Media and Political Persuasion in Young Democracies: Evidence from Russia

Ruben Enikolopov, Maria Petrova, Ekaterina Zhuravskaya*

This draft: February 13, 2008

Abstract:

How do media affect voting behavior? What difference an independent media outlet can make in a country with state-controlled media? We address these question using exogenous variation in the availability of the signal of NTV, the only independent from the government national TV channel in Russia during the 1999 parliamentary elections. We look at electoral outcomes both at aggregate and individual level. We find that the presence of an independent source of political news on TV decreased the vote for the pro-government party by 2.5 percentage points and increased the combined vote for the main opposition parties by 2.1 percentage points. In individual level data, we find significant effect of watching NTV on voters' choice even controlling for respondents' voting intentions just a month before the elections. Placebo regressions for 1995 and 2003 elections show that the effects are not driven by unobserved heterogeneity between municipalities with and without NTV coverage.

* Authors are from Harvard University, Harvard University, and the New Economic School, respectively. We are very grateful to Maxim Boycko and the *Video International* company for sharing data on the NTV coverage and to Timothy Colton for his generosity in sharing his survey data with us.

1. Introduction

In August 1999, Vladimir Putin, with popularity rating between 1 to 2%, was appointed as prime minister of Russia by the first president Boris Yeltsin. Eight months later, during March 2000 Presidential elections he won the presidential elections in the first round by getting 52.9% of the vote. Just before that, during December 1999 Parliamentary elections in Russia, the newly created pro-government party called "Unity," which did not even exist two months prior to the election, scored the second in a national race, with 23.8% of the total vote. Massive media campaigns headed by state-owned national TV channels played an important part in bringing these fortunes. This example is an illustration of the crucial role that mass media plays in determining electoral outcomes in young democracies.

There is a large body of evidence that mass media has important effects on political outcomes in established democracies with competitive media system. The effects are likely to be even stronger in young democracies[1] for two main reasons. First, voters in these countries have much less prior information on political parties and candidates, so that any new information, in particular, provided by mass media, is likely to have stronger effect on voting behavior. The main reason for this is that citizens in these countries lack long-term partisan attachments, partly because of the short history of parties in young democracies and partly because party systems in partial democracies are unstable and evolve rapidly from one election to another. In addition, parties often run on platforms with vague and unclear ideology. All these uncertainties complicate the choice problem of ordinary voter, as his/her prior knowledge about party positions, politicians, and their ability to implement particular policy is imprecise. In theoretical terms, voters do not have a strong prior, and, therefore, put more weight on the information provided by mass media.

Second, in imperfect democracies competition in the media market is often limited and many media outlets are controlled by the governments or ruling parties. In established democracies with intense political competition and free and competitive media, possible persuasion effects of media are mitigated by consumers' ability to choose the most preferred source of information. If the state or governing party, directly or indirectly, controls most of the media sources, access to an alternative source of information becomes extremely important, especially if it is granted to a substantial fraction of population.

[1] According to Epstein et al. (2006), "partial democracies" are regimes which possess some, but not all, properties of full democracies. They are sometimes called "young democracies" as they are typically newly created regimes which later either evolve to established, consolidated democracy, or return back to authoritarian type of government. They are the most unstable and least understood of political regimes (Epstein et al., 2006). These regimes usually have elections, but the competitiveness and fairness of these elections is questionable at best.

. McMillan and Zoido (2004) show that the existence of even a single independent TV channel could be detrimental for the survival of a corrupt regime. Their findings suggest that the presence of independent media, potentially, could help to keep the government accountable and the elections competitive.

In this paper, we use Russia's example to study the effect of the access to an independent media outlet on voting behavior of the electorate in immature democracy. In particular, we estimate the impact of the independent national TV channel, NTV, on the results of the Russian 1999 Parliamentary elections. We exploit the idiosyncratic geographical variation in the NTV coverage to identify the effect of the channel on voting behavior.

In our analysis, we investigate two types of effects. First, we analyze the aggregate effects of having NTV transmission on the official electoral results. Second, we use data from a representative voters' survey to investigate the media effects on the individual level, using the access to NTV as an instrument for NTV exposure. We find large and significant effect of NTV on the voting outcomes in both types of analysis. The aggregate effects in 1999 elections are large. Due to the NTV broadcast, pro-government party lost 2.5 percentage points of votes (9% of the aggregate vote for the party), while main opposition parties, in sum, got an additional 2.1 percentage points of the total vote (10% of the aggregate vote for these parties). Using individual level data, we find that exposure to NTV had a significant effect on the change in voter' political preferences in favor of the main opposition party supported by NTV even in the last month before the elections. We find that the negative effect on the vote for pro-government party comes from the effect on voters who have not yet decided for whom to vote a month before elections, while the positive effect on the vote for opposition party supported by NTV comes from a change in the choice of people, who have already decided for whom to vote a month before elections.

The important step in our analysis is to show that the availability of NTV was idiosyncratic, i.e. that there were no unobserved characteristics of NTV municipalities which drove the differences in voting behavior. First, we show that NTV presence in 1999 was not correlated with voting choice in previous parliamentary elections in 1995, once socioeconomic characteristics are taken into account. Second, and most importantly, we conducted placebo regressions for the effects of NTV on voting behavior in 1995 and 2003, two election years in which there was no significant differences between political coverage of different national channels. We find that though availability of NTV in 1999 did have large effect on voting behavior in 1999, it didn't have any effect on votes in 1995 and 2003. These results suggest that effects which we find are effects driven by the differences in media coverage and not by some unobservable characteristic of municipalities which could be correlated with voting choice.

In the analysis of aggregate media effects, our approach is similar to that of Della Vigna and Kaplan (2007) who investigate the impact of Fox News on voting behavior of Americans, using idiosyncratic diffusion of Fox before 2000 elections. They find 0.5 percentage points effect of availability of Fox News on vote for Republicans, while we find 2.5 percentage point negative effect of availability of NTV on vote for Unity, pro-government party. This is consistent with hypothesis that media effects in young democracies are greater than in established democracies.

The rest of the paper is organized as follows. Section 2 contains literature review, section 3 provides background information on television market and political situation in Russia in the end of 1990s, section 4 presents our empirical hypothesis, section 5 contains data description, section 6 presents results for the analysis on municipal level, section 7 discusses validity of our instrument, section 8 discusses results based on survey data, and section 9 concludes.

2. Literature

A growing literature focuses on the effects of media on public policy. Strömberg (2004) finds that in the U.S. in the 1930s radio diffusion in a county was positively correlated with the level of public expenditures in the region. Einesee and Strömberg (2007) show that the amount of media coverage, instrumented by the timing of external news-worthy events, such as Olympics, affects U.S. aid on disaster relief. Besley and Burgess (2002) find that in India the newspaper circulation in the state is an important factor which influences government's responsiveness to the food shortages and the damages from floods. Reinikka and Svensson (2005) show that in Uganda the amount of public spending that actually reached local schools was higher when the intended funding arrangements were covered by local newspapers.[2]

This paper contributes to a growing literature on the effects of media on voting behavior. Early classic studies (e.g., Berelson et al. 1944 and Lazarsfeld et al. 1954) found no effect of media on voting once political predispositions of survey respondents are taken into account and argued that media does not persuade voters but only reinforce their existing preferences. These studies, however, suffer from severe endogeneity problem: survey respondents prefer media sources that reflect their political views. Recent contributions to the literature employ experimental and quasi-experimental approaches to avoid inherent endogeneity of survey-based studies and show that media can in fact affect voting behavior (e.g., Della Vigna and Kaplan 2006 and Gerber et al. 2007).

[2] Previous work has also demonstrated that media has a significant effect on people's attitudes and behavior in spheres unrelated to politics (e.g., Olken (2006) shows that TV decreased participation in social organizations in Indonesian Villages; Jensen and Oster (2007) show that TV improved women's position in families in India.

Most of the existing evidence of the effect of media on political outcomes in established democracies point to the effect of media on turnout.[3] For example, Gentzkow (2006) finds empirical support for the theory of Putnam (2000) who argues that the introduction of television in 1940s-1950s in the US significantly decreased turnout, as people read less newspapers and received less political information. George and Waldfogel (2006) use penetration of New York Times in 1990s to show that it decreased turnout in local elections because of a "distraction" of college-educated voters from local media and local affairs. Oberholzer-Gee and Waldfogel (2007) show that local news channels in Spanish in the U.S. increase turnout of Spanish-speaking electorate. Kaplan and Della Vigna (2006) use idiosyncratic diffusion of Fox News before 2000 elections to show that it affected vote for Republicans, mainly through increased turnout among Republican supporters. Strömberg (2004) finds that an increase in the penetration of local radio stations in the US in the 1930s increased turnout.

A number of studies aim at explaining the differences in the freedom of media across countries. The lack of media freedom is found to be associated with state media ownership (Djankov et al. 2003), resource curse and low incentives for bureaucracy (Egorov et al. 2006), low level of social spending (Petrova 2007), and high corruption (Brunetti and Weder, 2003).

The evidence on the effects of media on voting outside developed world is scarce. Several recent papers start to fill this gap in the literature. They suggest that media in addition to affecting turnout can have a substantial effect on political preferences in new democracies and authoritarian regimes. Using survey data, Lawson and McCann (2007) show that before the 2000 elections in Mexico, the TV news had a significant effect on both attitudes and vote choices. Gentzkow and Shapiro (2004) argue that biased media in Arabic countries reinforce anti-Americanism. McMillan and Zoido (2004) provide a detailed account on how the media was used to undermine democratic accountability in Peru. Haimueller and Kern (2007) show that availability of free West-German TV increased support of authoritarian regime in Eastern Germany by providing otherwise-missing entertainment to East Germans. Colton and McFaul (2003) emphasize the importance of media effects for the outcomes of Russian elections in 1999 and 2000 using a survey-based approach. Our paper contributes to this strand of literature.

Our paper is most closely related to White et al. (2005). They also try to estimate the effect of Russian media on the results of 1999 parliamentary and 2000 presidential elections and find significant effect of media exposure on voting results. They, however, use the vote choice and the measure of the presence of state-owned or commercial television from 2001 survey

[3] Gerber et al. (2007) is a notable exception. They conducted a randomized experiment by providing individuals with free subscription to Washington Times or Washington Post and found a substantial effect of the access to Washington Post on the voting behavior: those who received the paper were 8% more likely to vote for Democrats.

conducted 1.5 years after elections, which suffers from different endogeneity problems.[4] Our approach to use exogenous geographic availability of NTV is superior from methodological perspective. The main goal in this paper is to document and evaluate the size of the causal effect of NTV on voting decisions as the previous literature just established a correlation without establishing causality. Furthermore, in addition to analysis of self-reported individual voting behavior, we document the effect of NTV on the actual electoral outcomes using official electoral statistics.[5]

3. Background information.

Politics

Political landscape in Russia throughout the 1990s was constantly changing (see, e.g., White, Rose, and McAllister 1997; White, Wyman, and Kryshtanovskaya 1995; Brader and Tucker 2001). A multitude of new parties was formed and joined political races. For instance, the number of parties that participated in the parliamentary elections of 1993, 1995, and 1999 was 13, 43, and 26 respectively. Partisan attachments were extremely weak, with the exception of a large part of the Communist Party electorate. According to Colton (2000), 71% of voters changed their preferred party between 1993 and 1995; and for 60% of voters this change came with a substantial change in ideology.[6] Less than one fourth of voters chose the same party in 1995 and 1999 parliamentary elections (Colton and McFaul 2003). Thus, Russia constitutes a good example of an immature democracy with unstable party system and lack of developed partisan attachments.

Prior to the 2004 political reform, the lower house of the Russia's parliament directly elected by the general population (called the Duma), was formed by the mixed electoral rule: one half of all seats (225 deputies) was filled by single-member-district majoritarian elections in 225 districts and the other half of the seats was filled by party-lists voting in a single national district according to proportional representation formula with 5% entry barrier. Political parties, electoral blocks, and political movements were allowed to participate in the party-list voting.[7] In our empirical analysis we focus on the party-list vote in the December 1999 Duma elections.

[4] Survey respondents, whose choice was affected by media, tend to remember it better; and survey respondents, not interested in watching a particular channel, do not know if it is available. In addition, as pointed in Colton and McFaul (2003), Russian citizens tend to forget their past vote choices: in their survey, around half of respondents in 1999 either did not remember their vote in 1995 at all or recalled a vote that was different from that reported immediately after the 1995 elections.

[5] We cannot compare the magnitudes of the estimated effects in our paper and theirs, as they do not report either the marginal effects for their logit estimation or the results of the corresponding OLS regressions.

[6] Colton classified all Russian parties into 6 different groups by their ideology: liberal, socialist, centrist, nationalist, government and miscellaneous. 60% of survey respondents chose different party families in 1993 and 1995.

[7] Note that it is no longer true now. Political reform of 2004 instituted the new electoral rule for Duma. Starting with 2007 parliamentary elections, all seats in the Duma are filled by party-lists elections with the proportional representation and 7% entry barrier. Only registered political parties are allowed to form party lists.

On September 27, 1999, a new electoral block "Unity" ("Edinstvo" in Russian) was created. The leaders of the block officially stated that it has no ideology other than the support of everything that the government and its head Vladimir Putin do.[8] In October 1999, the front-runner of these elections was the opposition electoral block called OVR ("Fatherland – All Russia"). This block was created in August 1999 by the coalition of existing electoral blocks "Fartherland" and "All Russia." According to the polls two months before elections, OVR was expected to get 29% and KPRF (the Communists Party) – 21% of the total vote.[9] The results of the December 1999 election turned out to be very different from these forecasts: KPRF was the first with 24.29%, "Unity" – the second with 23.32%, and OVR – the third with 13.33%.[10] The other three parties that received more than 5% of the votes were liberal SPS and Yabloko, and nationalistic LDPR, which received 8.52%, 5.93%, and 5.98%, respectively.

Mass Media

What accounts for such a sharp change in voter preferences which happened in the fall of 1999? Colton and MacFaul (2003) conjecture that skilled PR campaign with the help of state-owned TV channels were the main cause for this "reversal of fortunes." Indeed, during the electoral campaign of 1999, television played a very important role in dissemination of political information to population: according to a representative survey of Russia's voters, 89% said that television was their "basic source of information about political events," compared with 8% for radio, and 3% for newspapers (Colton and McFaul 2003; see also White and Oates 2003).

There were three major national TV channels in 1999 that broadcasted political news. The two main channels, ORT and RTR ("the first channel" and "the second channel") were controlled by the state. The state owned 100% of RTR and 51% of ORT, with the rest of ORT belonging to Boris Berezovsky, a tycoon who actively supported Vladimir Putin at that time. The third major channel, NTV ("Independent TV"), was a commercial network owned by Vladimir Gusinsky, a tycoon who was not close to Yeltsin and Putin The other three TV channels with national status were either much smaller as "TV-Tsentr" and "TV-6" or did not cover politics as "Cultura."

The broadcast of political news on all major national channels was unbalanced: ORT and RTR were biased towards Unity, while NTV and TV-Tsentr were biased towards OVR. The political biases of the media channels were computed by the Institute of the European Media on

[8] The leader of "Unity," Sergei Shoigu, then the minister of emergency situations, said about the ideology of the newly created movement: "We do not bind ourselves to any narrow ideological direction. We are not 'centrists', 'rightists', or 'leftists.' We are a party of consolidation of all healthy forces in society, free of ideological bias." Here "healthy forces" meant support of Putin's government and Putin himself. Source: Nezavisimaya Gazeta, December 8, 1999, as cited in Colton and MacFaul (2003).

[9] Fond "Obschestvennoe mnenie," 20.10.1999 http://bd.fom.ru/report/cat/policy/party_rating/o907003

[10] It is worth noting that after one year and half, in April 2001, "Unity" and OVR, former fierce competitors, united to create "United Russia" party, which became the main "party of power" in Russia for the 2003 and 2007 elections.

the basis of the content analysis by Russian researchers (Oates, 2000). The political news coverage on both of the state-owned channels was uneven both terms of the amount of time allocated to different parties and in the content of the broadcasted messages. First, it disproportionately covered electoral block "Unity" and its head Shoigu as well as the Putin's government, and second, it was highly critical of it opponents. ORT positively covered Unity 28% of the time and its party leader Shoigu 19% of the time, with OVR and Luzhkov getting extremely negative coverage 9% and 4% of the time, respectively (Oates 2000, 2006). Another state channel, RTR, covered Unity 24% of the time, and OVR 13% of the time, in addition to the heavy coverage of Unity leader Shoigu and prime minister Putin (Oates 2000).

The content of NTV programs was sharply different from that of the state TV channels. It criticized Putin's government, supported OVR, and was friendly to other liberal pro-reform parties, SPS and Yabloko. NTV covered OVR 33% of a time and "Unity" only 5% of a time. Despite the fact that the many analysts found its coverage to be more fair, as compared with other channels, it was heavily biased toward OVR.

Broadcasting infrastructure in Russia was largely inherited from the Soviet times. ORT and RTR were accessible almost everywhere covering nearly 100% of the population. NTV channel was created in 1993 and in the end of 1996 it was granted the whole broadcasting infrastructure of the national educational channel. The coverage of the channel expanded between 1996 and 1999, but it was still determined primarily by the inherited infrastructure (correlation between availability of NTV in the beginning of 1997 and 1999 is 0.68). In 1999, NTV covered approximately 66% of country's population. Thus, 33% of voters located in parts of the country where NTV was not accessible were treated with one-sided media coverage (by ORT and RTR only), while 66% of voters in the other parts of the country that had access to NTV were treated with media coverage from both sides of the political battle.[11] In the paper, we use this difference in the signal coverage as the source of exogenous variation in media coverage.

4. Empirical hypotheses

All the characteristics of a partial democracy that increase the role of mass media outlined in the introduction were found in Russia in 1999. The party system was unstable, and partisan attachments were almost absent. Most parties had very vague programs and some explicitly claimed to have no ideology. Media coverage of electoral campaign was significantly biased, and a substantial part of country's population did not have access to any news source other than official pro-government channel. As a result, we expect to find substantial effects of availability of NTV on voting behavior.

[11] NTV had a satellite transmission that was available in all the Russian territory, but the share of population using this service was minuscule.

The main hypothesis is that there is significant positive effect of NTV on voting for all liberal and centrist parties that were supported by NTV (OVR, Yabloko, and SPS) and a significant negative effect of NTV on the vote for "Unity," which was criticized by NTV and praised by other national channels. We expect to see these effects both at the aggregate and individual level. In addition, we expect to see a positive turnout effect for potential supporters of OVR, Yabloko, and SPS, and a negative turnout effect for potential supporters of "Unity." We do not expect significant effects for other major parties, which were covered similarly by NTV and other national channels. There is no clear-cut prediction about the net effect on the overall turnout.

5. Data description

Sources

We use four primary sources of data. First, data on NTV coverage for 1997 and 1999 are the courtesy of the *Video International*, a major Russian media advertising company. Second, data on electoral results come from the Central Election Commission of the Russian Federation. Specifically, we use the data at the level of local electoral commissions on voting results and turnout in the party-lists part of the Duma elections of 1995 and 1999. Third, we use municipality-level data on socio-economic conditions from Rosstat, the official Russian statistical agency. Finally, we use the results of a representative multiregional survey of voters from Colton (2000) and Colton and McFaul (2003). The survey is a large-scale panel survey of the Russian electorate in 1995, 1996, 1999 and 2000, performed under contract by the researchers from the Institute of Sociology of the Russian Academy of Sciences.

Summary Statistics

Using NTV coverage data, we created a municipal-level dummy variable *NTV* which is equal to 1 if NTV was available in that municipality and 0 otherwise. After excluding Moscow and St. Petersburg from the sample (as they have a status of the Subjects of the federation rather than municipalities), we have 425 municipalities with the NTV signal and 1682 municipalities without the NTV signal. Summary statistics for socio-economic characteristics of municipalities with and without NTV signal are presented in Table 1 along with summary statistics for the election results in 1995 and 1999. NTV disproportionately covered big cities and regions with high urban population. Among municipalities from the Rosstat data base, NTV covered only 20% of municipalities and 52% of population, after the exclusion of Moscow and St. Petersburg.

Without controlling for observable socio-economic characteristics, NTV municipalities are different from non-NTV municipalities in their voting behavior both before and during 1999 elections. In 1995, the voters in municipalities that had NTV signal in 1999 were more likely to

vote for liberal Yabloko and NDR, the party of power of the time, and less likely to vote for Communists and LDPR. In NTV municipalities, voters were more likely to vote against all and less likely to turnout for elections. These differences in the vote for Yabloko, Communists, LDPR, "against all," and turnout remain in 1999. In addition, votes for new electoral blocks Unity, OVR, and SPS were also different between NTV and non-NTV municipalities. People in NTV municipalities were more likely to vote for OVR and SPS and less likely to vote for Unity. Note that this comparison is based on the unconditional means and does not take into account heterogeneity between municipalities in terms of socio-economic characteristics. Section 7 provides evidence that once we condition on observable socio-economic characteristics the difference in the voting behavior between NTV and non-NTV municipalities both before and after 1999 elections becomes insignificant.

6. Results on the aggregate-level data

In order to test whether the presence of NTV had an effect on aggregate voting outcomes in 1999 elections, we estimate the following model:

$$vote_{i,1999} = \beta_0 + \beta_1 NTV_{i,1999} + X_{i,1995}'\boldsymbol{\beta}_2 + S_{i,1998}'\boldsymbol{\beta}_3 + \varepsilon_i , \qquad (1)$$

where i indexes municipalities. $vote_{i,1999}$ is the percent of votes for a particular party at the 1999 Duma elections in a municipality i. $NTV_{i,1999}$ is a dummy variable for the presence of NTV signal in the municipality i in 1999, $X_{i,1995}$ is a vector of electoral outcomes in 1995 elections, and $S_{i,1998}$ is a set of socio-economic characteristics of the municipality i before the 1999 elections.

Table 2 presents the regression results for the vote for six major parties (Unity, OVR, KPRF, SPS, Yabloko, and LDPR), vote against all parties, and the voter turnout. Vote for Unity was substantially smaller in NTV municipalities than in non-NTV municipalities. The magnitude of the effect is substantial: availability of an NTV signal in a municipality decreased vote for Unity by approximately 2.5 percentage points. It corresponds to the idea that NTV was a successful counterweight to the propaganda power of RTR and ORT. The effect of NTV on the vote for all three opposition parties, supported by the channel, is significantly positive. Somewhat surprisingly, the effect of NTV on the vote for OVR, the electoral bloc for which the difference in coverage between NTV and the main state-controlled channels was the greater, is weaker than the effect on the vote for SPS and Yabloko; NTV increased vote for OVR by 0.5 percentage points, whereas the effect on vote for the two liberal parties, SPS and Yabloko is roughly the same in magnitude: 0.8 percentage points. The possible explanation is that people perceived substantial NTV's bias in favor of OVR and discounted it, while the balanced, moderately positive coverage of Yabloko and SPS was more convincing.

The aggregate size of the effect (-2.5 percentage points for Unity, and comparable +2.1 percentage points for opposition parties, combined) is notably greater than the effect of the Fox News of 0.5 percentage points observed by Kaplan and Della Vigna in the U.S. Note that the Fox News in 2000 was available to 34% of U.S. population, while NTV was available for 66% of Russian population, which implies that the effect on the results of the elections at the national level is even stronger.

The effect of NTV on vote for KPRF and LDPR is insignificant. It is consistent with the observation that NTV was not very different from the other TV channels in its coverage of these two parties, and, therefore, we did not expect to find any systematic difference between vote for these parties in the NTV municipalities and non-NTV municipalities. After controlling for the results of voting in 1995 there is no significant effect of NTV signal on the turnout, but people in the NTV municipalities were more likely to vote "against all," which can be considered as another form of abstention from supporting any particular party.

Our findings on the aggregate level data can be summarized as follows. The presence of NTV signal affected the vote for the parties which were covered differently by NTV and the two state channels. The effect of NTV on the vote for OVR was approximately 0.5 percentage points and its effect on the vote for two liberal parties was more than 0.8 percentage points for each party. This implies a combined effect on the voting for all parties supported by NTV of more than 2.1 percentage points. The effect on the vote for Unity, criticized on NTV and advertised by the two state TV channels, was minus 2.5 percentage points. This is consistent with the idea that NTV prevented its viewers from being persuaded to vote for Unity, which happened to voters in non-NTV municipalities. Finally, we do not find a substantial effect of NTV on turnout, but we do find a substantial positive effect of NTV on the vote "against all". It implies that NTV affected politically conscious people who bothered to come and vote against all to show their dissatisfaction with other choices instead of not voting at all.[12]

The sum of the positive effects on vote for OVR, SPS, Yabloko is approximately equal to the negative effect on the vote for Unity, which suggests that the voters who were persuaded by the state controlled channels to vote for Unity were coming from the electorate of these three parties, rather than from the electorate of the smaller parties or politically inactive groups of population who otherwise would not have voted. Individual-level results presented in section 8 provide farther support for this notion.

[12] This finding is consistent with the effect of negative campaigns on voter turnout (vote "against all" in this case), pointed by Ansolaberehere and Iyengar (1995) and Ansolabehere et al. (1999). Recall that NTV criticized, sometimes harshly, pro-government party Unity. Thus exposure to NTV's negative coverage might induce some of its viewers to vote against all. Vote "against all" and not voting at all are procedurally similar. The main difference between them is that vote the "against all" increases the probability of having legitimate elections since legitimacy depends on the number of people who actually turned up to the elections (even if they voted against all).

7. Checking validity of the instrument

The key identifying assumption in our analysis is that the availability of NTV, controlling for observable characteristics municipalities, is uncorrelated with political preferences of the voters other than through the effect of NTV. There are two potential reasons why this assumption may not hold. First, the coverage of NTV may be endogenous, as municipalities with certain political preferences were more likely to receive NTV signal. Second, there might be some omitted characteristics of municipalities that were correlated both with NTV coverage and political preferences of the population.

To check the validity of identifying assumptions, we first examine whether the results of the voting in 1995 parliamentary elections affect NTV coverage in 1999 once we control for observables. Table 3 shows that after controlling for such observable characteristics of municipalities as population, education, and average wage, the presence of NTV is no longer significantly linked to voting outcomes in 1995, both with and without controlling for availability of NTV in the beginning of 1997. This table presents results of regression in which a dummy for NTV signal in a municipality is regressed on voting results in 1995 conditional on municipal characteristics. Without additional controls (Columns 1 and 2), the availability of NTV signal is significantly correlated with past vote choices. Once socio-economic controls are included (Columns 3 and 4), however, the joint significance of electoral variables sharply decreases. F-statistic for electoral controls is insignificant at 10% level, while F-statistic for socio-economic controls is significant at 1% level.

To address the concern about omitted variable bias, we use placebo specifications. We exploit the fact that coverage of NTV was different from the other main channels only during the parliamentary elections of 1999, but not in 1995 and 2003. Table 4 reports the results of the estimation of the effect of NTV availability in 1999 on the results of parliamentary regression in 1995.The coefficients for NTV availability are small in size and statistically insignificant for all the major parties, vote against all, and voter turnout.

Table 5 reports the results of the estimation of the effect of NTV availability in 1999 on the results of parliamentary regression in 2003. Although during the campaign of 2003 coverage of NTV was similar to other major TV channels, we might expect the difference in the voting patterns from the 1999 electoral campaign to persist in 2003. However, the results of placebo regressions indicate that in 2003 there is no significant difference in the turnout and the number of votes received by the major parties between municipalities with and without NTV coverage in 1999. The two exceptions are Yabloko and voting “against all”. The number of people who voted for Yabloko and “against all” in 2003 was still slightly higher in municipalities with NTV coverage in 1999, but the effects are extremely small (0.005 and 0.002 percentage points,

respectively), much smaller than in 1999 (0.91 and 0.26 percentage points), and become insignificant once we control for voting in 1999.

8. Results on the individual-level data

In order to test the effect of NTV on voting decisions and intentions of individuals, we use the survey data from Colton and McFaul (2003). A part of the survey respondents (864 out of 1783) also participated in an earlier survey conducted immediately after the 1995 elections. Thus, in our regression analysis we can use the reported vote in 1995 to control for the preexisting voting preferences, though the size of the sample in these specifications is substantially reduced.[13] We use the data from these surveys to construct the dummy variables that reflect the intention to vote, the preferred party before elections, the reported turnout, and the reported vote for each party. Table 6 summarizes these intentions and reported the vote variables for the whole sample and by the availability of NTV signal, using the geographic location of the survey respondents, i.e., by the dummy variable used in the aggregate level analysis.

In the survey, respondents reported whether they watched daily news (Segodnya) on NTV, its weekly magazine (Itogi with Evgeny Kiselev), or the channel in general in 1999. In the regression analysis, we instrument a reported exposure to NTV programs by the availability of NTV signal in 1999. The basic model which we estimate for the reported vote and the intention to vote is:

$$vote_{i,1999} = \beta_0 + \beta_1 WatchesNTV_{i,1999} + X_{i,1999}'\boldsymbol{\beta}_2 + \varepsilon_i, \qquad (2)$$

where i indexes individual respondents. $WatchesNTV_{i,1999}$ equals one if the respondent i answers yes to either one of the following questions: “Do you watch NTV?”, “Do you watch Segodnya (daily news program on NTV)?” or “Do you watch Itogi (weekend newsmagazine on NTV)?” in 1999 and zero otherwise. $X_{i,1999}$ is a set of individual and municipal level characteristics.[14] Variable $WatchesNTV_{i,1999}$ is instrumented by the availability of the NTV signal in the home municipality of individual i.

As indicated in Table 6, the information on availability of NTV signal is not perfect - approximately 45% of people in municipalities that were coded as not having NTV were still able to watch the channel. However, the share of people watching the channel in municipalities that were coded as having NTV was significantly higher - 70%. Table 7 presents the results of

[13] We do not use measures of vote in 1995 recalled by respondents in 1999 because they are subject to a very severe recall bias. Colton and McFaul (2003) show that around half of respondents in 1999 either did not remember their vote in 1995 at all or recalled a vote that was different from that reported immediately after the 1995 elections.

[14] Individual social and demographic characteristics include: sex, age, marital status, dummy for ethnic Russian, education (dummy for college education or higher), religiosity (answer to the question: Do you attend regularly religious services?), dummy for former membership in CPSU, and consumption index. We follow Colton and McFaul (2003) and construct a consumption index as the sum of the answers to the following consumption questions: Do you own a car? A dacha (summer home)? A computer? A phone? An automatic washing machine? Do you have Internet access? Have you ever been abroad?

the first stage of the regressions (2). For all specifications, the availability of the NTV signal is a strong predictor for the respondents' exposure to NTV programs (F-statistics for the exclusion of the instrumental variable is never smaller than 16).

Table 8 reports the results of the regressions for the intention to vote, as reported by respondents in the pre-election survey. Intention to vote for OVR and Yabloko follows the same pattern as the vote in the aggregate-level data − watching NTV increases the probability that a particular person is going to vote for one of these parties. The results for the effect of watching NTV on intention to vote and reported vote for OVR and Yabloko remain similar in size and significance once we control for the vote in 1995. The coefficients on our main variable of interest, $WatchesNTV_{i,1999}$, in the IV specifications are the estimates of the causal effect of watching NTV on the intention to vote for a particular party. The effect is substantial: watching NTV increases the probability that a respondent is planning to vote for OVR and Yabloko by 0.60 and 0.47 respectively. These results appear rather large, but in interpreting them, it is important to bear in mind, that they represent the local average treatment effect (Imbens and Angrist, 1994), i.e., the effect of NTV on the people who started watching NTV just because it became available. It is reasonable to expect that the effect for these people would be higher than the average for the whole population.

Other results from the IV estimates in Table 8 demonstrate that an effect of watching NTV on intention to vote for SPS turns out to be negative if we do not control for the vote in 1995, but becomes insignificant one we control for the vote in 1995. The negative effect of watching NTV on the intention to vote for LDPR is not significant if we do not control for the vote in 1995, but becomes higher in magnitude and highly significant once we include these controls. Similarly, the positive effect on the intention to vote becomes significant only if we control for the vote in 1995. Further check, however, indicates that the difference in the results with and without controls for the vote in 1995 is driven almost exclusively by a change in the sample. Other results in both IV specifications are much weaker (none of the coefficients is significant at 10% level). Comparison of the results of IV and OLS estimation indicates that there is no general pattern and the bias seems to go in different direction for different parties.

Table 9 presents the results of the estimation for the vote as reported by the respondents in the post-election survey. All the effects except for the effect of watching NTV on turn out have the same sign as for the intention to vote, although statistical significance for many of them changes. If we do not control for the vote in 1995 the survey respondents who watched NTV were approximately 50 percentage points more likely to vote for OVR, 42 percentage points less likely to vote for Unity and 29 percentage points less likely to vote against all. As in the case of

intention to vote, the magnitude of the effect seems very big, but the estimates can not be treated as average effects for the whole population.

Once we control for the vote in 1995 the results for reported vote for OVR remain almost identical, the results for the reported vote for Unity become smaller in magnitude and lose their statistical significance, whereas the results of reported vote "against all" become noticeably bigger. As in the case of intention to vote, farther check indicates that the difference in the results with and without controls for the vote in 1995 is driven almost exclusively by the change in the sample Other results are weaker and not statistically significant in both IV specifications. As with the intention to vote, comparison of IV and OLS estimates shows no systematic pattern.

Table 10 shows how the exposure to NTV affected the difference between the reported vote and the intended vote and how NTV affected the voting behavior of "undecided" voters, i.e. those voters who did not answer which party they were going to vote in pre-election survey, but who answered which party they voted for in post-election survey. The results indicate that even if we control for voters' intention to vote just a month before the elections, the exposure to NTV made people 54 percentage points more likely to vote for OVR and less likely to vote for KPRF, LDPR and against all by 58, 31 and 69 percentage points respectively.

Results of the estimation for the restricted sample of undecided voters indicate that the availability of NTV decreased the probability that an undecided voter is going to vote for Unity by 48 percentage points and increased the probability that an undecided voter is going to vote for LDPR and against all by 16 and 22 percentage points respectively. Combined these results indicate that NTV increased the vote for OVR primarily by changing the vote of the people who have already made their mind a month before elections, whereas the negative effect of NTV on the number of votes for Unity and "against all" comes primarily from the effect on the voters, who have not made their mind a month before the elections. For LDPR the two effects move in opposite directions, cancelling each other out.

In sum, the results for the individual preferences over major political parties are consistent with those for the aggregate level data. IV regressions show that the effect of exposure to NTV on vote for OVR was positive, and the effect of exposure to NTV on vote for Unity was negative. Empirical results, which take into account previous vote choice of respondents in 1995 elections, show that only the OVR effect on both intention to vote and reported vote remains significant, though the lack of significance of the effects for the vote for other parties might be due to the substantial reduction in the sample size. NTV was able to affect the vote choice even during one month of political campaign before the elections. Voters were 54% more likely to vote for OVR if they were exposed to NTV even controlling for their voting intentions just a

month before the elections. In contrast to the results about voting for specific parties, we do not find a robustly significant effect of NTV coverage on the decision to participate in elections.

9. Conclusions

In this paper, we document the effects of media on the voting behavior of people in a young democracy, using the data from Russian parliamentary elections of 1999. We use the data on geographical coverage of NTV, the only major TV channel which at that time was in opposition, to isolate the effect of exposure to media on voting behavior and to avoid endogeneity biases inherent to survey studies. At the aggregate level of analysis, we find that the effect of NTV was positive and significant for three parties supported by NTV− OVR, SPS, and Yabloko. Together, these parties got 2.1 percentage points more votes in each municipality with NTV signal. This amounts to almost additional one tenth of the combined vote received by these parties as a result of the NTV broadcast. At the same time, pro-government Unity party got 2.5 percentage points fewer votes in each municipality with the NTV signal. This amounts to a total loss of about one tenth in the total vote received by the Unity party.

Using survey data we find that even controlling for the voting intentions just a month before the December 1999 elections, NTV had a substantial effect on the vote for OVR. Thus, NTV was able to persuade voters to vote for OVR despite their initial voting intentions just before the elections and prevent undecided voters from vote for Unity.

Our results imply that the power of media in political persuasion in young democracies, such as Russia, can be much larger than in established democracies. With constantly evolving party system and weak partisan attachments, it is easier for the media to persuade voters that a particular party responds to their needs.

Recent histories of Peru and Venezuela as well as the dominating role of the state as the owner of much of the broadcast media throughout the world illustrate that incumbent governments recognize the power of political persuasion of mass media and, particularly, TV (e.g., Djankov et al. 2003; Haimueller and Kern 2007; Egorov et al. 2006). Putin's government also drew lessons from the NTV's political campaign in 1999: in 2001, after a fierce struggle, NTV was acquired by a state-controlled gas monopoly Gazprom. Moreover, both of the Russia's media magnates, Vladimir Gusinsky and Boris Berezovsky, who were on the opposite sides of the barricades in 1999, were forced to flee the country. Since that time all national TV channels in Russia have been under the full control of the government. In the 2003 parliamentary elections, the newly-created government party "United Russia" got 38% of party list votes, leaving the Communists, i.e., winners of the last two elections, on the second place with only 12% of the votes.

References

1. Ansolabehere, S., and S. Iyengar (1995). Going Negative: How Political Advertising Shrinks and Polarizes the Electorate. New York: Free Press.

2. Ansolabehere, S.D., S. Iyengar, and A. Simon (1999) "Replicating Experiments Using Aggregate and Survey Data: The Case of Negative Advertising and Turnout," The American Political Science Review, Vol. 93, No. 4, pp. 901-909.

3. Berelson, B. R., Lazarsfeld, P.F. &. McPhee. W. N. (1954). Voting: A study of opinion formation in a presidential campaign. Chicago: Chicago University Press

4. Besley, T., and R. Burgess (2002) "The Political Economy of Government Responsiveness: Theory and Evidence from India," Quarterly Journal of Economics, 117(4), 1415-1452

5. Brader, T., Tucker, J. (2001) "The Emergence of Mass Partisanship in Russia from 1993-6," American Journal of Political Science, 45(1): 69-83..

6. Brunetti, A., and B. Weder (2003) "A Free Press is Bad News for Corruption," Journal of Public Economics, 87(7-8), 1801-1824

7. Colton, T. (2000) "Transitional Citizens: Voters and What Influences Them in the New Russia," Cambridge: Harvard University Press

8. Colton, T., and M. McFaul (2003) "Popular Choice and Managed Democracy," Washington: Brooking Institution Press

9. Della Vigna, S., and E. Kaplan (2007) "The Fox News Effect: Media Bias and Voting," Quarterly Journal of Economics Vol. 122: 3

10. Djankov, S., C. McLeish, T. Nenova, and A. Shleifer (2003) "Who Owns the Media?" Journal of Law and Economics 46(2)

11. Egorov, G., S. Guriev and K. Sonin (2006) "Media Freedom, Bureaucratic Incentives, and the Resource Curse," mimeo

12. Eisensee, T., and D. Strömberg (2007) "News Floods, News Droughts, and U.S. Disaster Relief," Quarterly Journal of Economics, forthcoming

13. Epstein, David L., Bates, Robert, Goldstone, Jack, Kristensen, Ira and O'Halloran, Sharyn 2006. "Democratic transitions," American Journal of Political Science 59: 551-69

14. Gentzkow, M. (2006) "Television and Voter Turnout," Quarterly Journal of Economics. CXXI (3)

15. Gentzkow, M., and J. Shapiro (2004) "Media, Education, and Anti-Americanism in the Muslim World," Journal of Economic Perspectives, 18:3, pp. 117-133

16. George, L., and J. Waldfogel (2006) "The New York Times and the Market for Local Newspapers." American Economic Review, 96(1), pp. 435-477

17. Gerber, A., D. Karlan, and D. Bergan (2007) "Does the Media Matter? A Field Experiment Measuring the Effect of Newspapers on Voting Behavior and Political Opinions," mimeo

18. Hainmueller, J., and H. Kern (2007) "Opium for the Masses: How Foreign Free Media Can Stabilize Authoritarian Regimes," mimeo

19. Imbens, G.W., and J. D. Angrist (1994) "Identification and Estimation of Local Average Treatment Effects," Econometrica, Vol. 62, No. 2 (Mar., 1994), pp. 467-475.

20. Jensen, R. and E. Oster (2007) "The Power of TV: Cable Television and Women's Status in India" NBER Working Paper No. 13305.

21. Lawson, C., and J.A. MacCann (2007) "Television News, Mexico's 2000 Elections, and Media Effects in Emerging Democracies," forthcoming, British Journal of Political Science

22. Lazarsfeld, P. F., B. Berelson, and H. Gaudet (1944). The People's Choice: How the Voter Makes Up His Mind in a Presidential Campaign. New York: Columbia University Press

23. McCombs, M. (2004) Setting the Agenda: The News Media and Public Opinion, Cambridge, UK: Polity Press

24. Mullainathan, S., and A. Shleifer (2005) "The Market for News," forthcoming in American Economic Review

25. Oates (2000) "The 1999 Duma Elections: The Dirty Road to the Duma," Problems of Post-Communism, 47(3), pp.3-12

26. Oates (2006) Television, Democracy and Elections in Russia (Basees/Routledge Series on Russian and East European Studies). London: Routledge.

27. Oberholzer-Gee, F., and J. Waldfogel (2007) "Media Markets and Localism: Does Local News en Español Boost Hispanic Voter Turnout?" HBS Working Paper 07-062

28. Olken, B. (2006) "Do Television and Radio Destroy Social Capital? Evidence from Indonesian Villages," NBER Working Paper, No. 12561.

29. Organization for Security and Cooperation in Europe/Office for Democratic Institutions and Human Rights (OSCE/ODIHR) (2000) "Russian Federation Elections to the State Duma, 19 December 1999, Final Report," Warsaw. Available at http://www.osce.org/documents/odihr/2000/02/1454_en.pdf

30. Organization for Security and Cooperation in Europe/Office for Democratic Institutions and Human Rights (OSCE/ODIHR) (1996) "International Observer Mission, Election of President of the Russian Federation, 16th June 1996 and 3rd July 1996, Report on the Elections". Available at http://www.osce.org/documents/odihr/1996/07/1453_en.pdf

31. Puglisi, R. (2006) "Being the New York Times: The Political Behavior of a Newspaper," SSRN: http://ssrn.com/abstract=573801

32. Strömberg, D. (2004) "Radio's Impact on Public Spending," Quarterly Journal of Economics, 119(1),189-221

33. White, S., and S. Oates (2003) "Politics and the Media in Postcommunist Russia" Politics 23 (1), 31–37.

34. White, S., M. Wyman, and O. Kryshtanovskaya. 1995. "Parties and Politics in Post-communist Russia." Communist and Post-Communist Studies 28:183–202.

35. White, S., R. Rose, and I. McAllister. 1997. How Russia Votes. Chatham, N.J.: Chatham House Publishers, Inc.

36. White, S., S. Oates, and I. McAllister (2005) "Media Effects and the Russian Elections, 1999-2000," The British Journal of Political Science 34 (2): 191-208.

Table 1. Summary statistics, socio-economic characteristics of municipalities with and without NTV signal

	NTV=0			NTV=1			
	Mean	St. dev.	Obs.	Mean	St. dev.	Obs.	Std. Err. of difference
			Socio-economic characteristics				
Population, thousands	32.20	33.07	1792	118.76	210.72	531	[9.173]***
Population change	-0.28	2.27	1617	-0.33	2.64	468	[0.135]
Migration rate, %	-0.06	1.26	1617	0.06	1.28	468	[0.067]*
Average wage, thousands of rubles	-0.43	0.49	1629	-0.06	0.54	466	[0.028]***
Average pension, thousands of rubles	0.39	0.06	1486	0.42	0.07	435	[0.004]***
Retired , %	25.76	10.61	1614	24.18	10.71	467	[0.561]***
Unemployed, %	1.80	1.81	1617	1.77	1.62	468	[0.087]
Population employed in farms, %	0.23	1.50	1617	0.31	1.87	468	[0.094]
Crime rate, per 10000	163.48	223.05	1617	165.34	191.27	468	[10.434]
			Vote in parliamentary elections in Duma, 1995				
Vote for KPRF (Communists), %	26.49	12.07	1503	23.10	10.99	445	[0.607]***
Vote for LDPR, %	13.84	6.33	1503	12.15	5.81	445	[0.320]***
Vote for NDR (Our Home is Russia), %	8.18	8.77	1503	9.36	5.62	445	[0.349]***
Vote for Yabloko, %	2.96	2.64	1503	5.60	3.86	445	[0.195]***
Vote for Women of Russia, %	4.92	2.51	1503	5.34	2.32	445	[0.128]***
Vote for Communists of USSR, %	6.16	2.93	1503	4.86	2.42	445	[0.137]***
Vote for KRO (Congress of Russian Communities), %	2.63	2.26	1503	4.06	2.61	445	[0.137]***
Vote for PST, %	2.51	1.74	1503	4.07	2.59	445	[0.130]***
Democratic Russia's Choice, %	1.60	2.63	1503	2.89	2.96	445	[0.156]***
Vote for APR (Agrarian Party of Russia), %	8.66	8.53	1503	4.01	5.76	445	[0.351]***
Vote against all, %	2.49	1.23	1503	2.89	1.09	445	[0.061]***
Voter turnout, %	70.33	8.53	1503	64.40	7.89	445	[0.434]***
			Vote in parliamentary elections in Duma, 1999				
Vote for Unity, %	29.17	10.95	1792	24.10	10.88	531	[0.5381]***
Vote for OVR(Fatherland - All Russia), %	9.62	14.59	1792	11.34	11.99	531	[0.6240]***
Vote for SPS(Union of Right Forces), %	4.61	3.94	1792	7.59	3.83	531	[0.1904]***
Vote for Yabloko, %	2.60	2.10	1792	5.84	3.35	531	[0.1535]***
Vote for KPRF (Communists), %	28.23	10.91	1792	24.48	9.50	531	[0.4861]***
Vote for LDPR (Bloc of Zhirinovsky), %	7.24	3.17	1792	6.75	2.67	531	[0.1378]***
Vote for Women of Russia, %	2.25	1.07	1792	2.33	0.91	531	[0.0468]*
Vote for Communists, workpeople of Russia, %	2.75	1.71	1792	2.39	1.07	531	[0.0614]***
Vote for NDR (Our Home is Russia), %	1.34	2.48	1792	1.36	2.14	531	[0.1097]
Vote for KRO (Congress of Russian Communities), %	0.31	0.37	1792	0.43	0.34	531	[0.0171]***
Vote against all, %	2.51	1.17	1792	3.39	1.24	531	[0.0604]***
Voter turnout, %	63.98	9.85	1792	58.82	7.63	531	[0.4047]***

Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 2. Effect of NTV on voting behavior, aggregate data

	Vote for OVR, %		Vote for Unity, %		Vote for SPS, %		Vote for Yabloko, %	
NTV1999	0.5457	0.5726	-2.577	-2.5198	0.9059	0.8023	0.9095	0.7668
	[0.2382]**	[0.2497]**	[0.5103]***	[0.5260]***	[0.1771]***	[0.1583]***	[0.1233]***	[0.1153]***
Electoral controls from 1995	No	Yes	No	Yes	No	Yes	No	Yes
Socioeconomic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1869	1568	1869	1568	1869	1568	1869	1568
R-squared	0.79	0.82	0.67	0.68	0.76	0.81	0.75	0.84
Number of regions	80	78	80	78	80	78	80	78

	Vote for KPRF, %		Vote for LDPR, %		Vote against all, %		Voter turnout, %	
NTV1999	0.1081	0.2368	-0.1949	-0.1867	0.2635	0.2282	-0.6489	-0.4218
	[0.3761]	[0.2979]	[0.1280]	[0.1142]	[0.0551]***	[0.0563]***	[0.3064]**	[0.2620]
Electoral controls from 1995	No	Yes	No	Yes	No	Yes	No	Yes
Socioeconomic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1869	1568	1869	1568	1869	1568	1869	1568
R-squared	0.73	0.82	0.73	0.78	0.66	0.74	0.68	0.8
Number of regions	80	78	80	78	80	78	80	78

Electoral controls include the results of Duma elections in December 1995, in particular vote for KPRF (Communists), vote for Yabloko, vote for NDR (Our Home is Russia), vote for LDPR (Liberal-Democratic Party of Russia), vote for Women of Russia, vote for Communists of USSR, vote for KRO (Congress of Russian Communities), vote for PST, vote for DVR (Democratic Russia's Choice), vote APR (Agrarian Party of Russia), vote "against all," voter turnout. The set of socioeconomic controls includes log of population, population change, migration rate, log of average wage, average pension, fraction of retired people, fraction of unemployed, number of people employed in farms, crime rate. Robust standard errors clustered by region in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 3. Correlates of availability of NTV in 1999, linear probability model.

	Availability of NTV in 1999 (0 or 1)			
	(1)			(2)
Vote for KPRF (Communists) in 1995, %	0.001	0.0006	0.0009	-0.0005
	[0.0026]	[0.0021]	[0.0027]	[0.0022]
Vote for LDPR in 1995, %	-0.0009	0.0005	-0.0036	-0.0018
	[0.0032]	[0.0025]	[0.0034]	[0.0026]
Vote for NDR (Our Home is Russia) in 1995, %	0.0014	0.0011	-0.0005	-0.0017
	[0.0027]	[0.0023]	[0.0029]	[0.0025]
Vote for Yabloko in 1995, %	0.0213	0.001	-0.003	-0.008
	[0.0072]***	[0.0045]	[0.0075]	[0.0047]*
Vote for Women of Russia in 1995, %	-0.0053	0.0036	0.0057	0.0064
	[0.0074]	[0.0052]	[0.0092]	[0.0066]
Vote for Communists of USSR in 1995, %	0.0027	-0.0005	0.0054	0.0005
	[0.0051]	[0.0041]	[0.0054]	[0.0042]
Vote for KRO in 1995,	0.0199	0.0096	0.0101	0.007
%	[0.0079]**	[0.0054]*	[0.0083]	[0.0059]
Vote for PST in 1995, %	0.0281	0.0212	0.0103	0.013
	[0.0100]***	[0.0064]***	[0.0104]	[0.0066]**
Democratic Russia's Choice, %	0.0069	0.0016	-0.0022	-0.0041
	[0.0061]	[0.0057]	[0.0065]	[0.0064]
Vote for APR (Agrarian Party of Russia) in 1995, %	-0.0019	-0.0016	0.0005	-0.0022
	[0.0027]	[0.0021]	[0.0029]	[0.0023]
Vote against all in 1995, %	0.01	0.0068	0.0181	0.0058
	[0.0125]	[0.0091]	[0.0159]	[0.0114]
Voter turnout in 1995, %	-0.0057	-0.0021	0.0007	0.001
	[0.0016]***	[0.0012]*	[0.0019]	[0.0015]
Availability of NTV in 1997		0.745		0.7222
		[0.0229]***		[0.0278]***
Ln (Population), 1998			0.2063	0.0715
			[0.0162]***	[0.0139]***
Population change, 1998			-0.0058	-0.001
			[0.0053]	[0.0018]
Migration rate, 1998			0.0025	-0.0027
			[0.0090]	[0.0075]
Ln(Average wage), 1998			0.1383	-0.1369
			[0.4385]	[0.2765]
Average pension, in thousands of rubles, 1998			0.0151	0.0374
			[0.0455]	[0.0297]
Fraction of retired people, 1998			-0.0018	-0.0015
			[0.0022]	[0.0012]
Fraction of unemployed, 1998			0.0115	-0.0057
			[0.0078]	[0.0055]
Fraction of population employed in farms, 1998			0.0085	-0.0004
			[0.0112]	[0.0062]
Crime rate, 1998			0.0001	0.000
			[0.0001]	[0.0001]
Region fixed effects	Yes	Yes	Yes	Yes
Observations	1948	1948	1568	1568
R-squared	0.30	0.68	0.38	0.69
F-statistics, electoral variables	14.99	5.28	0.85	1.33
F-statistic, socioeconomic variables			20.15	4.56

Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4. Placebo regressions for the elections of 1995.

	Vote for NDR, %		Vote for KRO, %		Vote for Democratic Russia's choice, %		Vote for Yabloko, %	
NTV1999	-0.3654	-0.1368	0.065	0.1707	-0.2291	-0.0499	-0.0802	0.0354
	[0.3426]	[0.2292]	[0.1722]	[0.1292]	[0.3774]	[0.1657]	[0.1890]	[0.1841]
Socioeconomic controls from 1996	Yes	No	Yes	No	Yes	No	Yes	No
Socioeconomic controls from 1998	No	Yes	No	Yes	No	Yes	No	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	848	1568	848	1568	848	1568	848	1568
R-squared	0.58	0.59	0.69	0.69	0.56	0.59	0.75	0.77
Number of regions	46	78	46	78	46	78	46	78

	Vote for KPRF, %		Vote for LDPR, %		Vote against all, %		Voter turnout, %	
NTV1999	-0.2961	-0.017	-0.0456	-0.5115	0.054	0.0683	-0.7811	0.0188
	[0.7046]	[0.4892]	[0.4207]	[0.3425]	[0.0776]	[0.0482]	[0.8235]	[0.5551]
Socioeconomic controls from 1996	Yes	No	Yes	No	Yes	No	Yes	No
Socioeconomic controls from 1998	No	Yes	No	Yes	No	Yes	No	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	848	1568	848	1568	848	1568	848	1568
R-squared	0.78	0.73	0.62	0.64	0.69	0.68	0.58	0.63
Number of regions	46	78	46	78	46	78	46	78

The set of socioeconomic controls includes log of population, population change, migration rate, log of average wage, average pension, fraction of retired people, fraction of unemployed, number of people employed in farms, crime rate. Data on socioeconomic characteristics prior to 1996 is not available, and the coverage for 1996 is very limited. Unfortunately, the data on socioeconomic characteristics of municipalities prior to 1996 is not available, and the coverage for 1996 is very limited. For this reason we report the results controlling for the characteristics both in 1996 and in 1998. The tables shows that the coefficients for NTV remain insignificant regardless of the set of controls we use. Robust standard errors clustered by region in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 5. Placebo regressions for the elections of 2003.

	Vote for Unity, %		Vote for APR, %		Vote for SPS, %		Vote for Yabloko, %	
NTV1999	-0.0002	0.0074	-0.0008	0.0013	0.0004	-0.0024	0.0048	0.0008
	[0.0060]	[0.0061]	[0.0022]	[0.0021]	[0.0015]	[0.0012]*	[0.0010]***	[0.0008]
Electoral controls from 1999	No	Yes	No	Yes	No	Yes	No	Yes
Socioeconomic controls from 1998	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1833	1833	1833	1833	1833	1833	1833	1833
R-squared	0.72	0.78	0.66	0.68	0.6	0.67	0.73	0.84
Number of regions	80	80	80	80	80	80	80	80

	Vote for KPRF, %		Vote for LDPR, %		Vote against all, %		Voter turnout, %	
NTV1999	-0.0041	-0.0034	-0.0035	-0.0006	0.002	-0.0007	-0.0028	0.0023
	[0.0030]	[0.0029]	[0.0022]	[0.0017]	[0.0008]**	[0.0008]	[0.0042]	[0.0038]
Electoral controls from 1999	No	Yes	No	Yes	No	Yes	No	Yes
Socioeconomic controls from 1998	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1833	1833	1833	1833	1833	1833	1833	1833
R-squared	0.59	0.72	0.76	0.84	0.68	0.79	0.73	0.84
Number of regions	80	80	80	80	80	80	80	80

Electoral controls include the results of Duma elections in December 1999, in particular vote for OVR, vote for Unity, vote for SPS, vote for Yabloko, vote for KPRF, vote for LDPR, vote "against all," voter turnout. The set of socioeconomic controls includes log of population, population change, migration rate, log of average wage, average pension, fraction of retired people, fraction of unemployed, number of people employed in farms, crime rate. Robust standard errors clustered by region in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 6. Summary statistics. Intention to vote and reported vote, December 1999 Duma elections.

	Mean	Obs.	Mean	Obs.	St. Er. of difference
	NTV=0		NTV=1		
Intention to vote for OVR	0.08	433	0.21	671	[0.0456]***
Intention to vote for Unity	0.12	433	0.09	671	[0.0242]
Intention to vote for SPS	0.08	433	0.07	671	[0.0205]
Intention to vote for Yabloko	0.05	433	0.14	671	[0.0177]***
Intention to vote for KPRF	0.42	433	0.21	671	[0.0490]***
Intention to vote for LDPR	0.04	433	0.05	671	[0.0164]
Intention to vote against all	0.05	433	0.07	671	[0.0219]
Intended to vote	0.88	685	0.89	978	[0.0224]
Vote for OVR	0.07	572	0.18	739	[0.0639]*
Vote for Unity	0.30	572	0.22	739	[0.0442]*
Vote for SPS	0.05	572	0.13	739	[0.0230]***
Vote for Yabloko	0.04	572	0.09	739	[0.0161]***
Vote for KPRF	0.39	572	0.22	739	[0.0400]***
Vote for LDPR	0.04	572	0.04	739	[0.0117]
Vote against all	0.02	572	0.03	739	[0.0112]
Turnout	0.81	730	0.80	978	[0.0228]
Watches NTV	0.45	753	0.70	1030	[0.0716]***

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7. The first stage estimation.

	Watches NTV		
NTV1999	0.259	0.284	0.198
	[0.039]***	[0.060]***	[0.049]***
Sex (1 if male)	0.102	0.096	0.058
	[0.032]***	[0.050]*	[0.040]
Age	-0.003	-0.004	-0.003
	[0.001]***	[0.001]***	[0.001]***
Ethnic Russian	0.101	-0.098	0.155
	[0.037]***	[0.066]	[0.050]***
Higher education	0.068	0.015	0.097
	[0.038]*	[0.067]	[0.050]*
Attends religious services	0.051	0.11	0.028
	[0.032]	[0.050]**	[0.039]
Former Member of CPSU (Communist Party of Soviet Union)	0.009	0.087	0.036
	[0.047]	[0.078]	[0.058]
Marital status (1 if married)	0.052	0.015	0.059
	[0.031]*	[0.049]	[0.040]
Consumption index	0.03	0.017	0.035
	[0.012]***	[0.018]	[0.015]**
Log (population), 1998	-0.046	-0.04	-0.053
	[0.013]***	[0.021]*	[0.016]***
Controls for voting choice in 1995	No	Yes	No
Intention to vote for OVR in 1999			0.023
			[0.069]
Intention to vote for KPRF in 1999			0.022
			[0.058]
Intention to vote for Unity in 1999			0.033
			[0.071]
Intention to vote for Yabloko in 1999			-0.045
			[0.075]
Intention to vote for LDPR in 1999			-0.114
			[0.090]
Intention to vote for SPS in 1999			0.066
			[0.084]
Intention to vote against all in 1999			-0.138
			[0.089]
Observations	1289	536	825
R-squared	0.10	0.11	0.09
F-statistics for the exclusion of NTV1999	44.24	22.59	16.12

Robust standard errors in brackets, * significant at 10%; ** significant at 5%; *** significant at 1%

Table 8. Intention to vote and NTV.

	OVR			Unity			SPS			Yabloko		
	IV	IV	OLS	IV	IV	OLS	IV	IV	OLS	IV	IV	OLS
Watches NTV	1.9772	1.7811	0.1209	-0.7809	0.2401	0.0732	-1.5539	-1.4228	0.106	1.7776	1.7612	-0.105
	[0.2807]***	[0.3956]***	[0.1514]	[0.9153]	[0.9889]	[0.1421]	[0.5894]***	[2.8631]	[0.1702]	[0.5188]***	[0.5115]***	[0.1495]
Marginal effect	0.6	0.5	0.02	-0.17	0.04	0.01	-0.4	-0.3	0.01	0.47	0.44	-0.02
Vote in 1995	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	825	357	825	825	357	825	825	324	825	825	363	825
Number of municipalities	41	36	41	41	36	41	41	35	41	41	36	41
χ^2 statistics for the exclusion of NTV1999 in the first stage	7.90	5.62		7.90	5.62		7.90	0.40		7.90	4.49	

	KPRF			LDPR			Against all			Turn out		
	IV	IV	OLS	IV	IV	OLS	IV	IV	OLS	IV	IV	OLS
Watches NTV	-1.1084	-0.2546	0.1068	-1.3649	-1.7065	-0.2502	-0.1273	-0.7205	-0.3011	1.1796	1.5321	-0.002
	[0.9940]	[1.0423]	[0.1016]	[1.5590]	[0.4982]***	[0.1576]	[2.1316]	[2.2299]	[0.1550]*	[0.7426]	[0.4953]***	[0.1499]
Marginal effect	-0.39	-0.09	0.04	-0.22	-0.38	-0.02	-0.01	-0.1	-0.03	0.29	0.4	0
Vote in 1995	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	825	363	825	825	319	825	825	357	825	1193	505	1193
Number of municipalities	41	36	41	41	36	41	41	36	41	41	37	41
χ^2 statistics for the exclusion of NTV1999 in the first stage	7.90	4.48		7.90	8.19		7.90	5.62		18.14	11.59	

Probit model. In the IV regressions Watched NTV variable from the pre-election survey is instrumented by the presence of NTV dummy. Observations are weighted by sample survey weights. Vector of controls includes dummy variables for sex, age, marital status, ethnic Russian, education, religiosity, former membership in CPSU, consumption index, logarithm of municipal population and logarithm of average wage in municipality. Controls for vote in 1995 include dummy variables for reported vote for 5 major parties and "against all." Robust standard errors clustered by municipality in brackets,.
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 9. Reported vote and NTV.

	OVR			Unity			SPS			Yabloko		
	IV	IV	OLS	IV	IV	OLS	IV	IV	OLS	IV	IV	OLS
Watches NTV	1.8611	1.8438	0.1168	-1.2029	-0.7921	-0.0823	-0.2316	1.2771	0.2699	1.1951	1.0977	-0.0432
	[0.3057]***	[0.3200]***	[0.1388]	[0.5043]**	[1.0330]	[0.1257]	[1.1280]	[1.1728]	[0.1569]*	[0.8528]	[1.2589]	[0.1668]
Marginal effect	0.49	0.49	0.02	-0.42	-0.29	-0.03	-0.03	0.10	0.04	0.16	0.13	0.00
Vote in 1995	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	951	408	951	951	408	951	951	408	951	951	367	951
Number of municipalities	41	37	41	41	37	41	41	37	41	41	36	41
χ^2 statistics for the exclusion of NTV1999 in the first stage	16.53	5.32		16.53	5.32		16.53	5.32		16.53	5.87	

	KPRF			LDPR			Against all			Turn out		
	IV	IV	OLS	IV	IV	OLS	IV	IV	OLS	IV	IV	OLS
Watches NTV	-0.5105	0.1983	0.0635	-1.0936	1.0305	-0.0891	-1.6147	-1.8625	-0.0771	0.8672	0.6006	0.1974
	[0.5115]	[1.3000]	[0.1001]	[0.9978]	[0.8647]	[0.1451]	[0.9517]*	[0.4685]***	[0.1784]	[0.8382]	[0.8932]	[0.0963]**
Marginal effect	-0.18	0.07	0.02	-0.14	0.08	-0.01	-0.29	-0.44	0.00	0.25	0.15	0.05
Vote in 1995	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	951	408	951	951	357	951	951	399	951	1246	521	1246
Number of municipalities	41	37	41	41	37	41	41	37	41	41	37	41
χ^2 statistics for the exclusion of NTV1999 in the first stage	16.53	5.32		16.53	9.87		16.53	9.87		18.52	3.12	

Probit model. In the IV regressions Watched NTV variable from the pre-election survey is instrumented by the presence of NTV dummy. Observations are weighted by sample survey weights. Vector of controls includes dummy variables for sex, age, marital status, ethnic Russian, education, religiosity, former membership in CPSU, consumption index, logarithm of municipal population and logarithm of average wage in municipality. Controls for vote in 1995 include dummy variables for reported vote for 5 major parties and "against all." Robust standard errors clustered by municipality in brackets,.
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 10. Reported vote controlling for intention to vote and for undecided voters.

	Vote for OVR, %		Vote for Unity, %		Vote for SPS, %		Vote for Yabloko, %	
	Full sample	Undecided Only	Full sample	Undecided Only	Full sample	Undecided Only	Full sample	Undecided Only
Watched NTV	1.9392	0.5278	-0.8581	-1.3357	-0.4362	1.1005	1.3518	-0.3204
	[0.1694]***	[0.8553]	[0.9922]	[0.4435]***	[1.6933]	[0.8941]	[1.1298]	[0.9749]
Marginal effect	0.54	0.08	-0.28	-0.48	-0.08	0.13	0.15	-0.04
Intention to vote	Yes	No	Yes	No	Yes	No	Yes	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	601	267	684	267	459	267	543	238
Number of municipalities	41	39	41	39	40	39	41	39
χ^2 statistics for the exclusion of NTV1999 in the first stage	6.14	19.8	6.5	19.8	2.51	19.8	5.44	18.68

	Vote for KPRF, %		Vote for LDPR, %		Vote against all, %		Voter turnout, %	
	Full sample	Undecided Only	Full sample	Undecided Only	Full sample	Undecided Only	Full sample	Undecided Only
Watched NTV	-1.6604	0.7692	-1.5824	1.2316	-2.1126	1.4444	-0.7397	0.6456
	[0.6545]**	[0.6880]	[0.6299]**	[0.4769]***	[0.0793]***	[0.7411]*	[1.1094]	[0.5667]
Marginal effect	-0.58	0.21	-0.31	0.16	-0.69	0.22	-0.14	0.24
Intention to vote	Yes	No	Yes	No	Yes	No	Yes	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	656	267	684	186	656	158	801	445
Number of municipalities	41	39	41	39	41	37	41	39
χ^2 statistics for the exclusion of NTV1999 in the first stage	3.4	19.8	6.5	14.39	3.4	8.64	7.65	21.12

Probit model. Watched NTV variable form the post-election survey instrumented by the presence of NTV dummy. In columns marked "Undecided only" only respondents that did not report their intention to vote in the pre-election survey are included in the sample. Observations are weighted by sample survey weights. Vector of controls includes dummy variables for sex, age, marital status, ethnic Russian, education, religiosity, former membership in CPSU, consumption index, logarithm of municipal population and logarithm of average wage in municipality. Controls for intention to vote include dummy variables for intention to vote for 6 major parties and "Against all." Robust standard errors clustered by municipality in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 11. Turnout, NTV, and intention to vote for different parties.

	Reported turnout in December 1999						
Availability of NTV in 1999	-0.3649	-0.5479	-0.4019	-0.415	-0.4143	-0.3601	-0.3927
	[0.2663]	[0.2722]**	[0.2497]	[0.2479]*	[0.2574]	[0.2499]	[0.2507]
Availability of NTV in 1999 x Intention to vote for OVR	-5.1893						
	[0.2443]***						
Availability of NTV in 1999 x Intention to vote for Unity		0.638					
		[0.3932]					
Availability of NTV in 1999 x Intention to vote for SPS			-0.1445				
			[0.4316]				
Availability of NTV in 1999 x Intention to vote for Yabloko				0.0382			
				[0.4288]			
Availability of NTV in 1999 x Intention to vote for KPRF					0.002		
					[0.3464]		
Availability of NTV in 1999 x Intention to vote for LDPR						-0.5283	
						[0.6680]	
Availability of NTV in 1999 x Intention to vote against all							-4.7043
							[0.4404]***
Intention to vote for OVR	4.9897	-0.1061	-0.1246	-0.1235	-0.1236	-0.1323	-0.1249
	[0.0000]	[0.2381]	[0.2359]	[0.2361]	[0.2383]	[0.2340]	[0.2363]
Intention to vote for Unity	-0.8468	-1.2612	-0.8516	-0.8562	-0.8558	-0.8495	-0.8494
	[0.3028]***	[0.3539]***	[0.3054]***	[0.3054]***	[0.3041]***	[0.3042]***	[0.3036]***
Intention to vote for SPS	-1.3404	-1.4227	-1.305	-1.3633	-1.3626	-1.3413	-1.3511
	[0.2910]***	[0.3088]***	[0.3640]***	[0.2977]***	[0.3016]***	[0.2951]***	[0.2945]***
Intention to vote for Yabloko	-0.9057	-0.8933	-0.8999	-0.9326	-0.8994	-0.9032	-0.902
	[0.2857]***	[0.2906]***	[0.2860]***	[0.4073]**	[0.2872]***	[0.2863]***	[0.2863]***
Intention to vote for KPRF	0.4902	0.4693	0.4841	0.4822	0.4808	0.4878	0.4837
	[0.2694]*	[0.2751]*	[0.2713]*	[0.2709]*	[0.3069]	[0.2712]*	[0.2701]*
Intention to vote for LDPR	-0.3241	-0.3362	-0.3308	-0.3315	-0.3318	0.0494	-0.3257
	[0.3216]	[0.3252]	[0.3214]	[0.3227]	[0.3222]	[0.6441]	[0.3223]
Intention to vote against all	0.161	0.173	0.162	0.1642	0.1638	0.1598	4.7837
	[0.4106]	[0.4157]	[0.4133]	[0.4118]	[0.4120]	[0.4099]	[0.0000]
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	530	530	530	530	530	530	530

Probit model. Observations are weighted by sample survey weights. Vector of controls includes dummy variables for sex, age, marital status, ethnic Russian, education, religiosity, former membership in CPSU, consumption index, logarithm of municipal population and logarithm of average wage in municipality. Robust standard errors clustered by municipality in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%