Can Independent Media Help Non-Democratic Governments Suppress Collective Action?

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The latest version of this paper is available here:

www.asobolev.com/files/Anton-Sobolev-Echo-Of-Moscow.pdf

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Abstract

There is a wide-spread belief that non-democratic governments are better off limiting media freedom, since it enables them to prevent mass protests and riots that could threaten the regime's survival. However, I argue that, under certain conditions, some degree of media freedom can help non-democratic leaders forestall anti-regime collective action by allowing media to report observable events truthfully, but not conduct independent journalistic investigations. For instance, reports on the number of people who attend pro-government rallies are more credible if produced by independent media outlets than by state propagandists. Thus, a signal of the regime's popularity from the former can discourage dissidents and suppress the protest. In order to test whether media freedom can allow autocrats to credibly signal their popularity, I exploit the fact that broadcasts of the opposition radio station *Echo of Moscow* were available in certain Russian cities but not in others. Importantly, local availability of *Echo of Moscow* in a given city was determined by socio-economic and geographic rather than political conditions. Data from recent opposition protests in Russia suggest that the occurrence of a massive pro-government rally in Moscow discouraged potential protesters significantly more in cities exposed to *Echo of Moscow* than in other cities.

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1. Introduction

Dictators tend to restrict the media for a number of reasons. First, when that dictator's government performs poorly, the presence of independent media enables citizens to infer the quality of government and adopt new political attitudes (Enikolopov, Petrova and Zhuravskaya, 2011; Miner, 2012; Stein, 2012). Second, free media also enables dissidents to coordinate protest activity: for instance, newsreels can serve as focal points that encourage protesters to take to the street (Miner, 2012; Hassanpour, 2014; Lohmann, 1994).

However, not all dictators restrict media completely, and in fact, substantial variation in the degree of media freedom exists even among harsh authoritarian regimes (Egorov, Guriev and Sonin, 2009). Given that autocratic incumbents do not easily accept criticism of their actions, why do some of them allow some media freedom? Studies of authoritarian politics provide several possible explanations. First, independent media outlets help authorities deal with "the dictator's dilemma" (Wintrobe, 1998), as they allow the gathering of information on public grievances and on the performance of local officials (Egorov, Guriev and Sonin, 2009; King, Pan and Roberts, 2013; Lorentzen, 2013). Second, informational transparency increases the government's credibility to investors, thus promoting economic growth (Hollyer, Rosendorff and Vreeland, 2014*a*,*b*). Recent theoretical studies suggest that an autocrat can allow some level of media freedom during times of good economic performance, but may be better off increasing censorship when the economy stagnates and public discontent is likely to turn into protest (Edmond, 2013; Guriev and Treisman, 2015). Indeed, VonDoepp and Young (2012) find that, in Africa, media harassment increases if governments are faced with protests and coup plots, while Stein (2012) shows that censored media convinced Brazilians to support the country's military regime throughout its existence from 1964 through 1985.

At the same time, a set of historical cases (e.g., the collapse of socialist regimes in Europe) suggests that revolutions can occur even under full censorship of media and dissemination of aggressive pro-government propaganda (Lohmann, 1994). In contrast, recent events in Venezuela and Russia demonstrate that a regime can handle threats of mass protest nonviolently, even in the presence of independent media outlets and uncensored internet services

(Munger et al., 2015).

In this paper, I argue that some media freedom can actually benefit a dictator. I identify a previously unstudied effect of the exposure to free media on dissidents' decisions to take to the street. While not all autocratic regimes allow at least some degree of media freedom, I suggest that the ones that do, can exploit it in order to suppress political protest. Specifically, I argue that autocrats may be able to blunt the momentum of waves of anti-government protests by staging large pro-government rallies. At first glance, this assertion appears puzzling because dissidents are typically cognizant that the dictator can pay or intimidate citizens to participate in such pro-regime rallies. However, if mobilizing citizens to march in support of the dictator is sufficiently costly, extremely unpopular dictators will find it more cost-effective to spend their resources in other ways. Observing a pro-government rally, citizens will rationally infer that the dictator may be not as unpopular as they had thought and so may revise their estimates of the dictator's popularity upward. However, for citizens who do not observe the pro-government rally directly to make such inferences, they must believe the reports concerning it that they receive. Thus, I argue that an autocrat benefits from partially free media that can report observable events truthfully, but cannot conduct independent journalistic investigations.

To test this hypothesis, I employ covariate-balance propensity score techniques (Imai and Ratkovic, 2014) and a difference-in-differences design to compare cities of Russia that received broadcasts of the independent radio station *Echo of Moscow* with those that did not during the 2011-2012 protests in Russia. Studying the relations between actions of media, of dissidents, and of government is challenging because these relations are highly endogenous. Incumbents can affect the level of media freedom and so can complicate the coordination of dissidents, while the latter can protest against censorship and demand media independence.

Nonetheless, unique features of the political and media landscape in Russia make it possible to attempt identification of a causal relationship between media freedom and protest. First, while, media freedom is restricted in Russia, *Echo of Moscow* was allowed to broadcast quite freely for several possible reasons. Because the radio station was owned by the

state company *Gazprom-Media*, businesses were not afraid to use it for advertising despite its critical coverage of the authorities. Thus the radio station was commercially successful and received many regional franchise requests. The board of directors set an informal threshold for the minimum regional radio audience size necessary for the company to accept a franchise request, and this size determined the revenues earned by the station from commercials. Thus, in contrast to a typical independent political outlet, the local availability of *Echo of Moscow* was subject to socio-economic and not political determinants. I confirm this empirically by showing that the only statistically significant predictors of the radio station's presence in a region are socio-economic and geographic. This result partially justifies my assumption that exposure to this radio station was as good as as-if random, conditional on the propensity of *Echo of Moscow* to enter local markets.

Second, the Russian government drastically changed its tactics toward the opposition in the middle of this wave of protests, whose scale and intensity grew rapidly during the last month of 2011. Nonetheless, before the early 2012 appointment of hard-liner Vyacheslav Volodin to the position of vice-head of the Kremlin's administration, the authorities preferred not to focus on the unrest and to instead treat it as a minor event.[1] This soon changed drastically. The intensity of protest activity declined as the Presidential elections of March 2012 approached, the number of protesters decreased significantly. As survey data show, only determined radicals continued to take to the streets to protest (Smyth et al., 2015). The Kremlin's new cardinal Volodin switched the government's mild tactics to more aggressive ones. On the day of planned nationwide anti-government demonstrations (February 4th), a massive pro-government rally was organized on *Poklonnaya* Hill in Moscow (Smyth, Sobolev and Soboleva, 2013). As a major source of information for protesters, *Echo of Moscow*, emphasized that this rally was much larger than the anti-government demonstrations occurring simultaneously.[2] Subsequently, rumors circulated that many of the tens of thousands

[1] See the BBC article on how major Russian TV channels reported on protests: http://www.bbc.com/russian/russia/2011/12/111207_russia_protests_media_coverage.shtml

[2] See examples of the Echo of Moscow radio station's reports on the pro-government rally: www.echo.msk.ru/news/855689-echo.html,http://www.echo.msk.ru/news/855664-echo.html , http://www.echo.msk.ru/news/855664-echo.html

of citizens rallying for the government were actually employees of state-owned enterprises and organizations who had been pressured to participate rather than sincere supporters of President Vladimir Putin. Being a radio station, *Echo of Moscow* was not a producer of investigative journalism and so establishing the approximate number of genuine Putin supporters participating in the rally from its reports was difficult.

In this paper, I test whether credible reports on the relative sizes of pro-government and anti-government demonstrations in the absence of detailed journalist investigations produced by independent media appeared to discourage dissidents from taking to the streets. To do so, I compare the number of protests and the protest turnout in those regional capitols of Russia exposed to *Echo of Moscow* broadcasting with those that were not but which nonetheless satisfied or were close to satisfying the requirements needed for acceptance of a franchise request. Overall, most of the regional capitols experienced reductions in the number of protests and in protest. However, whereas those regional capitols with no exposure to *Echo of Moscow* saw mean number of protests declined from 2.9 to 1.7 and mean protest turnout decrease from .73 to .54 participants per thousand citizens, those with exposure experienced a 3.9 to 1.6 decline in mean number of protests and a a .88 to .42 participants per thousand citizens decline in mean protest turnout. When adjusted for the propensity scores, results suggest that in cities with no exposure to *Echo of Moscow* number of protests and protest turnout decreased on average by 1.5 protests and by .21 participants, respectively. In capitols exposed to *Echo of Moscow* number of protests and protest turnout decreased on average 3 protests and by .57 participants per thousand citizens, respectively.

Overall, the results suggest that when reporting on a government that seeks to create an "image of invincibility" (Magaloni and Wallace, 2008), independent media outlets can unintentionally strengthen the dictator's position. Such media outlets can effectively play a "bad joke" on the opposition, because they can discourage moderates from participating. Some scholars of Russian politics suggest that among the major reasons for the defeat of the resistance campaign was the fact that after the Presidential elections (and especially after the start of *the Bolotnaya Square* case)[3] moderates left the protest movement (Volkov, 2012).

[3] A criminal case by the Russian Investigative Committee on the counts of alleged massive riot and alleged

Efforts to create an image of invincibility can be less effective in the absence of credible media outlets. This may explain why Muamar Gadaffi's regime in Libya and the soviet government in the late years of the USSR were unable to awe opposition activists by means of large-scale pro-regime rallies.[4] In both cases, most activists did not take the reports on such rallies broadcast by propaganda sources very seriously (Morris, 2014).

This paper contributes to several literatures. First, it speaks to the literature on the political mobilization (Miner, 2012; Adena et al., 2014; Peisakhin and Rozenas, 2014; Yanagizawa-Drott, 2014) and persuasion (Enikolopov, Petrova and Zhuravskaya, 2011; Gehlbach and Sonin, 2014) effects of media. The studies closest to my research are Yanagizawa-Drott (2014) and Peisakhin and Rozenas (2014). The former investigates the effect of state radio propaganda on casualties of the genocide in Rwanda in 1994. The latter finds that the availability of Russian analog television signals raised electoral support for pro-Russian parties and candidates in the 2014 presidential and parliamentary elections in the Ukraine. In contrast to studies that largely focused on the effects of biased news from state-controlled media, I show that sometimes credible reports sent by independent media outlets can be an even more efficient instrument to discourage opposition than can state propaganda.

Second, the paper speaks to the literature on the role that free media plays in autocracies. Studies focus primarily on the ways that autocrats can use free media to increase their regime's performance. They do it generally via gathering information on low-level officials (Egorov, Guriev and Sonin, 2009; King, Pan and Roberts, 2013) or by producing transparent information on the state of affairs and thus reducing the risk for capital investment (Hollyer, Rosendorff and Vreeland, 2014*a*,*b*). These studies assume a trade-off between the benefits of the free information flow and increased risks of social unrest. I find that this relationship is not always zero-sum. Under certain conditions, increased media freedom can be associated with a lower risk of mass protest.

Third, this study is also related to the literature on the evolution of strategies of authori-

violence against police during the "March of the Millions" on May 6, 2012.

[4]See, for example, news on a pro-soviet government rally (February, 23th, 1991): http://www.newizv.ru/society/2012-02-24/159699-moskva-mitingovaja.html

tarian survival (Magaloni and Wallace, 2008; Munger et al., 2015). Recent studies of Guriev and Treisman (2015) and Gunitsky (2015) find autocratic regimes of the 21st century to be less violent than their predecessors. In the new century, electoral falsifications, bribing and censoring the private press or corrupting online bloggers are cheaper and more efficient means of bolstering the regime's legitimacy than classic repressions. My results are in line with this account. In fact, Russian authorities were able to reduce the number of people taking to the street without any significant cases of violence.[5] Journalists, public commentators, and even leaders of the opposition emphasized the exceptional politeness of policemen.[6]

Finally, the contribution of this paper is limited in scope. First, it does not offer a general theory of collective action but only studies a role of partial media freedom in political survival of autocrats. Inevitably, it ignores the "free-rider" problem and focuses only on the problem of coordination – not because the former " is less important, but because the role of media is more pronounced in solving the latter. Empirically, I compare the success of protests in the regional capitols exposed and those not exposed to independent media broadcasting. Second, it does not argue that the Russian government strategically used *Echo of Moscow* to forestall anti-regime collective actions in 2011-2012. Instead, it suggests that, under certain conditions, exposure to credible reports of independent media can discourage potential protesters from taking to the streets.

The remainder of the paper is organized as follows. Section 2 contains clarifications and a numerical example of the theory. Section 3 provides background information. Section 4 describes the data, hypotheses and the identification strategy. Section 5 presents the empirical results and addresses potential concerns and factors that could bias the results. Section 6 concludes.

[5]See, for example, the report on the major anti-government demonstrations in Moscow (Bolotnaya Square, February, 4th, 2012). At the end of demonstration, organizers thank the police for the job and their politeness: http://www.ridus.ru/news/20267/

[6]The only significant exception was the *Bolotnaya* Square demonstration (May 6th, 2012). However, this protest happened after the time period that is in focus of my study.

2. THEORY AND NUMERICAL EXAMPLE

In this section, I develop a toy example of how independent and state-controlled media affect dissidents' beliefs on incumbent's popularity using a Bayesian approach. I limit my to a case where the incumbent is able to organize a large-scale pro-government rally. If the rally is not a big one, dissidents cannot infer whether anyone else participated except for pro-regime stalwarts, and thus it makes no sense for him to spend his resources on it. I consider a non-polarized society, i.e., the majority of citizens are neither radical dissident, nor pro-regime stalwarts but are somewhere in between. Thus, if a large-scale rally takes place, dissidents learn that moderates also took to the street. The question that remains is whether moderates are true-supporters of the regime or are, in fact, bribed or coerced to participate.

In the every day life of autocratic countries, the extent of media freedom depends highly on the incumbent's decisions. In this section however, I simplify the case by assuming the exogenous nature of media freedom. This assumption is consistent with my identification strategy that suggests conditional independence of the exposure to independent media.Moreover, the results hold if the incumbent is allowed to suppress media strategically, in case the suppression is costly. I address these issues in more detail in the Conclusion.

Setup. Consider a game with three players: *Dissident* (strategic), *Incumbent* (non-strategic), and *Moderate* (non-strategic). *Incumbent* organizes a pro-regime rally. *Moderate* can either show up at the rally or not show up, $a = \{S, \neg S\}$. If *Moderate* supports *Incumbent*, she always shows up at the rally. If she does not support *Incumbent*, the latter may propose a bribe sufficient in size to persuade her to show up despite her lack of enthusiasm for *Incumbent*. She accepts the bribe with probability $P(bribe) < 1$. *Dissident* does not observe whether or not *Moderate* supports the incumbent, but he has a prior probability estimate of this, $P_{prior}(support) < 1$.

Since *Dissident* knows that *Moderate* will participate in the rally if either (a) she supports the *Incumbent* or (b) she does not support the incumbent but has accepted a bribe to participate, *Dissident* also has a prior estimate of the probability that *Moderate* will participate:

$$P_{prior}(S) = P_{prior}(support) + [1 - P_{prior}(support)] \times P(bribe).$$

The protest succeeds with a probability of one minus the probability that *Moderate* supports the *Incumbent*, $1 - P(support)$. The expected utility of *Dissident* from the protest is:

$$U_d = [1 - P_{prior}(support)] \times A - P_{prior}(support) \times C,$$

where A is a victory prize, and C are the costs of failure (e.g., retribution).

Suppose now that *Dissident* can directly observe if *Moderate* showed up at the pro-government rally. *Dissident* follows Bayes rule in updating his beliefs on *Incumbent's* popularity, $P(support)$:

$$\begin{aligned} P(support|S) &= \frac{P(S|support) \times P_{prior}(support)}{P_{prior}(S)} = \\ &= \frac{P(S|support) \times P_{prior}(support)}{P(S|support) \times P_{prior}(support) + P(bribe) \times [1 - P_{prior}(support)]} \\ &= \frac{P_{prior}(support)}{P_{prior}(support) + P(bribe) \times [1 - P_{prior}(support)]}. \end{aligned}$$

Given that, by assumption $P(bribe < 1)$ and $P_{prior}(support) < 1$,

$$\frac{P_{prior}(support)}{P_{prior}(support) + P(bribe) \times [1 - P_{prior}(support)]} > P_{prior}(support),$$

i.e., if *Dissident* observes that *Moderate* showed up at the rally, he updates his estimates of *Moderate's* support for *Incumbent* upwards. Even though there is a positive probability that moderate has been bribed to attend the rally, *Dissident* still increases his estimate of the regime's popularity after observing that *Moderate* took to the street.

Now suppose that *Dissident* does no observe the rally directly but instead receives a signal from the media. I assume that the media may either be "biased" — in which case it always reports that *Moderate* rallied ($P_{biased}(signal = S) = 1$), whether she did or not — or "unbiased" — in which case it reports the truth with probability c. Type of media is common knowledge. One can think that c measurers the media's credibility. Clearly, if the media is

biased, *Dissident* will pay no attention to these reports:

$$P(S|signal = S) = \frac{P_{biased}(signal = S|S) \times p_{prior}(S)}{P_{biased}(signal = S)} = \frac{1 \times p_{prior}(S)}{1} = p_{prior}(S).$$

However, if the media is unbiased, she will update her beliefs as follows:

$$\begin{aligned} P(S|signal = S) &= \frac{P_{biased}(signal = S|S) \times p_{prior}(S)}{p(signal = S)} \\ &= \frac{c \times p_{prior}(S)}{c \times p_{prior}(S) + (1-c)(1-p_{prior}(S))} \end{aligned}$$

This equation allows conditions to be identified when $P(S|signal = S) > p_{prior}(S)$:

$$\begin{aligned} \frac{c \times p_{prior}(S)}{c \times p_{prior}(S) + (1-c)(1-p_{prior}(S))} &> p_{prior}(S) \\ c \times p_{prior}(S) &> p_{prior}(S) \times [2c \times p_{prior}(S) + 1 - c - p_{prior}(S)] \\ c &> 2c \times p_{prior}(S) + 1 - c - p_{prior}(S) \\ 2c[1 - p_{prior}(S)] &> 1 - p_{prior}(S) \\ c &> \frac{1}{2} \end{aligned}$$

This result shows that a media report will be more likely to lead to an increase in the belief that *Moderate* actually took to the street if the credibility of the media is relatively high. Given the signal from the media, *Dissident* calculates the posterior probability that *Moderate* supports the incumbent by adjusting for media freedom:

$$
\begin{aligned}
P(support|signal = S) &= P(support|S) \times P(S|signal = S). \\
&= \frac{P_{prior}(support)}{P_{prior}(support) + P(bribe) \times [1 - P_{prior}(support)]} \\
&\times \frac{c \times p_{prior}(S)}{c \times p_{prior}(S) + (1-c)[1 - p_{prior}(S)]}
\end{aligned}
$$

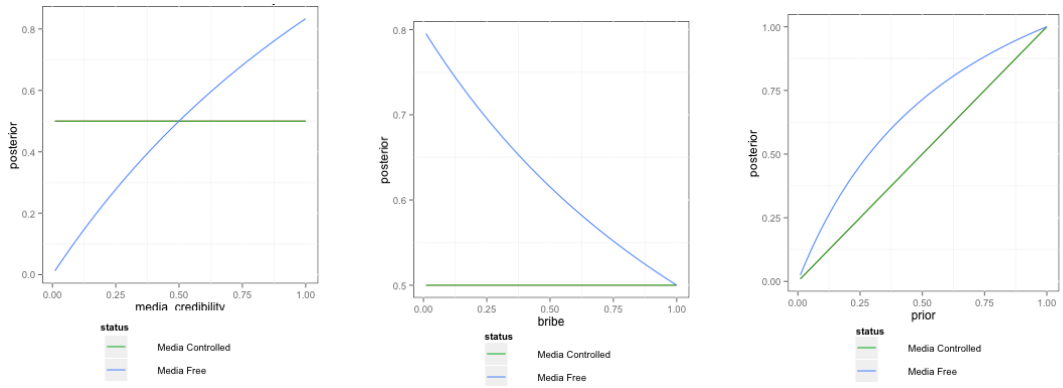
In the next section I show how $P(support|signal = S)$ relates to $P_{prior}(support)$, $P(bribe)$, and c.

Comparative Statics. Consider how the extent of media freedom affects *Dissident's* posterior beliefs on *Incumbent's* popularity with respect to his prior beliefs $P_{prior}(support)$, the probability that *Moderate* accepts bribe $P(bribe)$, and the credibility of the independent media outlet c. I set other parameters to particular values for the sake of simplicity.

Figure 1a shows the comparative statics for $P(support|signal = S)$ with respect to the credibility of the independent media outlet given $P_{prior}(support) = 1/2$ and $P(bribe) = 1/5$. Two main sources can explain the credibility of independent media; (lack of) professionalism, and dependency from opposition leaders. First, nobody believes even independent reports if journalists are known to be corrupt or unprofessional. Second, dissidents do not trust reports if the media outlet plays up revolutionary leaders who are ready to strike at any cost. The figure depicts that the posterior support is higher under media freedom only if the level of the media's credibility is greater then $1/2$.

This result can also be derived in a general case:

$$
\begin{aligned}
P(support|signal = S) &> P_{prior}(support) \Leftrightarrow \\
\frac{P_{prior}(support)}{p_{prior}(S)} \times \frac{c \times p_{prior}(S)}{c \times p_{prior}(S) + (1-c)[1 - p_{prior}(S)]} &> P_{prior}(support) \Leftrightarrow \\
1 - P_{prior}(S) &> \frac{1-c}{c}[1 - P_{prior}(S)] \Leftrightarrow \\
c &> \frac{1}{2}.
\end{aligned}
$$



(a) Media credibility (b) Size of the bribe (c) Prior beliefs

Figure 1: Comparative statics

As long as the media is credible (*c* > 1/2), *Dissident* raises his estimate of support for the *Incumbent* when he receives a report that *Moderate* rallied for the *Incumbent* from the unbiased media.

Figure 1b shows comparative statistics for $P(support|signal = S)$ with respect to $P(bribe)$ given $P_{prior}(support) = 1/2$ and c=1/8. Basically, $P(bribe)$ reveals the size of *Incumbent's* budget. If *Incumbent* has enough resources, he can propose a huge bribe, ensuring that *Moderate* always accepts it. Thus, as *Moderate* always shows up (either due to her support or due to the bribe), *Dissident* learns nothing about Incumbent's popularity even if media is independent.

Figure 1c shows the comparative statics for $P(support|signal = S)$ with respect to $P_{prior}(support)$ given $P(bribe) = 1/5$ and $c = 1/8$. The figure outlines several important results. First, except for the extreme cases when $P_{prior}(support)$ equals to 1 or 0, the independent media generates a higher value of posterior belief in *Incumbent's* popularity than the biased media. Second, the size of the effect of the independent media ($P_{posterior}$ - P_{prior}) peaks when the *Dissident*'s uncertainty on *Incumbent's* popularity is the highest, i.e., $P_{prior}(support) = 1/2$. Finally, in a particular number of cases, the independent media can crucially change *Dissident's* behavior as it transforms his prior beliefs that *Incumbent* is unpopular ($P_{prior}(support) < 1/2$) to the opposite posterior beliefs ($P(support|signal = S)$), while state-controlled media does not change $P_{prior}(support)$

Numerical example. Following is a numerical example that illustrates this main result.

Let $P_{prior}(support) = 1/3$, $P(bribe) = 1/5$ and $c = 1/8$, then

$$P(support|S) = \frac{1 \times \frac{1}{3}}{1 \times \frac{1}{3} + \frac{1}{5} \times \frac{2}{3}} = \frac{1}{3} / \frac{7}{15} = \frac{1}{3} \times \frac{15}{7} = 5/7.$$

If media is controlled by the state, then $P(S|signal) = \frac{1 \times 7/15}{1} = \frac{7}{15}$. Thus, *Dissident* does not change his beliefs:

$$\begin{aligned} P(support|signal = S) &= P(support|S) \times P(S|signal = S). \\ &= \frac{5}{7} \times \frac{7}{15} = \frac{1}{3} = P_{prior}(support) \end{aligned}$$

If media is independent, it reports on the rally with probability

$$\begin{aligned} P(S|signal = S) &= \frac{.8 \times 7/15}{.8 \times 7/15 + .2 \times 8/15} \\ &= \frac{7}{9} \end{aligned}$$

Dissident changes his beliefs:

$$\begin{aligned} P(support|signal = S) &= P(support|S) \times P(S|signal = S). \\ &= \frac{5}{7} \times \frac{7}{9} = \frac{5}{9}. \end{aligned}$$

Thus, after observing a report from state-controlled media *Dissident* believes that *Incumbent* is popular with probability $1/3 < 1/2$, but with probability $5/9 > 1/2$ if media is independent. This example shows that, under certain conditions, independent media may indeed crucially change *Dissident's* beliefs about *Incumbent's* popularity.

3. BACKGROUND

3.1. Brief history of the media in Post-Soviet Russia

Vladimir Putin's crusade against Russian media. According to the Freedom House Foundation, the media have not been free in Russia since at least 2003.[7] Except for a limited number of newspapers and magazines, all significant media outlets in Russia were either directly controlled by the state or were owned by oligarchs from Vladimir Putin's inner circle (Gehlbach, 2010*b*). One of Putin's main concerns upon becoming president was gaining control over the major media outlets, particularly TV channels. During Yeltsin's rule, major media empires were under the control of a few oligarchs who actively used them for lobbying their own business and political interests.

Within a short period of time, Putin was able to seize the "commanding heights" of the media industry (Gehlbach, 2010*b*). His most significant action was the attack on the *ORT* TV station of Boris Berizovsky and the *Media-Most* corporation of Vladimir Gusinsky. After the selective application of tax and criminal law to the company, the invasion of its premises by tax police, the direct pressure of the Ministry of Press, Radio, and Television, and also boardroom intrigue, *Media-Most* collapsed. The leading source of non-state broadcasting, and the only privately-owned TV station with a national reach, became the property of the government-controlled energy company *Gazprom* (Becker, 2004). The new owner completely changed the staff and editorial policy of the channel to become more supportive toward the government. Similar things happened to Boris Berezovsky's *ORT*, and both oligarchs were eventually forced into exile.

Exception to the rule: *Echo of Moscow*. As *Echo of Moscow* was a part of *Media-Most*, the radio service also became the property of *Gazprom*. However, the editorial policy of the station and the team of journalists within the company did not change. Being the oldest post-soviet media outlet, and known worldwide as one of Russia's last bastions of free media,

[7] See the Freedom House reports on the media in Russia:
https://freedomhouse.org/country/russia#.VfITq51Viko

the radio service was allowed to continue broadcasting to audiences across Russia for the following possible reasons.

First, as Editor-in-Chief Alexei Venediktov has pointed out, *Echo of Moscow* serves as a useful tool to refute Western criticism of Russia's lack of freedom of speech, as the Kremlin points to *Echo of Moscow* whenever countries in the West criticize press freedom in Russia (*Economist*, February 12, 2012).[8]

A second reason for the Kremlin's tolerance of Echo of Moscow was that it acts as a safety valve for discontented groups. . Even though the station is held in high regard by the country's intelligentsia, it has little influence over the voting masses (*Der Spiegel, February 17, 2012*).[9] Two facts supports this claim: first, according to *TNS Gallup*, the outlet's audience is extremely loyal. For more than half of its listeners, *Echo of Moscow* is the only - or at least the major - radio station (*TNS Group Report 2006*).[10] In addition, the radio station itself might not be a factor in affecting political preferences; instead, its audience already consists of those who hold negative attitudes toward the government. Alternatively, the Kremlin's tolerance could also be explained by the relatively small size of the radio station's audience compared to those of TV channels.[11]

Given the existing results in the political economy literature, independent media outlets may help to fill the informational vacuum generated by incentives of subordinates to not report bad news to an autocrat (Wintrobe, 1998). For instance, several journalists have mentioned that the highest-level politicians in Russia are among *Echo of Moscow*'s regular listeners(Barabanov, 2009).

Finally, the informal relations between the station's Editor-in-Chief, Alexey Venediktov, and Vladimir Putin may be the basis of the perception that *Echo of Moscow* is untouchable. In

[8] http://www.economist.com/blogs/easternapproaches/2012/02/media-russia

[9] http://www.spiegel.de/international/world/controlling-the-press-echo-of-moscow-under-pressure-in-russia-a-815731.html

[10] http://www.myshared.ru/slide/282007/

[11] Indeed, as the data shows, the exposure of a region to *Echo of Moscow* has not shown a correlation with any electoral outcomes for the last 15 years. Enikolopov, Petrova and Zhuravskaya (2011) find that the presence of the independent TV channel de- creased the aggregate vote for the government party by 2.5 percentage points and increased the combined vote for major opposition parties by 2.1 percentage points. When comparing these results to my findings, one should take into account that the audience size of *Echo of Moscow* is tens of times smaller.

a series of interviews, Venediktov has mentioned that, in the past, he had engaged in hours of informal talks with Vladimir Putin. In addition, Putin's press secretary, Dmitry Peskov often provides the station with exclusive commentaries (Reuters, July 30, 2015).

Although the exact reasons for *Echo of Moscow*'s survival are unknown, given that it is an anti-government radio station, there is a key difference between this radio station and other independent media outlets that specialize in political news. While most of the other outlets suffer from a lack of profits and must depend on wealthy donors (e.g., *Novaya Gazeta* newspaper and *The New Times* magazine depend on Alexander Lebedev and Irena Lisnevskaya respectively), *Echo of Moscow* is an exceptionally profitable company and has paid dividends to its shareholders every year since 1998. In contrast, *Finam.FM* radio station, founded in 2008, rapidly acquired a sizable audience in Moscow, but then, in 2013, the authorities exerted pressure on the station's owners to discontinue three of its programs. Eventually, due to these pressures and insufficient revenues, the owners ceased broadcasting altogether and sold the outlet.[12]

Because businesses were not afraid to use *Echo of Moscow* for advertising and because the station was commercially successful, it received franchise requests from most of the other regions in Russia. Consequently, the station's board of directors then set the informal minimum "entrance requirements" for the acceptance of regional franchise requests.[13] Thus, in contrast the a typical independent political outlet, the regional presence of *Echo of Moscow* was subject to economic, rather than political determinants. By the beginning of the most recent wave of post-electoral protests, 42 Russian cities were exposed to *Echo of Moscow*'s broadcasting. This exposure was most likely random among the cities that met *Echo of Moscow*'s entrance requirements for franchises at least somewhat closely.

The typical contract between *Echo of Moscow* and regional broadcasters states that the latter can use daytime hours for ads, announcements and local programs, but that evening and morning air time belongs to the Moscow office. This fact crucial for this study, as most reports on the *Poklonnaya Hill* rally were delivered during the evening broadcast of 4th Febru-

[12] http://lenta.ru/news/2013/11/05/finam/

[13] According to the author's interviews with the journalists and managers of *Echo of Moscow*

ary 2012. In fact, according to records of that evening's broadcast, the radio station reported on the size of both the pro-government and the anti-government demonstrations during each news release from 6 pm to 10 pm.[14] The numbers of participants included in these reports were provided by the demonstrations' organizers, the police, radio station journalists, and independent experts. All of these reports suggested that more participants took to the street in order to support Vladimir Putin than to demonstrate against him. While the true scale of the two collective actions is now unknown, the listeners could be assumed to trust these reports, as journalists of *Echo of Moscow* were critical of the government and, thus, unlikely to be incentivized to report the attendance as favorable toward Putin.

Importantly, that according to the survey of the protesters against the government, non-state controlled radio stations – and *Echo of Moscow* in particular – were a main source of political information for them.

Report, but do not investigate: free media in an unfree environment. An important feature of Russia's media environment is the absence of the means required to conduct investigative journalism. Even though *Echo of Moscow* and other independent media are allowed to criticize the government and report on anything that might interest their audiences, journalists lack the opportunities, rights, and legal protections needed to undertake effective investigations.

David Remnick's prominent article on *Echo of Moscow* underlines that although the station is able to broadcast opinions critical of the government, it falls short in conducting thorough investigations. As an example, he cites an interview with one of Russia's most famous journalists and commentators, Yulia Latynina, who admits that investigative work is nearly impossible in Russia:

> *"The basic problem is that you cannot really expect, in a regime like that of Marcos or Duvalier, to get solid information into your hands about bank accounts, ... Everyone looks the other way. This is not a dictatorship — no one should exaggerate and compare it to the Soviet Union — but in an authoritarian regime you can't conduct an effective*

[14] See examples of these reports in the Online Appendix

investigation the way you can in a democratic regime." (*The New Yorker, September 22, 2008*).

This opinion meshes closely with Gehlbach's (2010*a*) account, suggesting that media freedom in Russia is at the intermediate level. The latter is essential for the empirical strategy of this study, as the theory suggests that, without full freedom of the press, citizens could not infer whether moderates genuinely supported the incumbent or were bribed.

3.2. Russian protests 2011-2012

The meetings in protest of the falsification of the parliamentary and presidential elections of 2011-12 were the largest in Russia since the collapse of the Soviet Union in 1991. The largest of these protests took place in the months following the parliamentary elections. The aftermath of the 2011 elections was in sharp contrast to that of previous elections. Although most observers viewed the levels of fraud in the 2011-2012 and the 2007-2008 elections as roughly equivalent, the latter resulted in no mass protests. Even experienced leaders of the opposition expected the ruling party, *United Russia*, to receive the majority of votes and so foresaw no social unrest, especially on such a large scale. However, *United Russia*'s unexpectedly low official results for (49% of the vote) constituted the shock that triggered the mass protests (Hale, 2011).

The scale of the protests had been increasing since the parliamentary elections, with at least five thousand Muscovites taking to the streets in the early evening of December 5, 2011, to voice their dissatisfaction with the results of the parliamentary elections. In the following two months, Putin's Russia experienced the unexpected rise of the opposition movement. Six days after the *Chistiproudny Boulevard* meeting, at least sixty thousand protesters rallied in *Bolotnaya Square*. Two weeks later (on December 24,) this number had increased to around one hundred twenty thousand. These protests occurred not only the capitol cities of Moscow and Saint-Petersburg, but also in most of the regions. Figure 2 depicts the number of anti-government demonstrations from December 2011 until May 2012.

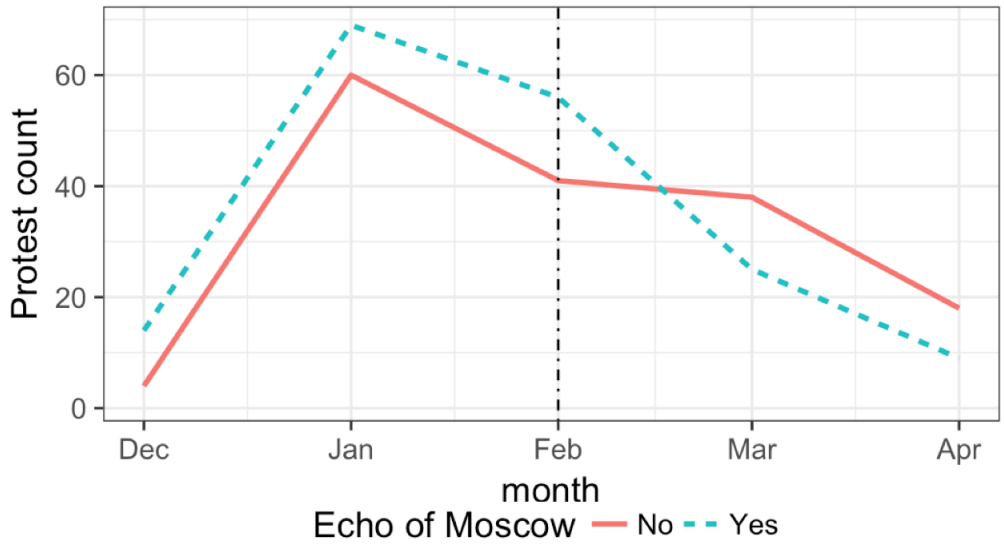


Figure 2: Number of protests in Russia's cities

More than 500 mass protests took place in almost all Russia's regions.[15] With the day of the presidential election approaching, however, the number of people taking to the streets in protest began to decrease, and the number of anti-government protesters had been declining steadily ever since the parliamentary elections.

Figure 2 also shows the patterns of protest intensity in cities that were exposed and were not exposed to *Echo of Moscow* broadcasts. As can be seen, before the major pro-government rally on February 4, these patterns were essentially the same, although the baseline amount of protests was higher for the first group (i.e., those exposed to *Echo*'s broadcasts). However, following the rally, the patterns changed. While the number of protests in the cities that were exposed to the station's broadcasting fell dramatically, this number remained almost constant in the other cities. Then, following the announcement of Vladimir Putin's victory in Presidential elections in March, 2012, protests faded away everywhere.

[15] Based on the author's calculations

4. HYPOTHESES, DATA AND EMPIRICAL STRATEGY

4.1. Hypotheses

The theory developed in this paper is consistent with a belief that, in general, the presence of independent media increases the ability of the opposition to mobilize dissidents. However, it also adds a significant nuance: if the incumbent is able to organize a large-scale support rally, then independent media reports can reduce both the probability of following protests and the size of the protest turnout.

Thus, I test two main hypotheses:

1. After a pro-regime rally takes place, *the size of the protest turnout* declines to a greater extent in cities exposed to independent media reports about the size of the pro-regime rally than in cities not exposed to such independent media reports;

2. After a pro-regime rally takes place, *the number of anti-government protests* declines to a greater extent in cities exposed to independent media reports about the size of the pro-regime rally than in cities not exposed to such independent media reports.

4.2. Data

Outcomes of interest: Protest count and protest size. While the 2011-2012 protests in Russia were a reaction to a single event (the falsification of the parliamentary election results), their scale and frequency varied greatly across time and city. I measure this variation using a protest-event dataset based on the reports from the *NaMarsh.ru* website, which aggregates information drawn from various sources: a network of regional correspondents, the printed press, and online newsreels. Despite the fact that the website is maintained by opposition groups and thus is potentially biased in its reporting of protest events, scholars of Russia's politics believe that the reports it contains accurately capture temporal and spatial protest trends and that it corresponds with national and regional public opinion polls gauging support for and activism in protests (Lankina and Voznaya, 2015). I validate the *NaMarsh.ru* data with reports from the archive of the Russian Institute for Collective Action (ICA). This NGO

publishes regular updates about individual opposition protest events across Russia, mostly those involving social claims or those linked to independent trade unions, anti-globalist movements, and other non-mainstream left-wing groups.[16] Although the total number of reports by ICA is smaller than that of *NaMarsh.ru*, these data are widely used in studies of Russian politics (Clément, 2008; Teague, 2011; Robertson, 2010, 2013).

While the complete dataset records more than 7400 opposition events across Russia from 2007 to 2017, I only use data concerning protests that took place within forty days of the February 4, 2012, pro-government rally on *Poklonnaya Hill* in Moscow; there were 251 and 145 of these before and after the date, respectively. Because of the paucity of Russian city-level socio-economic data in Russia, I consider only *regional capitols* that experienced protests in the forty-day time span. That almost eighty percent of *Echo of Moscow*'s branches were located in capitols of regions at that time partly justifies that choice. I measure a change in protest turnout for each city as the difference between the largest opposition protest before and the largest opposition protest after the pro-regime rally on *Poklonnaya Hill*, weighted by the city's population . The forty-day time span was chosen so that demonstrations which took place on the major days of the protest (December 24*th* and March 5*th*) appear in the sample. To obtain the second outcome of interest, I calculate the difference in the number of protests in a city before and after the rally on *Poklonnaya Hill* within forty-day time span. Aside from the small amount of data employed directly in testing the hypotheses, I used additional data points to check the assumption of parallel trends

Explanatory variable: Exposure to *Echo of Moscow* reports. I use a binary variable to indicate the exposure of the city to *Echo of Moscow* reports on the day of a major pro-government rally, information I collected from WebArchive.org,which contains a copy of the radio station website (echo.msk.ru) for the 2011-2012 protest period. At that time, *Echo of Moscow* broadcasted in 42 cities, nine of which (Kinesma, Obninsk, Pereslavl'-Zalesskiy, Rybinsk, Severodvinsk, Tol'jatti, Vyborg, Zelenzogorsk, Zeleznogorsk-Ilimskiy) were not regional capitols and so are not being considered in my study. Because the franchise request approach does not

[16] http://www.ikd.ru/taxonomy/term/39

	Echo of Moscow		Total
	-	+	
No Protest	6	0	6
Protest	43	33	76
Total	49	33	82

Table 1: Exposure of regional capitols to *Echo of Moscow* in Russia

apply to the city of Moscow, I excluded it from my analysis as well.

Table 1 shows that 76 regional capitols experienced protests in the forty-day time span, and 33 of them were exposed to *Echo of Moscow*. Anti-government demonstrations occurred in 43 out of 49 of the regional capitols lacking *Echo of Moscow* broadcasting.

4.3. Empirical strategy

How to test the validity of rules in accepting franchise requests. As the first stage of my analysis, I check whether the exposure to *Echo of Moscow* was most likely as good as random among the cities that met *Echo of Moscow*'s entrance requirements for franchises – that is, if the actual exposure of Russian cities to the radio station broadcasting is consistent with the rule described by its management in accepting franchise requests. To account for as many potential confounders as possible I employ LASSO selection approach, collecting a broad set of covariates to model the probability of a city's being exposed to *Echo of Moscow*. Most of the covariates come from the Russian State Agency of Statistics (*GosKomStat*). To identify the economic factors determining the station's local presence, I use local GDP per capita, private capital flows, the unemployment rate, average wage, economic inequality, the size of labor force, proportion of educated people in the labor force, and the number of automobiles per capita. I also use available geographic variables that could also have contributed to the cost of entry, including the distance of the city from Moscow and the mean January and July temperatures (as of 2010).[17]

In addition, I include a set of socio-demographic indicators to account for the size of the potential radio audience and its consumption behavior: local population size, the share of adult Internet and personal laptop users, the share and density of fixed and mobile phones

[17] http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/en/main/

coverage.[18]

One of the challenges of my approach is that local exposure to the *Echo of Moscow* radio station could also have been subject to political determinants. In such case, the causal effect cannot be estimated if both exposure to the station's broadcasts and the scale of protests were functions of local political regimes. To mitigate this problem, I obtained from the Central Electoral Committee of Russia the official electoral scores of the ruling *United Russia* party in parliamentary elections (2003, 2007, 2011) and the vote shares of Vladimir Putin and Dmitry Medvedev in the presidential rallies of 2004 and 2008, respectively. [19] In addition, I also employed estimates of electoral fraud in the 2011 parliamentary elections presented from Kobak, Shpilkin and Pshenichnikov (2012).

Identification. The identification strategy of this study is based on the assumption that exposure to *Echo of Moscow*'s broadcasts was most likely as good as if random among the cities that met *Echo of Moscow*'s entrance requirements for franchises at least somewhat closely. As the actual indicators that were used by radio station management to accept franchise requests were, and still are, to estimate the propensity of a city to meet *Echo of Moscow*'s entrance requirements for franchises, I use city-level predictors of local exposure to *Echo of Moscow*. If the quasi-randomness assumption is valid, then conditional on a city's propensity to be exposed to *Echo of Moscow*, the causal effect τ can be recovered with a difference-in-differences estimator:

$$\hat{\tau}|propensity = \{E[Y(1)|D=1] - E[Y(0)|D=1]\} - \{[E[Y(1)|D=0] - E[Y(0)|D=0]\},$$

where:

$E[Y(1)|D=1]$ is the expected size of the protest in a city with *Echo of Moscow* after the pro-regime rally,

$E[Y(0)|D=1]$ is the expected size of the protest a city without *Echo of Moscow* after the

[18] These date were collected from "Electronic Russia" Institute report: http://eregion.ru/en/full-report

[19] http://cikrf.ru/eng/lawRF/elect_subj_2008.html

rally,

$E[Y(1)|D = 0]$ is the expected size of the protest in a city with *Echo of Moscow* before the rally,

$E[Y(0)|D = 0]$ is the expected size of the protest in a city without *Echo of Moscow* before the rally.

The same estimator can be used to recover causal effect of media reports on the protest turnout.

5. Results

5.1. Does a city hear *Echo of Moscow?*

In this section, I identify factors that determined the local availability of *Echo of Moscow*, i.e., if actual exposure of regional capitols to the stations was consistent with the rule followed by its management in accepting franchise requests. As the potential confounders are abundant and the number of regional capitols is relatively small, I employ a LASSO approach (Tibshirani, 1996) to select the predictors of the station's urban presence. LASSO regression minimizes the sum of squared errors with a bound on the sum of the coefficients' values. Because the results of LASSO-modeling depend on initial values, I bootstrap the LASSO estimators of the regression parameters with one thousand bootstraps and retained those variables that were selected in at least 95% of the estimated models (Chatterjee and Lahiri, 2011).

Table 2 display selected predictors resulting from the estimated LASSO models. It shows the selection frequencies of each significant predictor, including regional capitol's population, the mean temperature in January, and the distance of the capitol to Moscow. A capitol city's population could be regarded as a valid proxy for the size of the *Echo of Moscow*'s audience. Moreover, a regional capitol's distance from Moscow also seems to be a reasonable predictor, as it can be partly associated with the cost of organizing joint broadcasting of the regional company and the central office of *Echo of Moscow*. Finally, the importance of the temperature in January may be related to the non-linearity in statistical relations between

	Exposure to *Echo of Moscow* Frequency of selection
Population of Region Capitol 2009	963
Regional Capitol Distance from Moscow	980
Temperature in January 2009	961
Observations	76

Table 2: Results of Bootstrap LASSO

the outcome of interest and a regional capitol's distance from Moscow.

The important result of for this analysis is that political variables, such as the results of the presidential (2004, 2008) and the parliamentary (2003, 2007, 2011) elections or the levels of electoral fraud do not predict local availability of *Echo of Moscow*. This result addresses the concern that the local availability of *Echo of Moscow* follows political reasons.

5.2. Effect of *Echo of Moscow* reports on protest activity

In the unadjusted sample, regional capitols with no exposure to *Echo of Moscow* experienced a decline in mean protest turnout and mean number of protests from .73 to .54 participants per thousand citizens and from 2.9 to 1.7 protests, respectively. At the same time, in capitols exposed to *Echo of Moscow,* mean protest turnout and mean number of protests dropped from .88 to .42 participants per thousand citizens and from 3.9 to 1.6 protests, respectively.

I employ three variables whose selection I described in the previous section to conduct covariate-balance propensity score algorithm (Imai and Ratkovic, 2014). Figure 3 shows the distribution of propensity scores for both groups of cities.

Next, I regress two outcomes of interest on exposure to *Echo of Moscow* with and without inverse propensity score weights. Table 3 reports the main results of this study. In the unadjusted sample, only the effect on the change in the number of protests appears to be significant (Columns 2 and 4). In the models that use inverse propensity score weighting *Echo of Moscow* is shown to have a large and significant effects on both measures of protest activity (Columns 1 and 3). These models suggest that, in cities with no exposure to *Echo of Moscow,* protest turnout and number of protests decreased on average by .21 participants per thousand citizens and by 1.5 protests, respectively. In capitols exposed to *Echo of Moscow,*

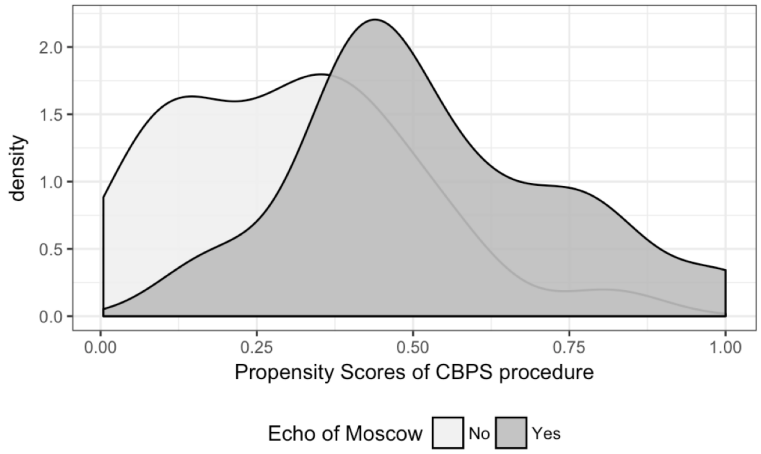


Figure 3: Covariate-balance propensity scores for city's exposure to *Echo of Moscow*

	Change in Protest Turnout^{+}		Change in Protest Count	
	IPW^{++}	Unadjusted	IPW	Unadjusted
Echo of Moscow	-0.36**	-0.23	-1.51***	-1.31**
	(0.15)	(0.19)	(0.52)	(0.58)
Constant	-0.21	-0.20	-1.56**	-1.814***
	(0.20)	(0.17)	(0.74)	(0.54)
Observations	76	76	76	76
Log Likelihood	−100.5	−93.8	-164.8	-152.8
Akaike IC	211.1	197.7	339.6	315.7

Note: Standard errors in parentheses,$p<0.1$; **$p<0.05$; ***$p<0.01$,
$^{+}$*Protesters per 1000 citizens,*$^{++}$*Inverse Propensity Weighting.*

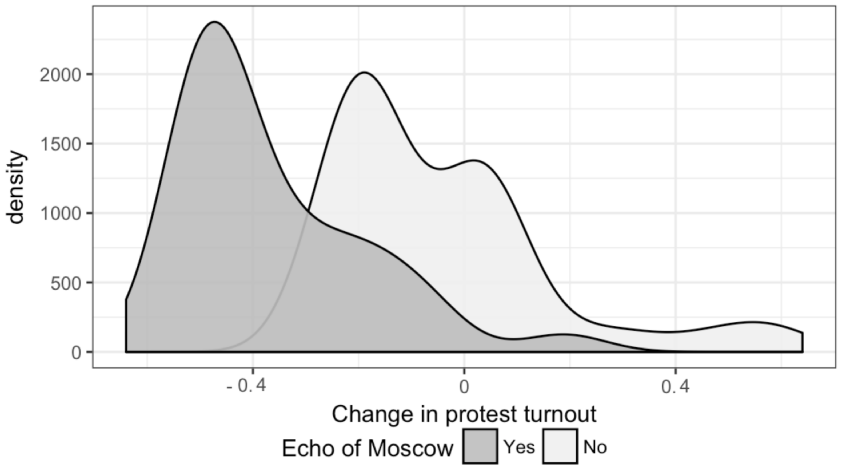
Table 3: Effect of local availability of *Echo of Moscow* on change *in protest activity*

turnout and number of protest decreased, on average, by .57 (-.36 + -.21) participants per thousand citizens and by 3 (-1.5 + -1.5) protests, respectively.

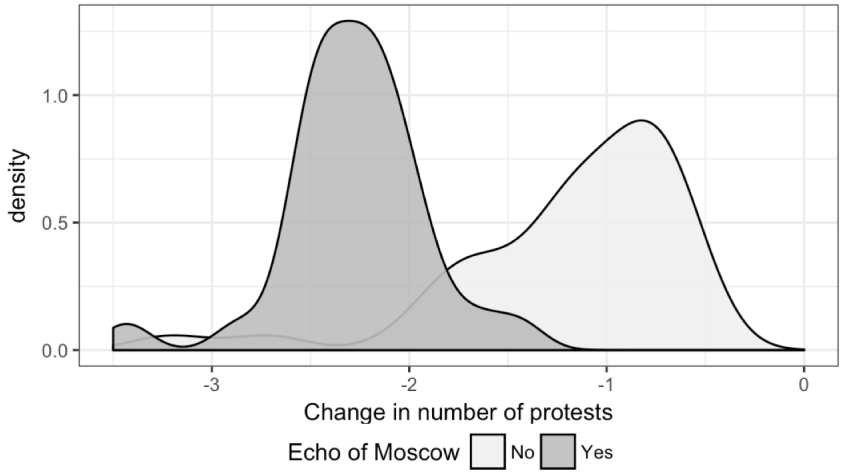
Figure 4 illustrates the patterns of change for both number of protests and protest turnout in adjusted sample.

5.3. Threats to validity

Censored or missing data. The size of the effect can be influenced by the fact that some regional authorities stopped issuing permits for demonstrations in the post-treatment period. This could explain both missing protest events and cases of extreme changes in the size of protest. In these cases, protesters either didn't take to the street at all, or constituted a



(a) Change in the protest turnout



(b) Change in the number of protests

Figure 4: Protest change

small proportion of radicals. The extreme example is Yaroslavl Oblast, where the size of the protest dropped from 1500 to 50 citizens. I account for this possibility by investigating cases of a suspiciously drastic change in the attendance rate. In 8 out of 11 cases the permission to hold a meeting was granted by the authorities, but in 3 of them it was common knowledge that officials tried to prevent the meeting by choosing an inadequate location or date for it. Results presented in section 5.2 do not change after omission of these 3 cases.

Regression to the mean. The fact that before the pro-government rally on February 4th the protest dynamics in both cities with and without exposure to *Echo of Moscow* followed parallel trends (see fig. 2) suggests that regression to the mean did not take place and did not account for the results of analysis.

6. Conclusion

This paper suggests that exposure to independent (partially-free) media can have a demobilizing effect on dissidents if combined with the aggressive tactics of building an image of overwhelming support for the autocrat. It is commonly believed that the existence of independent media increases the ability of opposition to mobilize. But if the incumbent has enough financial resources and organizational capacities to launch large-scale rallies of supporters, then independent media reports can reduce the number of mobilized protesters.

Data from recent protests in Russia suggests that in capitol cities exposed to *Echo of Moscow* radio station, the number of protests and protest turnout decreased more than in the rest of the capitol cities following the major pro-government rally in Moscow. The results of this study suggest that in cities with no exposure to *Echo of Moscow* protest turnout and number of protest on average decreased by .21 participant per thousand citizens and by 1.5 protests, respectively. In capitols exposed to *Echo of Moscow* turnout and number of protest on average decreased by .57 participant per thousand citizens and by 3 protests, respectively.

Note, that the results do not show that incumbents strategically allow independent media to exist. They only show that under certain conditions, greater media freedom can enable

autocrats to forestall anti-regime collective action more effectively. At the same time, it is likely that the actual level of media freedom is likely to be endogenous to the incumbent's perception of the risk of being overthrown (VonDoepp and Young, 2012; Guriev and Treisman, 2015) and to the strength of his regime (Stein, 2012; Geddes and Zaller, 1989), and, thus, to the incumbent's popularity.

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