (1913)   | **              | 12 519  |
| Non-urban   | 43.72   | 39.92   | 3.80   | (8 69)   | *               | 17 424  |
| Lirban  | 45.72   | 12.68   | 6.51   | (0.03)   | **              | 15 653  |
| 9 Yanukovych's second round vote sha  | are   |   |  |  |                 |   |
|   | Never observed  | Observed only in R3   |  |  |                 |   |
| Total   | 44.80   | 44.79   | 0.01   | (0.02)   |                 |   |
|   |   |   |  |  |                 | 29,411  |
| Big   | 51.09   | 45.89   | 5.19   | (10.16)  | **              | 29,411  |
| Big<br>Small  | 51.09<br>32.42  | 45.89<br>36.89  | 5.19<br>-4.46  | (10.16)<br>(–13.76)  | **              | 29,411<br>11,124<br>18,287  |
| Big<br>Small<br>Without Russian minorities  | 51.09<br>32.42<br>23.07   | 45.89<br>36.89<br>24.00   | 5.19<br>-4.46<br>-0.93   | (10.16)<br>(-13.76)<br>(-4.03)   | **              | 29,411<br>11,124<br>18,287<br>18,671  |
| Big<br>Small<br>Without Russian minorities<br>With Pussian minorities   | 51.09<br>32.42<br>23.07<br>72.88  | 45.89<br>36.89<br>24.00<br>61.09  | 5.19<br>-4.46<br>-0.93<br>11 79  | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)  | **<br>**        | 29,411<br>11,124<br>18,287<br>18,671<br>10,740  |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban  | 51.09<br>32.42<br>23.07<br>72.88<br>36.31   | 45.89<br>36.89<br>24.00<br>61.09<br>38.02   | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71   | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)   | **<br>**        | 29,411<br>11,124<br>18,287<br>18,671<br>10,740  |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban  | 51.09<br>32.42<br>23.07<br>72.88<br>36.31   | 45.89<br>36.89<br>24.00<br>61.09<br>38.02   | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71   | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)   | ** **           | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122  |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban   | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82  | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82  | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00   | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)   | **<br>**<br>**  | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289  |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban<br>10 Yanukovych's repeated second rou  | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82<br>nd vote share   | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82  | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00   | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)   | **              | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289  |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban<br>10 Yanukovych's repeated second rou  | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82<br>nd vote share<br>Never observed   | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82<br>Observed only in R1   | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00   | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)<br>2, or in R1R2  | **<br>**<br>**  | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289  |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban<br>10 Yanukovych's repeated second rou<br>Total   | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82<br>nd vote share<br>Never observed<br>44.80  | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82<br>Observed only in R1<br>43.41  | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00<br>, or only in R<br>1.39   | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)<br>2, or in R1R2<br>(3.10)  | **<br>**<br>**  | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289<br>28,203  |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban<br>10 Yanukovych's repeated second rou<br>Total<br>Big  | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82<br>nd vote share<br>Never observed<br>44.80<br>51.90                                     | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82<br>Observed only in R1<br>43.41<br>44.85                                     | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00<br>, or only in R<br>1.39<br>6.24                                   | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)<br>2, or in R1R2<br>(3.10)<br>(12.02)   | <br>            | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289<br>28,203<br>10,403  |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban<br>10 Yanukovych's repeated second rou<br>Total<br>Big<br>Small   | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82<br>nd vote share<br>Never observed<br>44.80<br>51.90<br>32.42                            | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82<br>Observed only in R1<br>43.41<br>44.85<br>31.33                            | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00<br>, or only in R<br>1.39<br>6.24<br>1.09                           | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)<br>2, or in R1R2<br>(3.10)<br>(12.02)<br>(3.36)                                 | ···<br>··<br>·· | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289<br>28,203<br>10,403<br>17,800                              |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban<br>10 Yanukovych's repeated second rou<br>Total<br>Big<br>Small<br>Without Russian minorities   | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82<br>nd vote share<br>Never observed<br>44.80<br>51.90<br>32.42<br>23.07                   | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82<br>Observed only in R1<br>43.41<br>44.85<br>31.33<br>24.82                   | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00<br>, or only in R<br>1.39<br>6.24<br>1.09<br>-1.75                  | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)<br>2, or in R1R2<br>(3.10)<br>(12.02)<br>(3.36)<br>(-7.58)                      | ••<br>••<br>••  | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289<br>28,203<br>10,403<br>17,800<br>17,237                    |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban<br>10 Yanukovych's repeated second rou<br>Total<br>Big<br>Small<br>Without Russian minorities<br>With Russian minorities              | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82<br>nd vote share<br>Never observed<br>44.80<br>51.90<br>32.42<br>23.07<br>72.88          | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82<br>Observed only in R1<br>43.41<br>44.85<br>31.33<br>24.82<br>62.62          | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00<br>, or only in R<br>1.39<br>6.24<br>1.09<br>-1.75<br>10.24         | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)<br>2, or in R1R2<br>(3.10)<br>(12.02)<br>(3.36)<br>(-7.58)<br>(14.05)           | ···<br>··<br>·· | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289<br>28,203<br>10,403<br>17,800<br>17,237<br>9,966           |
| Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban<br>Urban<br>10 Yanukovych's repeated second rou<br>Total<br>Big<br>Small<br>Without Russian minorities<br>With Russian minorities<br>Non-urban | 51.09<br>32.42<br>23.07<br>72.88<br>36.31<br>51.82<br>nd vote share<br>Never observed<br>44.80<br>51.90<br>32.42<br>23.07<br>72.88<br>36.31 | 45.89<br>36.89<br>24.00<br>61.09<br>38.02<br>47.82<br>Observed only in R1<br>43.41<br>44.85<br>31.33<br>24.82<br>62.62<br>33.13 | 5.19<br>-4.46<br>-0.93<br>11.79<br>-1.71<br>4.00<br>, or only in R<br>1.39<br>6.24<br>1.09<br>-1.75<br>10.24<br>3.18 | (10.16)<br>(-13.76)<br>(-4.03)<br>(16.18)<br>(-4.71)<br>(7.72)<br>2, or in R1R2<br>(3.10)<br>(12.02)<br>(3.36)<br>(-7.58)<br>(14.05)<br>(8.76) | ···<br>··       | 29,411<br>11,124<br>18,287<br>18,671<br>10,740<br>16,122<br>13,289<br>28,203<br>10,403<br>17,800<br>17,237<br>9,966<br>15,614 |

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| 12.6.1 | <b>Difference of</b> | means test | s using | Yanukovy | vch's v | ote share* |
|--------|----------------------|------------|---------|----------|---------|------------|
|--------|----------------------|------------|---------|----------|---------|------------|

| Type of polling station                          | Average vote share among polling stations: |  | Difference |          | Sign | N (polling stations) |  |
|--|--|--|------------|----------|------|----------------------|--|
|  | %  |  |            |          |      | n                    |  |
| 14 Yanukovych's repeated second round vote share |  |  |            |          | -    |                      |  |
|  | Never observed                             | Observed in R1R2R3   | }          |          |      |                      |  |
| Total  | 44.80                                      | 32.12  | 12.68      | (28.30)  | **   | 26,057               |  |
| Big  | 51.09                                      | 31.78  | 19.30      | (37.78)  | **   | 8,928                |  |
| Small  | 32.42                                      | 43.37  | -10.95     | (-33.77) |      | 17,129               |  |
| Without Russian minorities                       | 23.07                                      | 26.10  | -3.02      | (-13.09) |      | 17,012               |  |
| With Russian minorities                          | 72.88                                      | 37.16  | 35.72      | (49.01)  | **   | 9,045                |  |
| Non-urban  | 36.31                                      | 26.96  | 9.34       | (25.72)  | *    | 14,782               |  |
| Urban  | 51.82                                      | 34.46  | 17.35      | (33.48)  | **   | 11,275               |  |
| 19 Yanukovych's repeated second round vote share |  |  |            |          |      |                      |  |
|  |  | Observed only in R1, or only in R2, or only in R3, or in R1R2, or in |            |          |      |                      |  |
|  | Never observed                             | or in R1R3, or in R1R2R3   |            |          |      |                      |  |
| Total  | 44.80                                      | 43.01  | 1.79       | (3.99)   | **   | 33,059               |  |
| Big  | 51.09                                      | 43.88  | 7.21       | (14.11)  | **   | 13,902               |  |
| Small  | 32.42                                      | 35.37  | -2.94      | (-9.07)  | **   | 19,157               |  |
| Without Russian minorities                       | 23.07                                      | 24.52  | -1.45      | (-6.28)  | *    | 20,555               |  |
| With Russian minorities                          | 72.88                                      | 58.48  | 14.40      | (19.76)  | **   | 12,504               |  |
| Non-urban  | 36.31                                      | 35.67  | 0.64       | (1.76)   |      | 17,423               |  |
| Urban  | 51.82                                      | 46.26  | 5.56       | (10.73)  | **   | 15,636               |  |
|  |  |  |            |          |      |                      |  |

Source: OSCE/ODIHR; Central Election Commission of Ukraine.

\* 0,01 < p < 0,05; \*\* p < 0,01 (two-sided)

However, the observed difference can be driven by bias if the unobserved polling stations "naturally" supported the fraud-sponsoring candidate. If so, the result of the t-test is unreliable. Therefore in six subsequent tests, I controlled if this difference still holds in big and small polling stations, in polling stations located in regions with and without substantial Russian minorities, and in urban and non-urban settings. As table 12.6.1 shows, the hypothesized difference still holds in all of these sub-groups and the mean difference is statistically significant, apart from the polling stations located in regions without sizable Russian minorities.

This can easily be explained: those were the regions in the North and in the West where the opposition candidate, Yushchenko, was really strong. In those regions voters and polling station officials did not support Yanukovych, reducing his possibility of manipulating the election results through election-day fraud. This is also confirmed by the findings of OSCE/ODIHR observers, which claimed: "some 6% of observers assessed the voting process as bad (5%) or very bad (1%). There was a regional variation in the assessment. Polling was considered better in western regions (4% negative assessment) than in eastern regions (10% negative assessment)"<sup>19)</sup>. The fraud-reduction power of observation in polling stations located in Yanukovych's strongholds is impressive. The difference between unobserved and observed polling stations exceeds the remarkable threshold of 12.4 percent (21.21% if compared to Yanukovych's vote share in unobserved polling stations) and it is significant at the 1 percent confidence level.

We can see that the mean difference, while always statistically significant, is greater in big, urban polling stations than in small, non-urban ones. As mentioned before, the result can be biased if unobserved polling stations "naturally" supported the fraud-sponsoring candidate. But this is not the case. On the contrary, if we compare Yanukovych's performance in unobserved small (34.04%) and big (42.20%) polling stations and in non-urban (35.20%) and urban (43.13%) ones, we can easily see that Yanukovych performed better in big and urban polling stations where more polling stations were observed. This further supports our initial hypothesis and dismisses any possibility of bias in the results.

Actually, if the difference is bigger in polling stations where the cheating candidate is stronger, this means that observers are more useful where the cheating candidate "naturally" gets more votes. In this regard, a further consideration can help. If the cheating candidate gets 34.04 percent in unobserved small polling stations, and his share is reduced by 3.35 percent, this means observation reduces his share of the vote by roughly 10 percent. Yanukovych got the 42.20 percent in the big unobserved polling stations. The mean difference between observed and unobserved polling stations was 6.72 percent. This means a reduction of about 16 percent. The same is true for urban and non-urban polling stations. In the first case Yanukovych lost about 14 percent of his share, and about 12.5 percent in the second.

#### The second round

During the second round, Yanukovych got 49.75 percent of the national vote, while Yushchenko got 46.37 percent. As was the case in the first round, the distribution of votes was very different geographically. Yushchenko continued to have strong support in the North-West of the country, while Yanukovych dominated in the South-East. Again, the OSCE/ODIHR assessment of round two was straightforward: "Observers' overall evaluation of the conduct of the poll was slightly worse than on 31 October, with 7%

<sup>19)</sup> OSCE/ODIHR Final Report, p. 25.

assessing it as bad or very bad. However, there was a regional variation. Polling in western and northern regions was assessed negatively in 5% of reports and 11% and 9% respectively in central and eastern regions".

The second round allows us to test not only if there are immediate effects, but also if there are lasting effects of first round observations on the second round vote. Here, polling stations can belong to one of four groups: never observed, observed only in round one, observed only in round two, or observed in both rounds. This allows several tests: first, we can check for immediate effects. So we can compare the share of second-round votes between polling stations that were neither observed in round one nor in round two, and polling stations observed only in round two (test 2, never observed vs. observed only in R2). Second, we can test for the presence of lasting effects of round-one observation. So we can compare the share of second-round votes between polling stations that were never observed, and polling stations observed only in round one (test 3, never observed vs. observed only in R1). Third, we can measure the "total effect" of observation. So we can compare the share of second-round votes between unobserved polling stations and polling stations observed in both rounds (both the lasting effect of round one observation and the immediate effect of round two observation) (test 4, never observed vs. observed in R1R2). Fourth, we can check for a "general" effect of observation that does not distinguish between immediate and lasting effects. So we can compare the share of votes in unobserved polling stations with those in polling stations observed in one or both rounds (test 7, never observed vs. observed only in R1, only in R2, or in R1R2).

Starting with test 2, we measure the immediate effect of round two observation. We compare the second round share of votes between polling stations observed in the second round (but not in the first), and those of unobserved polling stations. We expect the performance of the fraud-sponsoring candidate to be worse in observed polling stations. Without controlling for size, Russian minorities, or the urban/rural divide, we can confirm that there was an immediate effect of round two observation on round two Yanukovych's share of the votes. Yanukovych's performance, in fact, appreciably decreased by 2.71% (about 5.4% of his vote share in unobserved polling stations). If, however, we perform the same test controlling for polling stations size, Russian minorities, and the urban/rural divide, we become aware that the fraud-reduction effect is not significant in small, "non-Russian", and non-urban polling stations Even worse, performing the test across small and non-Russian polling stations gives results in the opposite direction. This could suggest a fraud-increasing effect of observation. However, those results are clearly not significant.

I already explained why the mean difference test is not significant in polling stations located in areas without considerable Russians minorities. The opposition candidate was strongly supported and fraud, if any, was less widespread. But why are results not significant in small and non-urban polling stations? Is this a real challenge for the overall

results? Remember why I decided to control for polling station size and the urban/rural divide. If most unobserved polling stations were small or non-urban and if Yanukovych "naturally" performed better in such polling stations, the result of the general mean difference test can be driven by this bias.

However, looking at election results, this is not the case. Yanukovych was stronger in big rather than small polling stations (in unobserved polling stations: 54.26% > 40.97%), and in urban rather than in non-urban ones (55.09% > 43.72%). Therefore, the fact that those results are not significant does not refute the overall fraud-reducing effect of election observation. Maybe these results (not significant and sometimes in the opposite direction) are driven simply by the fact that in small, non-urban and non-Russian polling stations fraud was less widespread and therefore difficult to deter.

Test 3 establishes if the treatment of first-round observation has a lasting fraud-deterrent effect in the second round of the election. This is done by comparing the share of votes in round two between two groups that were not observed in the second round: one group was observed only in the first round, while the other group was not observed. If observation has a lasting deterrent effect on electoral fraud, then the cheating candidate should get a lower share of the vote in the second round in polling stations that were observed in the first round than in polling stations that were not observed. Here, all differences go in the expected direction for both candidates (positive for Yanukovych and negative for Yushchenko) and are statistically significant, apart from small polling stations and polling stational mean.

Results reported in test 3 show that the lasting effect of observation implies a reduction of Yanukovych's share of the vote by 4.14 percent (that is indeed the 8.24% of Yanukovych second round share of the vote in unobserved polling stations). The effect is stronger in big and in Russian polling stations (where it remains significant) and in urban polling stations. Note the impressive difference in Russian polling stations: 11.8 percent. Again, results found in small polling stations and in regions without strong Russian minorities are not statistically significant, but they do not endanger the validity of the general result since the cheating candidate got a lower share of the vote there.

Test 4 provides additional empirical support for the finding that observers had a strong deterrent effect on election-day fraud. It compares the second-round vote share between unobserved polling stations and polling stations observed in round one and two. In fact, it measures the "total effect" of observation, i.e. the immediate effect of the round two observation added to the lasting effect of round one observation. In this case, Yanukovych received about 9 percent more votes in polling stations that were never observed than in the ones observed in both rounds (which is about 18% of his own vote share in unobserved polling stations). Those results are statistically significant at the 1% confidence level. Controlling for polling station size, Russian minorities, and the urban/rural divide, results

appear to be not significant in small, non-Russian and non-urban polling stations. The results even have the opposite sign in the first two sub-groups. This does not represent a problem as long as Yanukovych's share of the vote is larger in big, Russian and urban polling stations.

Test 7 further supports the hypothesis that observers reduce election-day fraud. This is done by checking for a "general" effect of observation that does not distinguish between immediate and lasting effects. Using the round-two vote share, we can see if the cheating candidate received a higher vote share in polling stations that were not observed in either round, than in polling stations that were observed in one or both rounds. Since we hypothesize that observation always has some effect, we expect the cheating candidate's share of the vote in round two to be lower, if observation has taken place in either or both rounds. Test 7 shows that Yanukovych received 4.3 percent more in polling stations that were observed in one or both rounds. Test 7 shows that Yanukovych received 4.3 percent more in polling stations that were observed in one or both rounds. Test 7 shows that Yanukovych received 4.3 percent more in polling stations that were observed in one or both rounds. Test 7 shows that Yanukovych received 4.3 percent more in polling stations that were observed in one or both rounds. Test 7 shows that this effect is significant at the 1% confidence level. However, also this time, the relationship is reversed in small and non-Russian polling station, although it is not significant. Again, this does not represent a problem for our results, but strengthens them. Please, note the really high fraud reduction effect of observation in polling stations located in Russian areas: about 14 percent.

#### The repeated second round

The repeated second round was held on 26 December, under the authority of a newly appointed Central Election Commission, which administered the election process efficiently and with significantly more transparency. Overall, observers assessed the process much more favourably than in the previous two rounds. OSCE/ODIHR observers noted the persistence of some problems, such as the presence of police and other unauthorized people, instances of failure to assure the secrecy of the vote (particularly in eastern regions), and the sporadic presence of campaign materials.

According to the OSCE/ODIHR Final Report, polling procedures were generally respected: observers reported few serious violations; "however, in 3% of polling stations (5% in eastern regions and 6% in southern regions) they received allegations that serious violations had occurred. In the east and south of Ukraine the formal complaints filed at polling stations exceeded the national average"<sup>20)</sup>. Almost 7 percent of observers assessed the vote count as poor or very bad (11% on November 21). However, again, "a clear regional

<sup>20)</sup> OSCE/ODIHR Final Report, p. 36.

variation was noted with observers in southern (11%), eastern (10%) and central (10%) regions assessing the process much less favourably than in northern (2%) and western (3%) regions.

This was also the pattern in the observers' assessment of the polling environment, organisation of the count, understanding of the procedures and the accuracy of the results as reported"21). A final point before going on with the analysis of the results: in the final week of the campaign, Yanukovych repeatedly called for amendments to the election law that restricted absentee voting and voting at home, which he deemed an infringement of voter rights. According to the data released by the CEC, some 590,000 voters (1.6% of registered voters) requested a mobile vote of whom about 90% voted. However, observers noted a few cases where an unusually large number of citizens had apparently requested to vote outside the polling station, and, curiously enough, this happened in TEDs 39, 136, 143, 184, all located in the South and East. Overall, the largest concentrations of mobile voters were found in Donetsk and Luhansk, where it was reported that about 3% of registered voters requested to vote at home. It is impossible to demonstrate that it was an attempt to manipulate the vote, but it remains possible since it is easier to control the voters' choice outside "regular" polling stations. From the perspective of this analysis, the improvements in election quality may result in a non-detectable fraud-deterrence role of election observation simply because there was no, or very little fraud going on. This should not be true in Southern and Eastern regions (i.e. in regions with sizable Russian minorities), where fraud persisted. Let's see.

Starting with test 9, I compared the repeated second round vote share between polling stations never observed and polling stations observed only during the repeated second round. This measures the presence of an immediate effect of observation in a context in which election-day fraud was greatly reduced. From the results of test 9 we can hypothesize that, since the level of election irregularities dramatically decreased, the presence of observers did not in general have a deterrent effect: Yanukovych, in fact, generally had very similar results in observed and unobserved polling stations and the small difference is not at all statistically significant. However, the difference remained quite big and statistically significant at the 1% confidence level in Yanukovych strongholds (where there was still fraud): in big, Russian, and urban polling stations. In the other cases the difference goes in the opposite direction and/or does not reach statistical significance.

In order to test for the presence of lasting effects of previous rounds, we can compare never observed polling stations with polling stations observed during round one, round two, or both (test 10). If there are lasting effects, then Yanukovych's repeated second round vote share should be lower in observed polling stations. Apart from polling stations

<sup>21)</sup> OSCE/ODIHR Final Report, pp. 36–37.

located in the North and in the West where the relationship is not significant in any case, the results go in the expected direction (see test 10). They are not significant in small and non-Russian polling stations, and since more polling stations used in this mean difference test are in those groups, this may explain why the general test turns out to be not significant. However, note the still high (lasting) fraud-reducing effect of observation in polling stations located in Yanukovych's stronghold, i.e. in the South and in the East of the Ukraine (more than 10.2%, that, if compared to his vote share in unobserved polling stations, represents more than 14%).

Test 14 compares Yanukovych's repeated second round vote share in polling stations never observed with the same vote share in polling stations observed during first, second and repeated second round; we are, therefore, testing the magnitude of the lasting effects of round one and round two observation together with the immediate effect of the repeated second round observation: we will see what the effect is of observing the same polling stations three times. Test 14 shows that there is a difference and that it is quite strong. Notwithstanding the lower level of fraud, the deterrent effect of observation played a role. Yanukovych's vote share was reduced by about 12.7 percent (28.3% of his vote share in unobserved polling stations). This difference is significant at the 1% confidence level and it is even stronger in big, Russian, and urban polling stations, while it remains negative and not significant in small and non-Russian polling stations.

A final test, test 19, compares the repeated second round vote share between polling stations that were never observed and polling station that were observed in any round or in any combination of rounds, showing if the presence of observers in at least one occasion has a deterrent effect. According to the results shown in table 9, there is generally a positive deterrent effect of observation: Yanukovych gained about 1.8 percent less in observed polling stations. Those findings are even stronger and significant in big, Russian and urban polling stations. This adds one additional piece of information supporting the hypothesis that observers reduce election-day fraud through immediate and/or lasting effects.

### 12.7 Conclusions

In this chapter, I proposed an experimental research, in the wake of Susan Hyde's work (2007), which allowed us to check if election observers contribute to fraud-deterrence. This work adds an additional argument supporting international observation missions, their role in deterring election-day fraud (and not only in detecting it), and, consequently, the importance of their presence for a free and fair election process which is able to lead

to stronger democratization. We have repeatedly claimed that the fundamental quantifiable effect of election observation on election-day fraud should be a decrease of the share of the votes for the fraud-sponsoring candidate. We have seen that observers were able to reduce fraud at the polling stations they visited, since Yanukovych performed significantly worse (and Yushchenko significantly better) in the observed polling stations. The results of the tests performed above show that:

- International observation had an immediate effect in the first and in the second round. The same is not true for the repeated second round because the level of election irregularities dramatically decreased. However, there was an immediate effect of observation, and quite strong where fraud was still present: in the South and in the East of the country.
- 2. Observation in the first round had lasting effects on the second round. But observation in the first and/or the second round did not have lasting effects in the repeated second round if all polling stations are considered, but there was an effect, and it remained significant, if only the polling stations located in Yanukovych's strongholds are taken into consideration.
- 3. Observing the same polling stations in all two or three rounds gives positive results, confirming the hypothesis that international election observers did reduce fraud.
- 4. Observation always played a role where fraud was widespread, that is, in regions with sizable Russian minorities.

It is plausible that this happened because the simple presence of international observers inhibited the fraudulent behaviour of election stake-holders.

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