

# Biased Media and Foreign Policy Preferences: Online Appendix

Anonymous

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## A Background

Latvia has five regions, one of them, Latgale, sharing a mutual border with Russia, Belarus and Estonia. Latgale has the highest share of Russian speakers, 65.6 percent, followed by the region of the capital, Riga, with 56 percent. Before the European Union referendum, ethnic Latvian and Russian population in the country had compatible demographic background: average age was 46.6 and 48.5, age of completed education – 20.6 and 19.8 respectively, and average household income – 101-150 LVL a month.<sup>1</sup> Latvian is a second language for 20.8 percent of the population, and 43.7 percent speak Russian as a second language. In total, 71 percent of ethnic Latvians speak Russian, and 52 percent of ethnic Russians speak Latvian in a census from 2011. Latvia experienced an influx of Russian-speaking immigrants during the Soviet Union period. The region received substantial industrial investments from the Soviet government — a large number of Soviet factories and enterprises were located in the region. After the fall of the Soviet Union in 1991, many Russian speakers in Riga left the country, but a significant amount chose to remain in the Eastern regions. Latgale is the most impoverished region in the country — it has the highest unemployment rate and the lowest level of individual income tax per capita among the counties' budgets.<sup>2</sup> In general, the economic development of Latvia has been marked by peaks and valleys, witnessing a particularly dangerous volatility before and after World War II, in 1991, and after the crisis in 2008. The country survived the most significant level of depopulation in these same years. These events do not coincide with the period of analysis of this study.

**Table 1:** The most popular TV channels in Latvia in 2015

Rank	TV Channel	Founded	Share, %	Language	Genre	Ownership	Founder	Funding
1	TV3	1998	11.5	Latvian	General	Private	Modern Times Group	Commercials
2	LTV1	1954	9.8	Latvian, Russian	General	Public	Latvia's Television	Latvian government, commercials
3	PBK	2002	8.8	Russian	General	Private	Baltijas Mediju Alianse	Russian government, commercials
4	LNT	1996	8.3	Latvian	General	Private	Modern Times Group	Commercials
5	NTV Mir Baltic	2011	7.4	Russian	General	Private	Baltijas Mediju Alianse	Russian government, commercials

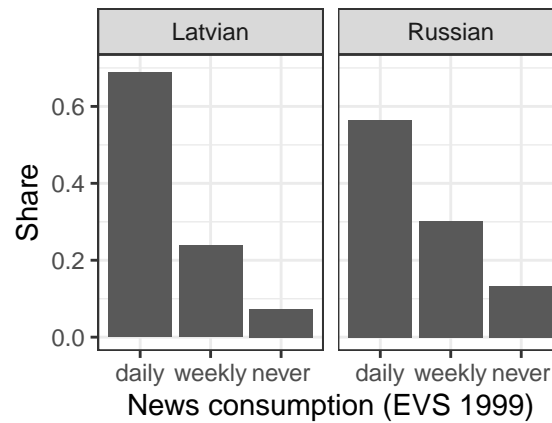
*Source: TNS Latvia 2015. Share, % - share of viewing, the percentage of the total viewing audience watching over a given period of time.*

<sup>1</sup>European Values Survey 1999.

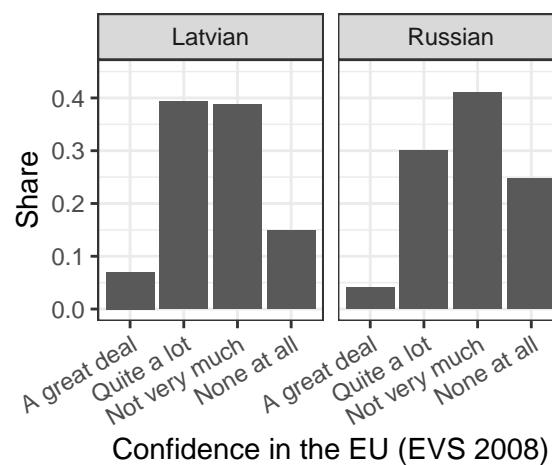
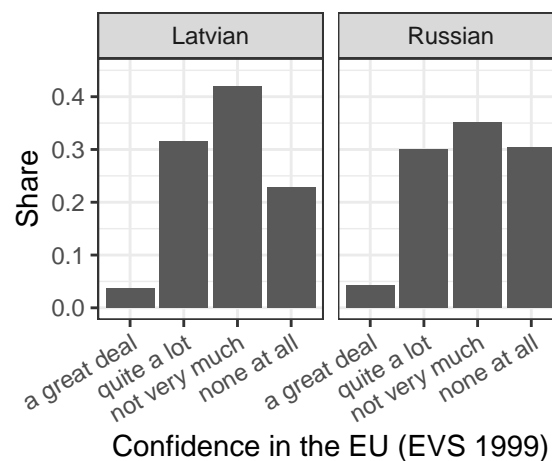
<sup>2</sup>Central Statistical Bureau of Latvia 2005.

## B Attitudes and public opinion before the EU referendum

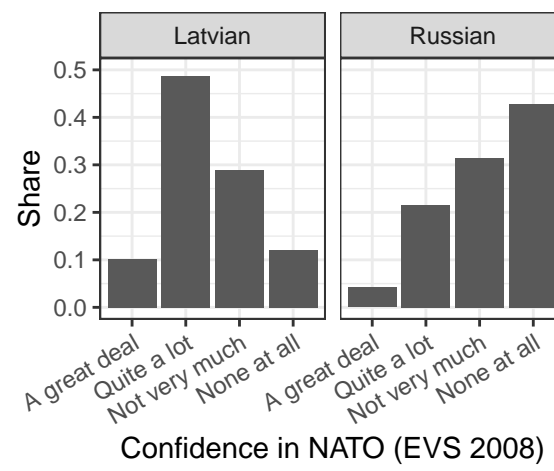
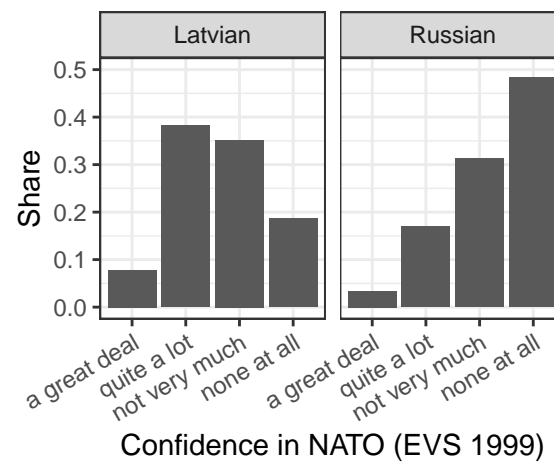
### B.1 TV media exposure



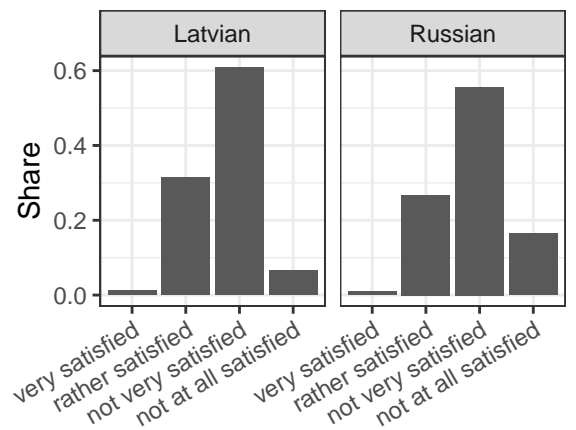
### B.2 Confidence in the European Union



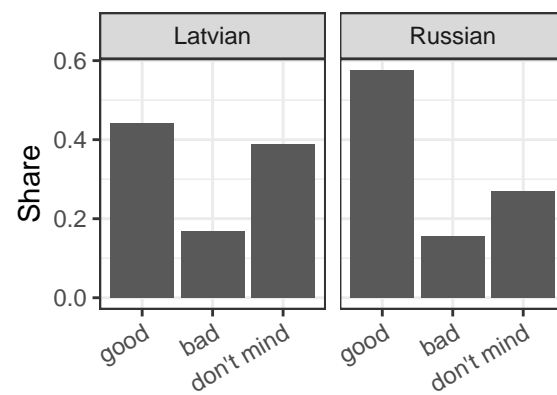
### B.3 Confidence in NATO



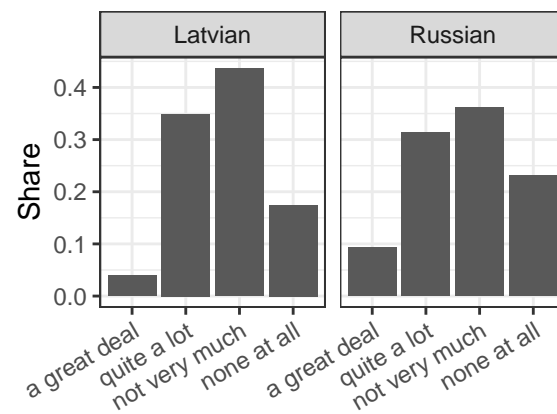
## B.4 Political attitudes



Satisfaction with democracy (EVS 1999)



Respect for authority (EVS 1999)

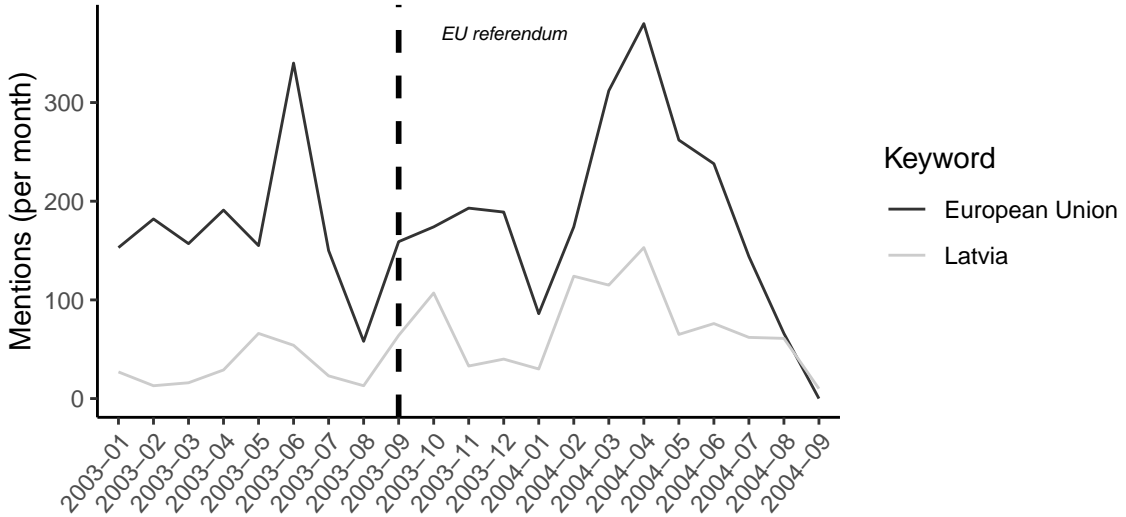


Confidence in the police (EVS 1999)

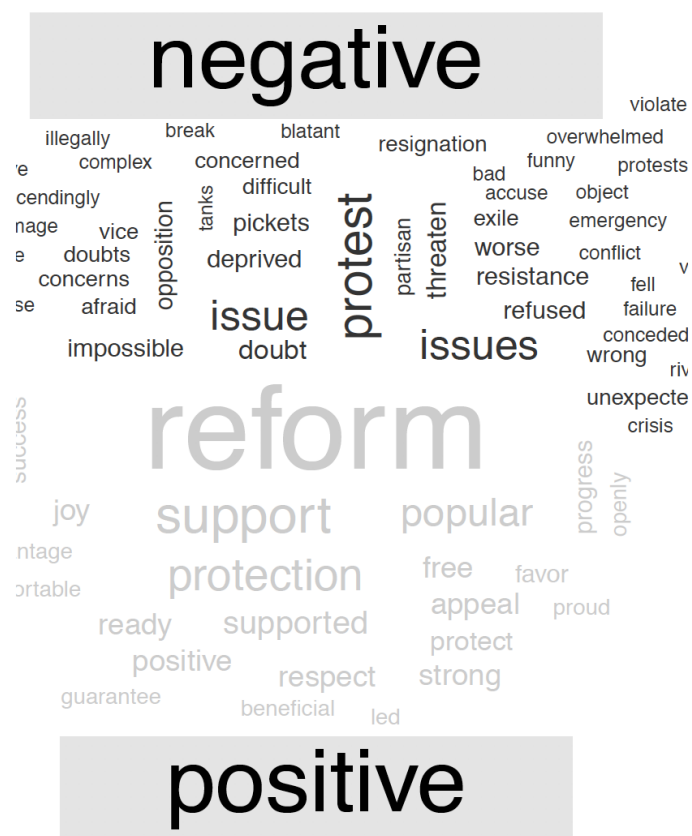
## C Russian media coverage

Russian TV channels mostly cover Russian political affairs. However, after the European Union announced that Baltic countries by the Russian border will join the union, Russian TV media started covering the news about the EU more often. Major Russian TV channels — Channel 1, Russia 1, NTV, and RenTV — mentioned the European Union more than 400 times during two months of pre-referendum period in Latvia with the most mentions in June 2003 (see Figure 1). In June 2003 large protests against a new education reform surged in Riga. Russian speaking citizens expressed discontent with Latvian government’s decision to abolish teaching Russian in schools. The EU administration presumably was going to defend Russian community.

TV news shows tend to repeat the news over one broadcasting day therefore the number of unique texts mentioning both the European Union and Latvia is equal 42 only. These are the texts that were reported two months before the European Union referendum to analyse their topics and sentiments. Figure 2 illustrates the most frequent words in Russian TV news reports. However, it is not clear from the wordcloud who is the subject of negative or positive words. In general, sentiment analysis is not an optimal approach for the TV texts analysis, first, because TV channels use a specific close to neutral language and, second, the referendums is not a type of event that can be covered as dramatically as war or conflicts. To demonstrate the general tone and Russian stands on the EU expansion, I made a table of quotes from every unique text in the sample. The quotes signal that Russian TV channels tried to express Russian disapproval the EU, local EU approval and questioning the fairness of how EU referendums were organised in other countries (see Table 2).



**Figure 1:** Mentions of the European Union and Latvia in new reports on major Russian TV channels between January 2003 and April 2004.



**Figure 2:** Wordcloud for positive and negative coverage of the European Union and Latvia two months before the referendum.

**Table 2:** Examples of TV media coverage of the EU and Latvia in Russia

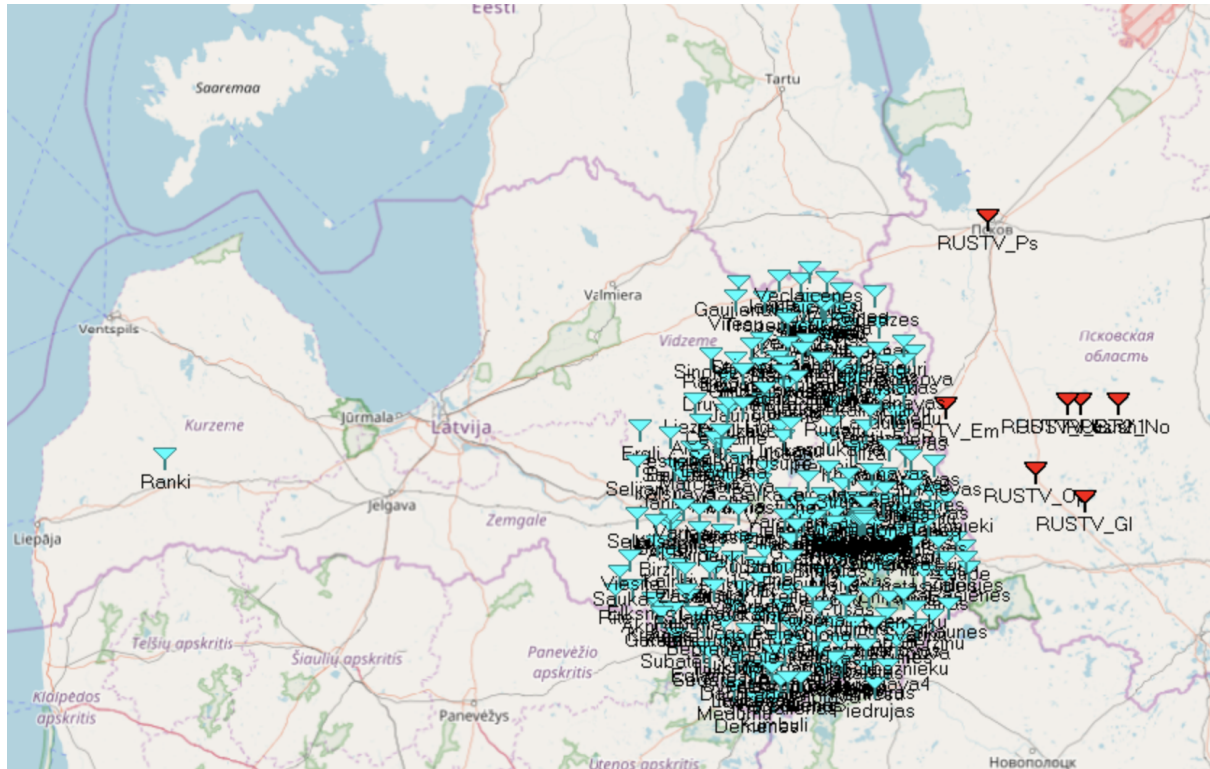
Date	TV Channel	Translation	Original text
June 9	RenTV	On Sunday morning, they had serious concerns about the outcome of the referendum. At the end of the first day only 17 percent of Polish citizens expressed their attitude towards joining the European Union, which meant the failure of the referendum. The authorities had to use all administrative resources and even involved the Pope.	Еще утром в воскресенье у них были серьезные опасения по поводу исхода референдума. По итогам первого дня только 17 процентов граждан Польши высказали свое отношение к вступлению в Евросоюз, это означало провал референдума. Власти были вынуждены использовать все административные ресурсы, подключили даже Папу Римского.
June 9	NTV	However, the fate of the referendum was unclear until the last moment. The voter turnout was so low. Despite the fact that voter activity was not particularly high, the referendum was successful. On Saturday and Sunday just over half of the electorate came to the ballot boxes, with the necessary 50%. As for Russia, Poland's accession to the EU will bring the European Union even closer to our borders.	Впрочем, судьба референдума была неясна до последнего момента. Настолько низкой была явка избирателей. Несмотря на то, что активность избирателей была не особенно высокой, референдум прошел успешно. В субботу и воскресенье к урнам пришли чуть более половины электората, при необходимых 50%. Что же касается России, то вступление Польши в ЕС, еще плотнее приблизит Евросоюз к нашим границам.
June 13	Channel 1	A 2-day vote will be recognized as having taken place at any voter turnout. Nevertheless, the authorities actively urge the citizens to show consciousness and come to the referendum. Many remember the experience of Poland and Latvia, where only half of the population of both countries took part in the voting. Sociologists predict that the same scenario is waiting for the Czech Republic. According to the polls, among young people there are the most supporters of joining the European Union. The older generation is not so enthusiastic about this idea.	Голосование, на которое отводится 2 дня, будет признано состоявшимся при любой явке избирателей. Тем не менее, власти активно призывают сограждан проявить сознательность и прийти на референдум. У многих на памяти опыт Польши и Латвии, где в голосовании приняла участие лишь половина населения обеих стран. По прогнозам социологов, тот же сценарий ждет и Чехию. Согласно опросам, больше всего сторонников вступления страны в Евросоюз среди молодежи. У старшего поколения эта идея не вызывает такого энтузиазма.
June 15	NTV	The Czech Republic will be part of the seven European nations. However, among the Czechs there are also doubters, say, the president Vaclav Klaus called the accession to the EU a marriage of convenience, not love and refused to talk about what he voted for.	Чешская республика станет частью семь европейских народов. Впрочем, среди чехов есть и сомневающиеся, скажем, президент страны Вацлав Клаус назвал присоединение к ЕС браком по расчету, а не по любви и отказался говорить о том, за что проголосовал.
June 18	Russia 1	A wave of demonstrations against the curtailment of Russian language teaching in Latvia swept through Riga. CORR: The meeting continues in front of the Latvian Saeima. Opponents of the reform claim: "Yes - to Russian schools? Yes - to the European Union! No - to Russian schools? No to the European Union." KORR: On September 20, Latvia, the last of the candidate countries, will hold a referendum on joining the European Union. Representatives of the headquarters for the protection of Russian schools are confident that the silent willingness of the EU to sacrifice the interests of national minorities will negatively affect the outcome of the referendum. The votes of non-Latvian citizens, which is about 25 percent of the voters, may prove decisive.	Ригу захлестнул вал демонстраций против свертывания преподавания на русском языке в Латвии. КОПР: Митинг продолжается у здания сейма Латвии. Противники реформы заявляют: "Да - русским школам? Да - Евросоюзу! Нет - русским школам? Нет - Евросоюзу". КОПР: 20 сентября Латвия, последняя из стран-кандидатов, проведет референдум о вступлении страны в Евросоюз. Представители штаба по защите русских школ уверены, молчаливая готовность ЕС принести в жертву интересы национальностей негативно отразится на итогах референдума. Голоса граждан нелатышей, а это около 25 процентов избирателей, могут оказаться решающими.
June 20	Channel 1	Corr: When asked about how Vaira Vike-Freiberga will feel about being the commander-in-chief of Latvia's NATO forces after Latvia becomes part of the North Atlantic Alliance, the Latvian president responds with the same confidence - she says that Latvia is also ready for a dialogue with Russia, but that desire must come from both sides. We respect the interests of our neighbours, and we believe that we will be treated with the same kindness," the President said.	На вопрос о том, как Вайра Вике-Фрейберга будет чувствовать себя в роли главнокомандующего латвийскими силами НАТО после того, как Латвия станет и частью северо-атлантического альянса, президент Латвии отвечает как и прежде уверенно - по ее словам, Латвия готова и к диалогу с Россией, но такое желание должно исходить с обеих сторон. Мы уважаем интересы своих соседей, и верим, что к нам будут относиться также доброжелательно, сказала президент.
July 8	Russia 1	In Latvia, opponents of the school reform, which envisages the transition of Russian schools to Latvian, are making new attempts to stop this process. They threaten to vote against the country's accession to the European Union if their demands are not met. Defenders of Russian schools said this today during a meeting with representatives of the European Commission.	В Латвии противники школьной реформы, которая предусматривает переход русских школ на латышский язык обучения, предпринимают новые попытки остановить этот процесс. Они угрожают голосовать против вступления страны в Евросоюз, если их требования не будут удовлетворены. Об этом защитники русских школ заявили сегодня во время встречи с представителями Еврокомиссии.



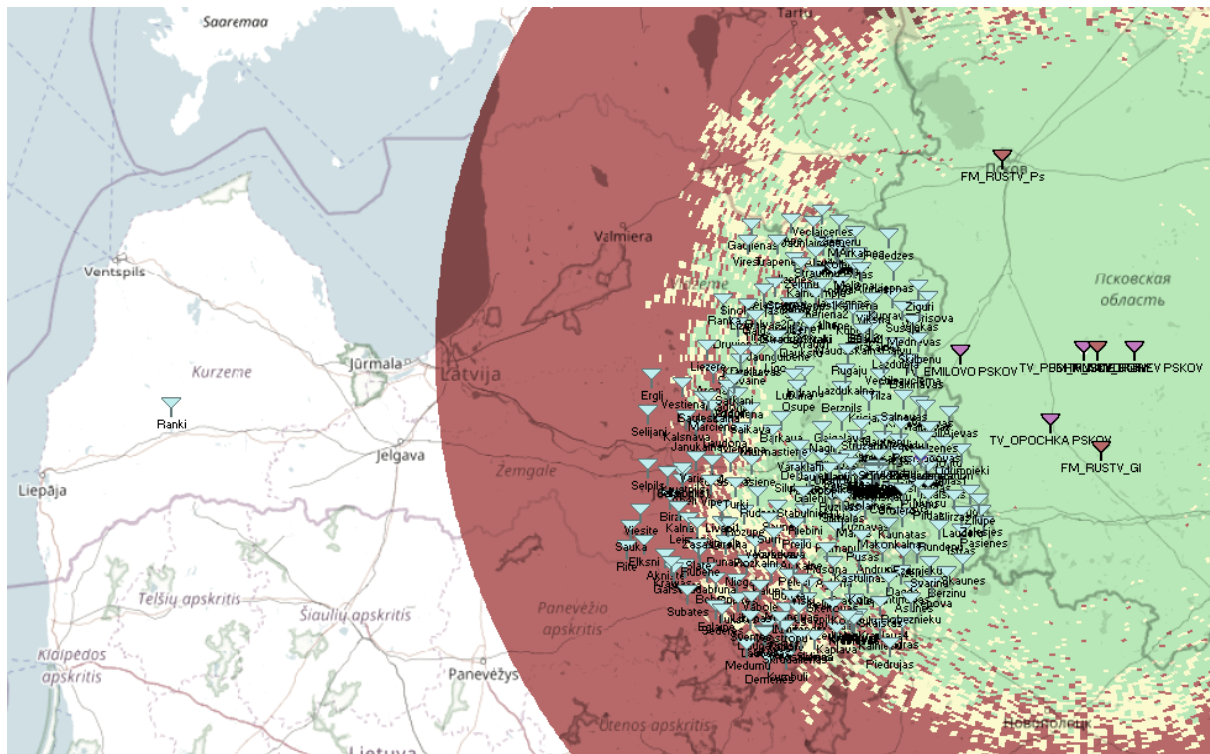
Table 2 – continued from previous page

Date	TV Channel	Translation	Original text
September 4	Channel 1	Thousands of people, by our estimates, there were at least 10,000. For Riga, where there are not even a million people, this is a very big action. So, 10 thousand people came out today to protest the reform of school education or, simply put, to defend Russian schools. These people will leave the right to choose the education of their children, because the school reform, starting from 2004, provides for only 40of subjects in their native language.	Тысячи людей, по нашим подсчетам, их было не менее 10 тысяч человек. Для Риги, где не проживает и миллиона человек, это очень большая акция. Так вот, 10 тысяч человек сегодня вышли выразить протест против реформы школьного образования или, проще говоря, в защиту русских школ. Эти люди оставят право выбора образования детей, поскольку в школе реформа с 2004 года, со следующего года, предусматривает обучение на родном языке лишь 40% предметов.
September 4	Channel 1	[About protests] The issue of protecting Latvia's Russian-speaking population will be an important element in the relationship between Russia and the EU. The protesters also demand the resignation of the Minister of Education, which is the most important thing, on the eve of the referendum on joining the European Union, some opponents of this reform threaten to vote against joining the EU on September 20.	[О протестах] Вопрос защиты русскоязычного населения Латвии станет важнейшим элементом отношений между Россией и ЕС. Митингующие также требуют отставки министра образования, что самое главное, в преддверии референдума вступления в Европейский Союз часть противников этой реформы угрожает на референдуме 20 сентября голосовать против вступления в ЕС.
September 14	Channel 1	As for Estonia, it is the only state in the Baltics, where the position of the so-called "Eurosceptics" is strong enough. There were already precedents when the country refused to join the European Union. That is what Norway did at the time.	Что же касается Эстонии, это единственное государство в Прибалтике, где достаточно сильны позиции так называемых "евроскептиков". Прецеденты, когда страна отказывалась от вступления в Европейский союз, уже были. Именно так в свое время поступила Норвегия.
September 20	Channel 1	All the forces of the government have been thrown to make sure that the referendum results are positive. Only citizens have the right to decide whether Latvia is the 25th EU member state. More than 300,000 people do not have the right to vote "for" or "against". However, surveys have also been conducted among them, and they have shown that there are more European sceptics in their ranks.	Все силы правительства брошены на то, чтобы был положительный результат референдума. Решать, быть ли Латвии 25-й страной Евросоюза, имеют право только граждане. Более 300 тысяч не граждан не имеют права отдать свой голос "за" или "против". Однако среди них тоже проводились опросы, и как они показали, что в их рядах больше евроскептиков.

## D Russian television reception



**Figure 3:** Mapped precincts in Latvia, up to 150 km from the Russian border. Source: Radio Mobile, ITU 2003.



**Figure 4:** Estimated coverage of Russian analog TV transmitters in Latvian. Green is a good reception (watching TV is possible), yellow is a moderate reception (poor quality of picture), and red – no signal. Triangles in Latvia are Latvian precincts, and in Russia – Russian analog TV towers. For illustration, FM towers are also placed on the map, but not included in the estimation of the coverage.

## E The Model

To formalize the issue, I will use the notation from Jasjeet Titunik. Let  $M_i$  be equal to 1 if a county  $i$  has the Russian TV signal and equal to 0 if a county  $i$  has no signal, and let  $R_i$  be equal to 1 if a county  $i$  has 60 or more percent of ethnic Russians, and 0 if otherwise. Then, the vote share against joining the EU in a county  $i$  will be  $Y_{0i}$  if  $M_i=0$  and  $R_i=0$  (the county has no signal of Russian TV and less than 60 percent of ethnic Russians), then  $Y_{1i}$  vote share against joining the EU if  $M_i=0$  and  $R_i=1$  (the county has no signal and the share of ethnic Russians 60 or more percent), and  $Y_{2i}$  if  $M_i=1$  and  $R_i=1$  (the county has the signal and the share of ethnic Russians 60 or more percent). Hence, we observe the following vote share against joining the EU:

$$Y_i = Y_{0i} \cdot (1 - M_i) \cdot (1 - R_i) + Y_{1i} \cdot (1 - M_i) \cdot R_i + Y_{2i} \cdot M_i \cdot R_i. \quad (1)$$

The average treatment effect on the treated (ATT) will be

$$ATT_0 = E[Y_{2i} - Y_{0i} | M_i = 1, R_i = 1]. \quad (2)$$

$$ATT_1 = E[Y_{2i} - Y_{1i} | M_i = 1, R_i = 1]. \quad (3)$$

However, as I mentioned above, distance to Russia and the presence of a river or lake in a county may jeopardize the randomness of the assignment of the signal strength to a county. Thus, I control for these factors and derive a weaker version of my research design:

$$ATT_0 = E[Y_{2i} - Y_{0i} | M_i = 1, R_i = 1, \mathbf{X}]. \quad (4)$$

$$ATT_1 = E[Y_{2i} - Y_{1i} | M_i = 1, R_i = 1, \mathbf{X}], \quad (5)$$

where  $\mathbf{X}$  is a vector of observable traits.

I derive the following equation:

$$Russian\_TV\_Signal_i = \beta X_i + \epsilon_i, \quad (6)$$

where  $Russian\_TV\_Signal_i$  represents the availability of Russian television and  $X_i$  is a matrix of controls.

The stochastic component of the model I define as the following:

$$Y_i \sim N(y_i | \theta_i, \alpha), \quad (7)$$

where  $Y_i$  is the normally distributed dependent variable. The systematic component of the model looks as

$$\theta_i = g(\mathbf{X}_i, \beta), \quad (8)$$

where  $\mathbf{X}_i$  is the matrix of key explanatory variables and control variables:

$$\beta_1 Signal + \beta_2 Distance_i + \beta_3 Controls + \epsilon_i, \quad (9)$$

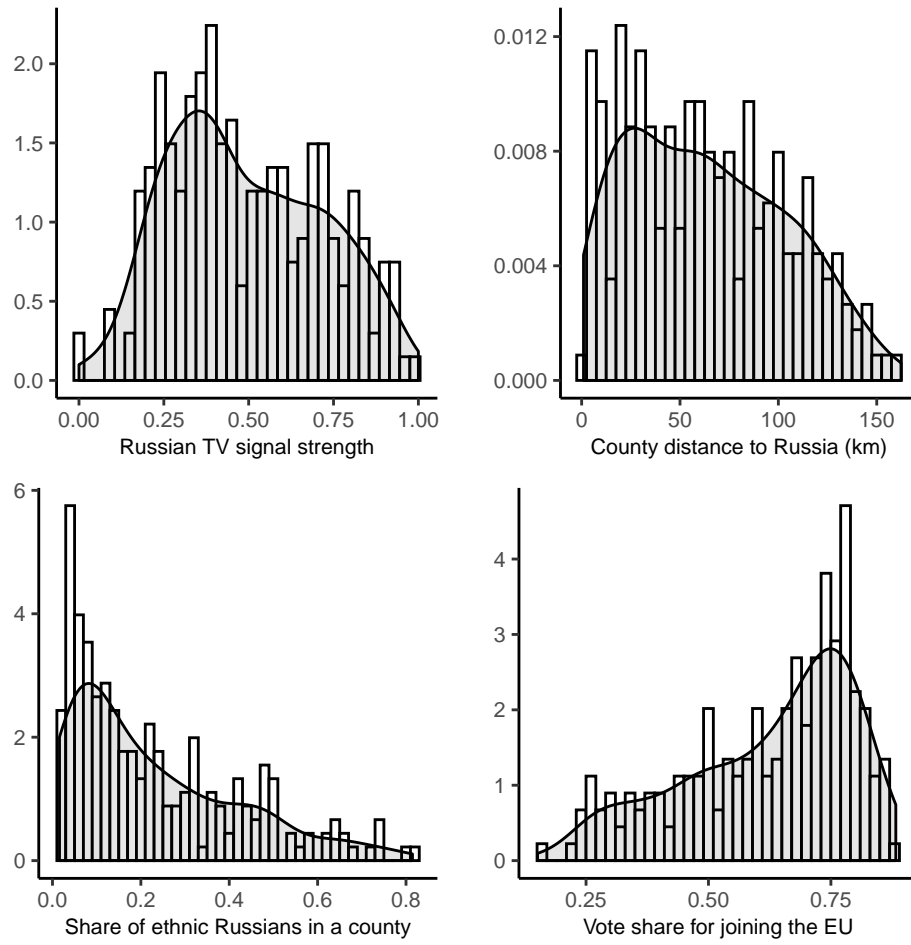
To make a mechanism of the interaction effect more intuitive, I write the model as follows:

$$\beta_1 Signal_i + (\beta_2 + \beta_3 Signal_i) Russians_i + Controls_i \beta_4, \quad (10)$$

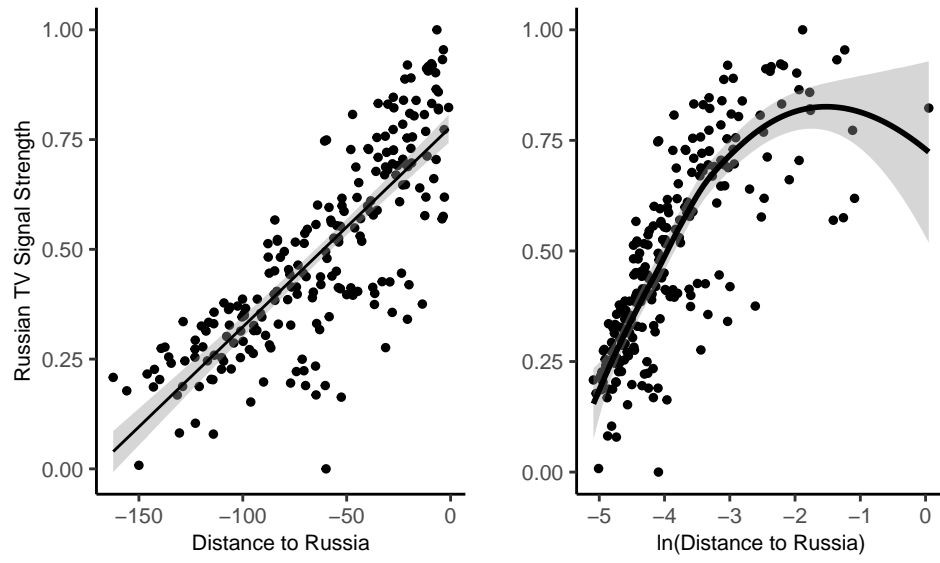
## F Summary statistics

**Table 3:** This table report essential statistics for county-level covariates. Dummies like Village, Main roads, Railways, River or Lake, Former USSR Factory are not included into this table.

Statistic	N	Mean	St. Dev.	Min	Max
Vote share for joining the EU	223	0.62	0.17	0.15	0.88
Vote share against joining the EU	223	0.37	0.17	0.12	0.85
Russian TV signal strength	223	0.49	0.22	0.00	1.00
Working age (share)	226	0.54	0.03	0.47	0.63
Aged 60 and over (share)	226	0.26	0.04	0.16	0.35
Ethnic Russians (share)	226	0.28	0.22	0.02	0.85
Higher Education (share)	226	0.05	0.02	0.01	0.10
Unemployed (share)	226	0.43	0.24	0.00	1.00
Turnout 1998, n	226	611.03	494.81	148	4,108
Results 1998	226	0.59	0.12	0.26	0.96
Voters 2003, n	223	576.55	528.18	121.00	4,679.00
Turnout 2003	223	0.49	0.15	0.02	0.81
Distance to Russia, km	226	63.05	39.87	0.95	162.36
Population, n	226	2,388.33	8,334.67	351	115,265



**Figure 5:** Distribution of main variables of interest.



**Figure 6:** Quality of Russian TV reception and distance to Russia.

## G Balance test

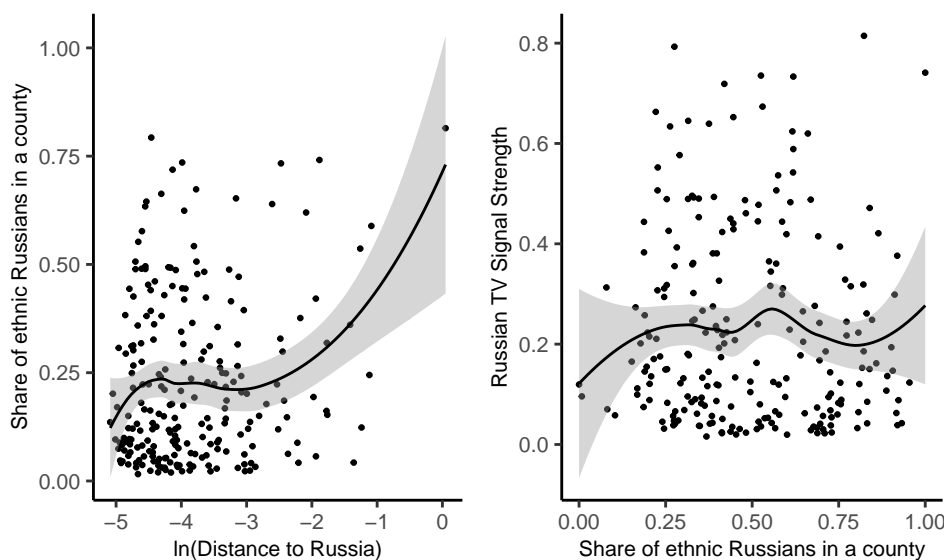
**Table 4:** Balance tests. OLS coefficients for residualized Russian television reception.

	County-level effects			District fixed effects			
	Est.	S.E.	p-val.	Est.	S.E.	p-val.	Obs.
Precinct population features							
1. Pro-Russian vote, 1998	-0.06	0.04	0.19	-0.05	0.05	0.33	220
2. Number of votes, 1998	0.12	0.21	0.58	-0.41	0.23	0.08	220
3. % Ethnic Russians	-0.02	0.06	0.77	-0.09	0.07	0.24	220
4. % Russian speakers	-0.19	0.07	0.01	-0.17	0.09	0.06	220
5. Population (log)	-0.17	0.33	0.59	-0.69	0.33	0.04	220
6. Rural precinct	0.15	0.13	0.22	0.23	0.14	0.10	220
7. Close to highways	0.44	0.18	0.01	0.41	0.18	0.03	220
8. Close to railways	-0.03	0.09	0.75	-0.10	0.09	0.23	220
9. Former USSR factory	-0.04	0.07	0.57	-0.07	0.07	0.29	220
10. % Working age	-0.00	0.01	0.92	-0.02	0.01	0.18	220
Precinct features							
11. Age 60 and more	-0.01	0.02	0.57	0.00	0.02	0.94	220
12. Higher education	0.00	0.01	0.95	-0.00	0.01	0.52	220
13. Large river or lake	-0.29	0.16	0.08	-0.24	0.18	0.18	220
14. % Unemployed	0.06	0.08	0.52	-0.01	0.09	0.95	220



## H Effect-Heterogeneity

Is the effect of the biased foreign media consistent across all ethnic Russians due to their shared historical background? Will it be fair to state that all Russians are affected by state propaganda by default since there is a lack of the influential independent Russian media outlets both abroad and within the Russian Federation? I suggest analyzing the state propaganda effects on an intergroup level, assuming that the effects can differ even within the ethnic groups themselves. In particular, I expect that, within the community of ethnic Russians, the impact of the biased media will vary across age as the younger generation has more experience with alternative sources of information such as the Internet media in comparison with elderly Russian citizens. Inside the Latvian group, the effects will be stronger among those who benefited from Soviet regime by working in large factories that were closed after the fall of the regime.



**Figure 7:** Share of ethnic Russian in a county and Distance to Russia (left), and quality of Russian TV reception (right).

## H.1 Full Output of the Interactive Models

**Table 5:** Full output of the fully interactive regressions. Both specifications include splines for distance to Russia.

	Vote for the EU	Turnout
	(1)	(2)
Russian TV Reception	−0.39* (0.15)	0.12 (0.29)
Percent Russian speakers	−0.55*** (0.09)	−0.18 (0.16)
Pro-Russian vote, 1998	−0.82*** (0.13)	−0.22 (0.24)
Rural precinct	−0.10* (0.04)	0.14 (0.08)
Close to highways	0.01 (0.04)	−0.06 (0.07)
Russian TV Reception x Percent Russian speakers	−0.02 (0.15)	0.05 (0.28)
Russian TV Reception x Pro-Russian vote, 1998	0.87*** (0.24)	0.09 (0.45)
Russian TV Reception x Rural precinct	0.14 (0.08)	−0.14 (0.15)
Russian TV Reception x Close to highways	−0.05 (0.07)	0.08 (0.13)
Constant	1.10*** (0.09)	0.53** (0.17)
N	220	220
R <sup>2</sup>	0.83	0.18
Adjusted R <sup>2</sup>	0.82	0.13
Residual Std. Error (df = 207)	0.07	0.14

\*p < .05; \*\*p < .01; \*\*\*p < .001

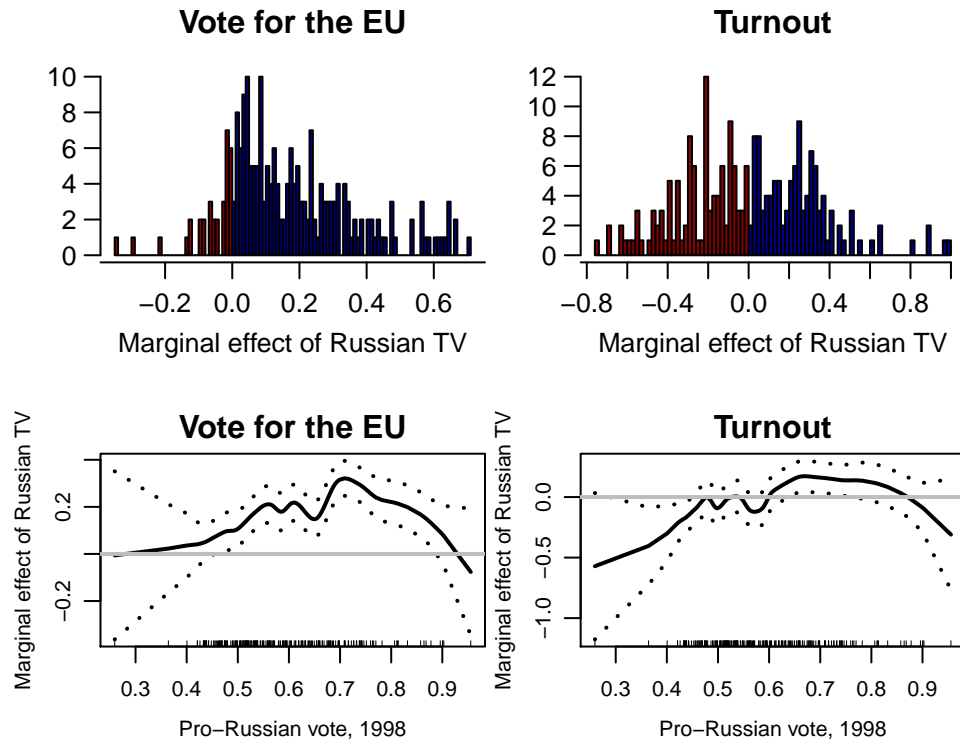
## H.2 More Flexible Interactive Model

**Table 6:** Full output of the fully interactive regressions. Both specifications include splines for distance to Russia.

	Vote for the EU	Turnout
	(1)	(2)
Russian TV Reception	−0.39* (0.16)	−0.01 (0.30)
Percent Russian speakers	−0.65** (0.20)	−0.39 (0.38)
Pro-Russian vote, 1998	−0.74** (0.24)	−0.89* (0.44)
Rural precinct	−0.07 (0.11)	−0.10 (0.20)
Close to highways	0.12 (0.09)	−0.31 (0.16)
Russian TV reception x Percent Russian speakers	0.02 (0.15)	0.06 (0.28)
Russian TV reception x Pro-Russian vote, 1998	0.86*** (0.25)	0.21 (0.46)
Russian TV reception x Rural precinct	0.14 (0.08)	−0.11 (0.15)
Russian TV reception x Close to highways	−0.06 (0.07)	0.09 (0.13)
Pro-Russian vote, 1998 x Percent Russian speakers	0.13 (0.26)	0.34 (0.48)
Pro-Russian vote, 1998 x Rural precinct	−0.05 (0.17)	0.40 (0.31)
Pro-Russian vote, 1998 x Close to highways	−0.16 (0.13)	0.41 (0.23)
Constant	1.04*** (0.16)	0.96** (0.29)
N	220	220
R <sup>2</sup>	0.83	0.20
Adjusted R <sup>2</sup>	0.82	0.14
Residual Std. Error (df = 204)	0.07	0.14

\*p < .05; \*\*p < .01; \*\*\*p < .001

### H.3 KRLS-Based Heterogeneity Estimates



**Figure 8:** Marginal effects conditional on pro-Russian vote in the referendum in 1998.