

Language Affinity, Russian Media and Sanctions Evasion*

Andrey Tkachenko[†] David Karpa[‡] Michael Rochlitz[§] Meruyert Tatkeyeva[¶]

Galiya Sagyndykova^{||}

January 31, 2025

Abstract

Does language affinity facilitate the export of propaganda by authoritarian regimes? And what are the economic consequences of authoritarian propaganda abroad? We study these questions in the context of Kazakhstan with the help of multiple survey waves, online search statistics, our own original survey, and international trade data. We identify a shift towards pro-Russian opinions among the Russian-speaking population of Kazakhstan after Russia’s full-scale invasion of Ukraine, even among ethnically non-Russian citizens. We relate this shift of opinion to a substantial increase in consumption of pro-Kremlin internet news and Russian social media content after February 2022. Using our own survey, we show that consumption of Russian propaganda increases the justification for circumvention of sanctions against Russia. Finally, using detailed trade data, we document that re-exports of sanctioned products to Russia increased disproportionately after February 2022 from regions where the population is more likely to be exposed to Russian propaganda. Our results shed light on mechanisms by which former colonial powers can continue to influence beliefs and economic behavior in their former colonies.

Keywords: Propaganda, language, sanctions evasion, Kazakhstan, Russia-Ukraine war

JEL: F51, P45, D74

*This project was partially financed by Nazarbayev University (Funder Project Reference: 11022021CRP1515). We thank participants of the IERP seminar and economic colloquium at the University of Bremen, the 1st Conference “New Advances in the Political Economy of Development in Eurasia” at Nazarbayev University and the 2nd Conference “New Advances in the Political Economy of Development in Eurasia” hosted by Almaty Management University and KIMEP University for valuable comments.

[†]Department of Economics, Nazarbayev University, andrey.tkachenko@nu.edu.kz

[‡]Centre for Social Data Science, University of Helsinki david.karpa@helsinki.fi

[§]Oxford School of Global and Area Studies, University of Oxford, michael.rochlitz@area.ox.ac.uk

[¶]NAC Analytica, Nazarbayev University, meruyert.tatkeyeva@nu.edu.kz

^{||}Department of Economics, Nazarbayev University, galiya.sagyndykova@nu.edu.kz

1 Introduction

Even after their demise, empires can keep an influence over their former colonies through language. English – the language of the former British Empire – has become a global language that has developed into an important channel through which Western concepts and values are distributed across the world (Phillipson 2008; Crystal 2012). Similarly, through “la Francophonie”, France has managed to promote its economic, political and cultural interests in its former colonies, many years after the end of the French empire (Neathery-Castro and Rousseau 2005; Vigouroux 2013). Often, the mechanism through which values and concepts are communicated are not even direct government communications or propaganda, but citizens of former colonies self-selecting into consuming specific content because the language they speak in their everyday lives is the one of the former colonizing nation.¹

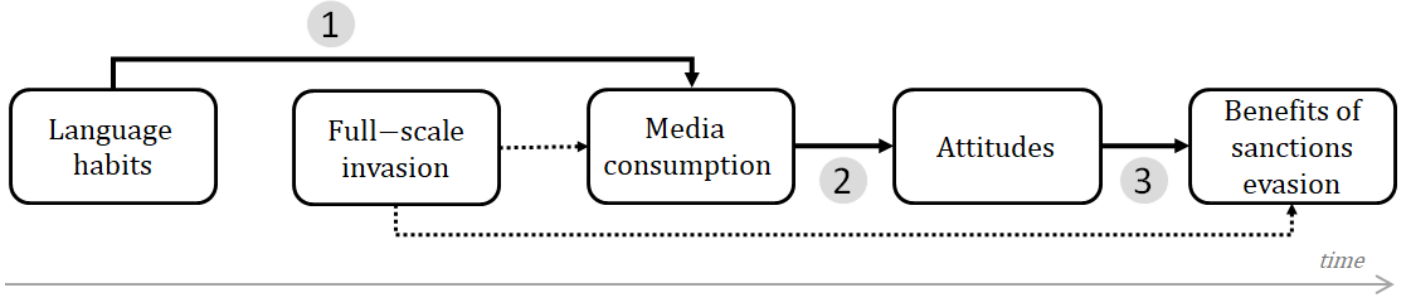
In this paper, we explore this channel and its relevance in the Russia-Ukraine war for Kazakhstan – one of Russia’s former colonies in Central Asia. Kazakhstan is particular in that more than 30 years after its independence and despite the state language being Kazakh, the first language of a large percentage of the population remains Russian. Many of these Russian-speaking citizens of Kazakhstan are torn between loyalty to their home country, and a close cultural affinity to what Russian state media is increasingly describing as the “Russkiy mir”, or “Russian world”. Through their language, they are also exposed to Russian propaganda, much more than their fellow citizens whose first language is not Russian.

We investigate whether this language affinity makes the Russian-speaking population in Kazakhstan more vulnerable to Russian propaganda than the part of the population that mainly speaks Kazakh in their daily lives. By controlling for ethnicity and other demographic characteristics, we specifically focus on language as a channel for propaganda transmission and study its political and economic consequences. Specifically, we investigate the role of Russian propaganda in shaping political beliefs, such as the justification of the Russian full-scale invasion of Ukraine and the willingness to help Russia circumvent sanctions, as well as its potential role in increasing the export of sanctioned goods from Kazakhstan to Russia after February 2022.

Figure 1 illustrates our line of argument. When the full-scale invasion happened on February 24, 2022, it triggered interest in the events in Ukraine among the Kazakh population. Depending on the language they felt most comfortable in, Kazakh citizens chose media sources that were either in Russian

¹A good case in point are Radio France Internationale or the BBC World Service, which for many years continued to be crucial sources of information in former French and British colonies in sub-Saharan Africa, long after these countries had become independent (Vaillant 2017; Leyris 2022).

Figure 1: Conceptual Framework



Note: The figure shows how we conceptualize the relationships between the events happening in Kazakhstan after the full-scale invasion of Ukraine in February 2022. The full-scale invasion and the ensuing sanctions triggered economic opportunities and increased individuals’ interest in news (dotted arrows). The selection of specific news sources was moderated by language proficiency (1). The exposition to a specific news source shaped attitudes (2). Finally, whether or not individual i seized the economic opportunity was moderated by their attitude (3).

or in Kazakh (1). As the primary source of information for Kazakh citizens is online news, the media sources most frequently chosen were either Russian online media from Russia, or Kazakh online media from Kazakhstan. The choice of media source then influenced attitudes towards the war and shaped the extent to which a given individual considered it acceptable to circumvent the economic sanctions against Russia (2). These attitudes then had a direct effect on the extent of sanctions circumvention that happened in Kazakhstan in 2022 and 2023 (3).

To test if there is indeed a link from language habits to the choice of media sources, attitudes, and economic behavior, we employ a range of different data sources. First, we use data from six waves of a telephone survey conducted biannually by the Central Asia Barometer (CAB) in Kazakhstan.² The first two waves were carried out before the Russian full-scale invasion of Ukraine in the spring and fall of 2021; the other waves were carried out after the invasion in the spring and fall of 2022 and 2023. We complement these data with an original online survey conducted in November 2023, which contains several list experiments. In addition, we use Yandex search data to document patterns of consumption of Russian language news around the time of Russia’s full-scale invasion of Ukraine. All these data sources combined allow us to identify how language habits influence the choice of media sources, and how media consumption influences political beliefs. Finally, we use transaction-level export data to investigate whether language patterns, patterns of media consumption, and shifts in public opinion translate into an increase in war-related exports from Kazakhstan to Russia (controlling for other potential determinants of exports), after the start of the Russian full-scale invasion.

Our findings can be grouped into three parts. First (arrow 1 in Figure 1), using the various waves of

²<https://ca-barometer.org/en/cab-database>

the CAB survey, we show that online media and the Internet are indeed the main source of information for Kazakh citizens, and that consumption of online news and news from Russian social media is especially high among the Russian-speaking population of our sample. We are able to document that the share of Kazakh citizens using online media increased measurably from 2022 onward, suggesting that the full-scale invasion triggered interest for Internet news and information. For Russian-speaking citizens of Kazakhstan, Telegram in particular seems to have become an important source of information after February 2022 (which is important because of the prominent role various pro-Russian Telegram channels have played in covering the war; see e.g. [Oleinik \(2024\)](#)). Using Yandex search, we are able to document a significant spike in searches for Russian-language information after February 24, 2022, suggesting that this was one of the channels Russian-speaking citizens in Kazakhstan got into contact with pro-Russian online media, once the full-scale invasion had triggered interest about the war.

In a second step (arrow 2 in Figure 1), we hypothesize that Russian media consumption might have positively affected support for the war among Russian-speaking Kazakh citizens. Indeed, we find that 4 months after the start of Russia’s full-scale invasion of Ukraine, Russian-speaking respondents in Kazakhstan were 18% more likely to justify Russia’s war in Ukraine than non-Russian-speaking respondents. They were also 8.8% less likely to attribute responsibility for the war to Russia and 12% more likely to attribute responsibility to the US, the EU, and NATO. Although these results fluctuate somewhat over time, they remain broadly stable until the end of 2023. As questions about the war were only asked from June 2022 onwards, we gauge the evolution of opinions over time by using a question about general attitudes towards Russia, the US and the Eurasian Economic Union, which was asked in all survey waves. Here we see that opinions towards Russia and the United States only diverged *after* February 2022, but not before. Before the invasion, Russian-speaking respondents in Kazakhstan even had a significantly more positive view of the United States than non-Russian-speakers.

For a more precise estimation of the effect of Russian media consumption on political beliefs, we turn to the survey experiments from our original survey, conducted in November 2023. Both in the direct question and when using list experiments, we find that consumers of Russian-language media are more likely to condone Russia’s actions in the war and to support the circumvention of economic sanctions against Russia. Crucially, we are able to hold the effects for ethnicity and other demographics constant, thus being able to exclude other alternative mechanisms.

Finally (arrow 3 in Figure 1), using detailed regional trade data, we identify a spike in sanctions-related exports from Kazakhstan to Russia after February 2022. This spike is particularly pronounced in Kazakh regions with larger shares of Russian speakers, as well as larger shares of people trusting Russian media and condoning Russia’s actions in the war. Using regional production data, we are able to show

that exposure to pro-Kremlin propaganda is not associated with an increase in regional production, suggesting that the circumvention of sanctions is based on re-export rather than local production of sanctioned goods.

Taken together, our interpretation of these findings is as follows. When the start of the full-scale Russian invasion of Ukraine triggered interest for the event in Kazakhstan, those citizens in Kazakhstan mainly using Russian in their daily lives were more likely than other Kazakh citizens to end up on the Russian internet and social media platforms, in their search for information. Watching the propaganda content on these platforms led to a divergence in opinions about the war and Russia’s role in it in Kazakhstan, a divergence that so did not exist before February 2022. This divergence was then also reflected in a higher propensity to condone the circumvention of economic sanctions against Russia, potentially convincing a certain number of Kazakh entrepreneurs to participate in making war-related deliveries to Russia. Importantly, we do not argue that Russian propaganda was the main or the only reason for Kazakhstan’s prominent role in sanctions circumvention during the early months of the war (Borozna and Kochtcheeva 2024). But the empirical evidence presented in this paper makes us believe that Russian propaganda played a meaningful role in shaping attitudes and that at the margin, it did play a measurable role.

Our paper builds on a vast literature that has investigated the effects of the media and political propaganda on political attitudes and voting. The effect of traditional media such as TV and newspapers has been extensively documented, both for democracies (DellaVigna and Kaplan 2007; Gerber et al. 2009; Durante and Knight 2012) and autocracies (Yanagizawa-Drott 2014; Adena et al. 2015; Peisakhin and Rozenas 2018; Mattingly and Yao 2022; Pan et al. 2022). Notably, a literature focusing on Russia has shown that on traditional platforms such as TV, media independent of the government can effectively oppose the government and influence voting behavior, even in authoritarian states (Enikolopov et al. 2011, 2022).

More recently, social media has started to play an important role in influencing public opinion (Bond et al. 2012). Less accessible to government control, social media also lack the reputation mechanisms that ensure minimum content quality and are thus prone to the spread of misinformation and polarization (Zhuravskaya et al. 2020). While social media has been used by the opposition to organize protests (Enikolopov et al. 2020) or mobilize voters (Enikolopov et al. 2022), and has been hailed as a “liberation technology” (Morozov 2011), authoritarian states also increasingly spread their messages through social media. Authoritarian governments employ different methods ranging from “flooding” popular platforms and hashtags with positive or distracting misinformation to shaping public opinion by providing different – and sometimes objectively wrong – narratives (Roberts 2018).

Beyond influencing the domestic population, research has shown that authoritarian propaganda is also increasingly spreading beyond borders as a tool of foreign influence. China, for example, has been extensively criticized for spreading misinformation related to Covid-19 and other topics.³ Scholars have argued that, for Russia in particular, influencing popular opinion and elections abroad has become an important political objective (Snyder 2018). Indeed, there is empirical evidence that Russia is the most active autocracy in this regard (Martin et al. 2019), with the Brexit referendum and the 2016 presidential elections in the US as two prominent examples (Martin et al. 2019; Eady et al. 2023).

As part of this strategy, Russian diasporas and Russian-speaking communities abroad have become an important tool in the Kremlin’s foreign policy strategy. For example, since February 2022 several pro-Putin events that were then joined by far-right extremists were organized in Germany by the Russian diaspora.⁴ A similar pattern can be observed in the US, where the Russian-speaking community was active in spreading a pro-Kremlin agenda.⁵ Russian foreign influence is thus not limited to its neighboring countries, but can be described as a worldwide phenomenon. Sometimes, the results of exposure to Russian propaganda might not even be intentional, as in the case of Latvia, where the discrediting of Western vaccines on Russian TV led to a significant drop in vaccination rates among the ethnic Russian population (Larreguy and Martinez 2024).

However, with the exception of Larreguy and Martinez (2024), empirical research on the specific effects, influence and channels of Russian propaganda on Russian-speaking communities abroad remains rare. More generally, while some research exists on the role of former colonial languages in ex-colonies (see e.g. Phillipson (2008) and Crystal (2012) for the British Empire, Neathery-Castro and Rousseau (2005) and Vigouroux (2013) for the French Empire or Mar-Molinero (2000) and Stavans (2021) for the Spanish Empire), we are not aware of any studies that specifically try to measure and quantify the effect of former colonial languages on beliefs and behavior. It is this research gap that we try to fill, by investigating a context where Russian language and the Russian-speaking community play an important role in this respect – the former Soviet republic of Kazakhstan in Central Asia.

Theoretically, the first part of our paper is based on Guiso and Makarin (2020), in that we hypothesize that Russian speakers think of information conveyed in Russian as *trustworthy*. According to this theory, genetic, cultural, or religious affinity increases trust (Guiso and Makarin 2020). In our paper, we denote language as – perhaps the most important – trait of cultural proximity, and try to separate it from

³<https://www.grid.news/story/global/2022/05/18/how-china-uses-global-media-to-spread-its-views-and-misinformation/>

⁴<https://theins.ru/politika/258094> See also Sablina (2023), who shows the role social media played in mobilizing the Russian-language community in Germany.

⁵<https://theins.ru/politika/256770>

other connections, such as, for example, personal ties, with a family member working in Russia and transmitting remittances. We thus hypothesize that Russian speakers are particularly susceptible to information that is conveyed in the Russian language, while they are also more likely to seek information from Russian-language sources in the case of high-profile events.

The second part of our paper builds on [Korovkin and Makarin \(2023\)](#), who find that Ukrainian firms from districts with fewer ethnic Russians experienced a deeper decline in trade with Russia, after the Russian annexation of Crimea in 2014. Along a similar vein, we document that firms in regions with a higher share of Russian speakers are more likely to circumvent the sanctions and export war-relevant goods to Russia, after the imposition of trade sanctions following Russia’s full-scale invasion of Ukraine.

The remainder of our paper is organized as follows. Section 2 introduces the background and context of our study, and section 3 presents our data and provides summary statistics. Section 4 documents how Russian speakers increased their consumption of Russian media after February 2022, while simultaneously their views of Russia improved and their views of the West deteriorated, compared to the rest of the population in Kazakhstan. Section 5 uses our original survey to show how Russian media consumption is indeed related to being more likely to condone Russia’s actions in the war and to support the circumvention of economic sanctions. Section 6 connects these findings with our trade data and documents how Kazakh regions with a higher share of Russian speakers are significantly more likely to export war-related goods to Russia after February 2022, but not before. Section 7 concludes.

2 Background and Context

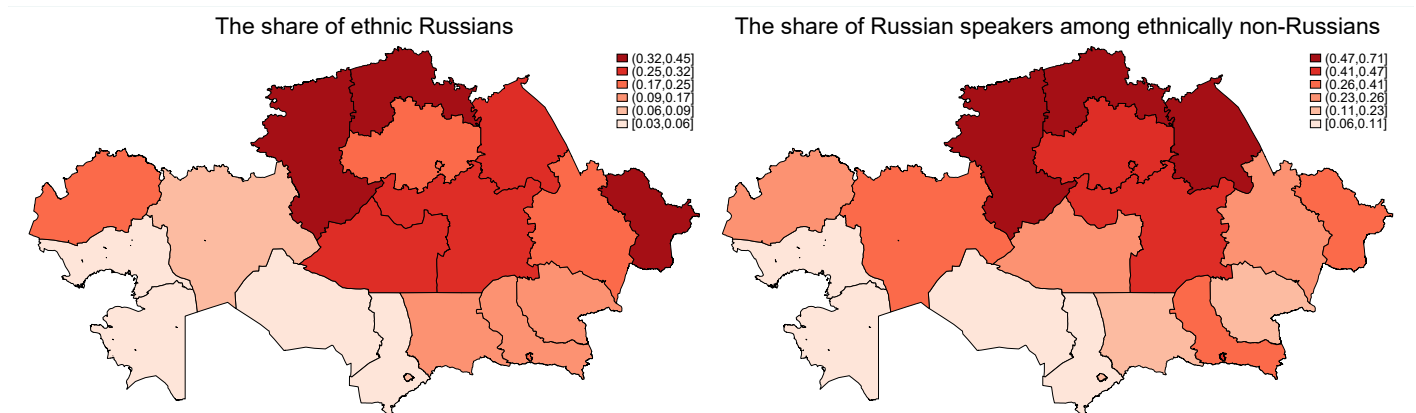
One of the successor states of the Golden Horde, the Kazakh Khanate was gradually conquered and absorbed by the Russian Empire from the late 18th to the mid-19th century. Following the Russian Revolution, the territory became part of the Soviet Union. After several territorial reorganizations, Kazakhstan’s modern borders were established in 1936 with the formation of the Kazakh Soviet Socialist Republic. Kazakhstan declared its independence from the Soviet Union on December 16, 1991 and has since been an independent state.

As a result of two centuries of Russian colonization, a large Russian minority continues to live in Kazakhstan. Although Kazakh is the official state language, Russian also has the status of an official language and a large share of the population continues to speak Russian daily. According to the 2021 census, the share of ethnic Kazakhs is 70% and that of ethnic Russians is 15.5%. The share of people speaking and reading Russian is 83.7%, and among ethnic Kazakh, this share is 79.5%.⁶ Moreover, according to nationally representative surveys, more than 40% of respondents indicate Russian as the

⁶[Results of the National Population Census 2021](#)

language they speak at home.⁷ Map 2 illustrates the distribution of ethnic Russians and Russian speakers across Kazakh regions, showing how Russian speakers are concentrated in the north of the country, as well as in the two main cities – Astana and Almaty. We show throughout the paper that this regional variation in language proficiency is linked to differences in media consumption, political opinions, and economic behavior in the form of trading sanctioned products to Russia.

Figure 2: Regional heterogeneity by ethnicity and home language



Note: the figure shows the shares of ethnic Russians and speaking Russian at home by regions of Kazakhstan according to six nationally representative surveys conducted by the Central Asia Barometer in 2021-2023. Regions are three major cities – Astana, Almaty, and Shymkent – and 17 other sub-national regions. For more details, see Section 3 for the survey data.

Since the start of Russia’s war in Ukraine in 2014, the Kazakh government has been careful to maintain a low profile with respect to the conflict, avoiding too extensive coverage of the conflict in the official media ([Lehtisaari et al. 2018](#)) and employing “strategic silence” [Dadabaev and Sonoda \(2023\)](#), in order not to antagonize neither Russia nor the West, even though at times concerns and criticism about the war are voiced.⁸ As a result, almost all of the Kazakh- and Russian-language media published within Kazakhstan take either a neutral or a moderately critical stance towards Russia when covering the conflict.⁹ However, at the same time Russian-language media from Russia is widely available in Kazakhstan. Especially when searching for information on the internet, the probability that Russian speakers will end up on a site from Russia featuring pro-Russian content is high, while Kazakh speakers are more likely to find content that is more neutral with respect to Russia’s invasion of Ukraine.

While the Kazakh government has been careful to maintain a neutral stance towards the conflict in its official statements, economically, Kazakhstan has taken a pro-Russian stance. Exports from Kazakhstan

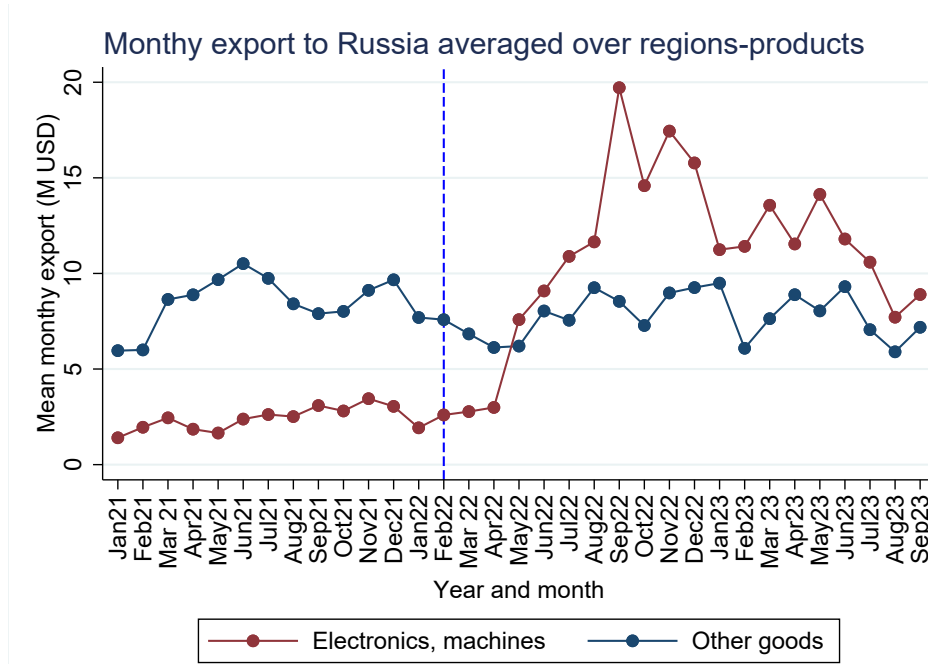
⁷See Table 1 in Section 3 for the survey data.

⁸Steppe change: How Russia’s war on Ukraine is reshaping Kazakhstan. European Council on Foreign Relations, 2023.

⁹This is also a result of Kazakh media being largely state-controlled. According to [Freedom House](#), “the dominant media outlets in Kazakhstan are either in state hands or owned by government-friendly businessmen”.

to Russia have increased significantly since February 2022. However, as illustrated by Figure 3, this is *only* the case for electronic goods and machines, i.e. products on which Western countries imposed sanctions after Russia’s full-scale invasion of Ukraine in February 2022, while exports of other goods have remained remarkably stable. This sanctions circumvention was revealed by investigative journalists,¹⁰ and the US secretary of state Antony Blinken visited Kazakhstan in February 2023 to discuss specifically the issue of sanctions circumvention by the Central Asian countries.

Figure 3: Export from Kazakhstan to Russia



Note: the figure shows the monthly export of Kazakhstan to Russia averaged over 5 product classes and regions for 2021-2023. For more details, see Section 3 for the international trade data.

In our paper, we investigate if Kazakhstan’s role in circumventing the sanctions is related to Russia’s continuing influence on the Russian-speaking community in Kazakhstan. In other words, are Russian speakers more likely to condone the war and approve of the circumvention of the sanctions after encountering Russian propaganda? And if there is such an effect, does it translate into increased exports of sanctioned products to Russia?

¹⁰See. e.g. [Kazakhstan Has Become a Pathway for the Supply of Russia’s War Machine. Here’s How It Works. Organized Crime and Corruption Reporting Project, 2023.](#) or [Now through Kazakhstan: devices from the United States, Germany and France, which can be used for electronic warfare, continue to go to Russia. The Insider, 2024.](#) or [Shooting Ukraine in the back: Sniper rifles and ammunition from the EU and U.S. are being supplied to Russia despite sanctions. The Insider, 2024.](#) or [Russian businessman extradited to Estonia for selling \\$50 million worth of foreign equipment to Russian defense enterprises. The Insider, 2025.](#)

3 Data

To answer these questions, we use four distinct sources of data. Our first dataset contains six waves of a nationally representative telephone survey conducted by the Central Asia Barometer in Kazakhstan in 2021 – 2023. This dataset enables us to test for a possible divergence in political views and media consumption between Russian speakers and other Kazakh citizens after the start of the full-scale invasion. Second, using a dataset of Yandex online searches, we test whether this divergence in political views can be explained by a divergence in online search patterns and news consumption after February 2022. Third, we conducted an original online survey including several list experiments in November 2023, to investigate how attitudes toward the war and sanctions circumvention depend on media consumption. Our fourth dataset is based on transaction-level trade data between Kazakhstan and the Eurasian Economic Union (EAEU) for the period 2021 to 2023. It enables us to investigate whether regional-level variation in exports of sanctioned goods from Kazakhstan to Russia after February 2022 is influenced by the variation in Russian language proficiency and trust in Russian media across Kazakh regions.

3.1 Central Asia Barometer

Since June 2017, the Central Asia Barometer (CAB) has been conducting regular public opinion surveys in the four Central Asian republics of Kazakhstan, Kyrgyzstan, Uzbekistan, and Tajikistan.¹¹ For our study, we use waves 9 to 14 of the CAB data for Kazakhstan. Surveys were carried out in April-June and September-November of each year, for the years 2021, 2022 and 2023. In addition to detailed demographics, all six survey waves include questions about attitudes toward Russia, the United States, China, and the Eurasian Economic Union. The waves starting from June 2022 also include several questions related to Russia’s full-scale invasion of Ukraine, of which we use the following two: (i) *“In your view, who is mainly responsible for the situation in Ukraine?”*, and (ii) *“To what extent do you think Russia’s special military operation in Ukraine is justified or unjustified?”*.

All six survey waves also include an extensive block of questions related to: (i) the *main* source of news most often used to get information about what is going on outside of Kazakhstan (including relatives and friends, national and Russian traditional media, and the internet), (ii) the messaging apps most often used (WhatsApp, Telegram, etc.), (iii) the social media platform most often used (Facebook, Odnoklassniki, VKontakte, Instagram, Twitter, TikTok, etc.), (iv) the language that is spoken at home, (v) and a full set of standard demographics, including ethnicity. Finally, the wave of September 2023 also includes a question about trust in media news from different countries.

¹¹These are CATI surveys with randomly generated mobile phone numbers according to the spectrum of numbers of mobile operators in a respective country. For more details, see <https://www.ca-barometer.org/en>.

Columns 3 and 4 of Table 1 provide descriptive statistics for language, ethnicity and attitudes from these six survey waves. The share of respondents speaking Russian at home in our sample is 47.3% for 2021, 41.1% for 2022, and 45.3% for 2023. For all three years, this share is more than twice the share of ethnic Russians, allowing us to separate the effects of ethnicity from those of language use. Notably, between 12.7% and 16.3% of respondents are business owners or heads of firms or company departments. Their views are of particular interest because their attitudes may directly affect economic behavior.

Table 1: Descriptive statistics for language, ethnicity and attitudes

Year	Obs.	Russian (%)		Firm head	War responsibility (%)			SMO is (%)		Favorable opinion of (%)			EAEU is benefic. (%)
		Lang.	Ethn.		Russia	Ukraine	West	justif.	not justif.	Russia	US	China	
2021	3,500	47.3	22.2	12.7						70.5	51.9	44.9	57.9
2022	3,020	41.1	17.9	15.4	27.5	20.8	10.8	26.3	45.7	50.9	49.4	51.5	59.5
2023	3,000	45.3	20.5	16.3	24.9	19.4	12.1	25.0	51.0	57.1	51.4	60.3	54.1

Note. The table uses six CAB survey waves for 2021-2023. The wave of May 2021 includes 2000 observations, and other waves include around 1500 observations each. All the percentages are calculated as shares of respondents in corresponding years without weighting. “SMO is justified”=1 for “Completely justified” or “Somewhat justified”, and 0 otherwise. “SMO is not justified”=1 for “Completely unjustified” or “Somewhat unjustified”, and 0 otherwise. War responsibility is denoted “West” if a respondent has chosen US, EU, or NATO. In the question “Favorable opinion of Russia/US/China” 1 means “Very favorable” or “Somewhat favorable”, and 0 otherwise. In the question “EAEU is beneficial,” 1 means “Strongly agree” or “Somewhat agree” that joining the Eurasian Economic Union has benefited Kazakhstan’s national economy, and 0 otherwise.

When asked who is responsible for the conflict in Ukraine, about a quarter of respondents believe it to be Russia, 20% indicate Ukraine, and less than 12% think that the West is primarily responsible for the conflict. When asked if Russia’s “Special Military Operation” (SMO) is completely or somewhat justified, around 50% indicate that it is not justified. This question seems to be particularly sensitive, with about 25% of respondents preferring not to answer (a fact that motivated us to supplement the CAB survey data with several list experiments in our own survey).

More than 70% of respondents had a favorable opinion of Russia in 2021, but this share significantly dropped to about 51% in 2022 and moved back to 57% in 2023. On average, around half of the population held favorable opinions of the US and China, with almost no dynamics for the former and an improved attitude for the latter. Most respondents agree that joining the Eurasian Economic Union has benefited Kazakhstan’s national economy, and the attitudes are quite stable.

Table 2 illustrates various media sources. Notably, the Internet emerged as the primary source of news regarding events outside of Kazakhstan, with approximately two-thirds of the population utilizing it by 2023. Slightly more than 10% of the sample access international news primarily via local or national TV, radio, and newspapers. Although Russian TV, radio, and newspapers only played a marginal role (4-7%) as *principal source of news*, around 62-65% of respondents consume Russian content for news or

Table 2: Descriptive statistics for media consumption

	2021	2022	2023
Panel A: Main news source for events outside Kazakhstan			
Internet	59.4	64.6	67
National/local TV, radio, newspapers	10.6	12.2	10.1
Russian TV, radio, newspapers	7.2	5	4.4
Panel B: Russian media consumption			
Use Russian media		65.5	62.1
Trust in news from Russia			36.8
Panel C: Messenger usage (most often)			
Use Telegram	6	8.5	10.1
Use Whatsapp	88.3	87.5	86.7
Panel D: Social media usage (most often)			
Use VK or OK	16.2	11.6	9.2
Use Facebook	8.7	8.2	7.7
Use Instagram	50.8	48.8	47.4
Use Tiktok	7.7	17.1	22.5
Panel E: Reliance on remittance from abroad			
Absence of remittance	88.3	91.9	92.9

Note. Table shows the percentage of media usage from six CAB survey waves for 2021-2023. No weights are applied. The row “*Trust in news from Russia*” shows the share of respondents from September 2023 who strongly or somewhat trust news from Russia. The row “*Absence of remittance*” shows the share of the households that do not rely on remittance.

entertainment, and nearly 37% trust Russian news.

In terms of social media and messaging apps, WhatsApp and Instagram seem to be most popular (Table 2). The usage of the Russian platforms Odnoklassniki or V Kontakte substantially dropped during 2021-2023, while platforms such as TikTok and Telegram experienced increasing popularity. Finally, about 10% of households surveyed depended on remittances from abroad, with the percentage slightly decreasing over time.

3.2 Yandex Search Data

We use Yandex search data to see how online search behavior for information about the war is affected by regional language patterns.¹² The data is taken from wordstat.yandex.kz. It shows the overall number and percentage changes of searches for a specific phrase per month and region. Figure 4 shows a substantial spike in searches for the phrase “war in Ukraine” in Russian in February 2022, with a smaller spike around the Russian mobilization in September 2022 and a stabilization after that.¹³

Figures A4, A5, A6 and A7 in Appendix A document that interest in internet news also spiked in February 2022. In addition, we see that while searches for information from pro-Kremlin news aggregators Yandex Dzen and Yandex News (Figures A5 and A6 of Appendix A) were significant and growing after February 2022, there is only a minor increase in searches for Euronews, the most popular pro-Western news channel in Kazakhstan (Figure A7 of Appendix A).

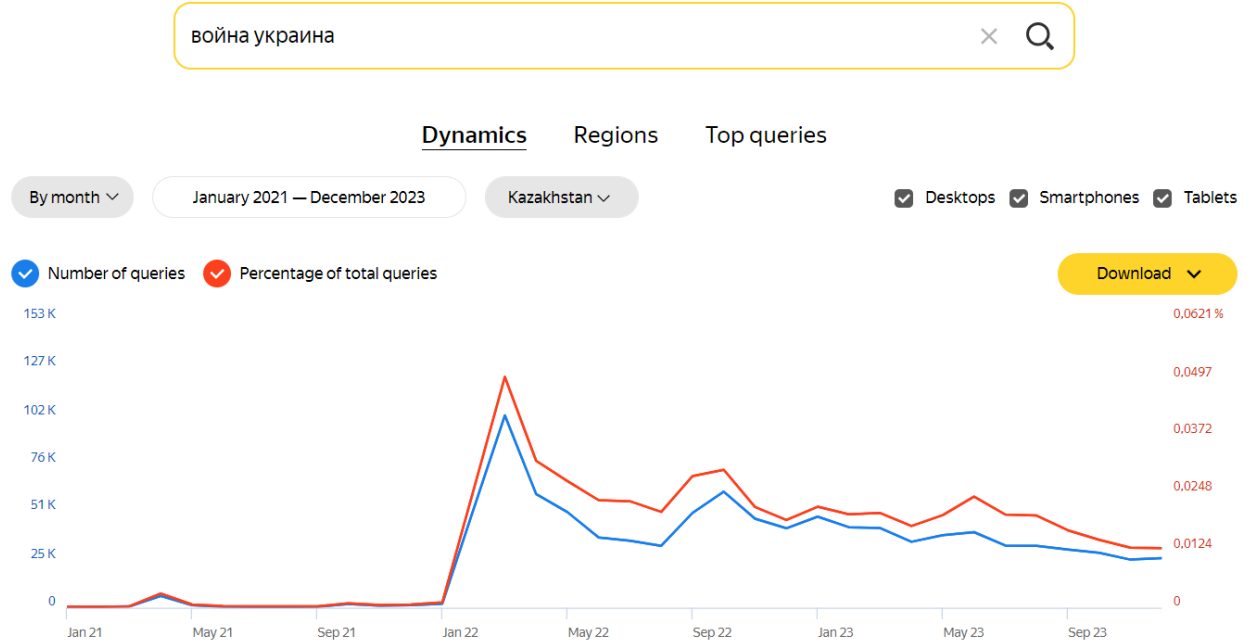
3.3 Online survey on media consumption and sanctions circumvention

The third dataset that we use is an original online survey that contains several list experiments conducted in November 2023 in Kazakhstan. The purpose of the survey was to provide information about media consumption and how it influences attitudes about sanction circumvention, with the list experiments permitting us to address problems linked to sensitive questions and social desirability bias. The survey

¹²Yandex has a market share of roughly 15% in Kazakhstan, whereas Google carries out the vast majority of searches. However, Google search data is not accessible in a systematic and reliable manner due to several limitations. Google Trends relies on a subsampling methodology, which means that the provided statistic is based only on a subset of searches, making the search statistics inconsistent over time. Additionally, Google Trends provides only data on the relative popularity of search terms, making it difficult to assess actual search volumes or to make accurate comparisons over time or across keywords. Furthermore, changes to Google’s data collection methods, which are not always well documented, can undermine the consistency of results. In contrast, Yandex Wordstat offers absolute search counts, providing more stable and reliable data for analysis. The [market share of Yandex](#) has been oscillating between roughly 10% and 25% for 2021-2023.

¹³Figure A2 of Appendix A presents the search results for the same phrase, “war in Ukraine”, in Kazakh. The number of searches does not exceed 130 per month, while queries in Russian reach tens of thousands, justifying our exclusive focus on search keywords in Russian. Moreover, Google Trends was unable to estimate the phrase’s popularity in Kazakh, displaying a message about insufficient data, as shown in Figure A3 of Appendix A.

Figure 4: Search for “War Ukraine” on Yandex



was pre-registered¹⁴ and carried out by NAC Analytica, a leading public opinion pollster in Kazakhstan.¹⁵ Participants were recruited through advertisements on social media, and a weighting scheme was applied to make the sample nationally representative.

The survey quality controls included attention checks (two questions on respondent’s age had to match), speeding filters (a minimum of 200 seconds), allowing only two complete responses per IP address, and allowing phone numbers to participate only once (payment was carried out by phone number). Out of 28,201 participants who clicked on the survey ad on social media to read the consent form, 5,025 completed the survey, passed quality checks, were unique respondents, and were compensated 700 Tenge (approx. 1.50 USD).¹⁶ Since the list experiment is a cognitively intensive task, for the analysis, we keep only respondents of age below 70, keeping us with 4,904 respondents.

The survey began with a consent form in a randomly assigned language (Kazakh or Russian). At any stage of the survey, the respondents could change the language.¹⁷ Upon confirming the consent form, the respondent was asked a set of demographic questions. It included several questions related

¹⁴https://aspredicted.org/YPM_LSH

¹⁵<https://nacanalytica.com/en/>

¹⁶Most of the participants who left the survey before completion did so on the consent page or during the initial demographic questions.

¹⁷Our data shows that if respondents changed the language, they did it on the consent form or the first demographic question, and completed the survey using the selected language.

to language proficiency and use, including (i) a set of languages respondents know well, (ii) a language they use most often at home, (iii) a language they use most often outside (at work, school, or with friends), and (iv) a language they use most often for news about political or economic events outside of Kazakhstan. After that, the survey asked a set of questions related to news: (i) the general interest in news outside of Kazakhstan, (ii) the four most essential sources of news,¹⁸ including names of channels, (iii) the intensity of consumption of these sources, and countries of origin. Table C1 of Appendix C shows the descriptive statistics.

After answering demographic questions, participants were proposed a set of list experiment questions in random order. The set included two sensitive questions about the war in Ukraine and helping Russia circumvent sanctions, one sensitive question about participation in protests for political change, and a non-sensitive (placebo) question to check for the design effect of list experiments. All the list experiments were framed with the following sentence: “*In your opinion, HOW MANY of the things or actions below are generally justified?*”. Each list experiment included three control items and one treatment item in random order. The sensitive treatment items about the war in Ukraine were “*Helping Russia avoid Western sanctions*” and “*Russia’s Special Military Operation in Ukraine/ Russia’s invasion of Ukraine*”,¹⁹ the sensitive treatment item about domestic politics was “*Participating in protests for political change*”, while the placebo treatment item was “*Working more than 50 hours per week*”. The set of control items was unique for each list experiment question. For more details on the design and specific questions of the list experiment, see Section C.2 of Appendix C. After the block of list experiments, we also asked direct questions on the same topics.²⁰

Table 3 shows the descriptive statistics for ethnicity, language usage, and the direct question of interest, including sensitive and placebo questions. Note that the share of respondents justifying the invasion of Ukraine is 25.7%, similar to what we find in the CAB survey. Moreover, the share of respondents in favor of sanctions circumvention is 30%, while the share of not approving this is 37.5%, with a high number of non-responses highlighting the sensitivity of the direct question. Note also that consumers of Russian media are 4.9% more likely to approve of the Russian invasion, and 12.2% more

¹⁸Including TV, Websites, YouTube, V Kontakte, Instagram, Twitter, Telegram, Yandex, TikTok, Facebook, Odnoklassniki, or other social media and websites.

¹⁹The framing *Special Military Operation in Ukraine* and *invasion of Ukraine* was assigned at random to balance invoked framing effects. Arguably, the way one asks about Russia’s invasion of Ukraine reveals their view on this topic and thus may invoke social desirability bias from the respondents.

²⁰The direct sensitive questions about the war in Ukraine were *In your opinion, is helping Russia avoid Western sanctions generally justified or not justified?* and *In your opinion, is Russia’s Special Military Operation/ invasion of Ukraine generally justified or not justified?*. The direct sensitive questions about domestic politics was “*In your opinion, is participating in protests for political change generally justified or not justified?*”. The direct placebo question was: *In your opinion, is working more than 50 hours per week generally justified or not justified?*

likely to indicate that helping Russia circumvent sanctions is justified.

Table 3: Descriptive statistics for online survey

		Russian ethnicity	Russian language knowledge (%)	news	Protest particip.	Evade sanct.	Invasion/ SMO	Justified action or event (direct quest.) % Work ≥ 50 hours
Panel A: Overall								
	4904	24.8	62.6	45.4	31.2	30.0	25.7	31.2
Panel B: Split by “ <i>Russian media is mentioned at least once among the four main news sources</i> ”								
No	3416	21.3	54.0	38.5	31.1	26.3	24.2	32.8
Yes	1488	32.7	82.5	61.4	31.5	38.5	29.1	27.6

Note. The table summarizes the characteristics of the participants in the online survey, including the share of ethnically Russian individuals, Russian speakers, consumers of news in Russian, and those justifying actions/events from the direct questions. Panel A refers to the entire sample, while Panel B presents subsamples based on whether Russian media is mentioned at least once among the four main news sources.

3.4 Data on international trade and domestic production

Finally, we use data from international trade between Kazakhstan and Russia to study the economic consequences of pro-Kremlin propaganda. Our dataset was collected from the Kazakh Bureau of National Statistics (www.stat.gov.kz). It consists of all transactions between the countries of the Eurasian Economic Union and Kazakhstan for the period between January 2021 and September 2023, and contains information on the TNVED classification code and region of Kazakh firms that trade internationally, as well as the nationality of their trading partners. Focusing on export activity from Kazakhstan to Russia, we are able to identify 810,000 individual transactions, which we classify into five product classes: (i) electronics and machines, (ii) food, (iii) cloth, (iv) metals and (v) others.²¹ Most of the products from class (i) are under Western sanctions, prohibiting their reexport from Kazakhstan to Russia. We therefore call them *sanctioned products*, even when discussing the pre-war period. We aggregate the export data, calculating the export value in million USD at the region (20 regions), month (33 months) and product class (5 classes) level, which gives us a final dataset of 2899 observations.

Figure 3 shows the dynamics of exports from Kazakhstan to Russia averaged over regions and product classes for electronics/machines and other products (product classes (ii)-(v)). As the Kazakh Bureau of National Statistics also provides industrial production output data for each region and month for 36 OKED product categories, we can aggregate these categories into the same 5 product classes.²² We

²¹We allocate the 2-digits TNVED product classifications as follows: electronics (85,88,90,91), machines (84,86,87,89), food (01-24), cloth (41-43, 50-67), metals (72-83), with “others” covering the rest.

²²We allocate the 2-digits OKED product classifications as follows: electronics (26,27), machines (28,29,30), food

match the production data with the export data at the region-month-product class level, allowing us to separate the reexport of imported goods from goods that were produced in Kazakhstan. Figure A8 of Appendix A shows the dynamics of Kazakhstan’s production averaged over regions and product classes for electronics/machines and other products.

4 Language Proficiency, Media and Public Opinion

4.1 Language Proficiency and Justification of the War in Ukraine

We start with studying how linguistic proficiency in speaking Russian relates to attitudes toward the war in Ukraine. We use the four CAB survey waves conducted since the start of the full-scale invasion and consider the following two-way fixed-effects linear specification:

$$y_{irt} = \alpha L_{irt} + \mathbf{X}_{irt}\beta + \kappa_r + \lambda_t + \epsilon_{irt} \quad (1)$$

The subscript i denotes respondent from region r and wave t .²³ The binary variable L_{irt} is 1 if a respondent speaks Russian as their daily language at home, and 0 otherwise. The vector \mathbf{X}_{irt} includes the following set of control variables: gender, five age categories, a dummy variable for education at the university level or higher, five categories of household size, dummy variables for urban/rural settlement and ethnicity (Russian or Kazakh²⁴), as well as the interviewer’s assessment of the respondent’s survey comprehension and comfort with answering the survey. Note that data for ethnicity enables us to separate language habits from ethnicity. The variables κ_r and λ_t are the region and survey wave fixed effects, respectively. As dependent variables y_{irt} , we consider answers to the following two questions about the war in Ukraine: (i) the extent to which the SMO is justified (both as a binary and a scaled measure) and (ii) and the answer to the question who is responsible for the war (Russia, Ukraine or the West). Our main focus is coefficient α , which shows the association between attitudes about the war and language habits, controlling for socio-demographic factors and ethnicity.

Table 4 shows the results for the binary measure “the SMO is justified” for the whole sample (column 1) and for different sub-samples we can identify with the CAB data: column 2 zooms in on firm heads, columns 3 and 4 on respondents older or younger than 40 years of age, column 5 looks at respondents who indicated to pay a lot of attention to information about the war, and column 6 at the ethnically non-Russian part of the Kazakh population. We find that Russian-speaking respondents are 11% more

(10,11,12), cloth (13,14,15), metals (24,25), with “others” covering the rest.

²³Regions are three major cities, Astana, Almaty, and Shymkent, and 17 other sub-national regions.

²⁴For simplicity, we code all respondents who are ethnically non-Russian as “Kazakh”.

likely to agree that Russia’s SMO is justified, with a sample average of 42.8% justifying the war. For all the above-mentioned sub-samples, the results are similar (with the exception that older Russian-speaking respondents are more likely to justify the war than younger respondents). Interestingly (and important for our analysis), even among the group of ethnic Kazakhs, those who mainly speak Russian in their daily lives are 10% more likely to justify the war than those who mainly speak Kazakh. Table B1 in Appendix B provides the detailed regression output that includes all control variables. Table B2 in Appendix B shows the estimates for the scaled outcome variable with the results being the same, except for the result for firm heads being no longer insignificant. Finally, Table B3 in Appendix B uses “the SMO is not justified” as a binary dependent variable, showing that Russian speakers are about 8% less likely to condemn the war than non-Russian speakers.

Table 4: Russian language proficiency and war justification

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	SMO is justified (binary)					
Russian language	0.11*** (0.015)	0.090** (0.037)	0.16*** (0.026)	0.077*** (0.019)	0.13*** (0.019)	0.10*** (0.015)
Observations	6,020	955	2,366	3,654	3,889	4,864
R-squared	0.140	0.154	0.223	0.082	0.178	0.078
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The table shows the regression results (1) for a binary dependent variable, “SMO is justified”. Robust standard errors are in parentheses.

As the next step, we consider a set of binary variables assigning responsibility for the war to three possible actors – Russia, Ukraine, or the West as the dependent variable y_{irt} in equation (1). Table 5 shows the results with a breakdown by dependent variables and sub-groups of respondents. Column 1 of panel A shows that, in general, Russian-speaking respondents are 5.7% less likely to blame Russia for being the main culprit of the war, which is equivalent to 21.7% when referring to the sample average. The association is even stronger for respondents who are particularly interested in information about the war (column 5 of panel A), while for firm heads and younger respondents it is not significant (columns 2 and 4 of panel A).

Panel B shows that Russian-speakers are not more likely than non-Russian speakers to assign responsibility for the war to Ukraine. However, Panel C shows that Russian speakers are 8.7% more likely to blame the West, with an overall sample average of 76% of Russian speakers sharing this opinion. This

last effect remains strong and significant for all sub-samples, including firm heads (column 2 of panel C) and younger respondents (column 4 of panel C).

Table 5: Russian language proficiency and responsibility for the situation in Ukraine

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. War responsibility: Russia						
Russian language	-0.057*** (0.017)	-0.025 (0.042)	-0.094*** (0.028)	-0.034 (0.021)	-0.070*** (0.022)	-0.058*** (0.017)
Panel B. War responsibility: Ukraine						
Russian language	0.013 (0.014)	-0.028 (0.033)	0.028 (0.024)	0.0058 (0.018)	0.0012 (0.018)	0.013 (0.014)
Panel C. War responsibility: US, EU, NATO						
Russian language	0.087*** (0.012)	0.079*** (0.031)	0.13*** (0.024)	0.063*** (0.013)	0.10*** (0.016)	0.083*** (0.012)
Observations	6,020	955	2,366	3,654	3,889	4,864
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The table shows the results of regression (1) for binary dependent variables assigning responsibility for the war to Russia, Ukraine or the West. Robust standard errors are in parentheses.

We conclude that Russian-speaking respondents are more likely to justify the war, are less likely to blame Russia, and are more likely to blame the West as compared to non-Russian speakers.²⁵ These results underline the critical role of language in shaping political views, in addition to ethnicity and other factors.

4.2 Language Habits, Media Consumption and Remittances

In this section, we study a set of *potential mechanisms* explaining why Russian speakers are more likely to justify the war, a result that we found even for the part of the Kazakh population that is ethnically non-Russian. We start by considering information channels that have traditionally played an important role in Central Asia, namely Russian traditional media (TV and Radio) and labor migration. We use

²⁵Figure B1 in Appendix B shows the dynamics of the association between language proficiency and war attitudes (i.e. coefficients α_t for $L_{irt} \times \lambda_t$ keeping other controls from specification (1).) All war attitude variables exhibit a strong association with language in the first wave and stabilization at a lower magnitude afterward.

them as dependent variables in equation (1).

Table 6: Russian language proficiency and channels for Russian propaganda

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A. News from Russian TV, radio, newspapers					
Russian language	0.022*** (0.0063)	0.0074 (0.012)	0.037*** (0.014)	0.010* (0.0060)	0.029*** (0.0089)	0.016*** (0.0061)
	Panel B. Absence of remittances					
Russian language	0.0082 (0.010)	0.024 (0.025)	0.0033 (0.016)	0.010 (0.014)	0.0032 (0.012)	0.013 (0.011)
	Panel C. News from the Internet					
Russian language	0.038** (0.016)	-0.017 (0.036)	0.0063 (0.030)	0.052*** (0.020)	0.046** (0.019)	0.038** (0.017)
Observations	6,020	955	2,366	3,654	3,889	4,864
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The table shows the results of regression (1) for binary dependent variables indicating consumption of international news from Russian TV, Radio, Newspapers and from the Internet, as well as binary dependent variables indicating that respondents received remittances from Russia. Robust standard errors are in parentheses.

Panel A of Table 6 shows that Russian-speaking respondents are more likely than non-Russian speakers to consume Russian traditional media (TV news, radio, and newspapers). This effect is stronger for older respondents and those who pay special attention to information about the war. One has to remember, however, that overall Russian traditional media are only used by a relatively small share of the population on a regular basis (see Table 2). There is no evidence that Russian-speakers are more or less likely to receive remittances from Russia, making it unlikely that this could be a channel of influence that distinguishes them from non-Russian speakers (Panel B of Table 6).

Panel C of Table 6 then looks at Russian-speaking respondents who mainly consume news from the Internet (the main source of information for citizens of Kazakhstan, see Table 2). We see that Russian-speaking respondents are 3.8% more likely to consume internet news than non-Russian speakers, with the effect being especially prominent for younger respondents. The combined results from panels A and C suggest that while traditional Russian media still play a role for older respondents, younger

Table 7: Russian language proficiency, social media and internet news

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: Internet news and the following Social Media:					
VARIABLES	VK or OK	Telegram	Instagram	TikTok	Facebook	WhatsApp
Russian language	0.055*** (0.0063)	0.028*** (0.0068)	-0.026** (0.012)	-0.027*** (0.0085)	-0.040*** (0.0058)	-0.045*** (0.013)
Observations	6,020	6,020	6,020	6,020	6,020	6,020
R-squared	0.014	0.003	0.001	0.002	0.007	0.002
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	All	All	All	All	All
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The table shows the results of regression (1) for a set of binary dependent variables that are a combination of using the Internet for international news and frequently using one of the indicated social media platforms. Robust standard errors are in parentheses.

respondents with a similar language profile get their information mostly online.²⁶

The CAB survey only includes a question about news consumption from the Internet, without asking for news consumption from social media or specific websites. However, there is a question about the preferred social networks that respondents use most frequently. Combining this question with the question about news consumption allows us to build a proxy for media consumption through social networks that we use as dependent variable in equation (1) for Table 7, allowing us to study the role of specific social media platforms as channels of information.

We consider 8 different social media platforms. V Kontakte (VK) and Odnoklassniki (OK) are platforms controlled by the Russian government, with the former being more popular among younger people and the latter among older people. Especially since February 2022, VK, OK and Telegram have been intensely used by Russian government propaganda. Telegram in particular has become a platform where pro-Russian bloggers with often large audiences are providing information about the war from a Russian perspective.²⁷ Facebook and Instagram, on the other hand, are blocked in Russia. TikTok hosts entertainment content and WhatsApp is mostly used as a messaging app, so these platforms are less relevant as channels of Russian propaganda.

²⁶Appendix B shows that Russian speakers are more likely to use the internet in daily life (Tables B4 and B5), less likely to consume Kazakh national media for international news (Table B6) and more likely to consume Russian media for news and entertainment (Table B7). Ethnic non-Russians speaking Russian are more likely to trust Russian news (Table B8).

²⁷See e.g. <https://www.dw.com/en/russian-war-bloggers-pawns-in-a-political-game/a-64284496>

Columns 1 and 2 of Table 7 show that Russian-speaking respondents who consume news from the Internet are also significantly more likely to use VK, OK and Telegram, while they are less likely to use platforms that are not controlled by the Russian government (columns 3 to 6). These results suggest that online news consumption from Russian social media platforms could be one potential channel driving the difference in opinions we identify above.

4.3 Language and Long-Term Political Attitudes

So far, we have shown that language habits correlate with a particular set of attitudes about the war (Section 4.1). They are also associated with specific patterns of media consumption that make it more likely to receive pro-Russian content (Section 4.2). However, we were not yet able to establish a causal link from language patterns to attitudes, i.e., that people in Kazakhstan select certain media sources because of their language and that these sources then influence their opinions. The findings in Tables 4 and 5 could just stem from Russian speakers in Kazakhstan having always been more pro-Russian than non-Russian speakers, as they share long-term historical and cultural ties with Russia. If this is the case, we would expect that this group always held a more favorable view of Russia and a less favorable view of the US than the group of non-Russian speakers.

To examine this argument, we use a question from the CAB survey that gauges opinions about Russia, the US and China from 2021 to 2023, allowing us to estimate the following DID specification from Korovkin and Makarin (2023):

$$y_{irt} = \alpha L_{irt} + \gamma Post_t + \delta L_{irt} \cdot Post_t + \mathbf{X}_{irt}\beta + \kappa_r + \lambda_t + \epsilon_{irt} \quad (2)$$

Here, i denotes a respondent from region r and survey wave t . The binary variable L_{irt} equals one for Russian-speakers and 0 otherwise, and the binary variable $Post_t$ is equal to one for the period after February 2022. The vector \mathbf{X}_{irt} includes the same set of control variables as in (1), λ_t is the survey wave fixed effect, and κ_r is the region fixed effect. The regression design is similar to a standard DID design, even though there is no pure (unaffected) control group. That is, the coefficient α shows the gap in y_{irt} between the Russian and non-Russian speaking respondents before the war, and the coefficient δ shows the change in this gap after February 2022. The coefficient δ can be interpreted as the differential treatment effect. We use respondents' opinions about Russia, the US and China from all six CAB survey waves (binary as well as scaled from 1 to 4) as our dependent variable.

Table 8 shows our results.²⁸ Before the full-scale invasion, Russian-speaking respondents had the

²⁸Figure B3 of Appendix B shows the result of an event-study analysis and justifies the parallel trend assumption for

Table 8: Opinion of Russia, US and China in dynamics

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Favorable opinion of Russia (bin.)			Favorable opinion of the US (bin.)			Favorable opinion of China (bin.)		
Russian language (α)	-0.00010 (0.018)	0.033 (0.030)	-0.017 (0.023)	0.092*** (0.018)	0.087*** (0.030)	0.093*** (0.023)	0.17*** (0.019)	0.19*** (0.030)	0.16*** (0.024)
After Feb. 2022 (γ)	-0.13*** (0.020)	-0.14*** (0.033)	-0.13*** (0.025)	0.029 (0.020)	0.042 (0.033)	0.019 (0.025)	0.16*** (0.019)	0.12*** (0.032)	0.17*** (0.025)
Russian language \times After Feb. 2022 (δ)	0.13*** (0.019)	0.16*** (0.031)	0.098*** (0.025)	-0.078*** (0.020)	-0.11*** (0.032)	-0.060** (0.026)	0.015 (0.020)	0.031 (0.031)	-0.0016 (0.026)
Observations	9,520	3,732	5,788	9,520	3,732	5,788	9,520	3,732	5,788
R-squared	0.111	0.126	0.108	0.137	0.094	0.088	0.141	0.169	0.127
Waves	All	All	All	All	All	All	All	All	All
Sample	All	Above 40	Below 40	All	Above 40	Below 40	All	Above 40	Below 40
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Table shows the results of regression (2) for binary dependent variables: “Favorable Opinion of Russia” (columns 1-3), “Favorable Opinion of the US” (columns 4-6), “Favorable Opinion of China” (columns 7-9). Robust standard errors are in parentheses.

same opinion of Russia ($\alpha = 0$ in column 1) and a *more favorable* opinion of the US ($\alpha > 0$ in column 4) than non-Russian-speaking respondents. These results change substantially after February 2022 (coefficient δ). After February 2022, Russian-speaking respondents had a significantly better opinion of Russia than non-Russian-speaking respondents ($\delta > 0$), while the way non-Russian speakers saw Russia deteriorated substantially ($\gamma < 0$) (column 1). These results hold for both younger and older respondents (columns 2 and 3).

Column 4 shows that the positive attitude of Russian-speaking respondents toward the US decreased significantly ($\delta < 0$), while the attitude toward the US of non-Russian speakers remained stable ($\gamma = 0$). Again, the results appear to hold for respondents both below and above age 40. Finally, for comparative purposes, we also look at opinions towards China, a country that holds (at least de jure) a neutral position in the conflict. Here we find that Russian-speaking respondents had a more favorable opinion of China before the invasion, and that this did not change after the full-scale invasion.

Overall, our results suggest that the argument that Russian-speakers in Kazakhstan are more supportive of the war because they have always been closer to Russia is not valid. We argue that instead of long-established habits and views, it is the use of the Russian language and through this consumption of Russian media that has caused the shift in opinions we identify above.

attitudes to Russia and the US. The results of our DID estimates from Table 8 can therefore be interpreted as causal.

4.4 The Effect of Language on Media Choice

So far, we have shown that Russian speakers are more likely to justify Russia’s war in Ukraine and to blame the West for the conflict. We were able to demonstrate that this gap in opinions only appeared after February 2022, and that Russian speakers are more likely to consume pro-Russian news from the Internet, Russian traditional media and Kremlin-controlled social media. However, we were not yet able to show *exactly why* the divergence of opinions occurred only after February 2022, and not before.

To explain this phenomenon, our hypothesis is as follows. When Russia’s full-scale invasion triggered interest in a conflict that until then had not been on the front pages for most people in Kazakhstan, those Kazakh citizens speaking mainly Russian in their daily lives used Russian-language keywords to search for information about the conflict. Due to the dominance of pro-Russian media on the Russian-language Internet, most of these people ended up on pro-Russian news sites, which subsequently influenced their opinions into a pro-Russian direction. Kazakh-speaking individuals, on the other hand, ended up on more neutral Kazakh-language media outlets.

In this section, we use Yandex search statistics at the month-regional level to test this hypothesis. To see whether Russian language proficiency affected the frequency of searches for war-related information, we use the CAB survey data to calculate the share of Russian speakers at the regional level and match this information with monthly and regional search statistics from Yandex. We consider the following event study specification:

$$y_{rt} = \sum_t \beta_t \cdot SL_r \cdot \lambda_t + \kappa_r + \lambda_t + \epsilon_{rt} \quad (3)$$

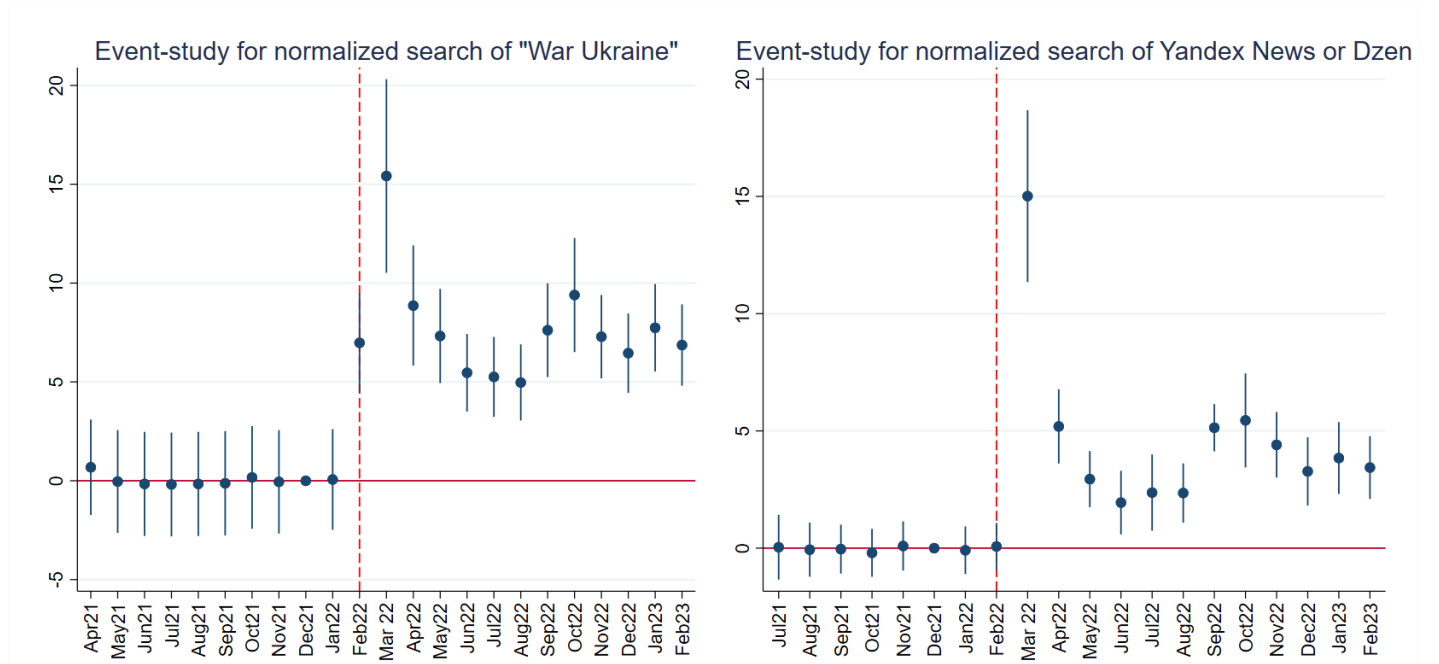
The dependent variable $y_{rt} = \frac{\text{Num. of searches in region } r \text{ in month } t}{\text{Population in region } r} \cdot 1000$ is the number of searches for a specific keyword per month, region and 1000 inhabitants. SL_r is the share of respondents speaking Russian at home in region r , κ_r is the region fixed effect and λ_t is the year-month fixed effect. Coefficient β_t shows the differential effect of regional Russian language proficiency on the frequency of online searches.

The left graph of Figure 5 shows the results for the keywords “vojna Ukraina” (“war Ukraine”, see also Figure 4).²⁹ We show how regions with a higher share of Russian speakers demonstrate a significant increase in searches for war-related keywords compared to regions with a lower share of Russian speakers, after February 2022. Specifically, increasing the share of Russian speakers from 8% to 83% in a region (that is, from the lowest to the largest share in Kazakhstan) increases the search for war-related keywords 11.3 times per 1000 people. Figure B6 in Appendix B shows that the large-scale protests that occurred

²⁹The Yandex search statistics is insensitive to letter cases, prefixes, endings, pronouns, and prepositions, as a search phrase is first lemmatized and stopwords are removed.

in Kazakhstan in January 2022 (the most significant protests that ever happened in Kazakhstan’s history as an independent country) only led to a much smaller increase, highlighting that the interest for information sparked by Russia’s full-scale invasion of Ukraine was truly exceptional.³⁰ This makes us believe that this surge in interest could indeed be responsible for the divergence in opinions we are able to document in section 4.1.

Figure 5: Event study design for Yandex search “war Ukraine”, "Yandex news" or "Yandex Dzen"



Note. The figure shows coefficients β_t from (3) over time. We calculate the regional share of speaking Russian at home from the CAB 2022-2023 surveys. The vertical axis shows the effect of the regional share of Russian speakers on the number of keyword searches per 1000 regional inhabitants.

The graph on the left side of Figure 5 shows that the search for war-related information in Russian increased disproportionately in regions with a higher share of Russian speakers. However, this increase in search frequency alone does not mean that people automatically ended up on specific news sites. To investigate this further, we look at search patterns for specific news aggregators and sites.

First, we estimate equation (3) for searches for Yandex Dzen and Yandex News – the largest pro-Kremlin news aggregator.³¹ The right graph of Figure 5 shows that the effect of the share of Russian speakers in a given region on searches for Yandex News is comparable to what we find when investigating the keywords “war Ukraine”. This suggests that Yandex News is an important source of news in the

³⁰Figure B7 of Appendix B shows that the news search after February 2022 is specific to war in Ukraine, and other generic searches like weather, online games or movies are not connected to this event.

³¹Yandex News was acquired by the Russian state-owned social media VK in 2022, and renamed Yandex Dzen.

Russian-speaking regions of Kazakhstan. Figure B4 of Appendix B shows that other pro-Kremlin TV shows and media, such as “Evening with Solovyov”, RIA News, and RBC News, also experienced a significant surge after February 2022 in Russian-speaking regions.

Searches for Russian-language versions of the BBC and Euronews (the most popular pro-Western media in Kazakhstan), on the other hand, only showed a very small spike in Russian-speaking regions, suggesting that Western outlets were not able to compete in the Russian-language information space in Kazakhstan (Figure B5 in Appendix B).

5 Russian Media and Attitudes About Sanctions Circumvention

In this section, we present the results from our own original survey, allowing us to pinpoint the effect of Russian media consumption on political beliefs, with a specific focus on attitudes toward the war and sanctions circumvention. Combining direct questions with list experiments permits us to address issues with social desirability bias and the sensitivity of war-related questions, which might have distorted answers to the direct questions in the CAB survey. We consider the following linear specification:

$$y_{ir} = \alpha RM_{ir} + \mathbf{X}_{ir}\beta + \kappa_r + \epsilon_{ir} \quad (4)$$

The subscript denotes respondent i from region r . The variable RM_{ir} is the number of media sources coming from Russia out of the four main news sources on political and economic issues indicated by respondent i . The vector \mathbf{X}_{ir} includes a binary variable of *knowledge of the Russian language*, a binary variable about *completing the survey in Russian*, as well as controls for Russian ethnicity, gender, age, the number of kids, higher education, occupation, financial state, the intensity of internet use, the extent of interest in news, and living in a rural area. The variable κ_r is a regional fixed effect. As dependent variable y_{ir} , we use binary responses to direct questions that ask respondents if they find it justified to (1) participate in protests, (2) help Russia avoid sanctions, (3) that Russia invaded Ukraine, and (4) to work more than 50 hours a week.

A problem we encounter is that consumption of Russian media RM_{ir} is endogenous to our main dependent variables of interest – justifying to help Russia evade sanctions and justifying the invasion of Ukraine. As an instrument RL_{ir} , we therefore use the extent to which Russian is being used in daily life. We construct the variable RL_{ir} as the sum of three binary variables that measure using Russian as the main language (i) at home, (ii) with friends/colleagues, and (iii) for media consumption. We assume that after controlling for Russian ethnicity (which may create a cultural connection), knowledge of Russian (making content in Russian available), and completing the survey in Russian (revealed instant language

preference), the habit of using Russian in daily life affects attitudes to the war in Ukraine and sanctions against Russia *only* via consumed media.³²

Table 9 presents our results of the IV estimations for direct questions, both for justifying and explicitly not justifying the four actions we are interested in. Columns 3 and 4 show that respondents who consume Russian media are 18% more likely to think it is justified to help Russia evade sanctions, and 22% less likely to explicitly state that this is not ok. Column 5 shows no significant effect of Russian media consumption on the justification of the invasion/SMO. However, column 6 shows a strong negative effect of Russian media consumption on the explicit non-justification of the invasion. This could imply that these respondents either hide their preferences, answering “*prefer no to answer*”, or they do not have a well-determined attitude.

Columns 1 and 2 look at the direct question about participating in a protest for political change in Kazakhstan. Despite the political sensitivity of the topic, consumption of Russian media does not have a significant effect.³³ This is in line with our previous findings that Russian media only shape the attitudes of Kazakh citizens with respect to Russia-related events, but not with respect to other political issues. Finally, columns 7 and 8 show results for the dependent variable that is not related to politics, i.e. working more than 50 hours per week. As with respect to protest participation, there is no effect of Russian media consumption on opinions about this topic.

To reduce the preference falsification in direct questions and for ethical reasons, we gave option *Prefer not to answer* in all the direct questions considered as dependent variables in Table 9.³⁴ To better understand the non-revealed preferences with respect to helping Russia evade sanctions and justifying the invasion, and their relation with Russian media consumption, we use a set of list experiment questions on the same topics. Section C.2 of Appendix C, describes the list experiments design in detail and Table C3 of Appendix C shows the balance statistics.

Table 10 shows the results from the list experiments, estimated by OLS with controls for Russian

³²**Knowledge** of Russian is a proxy for Russian media exposure of the second order, while **usage** of Russian in daily life is a proxy of the first order. If respondents do not know Russian they cannot be exposed to Russian news directly, but only via re-published content in other languages. If they know Russian but have no habits of using it in daily life, they are unlikely to be exposed to Russian media intensively. The more intensively they use Russian in daily life, the more they are exposed to Russian media.

³³After the events of “Bloody January” in 2022, discussing protest participation has become a very sensitive topic in Kazakhstan.

³⁴The shares of respondents selecting *Prefer not to answer* in direct questions of justification for: (i) protest participation - 30.3%, (ii) help in sanctions evasion - 32.5%, (iii) invasion of Ukraine - 33.2%, (iv) working more than 50 hours per week - 21.1%. We find that around 10% of respondents select *Prefer not to answer* to direct politically sensitive questions, but not to other questions related to religion, media, and trust in government.

Table 9: Russian media and justification of actions/events: Direct Question

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Protest participation Justified	Not justif.	Sanctions evasion Justified	Not justif.	Invasion/SMO Justified	Not justif.	Work \geq 50 h. Justified	Not justif.
Russian media (scale)	-0.0081 (0.063)	-0.074 (0.067)	0.18*** (0.064)	-0.22*** (0.073)	0.082 (0.057)	-0.23*** (0.075)	0.016 (0.060)	0.064 (0.067)
Know Russian	-0.050 (0.037)	-0.0090 (0.039)	-0.17*** (0.037)	0.11** (0.043)	-0.10*** (0.035)	0.11** (0.044)	-0.090** (0.035)	0.023 (0.039)
Survey in Russian	-0.023 (0.018)	-0.045** (0.020)	0.030 (0.019)	-0.072*** (0.021)	-0.013 (0.017)	-0.055** (0.022)	-0.027 (0.019)	-0.021 (0.020)
Ethnical Russian	-0.081*** (0.025)	0.0067 (0.029)	0.068** (0.027)	-0.12*** (0.030)	0.018 (0.023)	-0.14*** (0.032)	-0.070*** (0.024)	-0.041 (0.029)
Observations	4,904	4,904	4,904	4,904	4,904	4,904	4,904	4,904
R-squared	0.137	0.021	0.039	-0.082	0.113	-0.123	0.129	0.083
Region FE	Y	Y	Y	Y	Y	Y	Y	Y
Estimat.	IV	IV	IV	IV	IV	IV	IV	IV
Kleib.-Paap Wald rk F	41.4	41.4	41.4	41.4	41.4	41.4	41.4	41.4

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Linear regression models, where the dependent variable is responding “justified” to the question *In your opinion, is [item] generally justified or not justified?*. The wording is in Section 3.3. Russian media (scale) varies from 0 to 4 and shows how many sources out of four main news sources are of Russian origin. The instrument – Usage Russian – is the sum of binary variables related to Russian as the main language: at home, with friends/colleagues, for media consumption. The heteroskedasticity robust F-statistics show that the instrument is strong (≥ 20) for the standard inference (Andrews et al. 2019). The additional controls not shown in the table are gender, age, number of kids, education, occupation, financial state, the intensity of internet usage, the extent of interest in news, rural binary indicator, and regional fixed effects. Robust standard errors are in parentheses. OLS results with control for Usage Russian are in Table C4 of Appendix C.

media consumption and its interaction with the treatment group.³⁵ The coefficients for the treatment group in Columns 3-4 (5-6) show that around 30% of respondents *who do not* indicate Russian media as their main source of information justify sanctions circumvention, while 24% justify the invasion of Ukraine. The coefficient for the interaction shows that consumers of Russian media were an additional 6.5% more likely to justify sanctions circumvention, while there was no effect for justifying the invasion of Ukraine. Taken together with the results of Table 9, we can conclude that the consumption of Russian media increased the justification of helping Russia to evade sanctions and decreased explicit non-justification of the invasion. These results link our previous discussion of Russian media consumption and attitude to the war with the re-export activity of Kazakhstan presented in the next section.

6 Russian propaganda and help in sanctions circumvention

In this section, we study how exposure to Russian propaganda affects the export activity of sanctioned products to Russia from Kazakhstan. Our aggregate export data from Kazakhstan to Russia includes

³⁵The results cannot be interpreted causally. The IV approach reveals a weak instrument for the interaction of the treatment group with Russian media consumption.

Table 10: Russian media and justification of actions/events: List Experiment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Number of chosen items in a list experiment question.				Treatment item:			
VARIABLES	Protest particip.		Evade sanctions		Invasion/SMO		Work \geq 50 h.	
Tr. Gr.	0.32*** (0.039)	0.33*** (0.037)	0.30*** (0.039)	0.32*** (0.037)	0.24*** (0.037)	0.23*** (0.036)	0.22*** (0.039)	0.21*** (0.037)
Tr.Gr. \times Rus.media	0.023 (0.029)	0.024 (0.029)	0.065** (0.030)	0.066** (0.030)	0.00061 (0.029)	0.0047 (0.029)	0.0059 (0.030)	0.0016 (0.030)
Russian media	0.076*** (0.018)	0.056*** (0.019)	0.017 (0.019)	0.021 (0.020)	0.049*** (0.018)	0.056*** (0.020)	0.086*** (0.019)	0.067*** (0.020)
Usage Russian		0.076*** (0.024)		0.056** (0.025)		-0.00071 (0.023)		0.023 (0.024)
Know Russian		0.13*** (0.049)		0.055 (0.049)		0.095** (0.047)		0.093* (0.048)
Survey in Russian		-0.23*** (0.048)		-0.34*** (0.048)		-0.27*** (0.047)		-0.17*** (0.048)
Ethnical Russian		-0.28*** (0.056)		-0.17*** (0.056)		-0.096* (0.053)		-0.20*** (0.056)
Observations	4,904	4,904	4,904	4,904	4,904	4,904	4,904	4,904
R-squared	0.029	0.100	0.026	0.109	0.015	0.074	0.018	0.102
Controls	N	Y	N	Y	N	Y	N	Y
Estimat.	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Linear regression models, where the dependent variable is the number of items chosen in a list experiment setting. The binary variable *Treat. group* equals one for participants receiving a treated list. The wording is in Table C2 of Appendix C. Odd columns do not have controls. Even columns have additional controls. Controls not shown in the table are similar to the ones in Table 9. Robust standard errors are in parentheses.

2899 observations at the region(20 regions)-month(33 months)-product class (5 classes) level.

Figure 3 shows that before the war, the Kazakhstan export to Russia of sanctioned products was relatively stable and small - around 2.4M USD per month-region (or 47M USD monthly for all regions), while the export of other products was 3.5 times larger - 8.4 M USD per month-region-product class³⁶ (or 645M USD monthly for all region and products). After the invasion, the export of sanctioned products became 11M USD per month-region (with a spike in Autumn 2022 reaching 20M USD per month-region) and accounting for 211M USD monthly. The export of non-sanctioned products stayed around 7.8 M USD per month-region-product class (568M USD monthly for all regions and products). In Section 6, we show the role of Russian propaganda in this sanctions circumvention process.

We start by estimating the average effect of war and sanctions on the export activity of sanctioned products to Russia. For this, we use the difference-in-differences, where the treatment group includes

³⁶Cloth 0.4M USD, Food 2.6M USD, Metals 12.8M USD, Other products 17M USD per month-region

sanctioned products (e.g., electronics and machines), the control group includes all non-sanctioned products, and February 2022 is the treatment date. We consider the following linear equation:

$$Value_{rtp} = \beta \cdot S_p \cdot Post_t + [\delta \cdot Capital_r \cdot S_p Post_t] + \kappa_r + \lambda_t + \mu_p + \varepsilon_{rtp}. \quad (5)$$

Here r denotes region, t – time (year-month) and p – product class. The outcome variable $Value_{rtp}$ is the export value (in million USD). The binary variables S_p denote the sanctioned products (electronics and machines), $Post_t$ – the period from February 2022 onwards, $Capital_r$ – Astana city (current capital) or Almaty city (former capital). Variables κ_r , λ_t , and μ_p are regional, time, and product class fixed effects, respectively. In specification (5) without bracket term, coefficient β captures the average treatment effect of war and sanctions on the region-month export value of sanctioned products to Russia. Column 1 of Table 11 shows that after February 2022, the export transactions of sanctioned products increased by 9.7M USD per month-region.³⁷ Considering the stable production output of electronics and machines in Kazakhstan since 2021 (Figure A8 of Appendix A) and a substantial spike in the export of these products to Russia after February 2022 (Figure 3), this result indicates of a substantial re-export activity of firms in Kazakhstan.

We aim to understand the heterogeneity of coefficient β depending on the exposure to pro-Kremlin information at the regional level. Nevertheless, two largest regions – Astana city and Almaty city – may become outliers due to the substantial concentration of business in them. Therefore, we analyze them separately. In specification (5) with bracket term, coefficient δ shows how the monthly export growth after February 2022 of sanctioned products from Astana and Almaty differs from the export growth of other regions. Column 2 of Table 11 shows that the monthly export growth of sanctioned products from Astana and Almaty is 46.5M USD larger than other regions. Nevertheless, the monthly export growth of other regions is not negligible – 4.9M USD.³⁸ Due to substantial differences in the overall effects for capital cities and the rest of the regions, in the forthcoming analysis of the effect of regional exposure to pro-Kremlin information, we either exclude Astana and Almaty or show a standalone coefficient for them.

The analysis above showed a spike in the export value of sanctioned products to Russia. But does this spike depend on the extent of exposure to pro-Kremlin information about the war? To answer this

³⁷Section D.1 of Appendix D discusses the parallel trend assumption test, and Figure D1 of Appendix D shows the result of event-study analysis for (5).

³⁸Figure D1 of Appendix D justifies the parallel trends assumption for capital cities and other regions.

question, we consider the following triple DID specification:

$$Value_{rtp} = \alpha \cdot S_p \cdot Treat_r + \beta \cdot S_p \cdot Post_t + \gamma \cdot S_p \cdot Treat_r \cdot Post_t + [\delta \cdot S_p \cdot Capital_r \cdot Post_t] \quad (6) \\ + \kappa_r + \lambda_t + \mu_p + \varepsilon_{rtp}.$$

Variable $Treat_r$ uses CAB surveys and captures three different regional measures of treatment exposure to the pro-Kremlin information about the war as the share of (i) Russian-speaking respondents, (ii) respondents justifying the war, (iii) respondents trusting Russian news. Other variables are the same as in (5). When considering all regions, we include a term in brackets in (6); otherwise, we exclude it. When we exclude Astana and Almaty, coefficient α measures the prewar differences in the export activity of (not yet) sanctioned products depending on the treatment exposure. Coefficient β measures the change in export of sanctioned products after February 2022 for a hypothetical region with zero treatment exposure, while the coefficient γ captures the additional contribution of treatment exposure to this effect. When we include Astana and Almaty, the interpretation of the coefficients β and γ preserves, while δ measures the additional effect of the help in sanctions circumvention for these cities.

Table 11 presents the estimation results for model (6).³⁹ Columns 4, 7, and 10 exclude Astana and Almaty, while Columns 3, 6, and 9 include them. The coefficient β is smaller in all these models compared to the baseline model of Column 2 and, in most cases, is either negative (Columns 9, 10) or insignificant (Columns 3, 6, 7). This suggests that in a hypothetical region with zero treatment exposure, the effect of the help of sanctions circumvention is either negative or zero. On the contrary, coefficient γ is positive and significant in all the considered models, suggesting that exposure to pro-Kremlin news stimulates firms in these regions to export more sanctioned products. Among the three measures of treatment exposure, the *Share of speaking Russian* demonstrates the weakest effect, while the *Share of trusting Russian news* – the strongest, being slightly above the *Share of justifying the war*. This evidence suggests that the main driver of the help in sanctions circumvention is Russian media, not cultural proximity. Figure 6 shows $\beta + \gamma \cdot Treat$ as a function of $Treat$. It can be interpreted as the export growth of sanctioned products after February 2022, depending on treatment exposure. At the mean treatment exposure,⁴⁰ the export of sanctioned products to Russia increases by 5.6M USD per region-month compared to the prewar time in non-capital regions. Moreover, this effect is stronger for regions more exposed to pro-Kremlin propaganda. Figure D4 of Appendix D shows $\beta + \gamma \cdot Treat$

³⁹Section D.2 of Appendix D discusses the parallel trend assumption test, and Figure D2 (Panel A) of Appendix D shows the result of event-study analysis for (6).

⁴⁰Mean values: 0.42 for the Russian language, 0.27 for war justification, and 0.37 for trust in Russian media.

for specification (6) where the treatment exposure is calculated based on answers of firm owners and managers from CAB surveys.⁴¹ The results are very close to those presented in Figure 6. Figure D5 shows the result of estimation for the extended model where we complement the treatment exposure with the additional regional exposure by Russian ethnicity.⁴² Despite wide confidence intervals, the growth of export activity of sanctioned products to Russia after February 2022 is higher in regions with higher exposure to Russian propaganda. There is a concern about the interpretation of results from Figures 6 and D3 that the invasion of Ukraine induced both propaganda intensification and economic benefits of helping Russia in sanctions evasion. Therefore, Russian propaganda can be considered by people as a justification rather than the cause of illegal economic activity. To address this issue we use the share of respondents who explicitly do not justify the SMO (or blame Russia as a main responsible side for the invasion) as regional measures of moral restriction to have business with Russia and apply these measures to model (6). Figure D6 of Appendix D shows that in regions with a higher share of people who do not justify the invasion, the growth of export activity of sanctioned products is lower and nearly negligible in the upper quartile.⁴³ Figure 7 shows $\beta + \gamma \cdot Treat$ for the same specification (6), but for regional production output of corresponding goods as a dependent variable. It shows that regional exposure to pro-Kremlin propaganda does not affect the production growth of sanctioned products after February 2022 in Kazakhstan. This suggests that the circumvention of sanctions is based on re-export rather than local production of sanctioned products.

Finally, we restrict our attention to the subsample of sanctioned products only and implement the DID specification similar to the one in Korovkin and Makarin (2023):

$$Value_{rt} = \gamma \cdot Post_t \cdot Treat_r + \kappa_r + \lambda_t + \varepsilon_{rt}, \quad (8)$$

with non-binary treatment exposure $Treat_r$ similar to the one in (6).⁴⁴ In this specification, coefficient γ identifies the differential export growth of sanctioned products after February 2022 between regions

⁴¹See Table D3 of Appendix D for parallel trends assumption check.

⁴²Namely, we estimate the following extension of model (6) for regions excluding Astana and Almaty:

$$Value_{rtp} = \alpha \cdot S_p \cdot Treat_r + \beta \cdot S_p \cdot Post_t + \gamma \cdot S_p \cdot Treat_r \cdot Post_t + \delta \cdot S_p \cdot RusEth_r + \theta \cdot S_p \cdot RusEth_r \cdot Post_t + \kappa_r + \lambda_t + \mu_p + \varepsilon_{rtp} \quad (7)$$

Here $RusEth_r$ is a share of ethnic Russians in the region r . Other variables are similar to (6).

⁴³Figure D7 shows the graph for treatment exposures based on the shares of respondents blaming Ukraine or the West as the main responsible side for the invasion. Similarly to Figure 6 the higher exposure induces higher export growth for sanctioned products.

⁴⁴One can think of regions with low and high treatment exposure as control and treatment groups, respectively, in a binary treatment setting.

with high and low degrees of treatment exposure. For the same reasons as before, we exclude Astana and Almaty from the sample. Columns 5, 8, and 11 of Table 11 show the results for the regional share of Russian speaking, justifying the war, and trusting Russian news, respectively.⁴⁵ Similar to the previous findings, export growth of sanctioned products to Russia is higher for regions with higher pro-Kremlin propaganda exposure. However, the magnitude depends on the exposure measure. An increase in the share of Russian-speaking respondents from the first quartile (.204) to the third quartile (.605) increases the additional export by 3.14M USD per month-region. Similarly, increasing the share of justifying the war and trusting the Russian news for one inter-quartile range (0.111 and 0.071, respectively) increases the additional export of sanctioned products by 2.4M USD and 0.86M USD per month-region. This finding also justifies the previous finding that exposure to pro-Kremlin information affects the firms' incentives to help Russia circumvent sanctions.

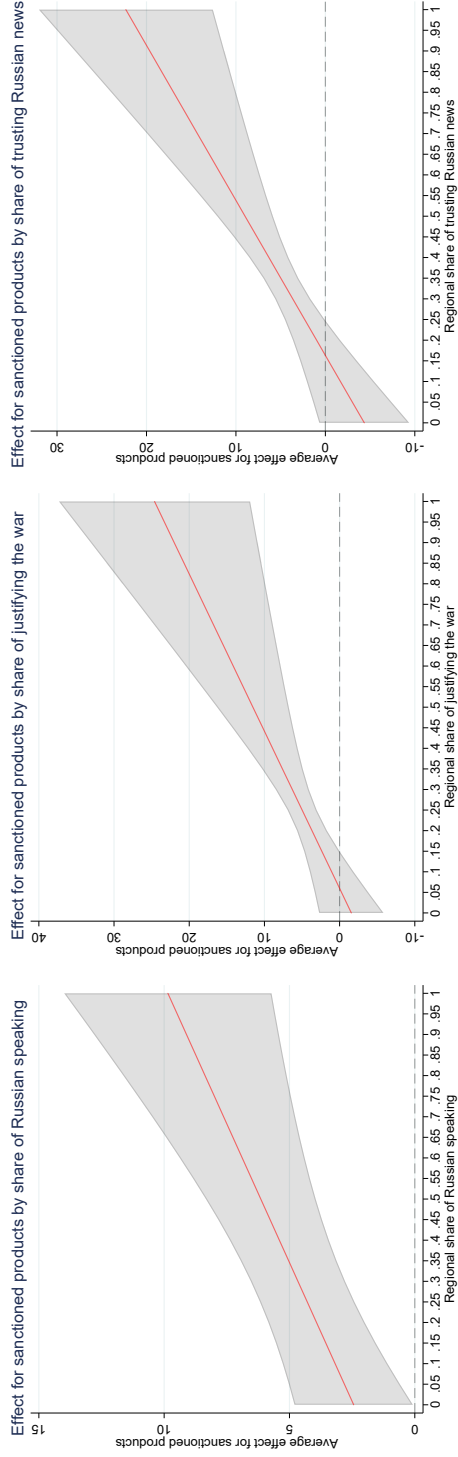
⁴⁵Section D.3 of Appendix D discusses the parallel trend assumption test, and Figure D2 (Panel B) of Appendix D shows the result of event-study analysis for (8).

Table 11: The effect of Russian propaganda on sanctions circumvention

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			Dependent variable: value of region-month-product export to Russia (in M USD)								
Sanctioned products \times Treatment exposure (α)			-8.71*** (2.42)	-7.98*** (2.44)		-17.3** (8.09)	-30.9*** (7.90)		-14.6** (7.37)	-21.8*** (7.05)	
Sanctioned products \times Post-invasion (β)	9.76*** (1.35)	4.90*** (0.96)	0.78 (1.18)	2.44** (1.20)		-1.87 (2.41)	-1.56 (2.18)		-6.13*** (2.89)	-4.35* (2.57)	
Sanctioned products \times Post- invasion \times Treatment exposure (γ)			9.56*** (2.65)	7.41*** (2.61)	7.84*** (1.59)	25.2*** (9.14)	26.2*** (8.37)	21.9*** (5.75)	29.7*** (8.08)	26.7*** (7.23)	12.1*** (3.03)
Sanctioned products \times Post-invasion \times Capitals (δ)		46.5*** (6.18)	46.4*** (6.18)			47.1*** (6.24)			47.2*** (6.19)		
Constant	18.1*** (0.88)	18.0*** (0.90)	18.0*** (0.90)	15.0*** (0.80)	2.21*** (0.38)	18.0*** (0.90)	15.0*** (0.80)	0.41 (0.96)	18.0*** (0.90)	15.0*** (0.80)	1.36* (0.72)
Observations	2,899	2,899	2,899	2,569	531	2,899	2,569	531	2,899	2,569	531
R-squared	0.289	0.352	0.353	0.298	0.612	0.353	0.298	0.602	0.353	0.298	0.590
Year-Month FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Region FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Product class FE	Y	Y	Y	Y	-	Y	Y	N	Y	Y	-
Product class	All	All	All	All	Sanctioned	All	All	Sanctioned	All	All	Sanctioned
Sample	All regions	All regions	All regions	No capitals	No capitals	All regions	No capitals	No capitals	All regions	No capitals	No capitals
Regional treatment exposure	No	No	Share of speaking Russian at home	Share of speaking Russian at home	Share of justifying the war	Share of justifying the war	Share of justifying the war	Share of justifying the war	Share of justifying the war	Share of justifying the war	Share of justifying the war

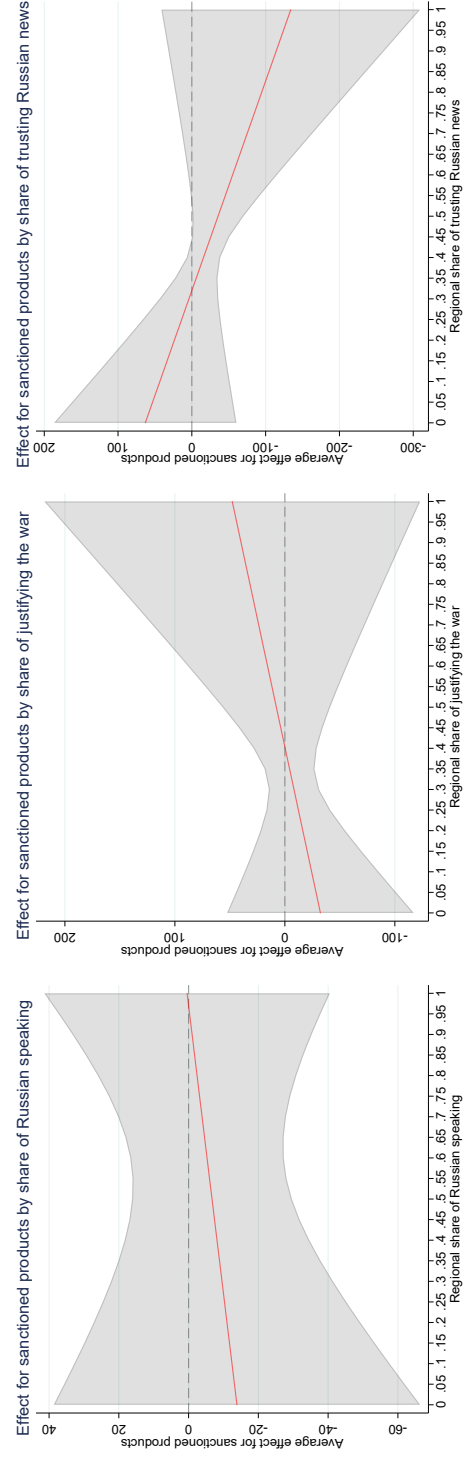
Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Column 1 shows the results of regression (5) without brackets, while Column 2 uses (5) with brackets. Columns 3-11 use regional measures of treatment exposure: Share of speaking Russian at home (Columns 3-5), Share of justifying the war in Ukraine (Columns 6-8), Share of trusting Russian news (Columns 9-11). Columns 3, 6, and 9 use all regions and estimate (6) including the term in brackets. Columns 4, 7, and 10 exclude Astana and Almaty and estimate (6) without the term in brackets. Columns 5, 8, and 11 exclude Astana and Almaty and estimate (8). Robust standard errors are in parentheses.

Figure 6: Sanctions circumvention by regional treatment exposure



Note. The figure shows $\beta + \gamma \cdot Treat$ from the specification (6), where β and γ taken from Columns 4, 7, and 10 of Table 11. The dependent variable is the value of exports to Russia in a region-month. It uses CAB 2022-2023 surveys to calculate regional measures of treatment exposure.

Figure 7: Regional production by regional treatment exposure



Note. The dependent variable is the production output in a region-month. For the rest, see note of Figure 6.

7 Conclusion

Can language affinity facilitate the export of propaganda by authoritarian regimes during times of war? To test this question, we use data from six waves of a telephone survey conducted in Kazakhstan, and complement it with Yandex search data, our own original survey, as well as detailed trade data on exports from Kazakhstan to Russia. We find that Russia’s full-scale invasion of Ukraine in February 2022 caused a spike in searches for news on the topic in Kazakhstan. Searching for information on the internet, Russian-speakers in Kazakhstan were significantly more likely to end up on pro-Kremlin media platforms than non-Russian speakers. We document how the consumption of pro-Kremlin media led to a persistent change and division in beliefs between Russian-speaking and non-Russian-speaking Kazakh citizens, a division that so did not exist before February 2022. After February 2022, Russian-speakers had a significantly more negative view of the West and a more positive view of Russia than non-Russian speakers. They were also more likely to condone Russia’s invasion of Ukraine, and to justify the circumvention of economic sanctions imposed against Russia. Using detailed trade data, we show how these beliefs map into a significant increase in trade with Russia after February 2022, with the increase being particularly strong in those Kazakh regions where people are more likely to speak Russian and to consume pro-Kremlin media.

Our paper contributes to a literature that shows how the media in authoritarian regimes can have a strong influence on beliefs and behavior of the population. While the Russian case has been particularly well documented (Enikolopov et al. 2011; Zhuravskaya et al. 2020; Enikolopov et al. 2022), other cases include such diverse autocracies as Nazi Germany (Adena et al. 2015), Brazil’s military dictatorship in the 1960s and 1970s (Schneider 2014), the Gulf States and Saudi Arabia (Leber and Abrahams 2019), China (Chen 2019; Weiss and Dafoe 2019; Pan et al. 2022) or North Korea (Ba et al. 2023). In these contexts, state actors are often engaged in industrialized efforts to create alternative narratives.⁴⁶ These efforts at disinformation campaigns have culminated in what some have called “post-truth” or “pseudo-realities” (Jones 2022). These false narratives take hold domestically, are replicated, and later exported globally. During the last decade, Russian-spawned narratives have taken hold in many different places around the world, influencing major events. Russian bots and user accounts interfered in both the UK’s Brexit referendum and the 2016 US presidential election (Alizadeh et al. 2020; Earl et al. 2021). Recorded instances also include Russian misinformation campaigns about the Black Lives Matter movement in an attempt to polarize the public and create conflict (Earl et al. 2022). In the context of Russia’s full-scale

⁴⁶As evidenced for example by Russia’s troll “factories”, <https://www.nytimes.com/2018/02/18/world/europe/russia-troll-factory.html>

invasion of Ukraine in early 2022, Russian campaigns were launched to sell an alternative narrative, in order to create opposition to Western support for Ukraine and help circumvent Western-imposed sanctions against Russia. In this context, our paper is the first to show how this strategy is producing tangible results – both in changing public perceptions and beliefs, and in reducing public concerns about circumventing Western-imposed sanctions against Russia.

We argue in this paper that Russia’s ability to do this, as well as Russia’s invasion of Ukraine itself, are both legacies of empire - the Russian and the Soviet one. As evidenced elsewhere, Russia’s full-scale invasion of Ukraine cannot be explained by rational choice theories of authoritarian politics alone, that depict the dictator as a rational actor ([Sonin 2024](#)). Instead, Russia’s imperial past has become reason and motivation for Putin’s renewed interest in territorial expansion ([Schulze-Wessel 2023](#)). Those ethnic Russians who found themselves outside of Russia after the fall of the Soviet Union have started to play a pivotal role in this respect ([Zewelëv 2001](#); [Ziegler 2006](#)). Putin has made the Russian diaspora an essential part of his foreign policy and a way of exercising soft power ([Decker 2021](#)). The annexation of Crimea in 2014, the war in the Donbass, as well as the start of the full-scale invasion in 2022 were all at least partially justified with the need to protect Russian-speakers abroad ([Pieper 2020](#)).

In our paper, we show how the Russian diaspora has become object and actor alike in Putin’s effort to rebuild the Russian empire. We identify one factor that makes populations particularly vulnerable to Russian propaganda alternatives: language. Our findings are consistent with the literature on media effects in autocracies, and underscore the importance of language and online media in this respect. Other studies have found that Russian narratives also often refer to a specific Russian identity ([Spies et al. 2022](#); [Tolz and Hutchings 2023](#)), which is beyond the scope of this study, but certainly warrants further investigation. However, neither identity nor language fully explain how propaganda in the form of narratives is transferred to other contexts, as the adoption of Russian propaganda in China ([Hanley et al. 2025](#)) or in English-speaking political discussions on Reddit ([Hanley et al. 2023](#)) show, suggesting additional avenues of research on this topic. ([Marquardt 2022](#)) ([Chapman and Zhandayeva 2025](#))

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A Appendix

Figure A1: Opinions of different countries and the Eurasian Economic Union (EAEU) in dynamics

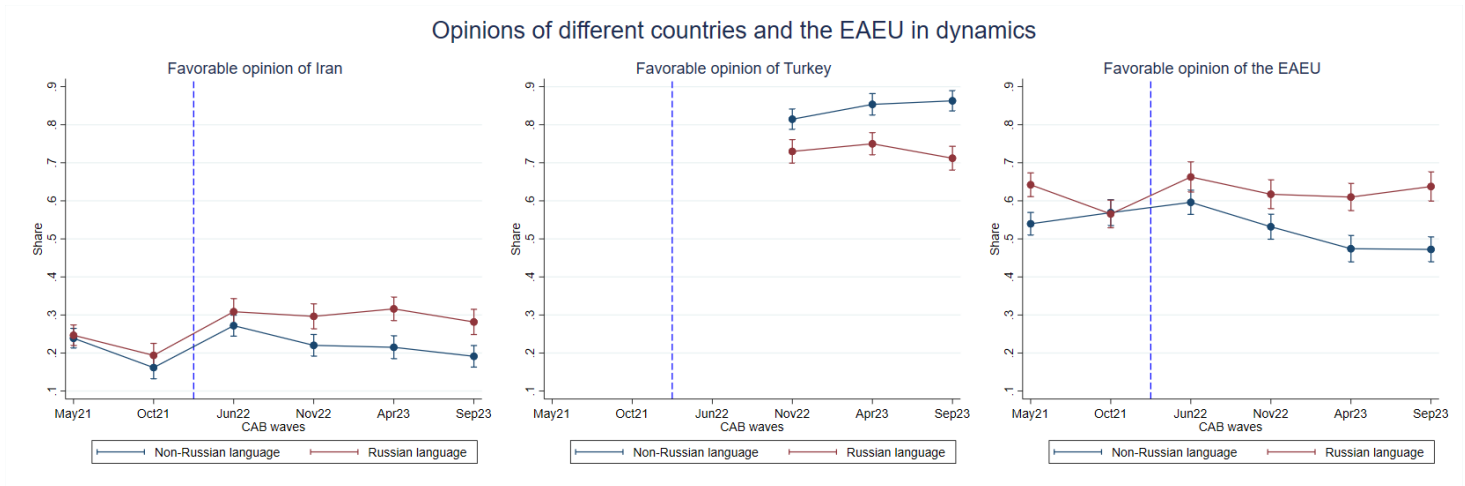


Figure A2: Search for “War Ukraine” in Kazakh language on Yandex

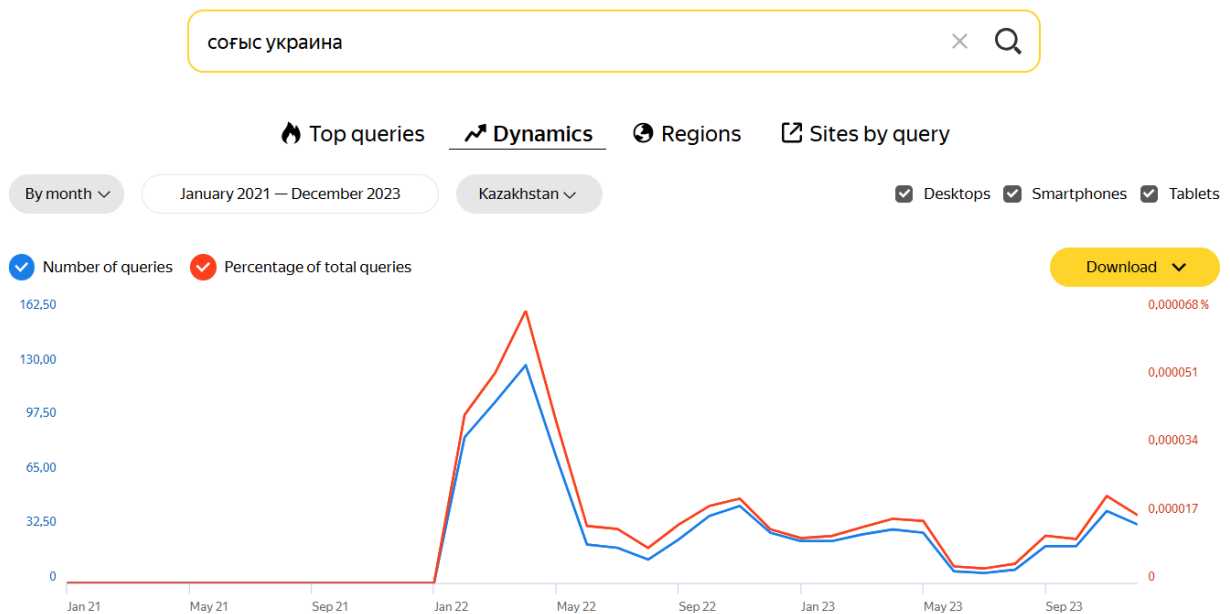


Figure A3: Search for “War Ukraine” in Kazakh language on Google Trends

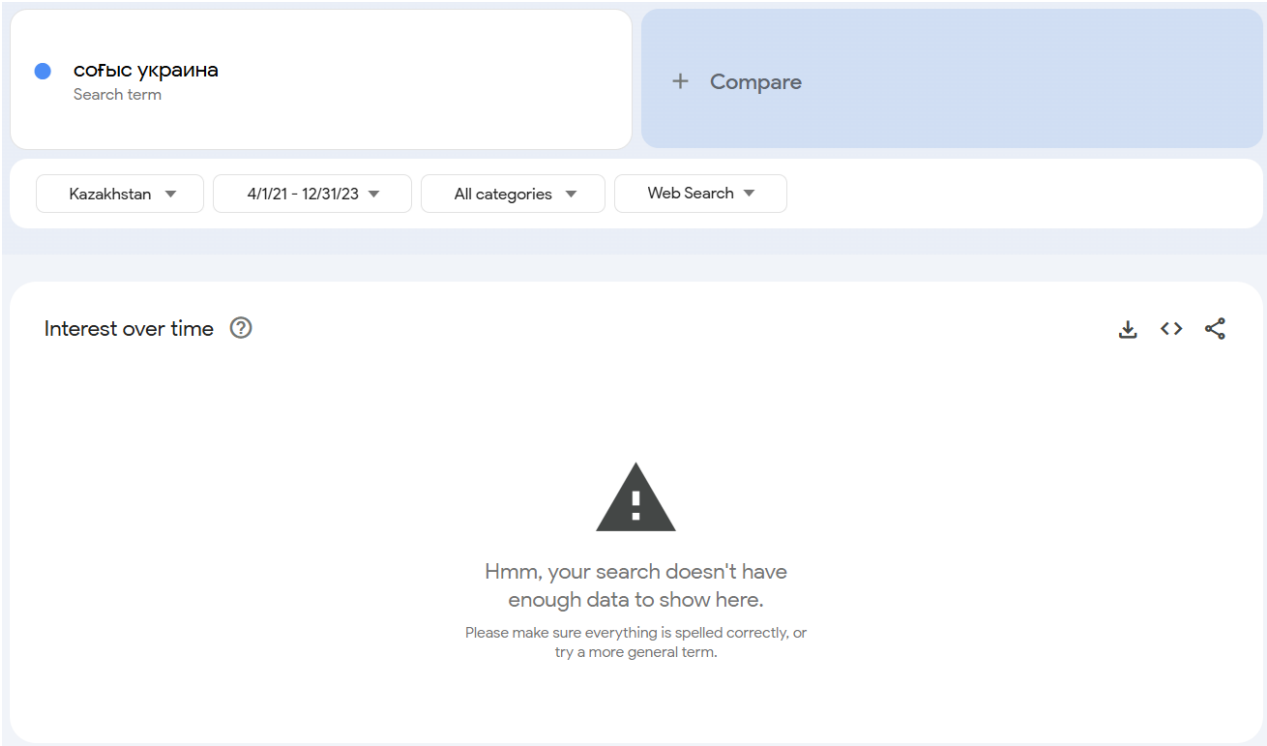


Figure A4: Search for “News” on Yandex

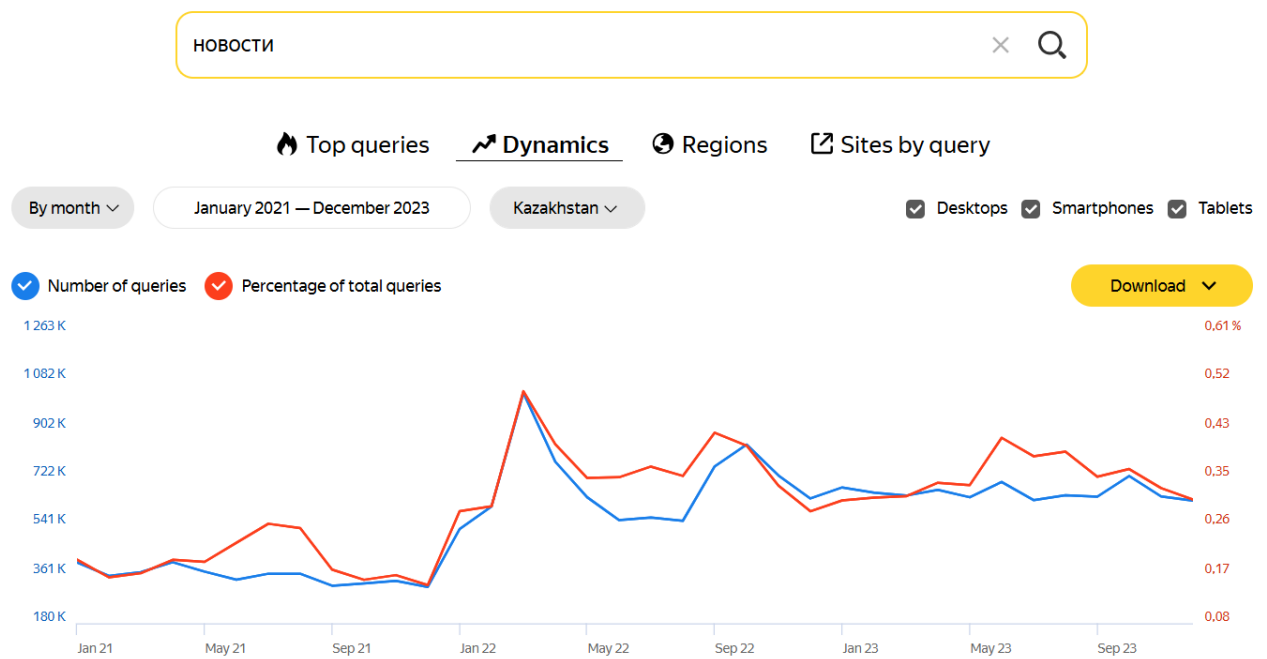


Figure A5: Search for “Yandex Dzen” on Yandex

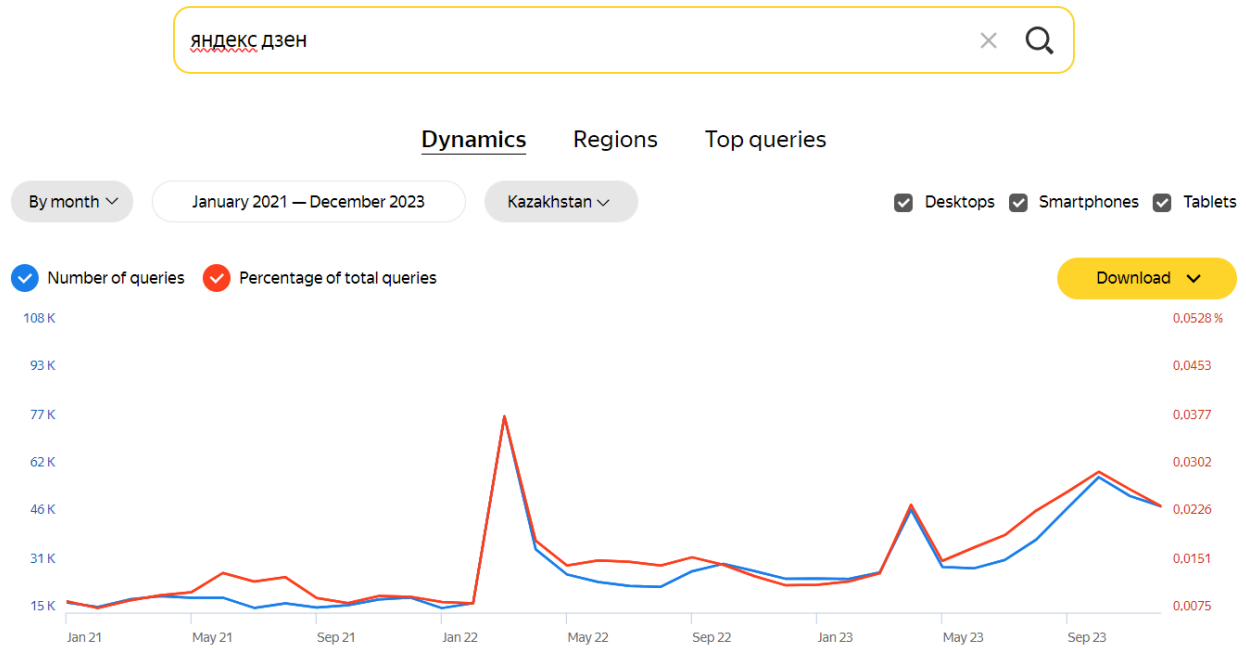


Figure A6: Search for “Yandex News” on Yandex

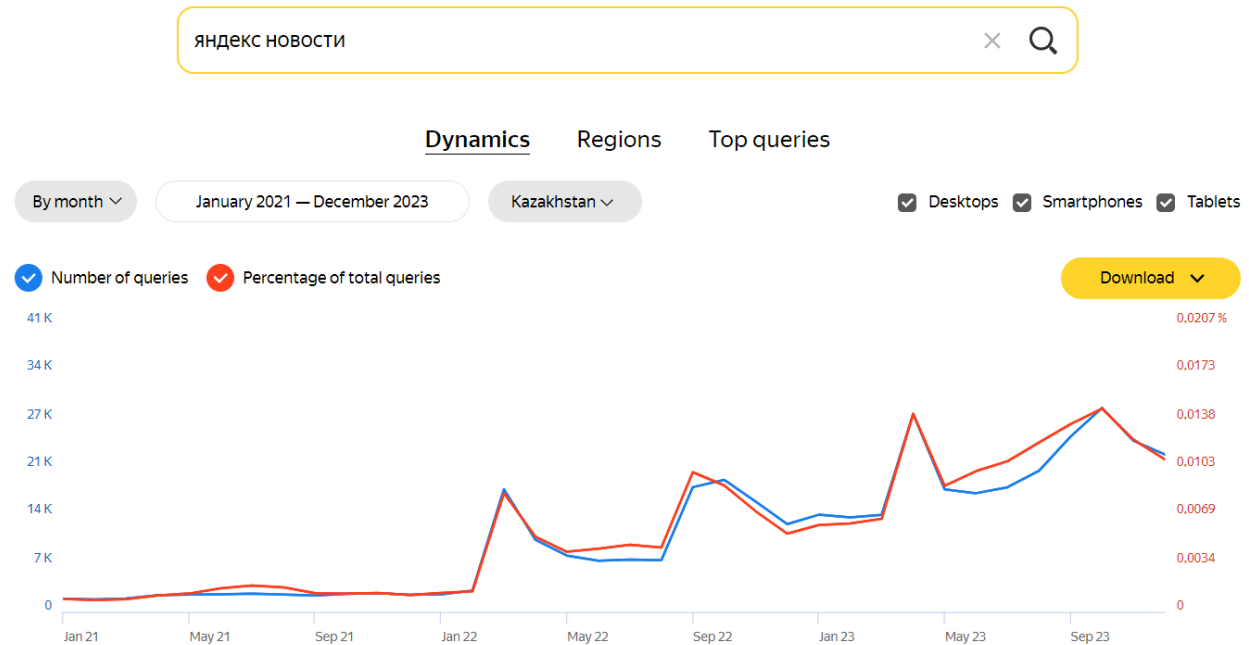


Figure A7: Search for “Euronews” on Yandex

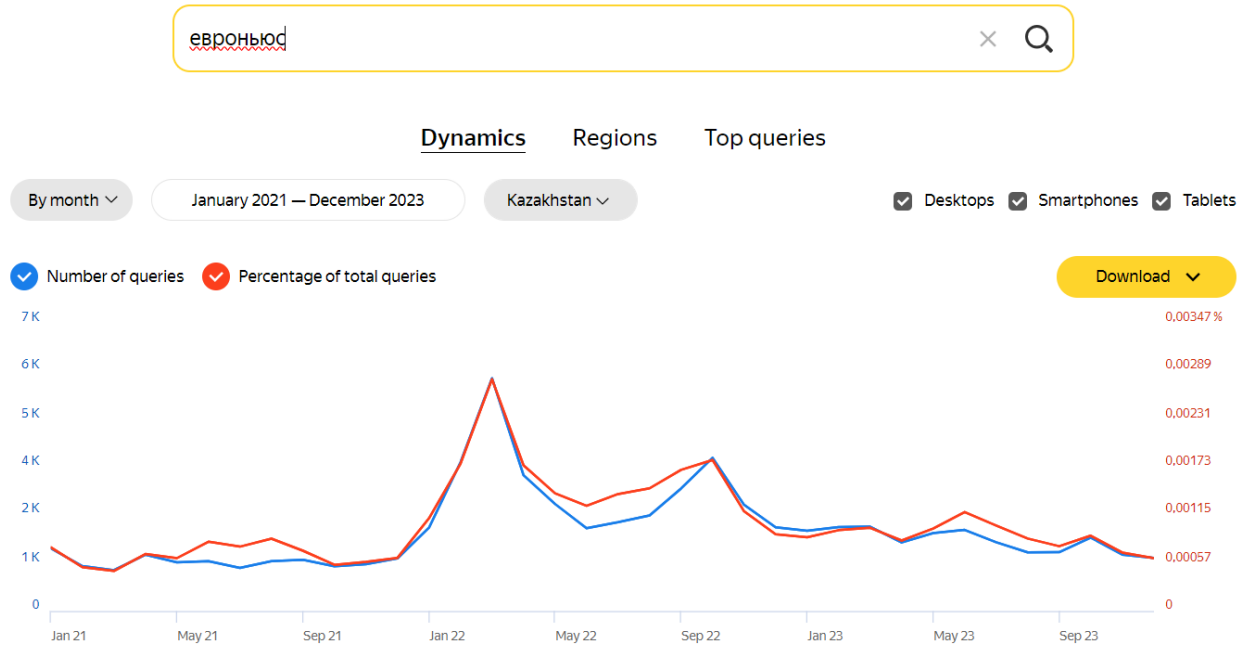
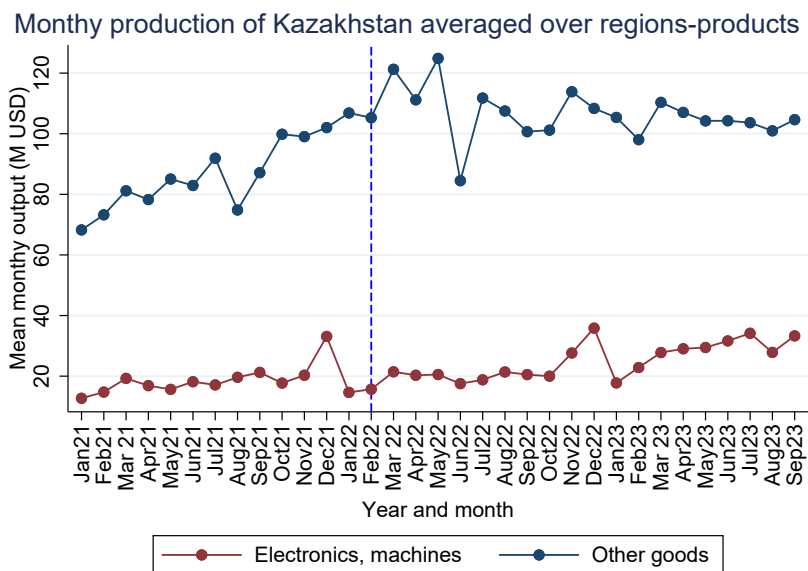


Figure A8: The production output of Kazakhstan



B Appendix

B.1 Tables of Appendix B

Table B1: Russian language proficiency and war justification

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	SMO is justified (binary)					
Russian language	0.11*** (0.015)	0.090** (0.037)	0.16*** (0.026)	0.077*** (0.019)	0.13*** (0.019)	0.10*** (0.015)
Female	-0.018* (0.011)	-0.012 (0.031)	-0.056*** (0.017)	0.0056 (0.014)	-0.012 (0.014)	-0.012 (0.011)
30-39 years old	0.0072 (0.014)	-0.052 (0.034)		0.016 (0.014)	0.021 (0.018)	0.0073 (0.014)
40-49 years old	0.045*** (0.015)	0.043 (0.039)			0.054*** (0.020)	0.020 (0.016)
50-59 years old	0.043** (0.018)	0.015 (0.053)	-0.00090 (0.020)		0.046** (0.022)	0.012 (0.019)
60+ years old	0.13*** (0.021)	0.013 (0.088)	0.084*** (0.022)		0.13*** (0.024)	0.053** (0.023)
Higher education	-0.040*** (0.011)	-0.074** (0.029)	-0.030* (0.018)	-0.049*** (0.014)	-0.054*** (0.014)	-0.041*** (0.011)
Medium household size	0.0015 (0.012)	0.0095 (0.030)	-0.0066 (0.019)	0.010 (0.015)	0.0021 (0.015)	0.0056 (0.013)
Above medium household size	0.016 (0.019)	0.015 (0.050)	-0.024 (0.032)	0.037 (0.024)	0.030 (0.024)	0.011 (0.019)
Large household size	-0.018 (0.033)	0.053 (0.092)	-0.056 (0.052)	0.00076 (0.042)	-0.022 (0.043)	-0.0088 (0.033)
Missing household size	0.0051 (0.037)	0.12 (0.098)	-0.042 (0.067)	0.026 (0.045)	0.071 (0.058)	-0.014 (0.037)
Rural area	0.015 (0.013)	-0.016 (0.041)	-0.024 (0.021)	0.047*** (0.018)	-0.0036 (0.017)	0.015 (0.014)
Ethnically Kazakh	-0.17*** (0.019)	-0.19*** (0.048)	-0.20*** (0.031)	-0.14*** (0.024)	-0.22*** (0.025)	-0.17*** (0.019)
Ethnically Russian	0.080*** (0.022)	0.042 (0.057)	0.11*** (0.034)	0.034 (0.029)	0.065** (0.029)	
Understood most of the questions	0.012 (0.015)	0.020 (0.038)	0.019 (0.023)	0.0081 (0.019)	0.026 (0.018)	0.023 (0.015)
Understood most of the questions but with some help	0.015 (0.023)	0.12 (0.078)	0.0074 (0.035)	0.020 (0.030)	0.017 (0.030)	0.022 (0.023)
Had difficulty understanding most of the questions, even with help	-0.042 (0.043)	-0.073 (0.12)	0.023 (0.075)	-0.10** (0.040)	-0.047 (0.064)	-0.045 (0.041)
Was comfortable with most of the questions	-0.035** (0.014)	-0.0052 (0.036)	-0.050** (0.022)	-0.027 (0.017)	-0.033* (0.017)	-0.037** (0.014)
Was comfortable with only some of the questions	-0.15*** (0.030)	-0.13 (0.087)	-0.15*** (0.051)	-0.14*** (0.036)	-0.14*** (0.047)	-0.12*** (0.031)
Was generally uncomfortable with the survey questionnaire	-0.17*** (0.038)	-0.24*** (0.089)	-0.13** (0.058)	-0.18*** (0.046)	-0.14** (0.062)	-0.13*** (0.039)
Wave 12	-0.049*** (0.015)	-0.080** (0.040)	-0.037 (0.025)	-0.052*** (0.020)	-0.041** (0.019)	-0.020 (0.016)
Wave 13	-0.069*** (0.015)	-0.11*** (0.040)	-0.053** (0.024)	-0.071*** (0.019)	-0.063*** (0.019)	-0.063*** (0.016)
Wave 14	-0.037** (0.016)	-0.031 (0.041)	-0.040 (0.025)	-0.028 (0.021)	-0.027 (0.020)	-0.0089 (0.017)
Constant	0.33*** (0.029)	0.40*** (0.073)	0.39*** (0.047)	0.31*** (0.035)	0.37*** (0.037)	0.33*** (0.029)
Observations	6,020	955	2,366	3,654	3,889	4,864
R-squared	0.140	0.154	0.223	0.082	0.178	0.078
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The table shows the regression results (1) for a binary dependent variable, “SMO is justified”. Robust standard errors are in parentheses.

Table B2: Russian language proficiency and war justification (scale from 1 to 4)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	SMO is justified (scale)					
Russian language	0.27*** (0.042)	0.13 (0.11)	0.44*** (0.074)	0.16*** (0.051)	0.31*** (0.051)	0.26*** (0.043)
Observations	4,458	740	1,818	2,640	3,200	3,566
R-squared	0.207	0.227	0.309	0.137	0.241	0.133
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The table shows the regression results (1) for a discrete dependent variable measured from 1 “SMO is completely unjustified” to 4 “SMO is completely justified”. Robust standard errors are in parentheses.

Table B3: Russian language proficiency and war condemnation

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	SMO is not justified (binary)					
Russian language	-0.078***	-0.070	-0.11***	-0.053**	-0.10***	-0.077***
Observations	6,020	955	2,366	3,654	3,889	4,864
R-squared	0.123	0.167	0.189	0.096	0.172	0.104
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The table shows the regression results (1) for a binary dependent variable, “SMO is not justified”. Robust standard errors are in parentheses.

Table B4: Russian language proficiency and daily use of the Internet via a phone

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Daily Internet use					
Russian language	0.042*** (0.012)	0.017 (0.024)	0.040* (0.023)	0.043*** (0.013)	0.047*** (0.014)	0.040*** (0.012)
Observations	6,020	955	2,366	3,654	3,889	4,864
R-squared	0.076	0.089	0.090	0.039	0.094	0.083
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Table shows the results of regression (1) for a binary dependent variable, “Daily use of the Internet via a phone”. Robust standard errors in parentheses.

Table B5: Russian language proficiency and frequency of Internet use via a phone (scale 1-5)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Frequency of Internet use (from 1 daily to 5 never)					
Russian language	-0.069*** (0.026)	-0.038 (0.043)	-0.082 (0.054)	-0.061** (0.027)	-0.080*** (0.029)	-0.065** (0.026)
Observations	6,020	955	2,366	3,654	3,889	4,864
R-squared	0.080	0.090	0.089	0.038	0.093	0.089
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Table shows the results of regression (1) for a discrete dependent variable, “Frequency of using the Internet via a phone”, with values from 1 (daily) to 5 (never). Robust standard errors in parentheses.

Table B6: Russian language proficiency and channels for Russian propaganda export: national or local TV, radio, newspapers

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
		News from national or local TV, radio, newspapers				
Russian language	-0.036*** (0.010)	-0.012 (0.016)	-0.035 (0.023)	-0.035*** (0.0097)	-0.046*** (0.013)	-0.033*** (0.010)
Observations	6,020	955	2,366	3,654	3,889	4,864
R-squared	0.072	0.061	0.063	0.038	0.089	0.087
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Table shows the results of regression (1) for a binary dependent variable, “News from national or local TV, radio, newspapers”. Robust standard errors in parentheses.

Table B7: Russian language proficiency and media consumption from different countries for news or entertainment

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
			Use media from Russia			
Russian language	0.11*** (0.020)	0.039 (0.049)	0.11*** (0.033)	0.11*** (0.026)	0.13*** (0.024)	0.11*** (0.021)
			Use media from the US			
Russian language	0.054*** (0.021)	0.080 (0.050)	-0.036 (0.035)	0.098*** (0.026)	0.047* (0.026)	0.060*** (0.021)
			Use media from Turkey			
Russian language	-0.11*** (0.021)	-0.14*** (0.049)	-0.13*** (0.036)	-0.099*** (0.026)	-0.15*** (0.027)	-0.11*** (0.021)
			Use media from China			
Russian language	-0.018 (0.017)	-0.060 (0.043)	-0.020 (0.031)	-0.018 (0.022)	-0.031 (0.023)	-0.015 (0.018)
Observations	4,511	741	1,768	2,743	2,872	3,611
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Table shows the results of regression (1) for binary dependent variables, “Use media for news or entertainment from Russia/ the US/ Turkey/ China”. Robust standard errors in parentheses.

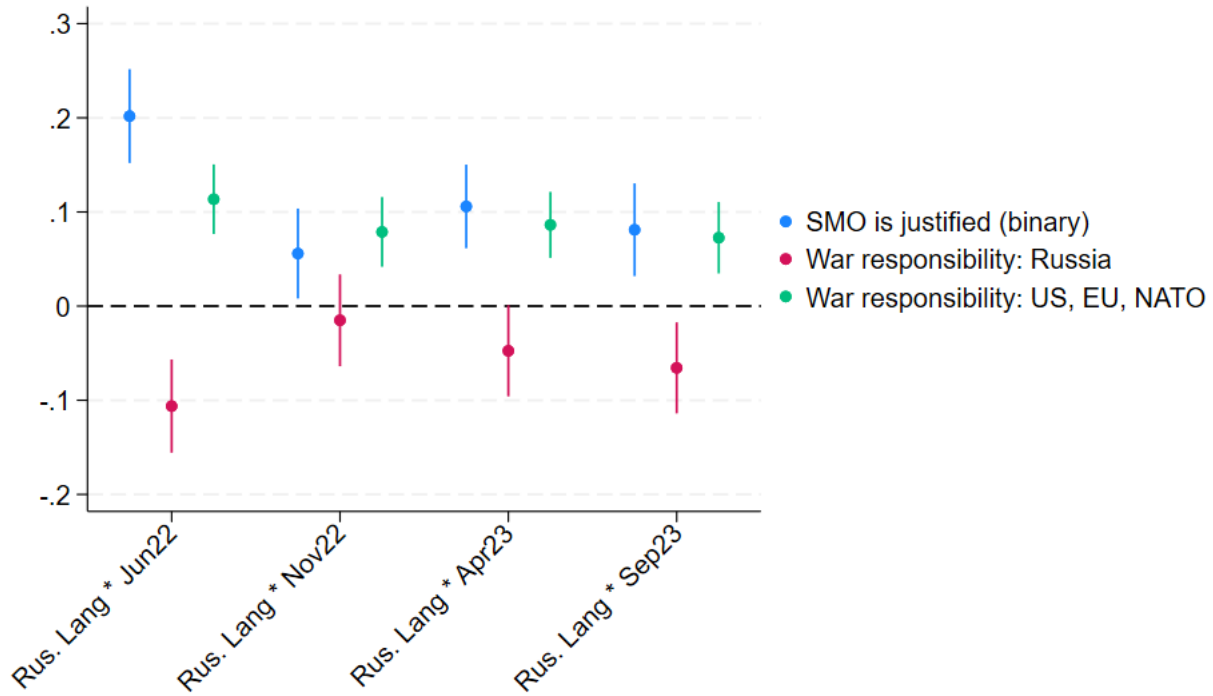
Table B8: Russian language proficiency and trust in news or information from different countries

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Trust news or information from Russia					
Russian language	0.070* (0.036)	-0.10 (0.087)	0.10 (0.063)	0.052 (0.045)	0.066 (0.048)	0.076** (0.037)
	Trust news or information from the US					
Russian language	0.017 (0.034)	-0.088 (0.082)	-0.013 (0.053)	0.032 (0.045)	0.032 (0.046)	0.019 (0.035)
	Trust news or information from Turkey					
Russian language	-0.090** (0.039)	-0.31*** (0.093)	-0.14** (0.065)	-0.062 (0.049)	-0.12** (0.051)	-0.089** (0.040)
	Trust news or information from China					
Russian language	0.068** (0.031)	-0.051 (0.073)	0.12** (0.049)	0.037 (0.040)	0.088** (0.043)	0.060* (0.032)
Observations	1,500	245	621	879	963	1,209
R-squared	0.076	0.174	0.138	0.076	0.100	0.062
Waves	After 2022	After 2022	After 2022	After 2022	After 2022	After 2022
Sample	All	Firm head	Above 40	Below 40	Informed	No Russians
Region FE	Yes	Yes	Yes	Yes	Yes	Yes

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Table shows the results of regression (1) for binary dependent variables, “Trust news or information from Russia/ the US/ Turkey/ China”. Robust standard errors in parentheses.

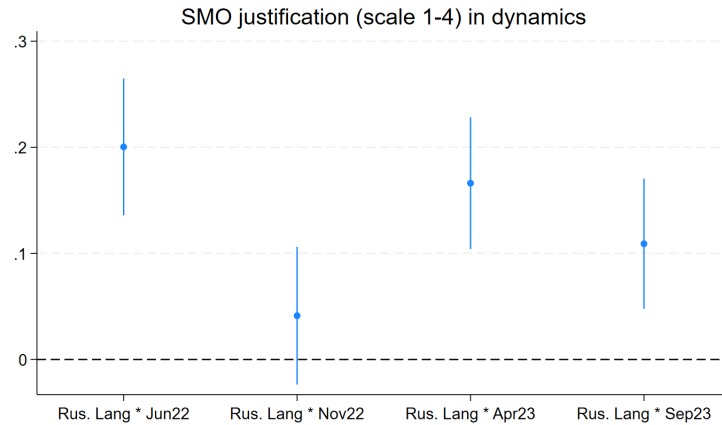
B.2 Figures of Appendix B

Figure B1: The dynamics of association between Russian language and war attitudes



Note. The figure shows the dynamics of the association between Russian language proficiency and war attitudes, i.e. coefficients α_t for $L_{irt} \times \lambda_t$ keeping other controls from specification (1). The dependent are binary variables “SMO justification”, “Russia is mainly responsible for the war”, “West is mainly responsible for the war”.

Figure B2: The dynamics of association between Russian language and the ordinal SMO justification measure



Note. Note. The figure shows the dynamics of the association between Russian language proficiency and war attitudes, i.e. coefficients α_t for $L_{irt} \times \lambda_t$ divided by the mean of dependent variable and keeping other controls from specification (1). The dependent variable is “SMO justification” (scale 1-4). The interpretation of dots is increase in war justification for Russian speakers as the percentage of the mean.

Figure B3: Event study design about favorable opinion of countries

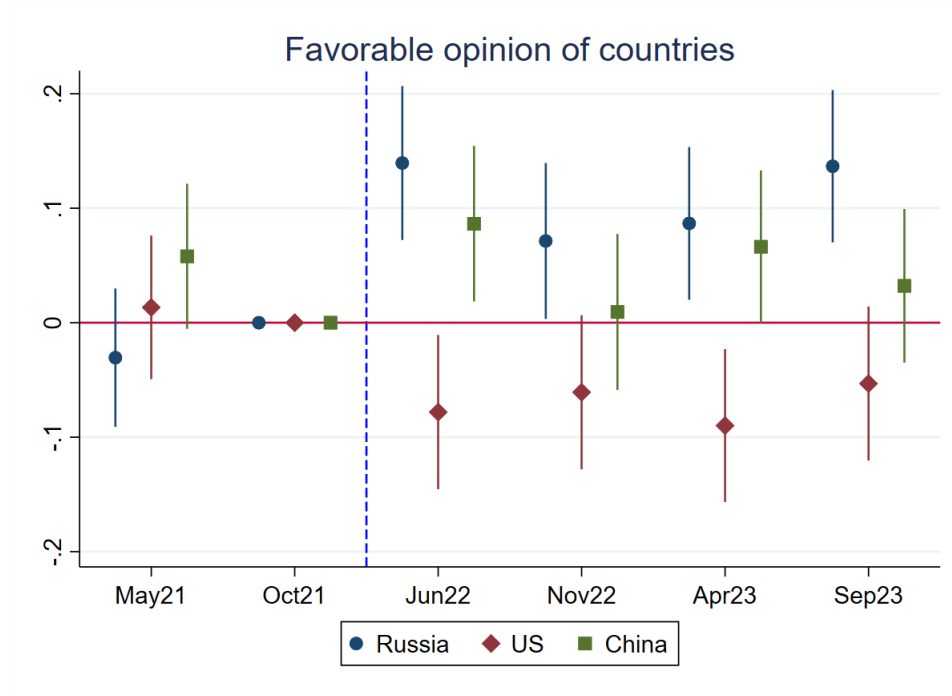


Figure B4: Event study design for Yandex search of pro-Kremlin channels and news

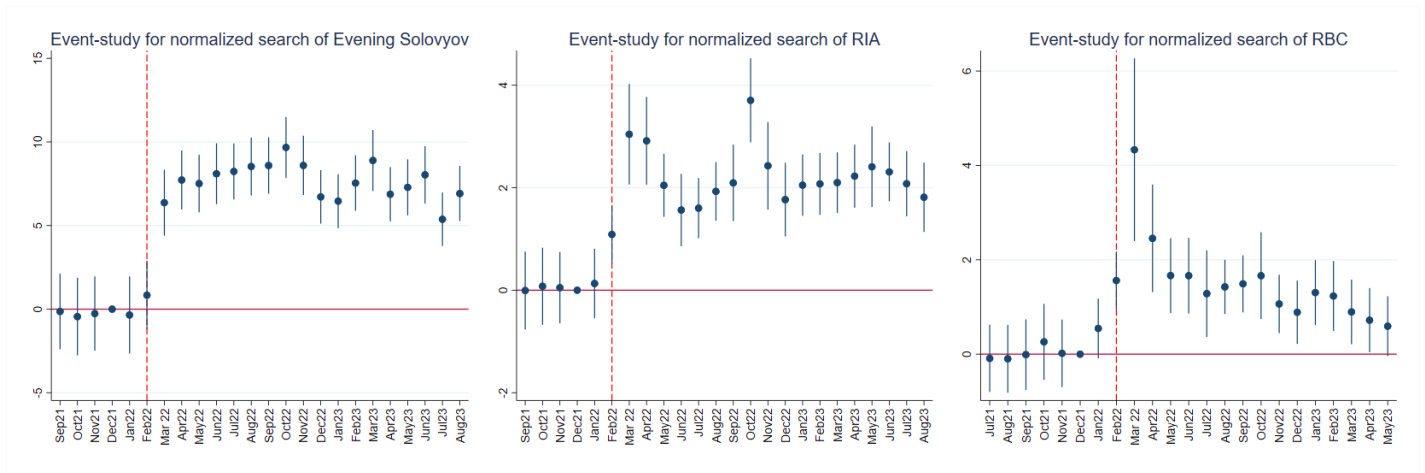


Figure B5: Event study design for Yandex search of western and Telegram news

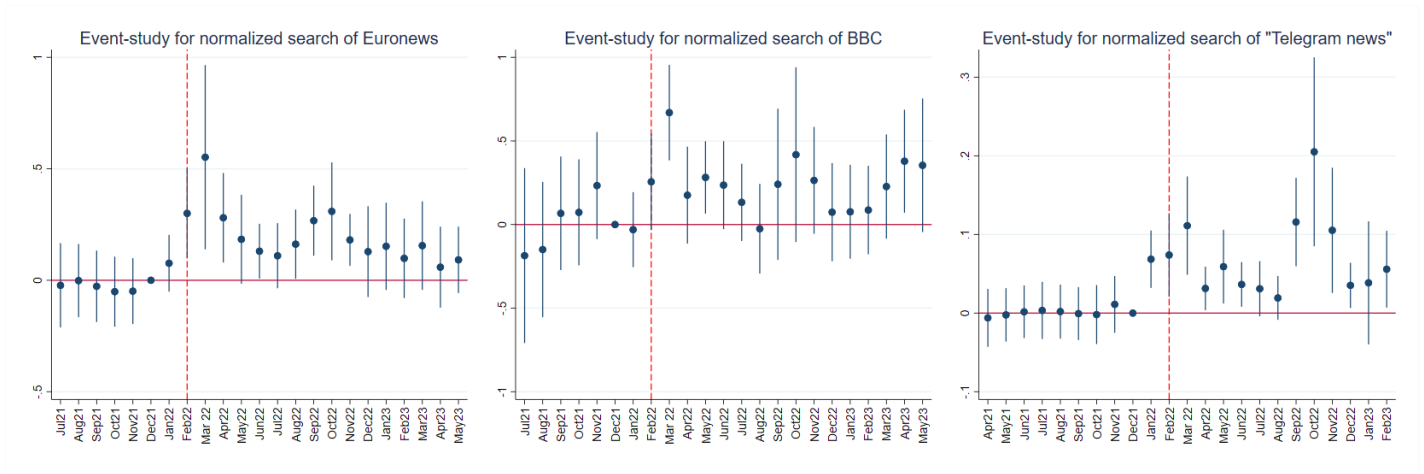


Figure B6: Event study design for Yandex search of January 2022 protest in Kazakhstan

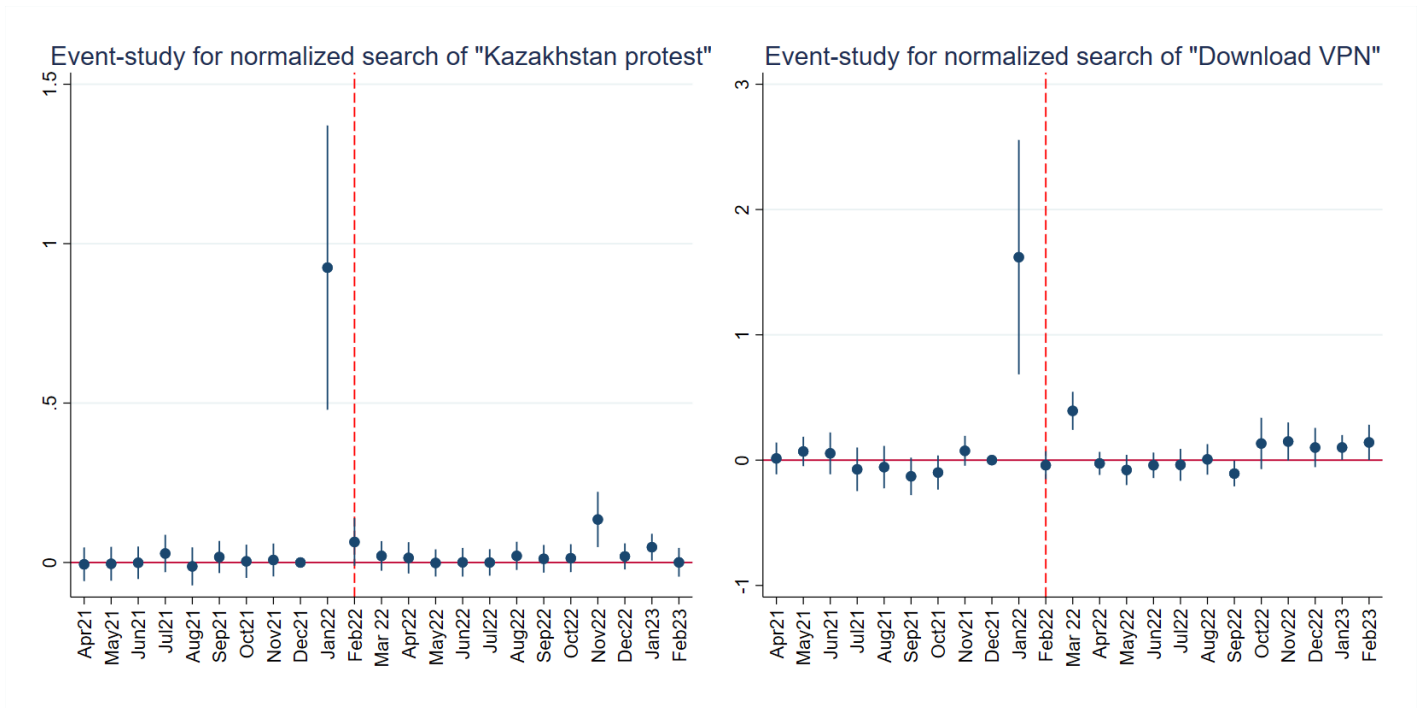
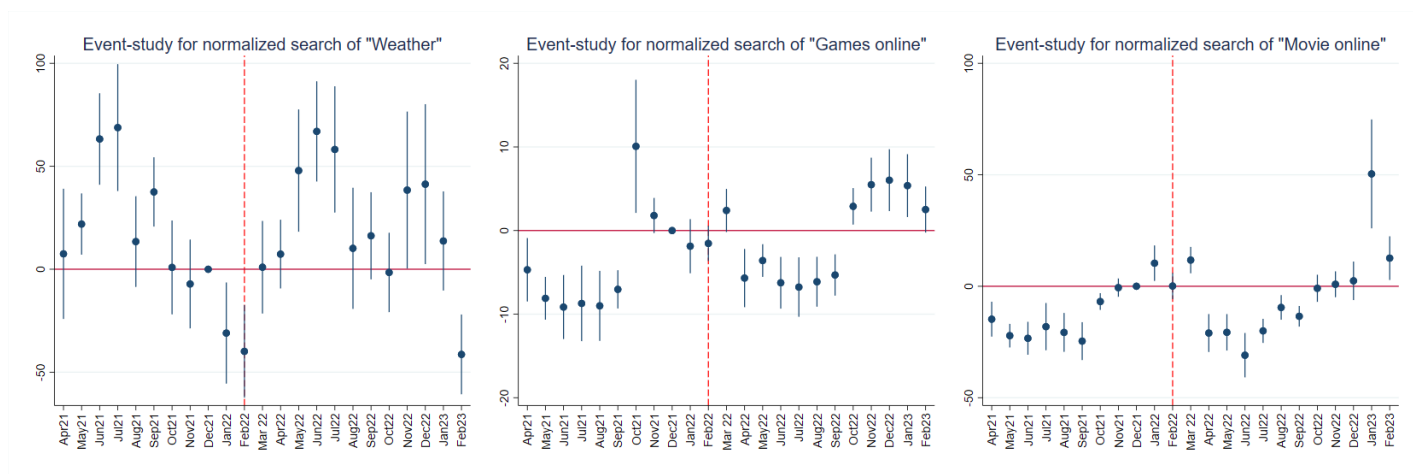


Figure B7: Event study design for Yandex search of weather and entertainment



C Appendix

C.1 List experiment

Table C1: Summary statistics for the online survey

	N	Mean	SD
Survey in Russian	4904	0.54	0.50
Ethnical Russian	4904	0.25	0.43
Know Russian	4904	0.63	0.48
Usage Russian (scale 0-3)	4904	1.26	1.33
Russian media (scale 0-4)	4904	0.63	1.13
Female	4904	0.50	0.50
Age	4904	41.82	15.39
Number of children	4904	1.22	1.43
Higher education (including incomplete)	4904	0.31	0.46
Work full-time or part-time	4904	0.62	0.49
Intensity of Internet usage (scale 1-6)	4904	4.48	1.79
Extent of interest in news (scale 1-4)	4904	2.87	0.84
Financial state: Not enough money even for food	4904	0.15	0.35
Financial state: Enough money for food but not clothes	4904	0.23	0.42
Financial state: Enough money for food and clothes but not TV or refrigerator	4904	0.32	0.47
Financial state: Enough money for everything but not car or apartment	4904	0.24	0.43
Financial state: Enough money for everything	4904	0.06	0.24
Rural area	4904	0.15	0.36
Region: Almaty city	4904	0.14	0.34
Region: Astana city	4904	0.09	0.28
Region: other	4904	0.78	0.42
Participating in protests for political change is justified	4904	0.31	0.46
Participating in protests for political change is not justified	4904	0.38	0.49
Helping Russia avoid Western sanctions is justified	4904	0.30	0.46
Helping Russia avoid Western sanctions is not justified	4904	0.38	0.48
Russia's Special Military Operation/ Invasion of Ukraine is justified	4904	0.26	0.44
Russia's Special Military Operation/ Invasion of Ukraine is not justified	4904	0.41	0.49
Working more than 50 hours per week is justified	4904	0.31	0.46
Working more than 50 hours per week is not justified	4904	0.48	0.50

Note. The table summarizes the characteristics of the participants in the online survey, including demographics, language use, media consumption, socioeconomic status, and regional indicators. The table also shows responses to the direct questions of justification: *In your opinion, is [item] generally justified or not justified?*, with items including protest participation, sanctions evasion, SMO/invasion of Ukraine, and work over 50 hours per week.

C.2 List experiment

List experiments – also known as the item count technique – have been successfully used, for example, to study support for authoritarian leaders (Blair et al. 2014; Frye et al. 2017; Robinson and Tannenberg 2019; Frye et al. 2023), estimating the size of LGBT population (Coffman et al. 2013), and vote trafficking in Lebanon (Corstange 2012).

Participants are exposed to either J or $J + 1$ items and then asked to count the number of items that apply to them, with the additional ($J + 1$ th) item being the sensitive item of interest.⁴⁷ The premise of list experiments is that when a sensitive question is asked indirectly, respondents are more likely to give a truthful answer, even if social norms encourage them to answer the question in a particular way (Blair and Imai 2012). Fear of being judged or punished by others leads to a change in behavior best known as social desirability bias, a subset of what is known as sensitivity bias (Blair et al. 2020). More sophisticated statistical methods allow analysis beyond mean comparisons so that sensitivity bias can be shown, but also which sociodemographic factors and personality traits play a role (Imai 2011; Blair and Imai 2012).

In list experiments, inevitable *nonstrategic* misreporting can be kept at a minimum by specific design choices (Kuhn and Vivyan 2022). Nonstrategic measurement errors are, for example, floor and ceiling effects (Ahlquist 2018), and complexity (Kramon and Weghorst 2019). Floor and ceiling effects appear when either all or none of the statements in the list are true, and survey participants thus must reveal their preference over the sensitive item in order to remain giving truthful answers. In this case, one would have to expect strategic misreporting, i.e., lying. List experiments thus help to elicit true preferences, but, by design, suffer from overwhelming or confusing study participants. By careful consideration of the design, these measurement errors can be minimized (Glynn 2013; Blair et al. 2020), for example by choosing a suitable control list (Agerberg and Tannenberg 2021). Is it furthermore common practice to validate experiments before going into the field (Rosenfeld et al. 2016).

Our list experiment takes this literature into account and is designed accordingly. Non-strategic measurement errors were tried to be minimized according to suggestions from the literature:

First, floor and ceiling effects were avoided by (1) choosing items where the prevalence among the population was known beforehand, and (2) choosing control list items that are negatively correlated. For example, the items 'homosexuality' and 'holding on to religious values' are strongly negatively correlated. It is very unlikely that respondents agree with both items. Furthermore, it is unlikely that

⁴⁷ J is commonly equal to 3 or 4. Higher values substantially increase complexity, while lower values are risking to compromise the privacy of the participants (floor effect).

none of the items are true, statistically. Items were taken and adapted from the World Value Survey and Central Asian Barometer. Thus, ceiling effects and floor effects could, by design, be minimized. Second, sensitive control list items were chosen, in order to conceal the item of interest and not evoke demand effects (Zizzo 2010). Third, a placebo item is used in order to test whether there are design effects (Frye et al. 2017, 2023). Fourth, a pre-test was run with 400 subjects in order to validate the lists. Last, a double list experiment was employed in order to enhance statistical power. In a double list experiment the sample is split into two groups, and each half acts as a control group for the other half, see Table C2.

Table C2: List experiment design

In the next section, you will be presented with a number of items. Please read the list of items carefully. After you have read the items, please indicate HOW MANY of the items (things or actions) below are generally justified in your opinion. We will not be able to know which items are justified for you.	
[GROUP A]	[GROUP B]
In your opinion, HOW MANY of the things or actions below are generally justified? Prioritizing industrial development above environmental safety Protecting the environment even if costs are high Prostitution Participating in protests for political change [selection:] 0, 1, 2, 3, 4	In your opinion, HOW MANY of the things or actions below are generally justified? Prioritizing industrial development above environmental safety Protecting the environment even if costs are high Prostitution [selection:] 0, 1, 2, 3
In your opinion, HOW MANY of the things or actions below are generally justified? Homosexuality Full time work for women Holding on to religious values [selection:] 0, 1, 2, 3	In your opinion, HOW MANY of the things or actions below are generally justified? Homosexuality Helping Russia avoid Western sanctions Full time work for women Holding on to religious values [selection:] 0, 1, 2, 3, 4
In your opinion, HOW MANY of the things or actions below are generally justified? Suicide Being proud of national traditions Russia's Special Military Operation in Ukraine/ Russia's invasion of Ukraine Aspiring to Western values [selection:] 0, 1, 2, 3, 4	In your opinion, HOW MANY of the things or actions below are generally justified? Suicide Being proud of national traditions Aspiring to Western values [selection:] 0, 1, 2, 3
In your opinion, HOW MANY of the things or actions below are generally justified? Death penalty Violating traffic rules Banning smoking in public places [selection:] 0, 1, 2, 3	In your opinion, HOW MANY of the things or actions below are generally justified? Death penalty Violating traffic rules Working more than 50 hours per week Banning smoking in public places [selection:] 0, 1, 2, 3, 4

Note. The table presents the list experiments as reported in section 5. Group A and Group B consist of subsamples, where each participant is assigned randomly to one of the two groups. A detailed description of double list experiments can be found in appendix C.2. Group A corresponds to the left column and Group B to the right column of Table C3. The framing of the item corresponding to Russia's full-scale invasion of Ukraine was assigned at random, in order to account for framing effects: *Russia's Special Military Operation/Invasion of Ukraine*.

Table C3: Balance table for the list experiment

	Group A	Group B	Difference
Ethnical Russian	0.24 (0.43)	0.26 (0.44)	0.01 (0.01)
Know Russian	0.63 (0.48)	0.62 (0.49)	-0.01 (0.01)
Usage Russian (scale 0-3)	1.23 (1.32)	1.28 (1.33)	0.05 (0.04)
Survey in Russian	0.53 (0.50)	0.55 (0.50)	0.02 (0.01)
Russian media (scale 0-4)	0.63 (1.13)	0.64 (1.14)	0.01 (0.03)
Female	0.51 (0.50)	0.50 (0.50)	-0.01 (0.01)
Age	41.74 (15.41)	41.90 (15.37)	0.16 (0.44)
Number of children	1.21 (1.41)	1.24 (1.44)	0.02 (0.04)
Higher education (including incomplete)	0.31 (0.46)	0.31 (0.46)	0.00 (0.01)
Work full-time or part-time	0.61 (0.49)	0.63 (0.48)	0.02 (0.01)
Intensity of Internet usage (scale 1-6)	4.51 (1.77)	4.46 (1.81)	-0.05 (0.05)
Extent of interest in news (scale 1-4)	2.85 (0.84)	2.89 (0.84)	0.04 (0.02)
Financial state: Not enough money even for food	0.15 (0.36)	0.14 (0.35)	-0.01 (0.01)
Financial state: Enough money for food but not clothes	0.23 (0.42)	0.22 (0.42)	-0.00 (0.01)
Financial state: Enough money for food and clothes but not TV or refrigerator	0.31 (0.46)	0.33 (0.47)	0.01 (0.01)
Financial state: Enough money for everything but not car or apartment	0.25 (0.43)	0.24 (0.43)	-0.01 (0.01)
Financial state: Enough money for everything	0.06 (0.24)	0.06 (0.24)	0.00 (0.01)
Rural area	0.15 (0.36)	0.16 (0.37)	0.01 (0.01)
Region: Almaty city	0.13 (0.34)	0.14 (0.35)	0.01 (0.01)
Region: Astana city	0.09 (0.28)	0.08 (0.28)	-0.00 (0.01)
Region: other	0.78 (0.42)	0.77 (0.42)	-0.01 (0.01)
Observations	2,478	2,426	4,904

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The table presents the balance of characteristics between Group A and Group B subsamples in the list experiment, including demographics, language use, media consumption, socioeconomic status, and regional indicators. Group A corresponds to the left column and Group B to the right column of Table C2. Columns Group A and Group B report means and standard deviations (in parentheses) of chosen characteristics for corresponding subsamples. Column Difference reports the difference in means between Groups A and B, and associated robust standard errors in parentheses.

Table C4: Russian media and justification of actions/events: Direct Question. OLS estimate

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Protest participation Justified	Not justif.	Sanctions evasion Justified	Not justif.	Invasion/SMO Justified	Not justif.	Work \geq 50 h. Justified	Not justif.
Russian media (scale)	0.012*	0.014**	0.051***	-0.0076	0.027***	0.0011	-0.0030	0.038***
	(0.0065)	(0.0070)	(0.0066)	(0.0063)	(0.0061)	(0.0066)	(0.0061)	(0.0071)
Usage Russian	-0.0030	-0.013	0.020**	-0.032***	0.0083	-0.035***	0.0029	0.0038
	(0.0095)	(0.0099)	(0.0091)	(0.010)	(0.0086)	(0.010)	(0.0092)	(0.010)
Know Russian	-0.058***	-0.045**	-0.12***	0.023	-0.078***	0.017	-0.082***	0.034
	(0.020)	(0.021)	(0.019)	(0.021)	(0.019)	(0.021)	(0.020)	(0.021)
Survey in Russian	-0.022	-0.039*	0.022	-0.059***	-0.016	-0.041**	-0.028	-0.022
	(0.020)	(0.020)	(0.019)	(0.020)	(0.018)	(0.020)	(0.020)	(0.021)
Ethnical Russian	-0.083***	-0.0029	0.082***	-0.14***	0.024	-0.17***	-0.068***	-0.039
	(0.021)	(0.024)	(0.022)	(0.022)	(0.020)	(0.023)	(0.020)	(0.024)
Observations	4,904	4,904	4,904	4,904	4,904	4,904	4,904	4,904
R-squared	0.139	0.056	0.124	0.122	0.130	0.110	0.131	0.086
Region FE	Y	Y	Y	Y	Y	Y	Y	Y
Estimat.	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS

Note. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Linear regression models, where the dependent variable is responding "justified" to the question *In your opinion, is [item] generally justified or not justified?*. The wording is in Section 3.3. Russian media (scale) varies from 0 to 4 and shows how many sources out of four main news sources are of Russian origin. Usage Russian – is the sum of binary variables related to Russian as the main language: at home, with friends/colleagues, for media consumption. The additional controls not shown in the table are gender, five age groups, number of kids, higher education, occupation, financial state, the intensity of internet usage, the extent of interest in news, rural binary indicator, and regional fixed effects. Robust standard errors are in parentheses.

D Appendix

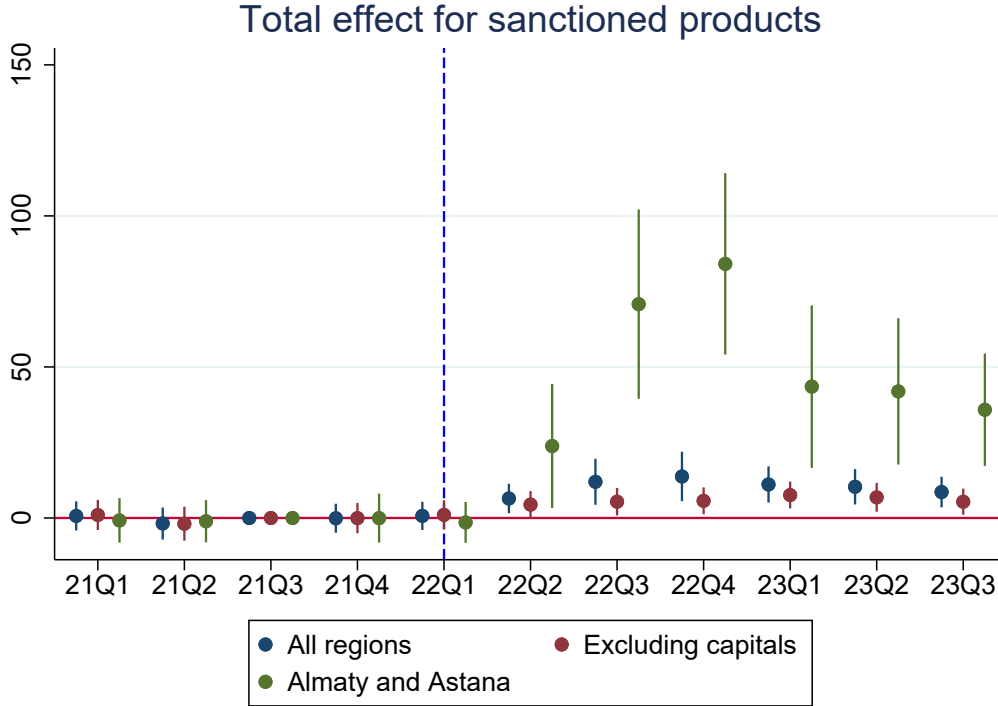
D.1 Parallel trend assumption for the overall export (specification (5))

To test the parallel trend assumption for specification (5), we use the Event Study coefficients β_τ and δ_τ from the following specification:

$$Value_{rtp} = \sum_{\tau=21Q1}^{23Q3} \beta_\tau \cdot S_p \cdot I(t = \tau) + \left[\sum_{\tau=21Q1}^{23Q3} \delta_\tau \cdot Capital_r \cdot S_p \cdot I(t = \tau) \right] + \kappa_r + \lambda_t + \mu_p + \varepsilon_{rtp}, \quad (9)$$

For the notation, see Section 6 of the main text. Figure D1 shows the estimation results of specification (9), justifying the parallel trend assumption.

Figure D1: The dynamics of the gap in trade between sanctioned and other products



Note. The graph shows the event study coefficients from (9) to test the parallel trend assumption for specification 5. Blue dots show the coefficients β_τ when all regions are included and specification (9) without brackets is estimated. Green dots show the coefficients δ_τ when only Astana and Almaty are included in specification (9). Red dots show the coefficients β_τ when Astana and Almaty are excluded and specification (9) without brackets is estimated. The 95% confidence intervals are calculated w.r.t. robust standard errors.

D.2 Parallel trend assumption under regional treatment (specification (6))

To test the parallel trend assumption for specification (6), we consider Event Study coefficients γ_τ from the following specification:

$$Value_{rtp} = \alpha S_p Treat_r + \beta S_p Post_t + \sum_{\tau=21Q1}^{23Q3} \gamma_\tau S_p I(t = \tau) Treat_r + \kappa_r + \lambda_t + \mu_p + \varepsilon_{rtp}, \quad (10)$$

For the notation, see Section 6 of the main text. For estimation of (10), we exclude Astana and Almaty. Panel A of Figure D2 shows the estimation results of specification (10), justifying the parallel trend assumption for all treatment exposures in specification (6): share of Russian speakers, share of justifying the war, share of trusting Russian news.

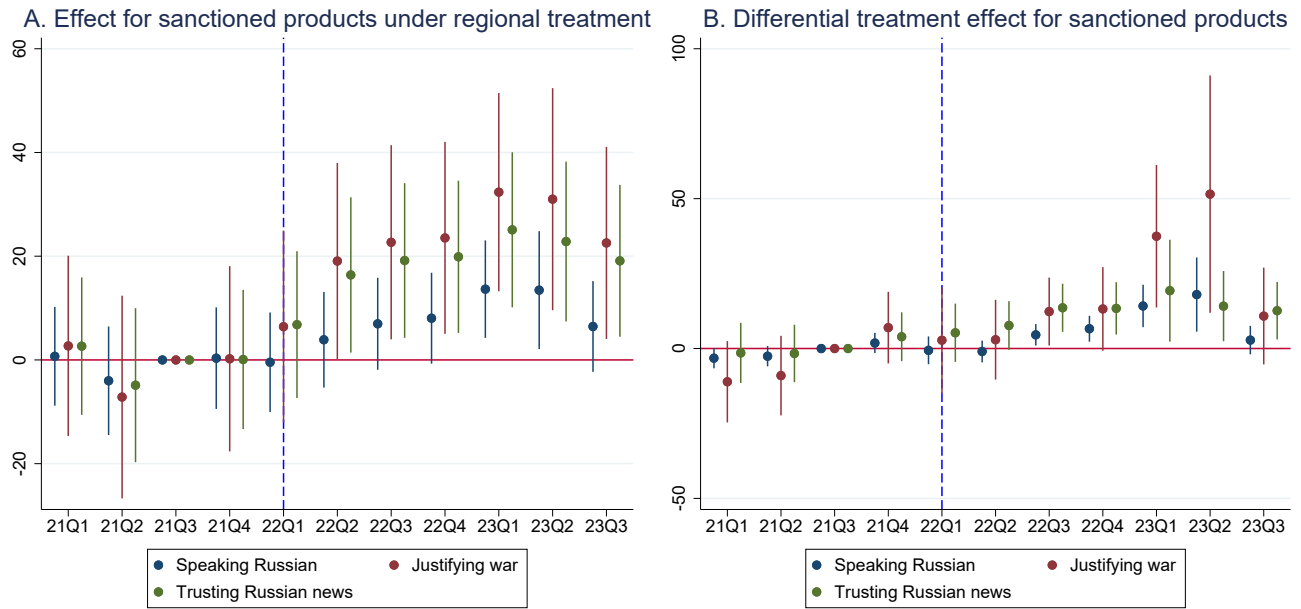
D.3 Parallel trend assumption under differential treatment (specification (8))

To test the parallel trend assumption for specification (8), we consider Event Study coefficients γ_τ from the following specification:

$$Value_{rt} = \sum_{\tau=21Q1}^{23Q3} \gamma_\tau I(t = \tau) Treat_r + \kappa_r + \lambda_t + \varepsilon_{rt}, \quad (11)$$

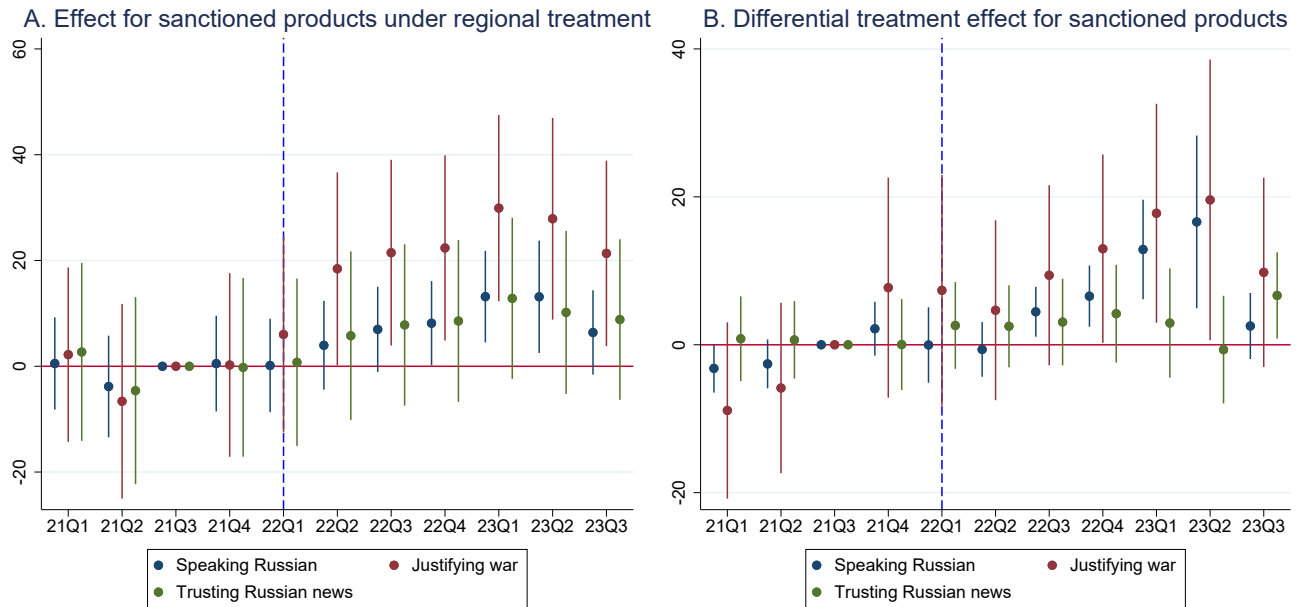
For the notation, see Section 6 of the main text. For estimation of (11), we exclude Astana and Almaty. Panel B of Figure D2 shows the estimation results of specification (11), justifying the parallel trend assumption for all treatment exposures in specification (8): share of Russian speakers, share of justifying the war, share of trusting Russian news.

Figure D2: The dynamics of the effect of Russian propaganda on sanctions circumvention



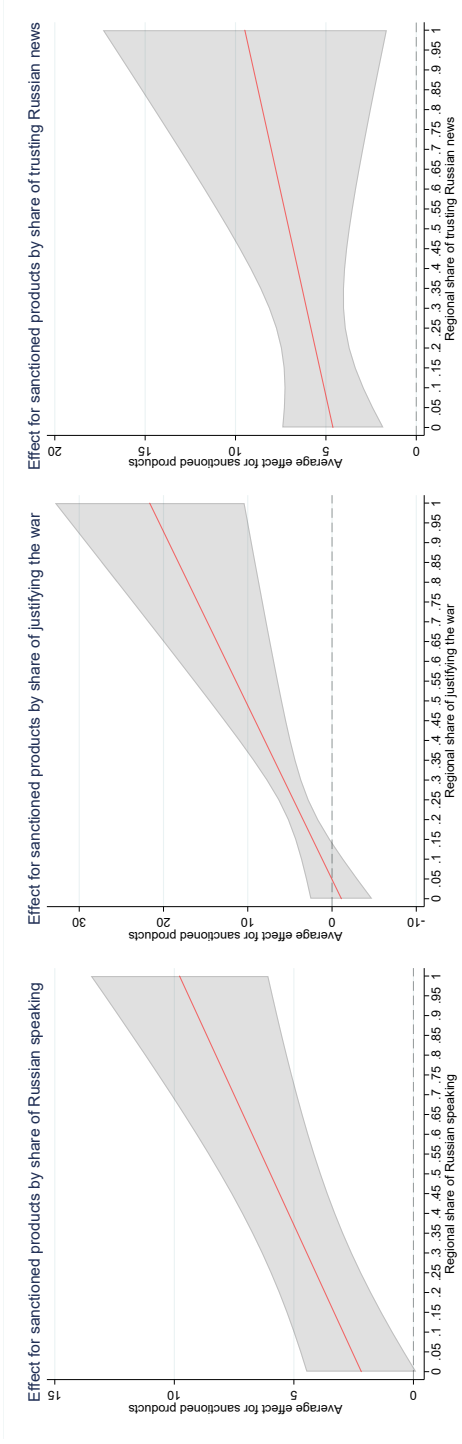
Note. The graph shows the event study coefficients from (10) (Panel A) and (11) (Panel B) to test the parallel trend assumption for specifications 6 and 8, respectively. All models exclude Astana and Almaty. Blue dots show the coefficients γ_τ (in both specifications) for the share of speaking Russian as a regional treatment exposure measure. Green dots show the coefficients γ_τ for the share of trusting Russian news as a regional treatment exposure measure. Red dots show the coefficients γ_τ for the share of justifying the war as a regional treatment exposure measure. The 95% confidence intervals are calculated w.r.t. robust standard errors.

Figure D3: The dynamics of the effect of Russian propaganda on sanctions circumvention, based on answers of firm owners and managers from CAB



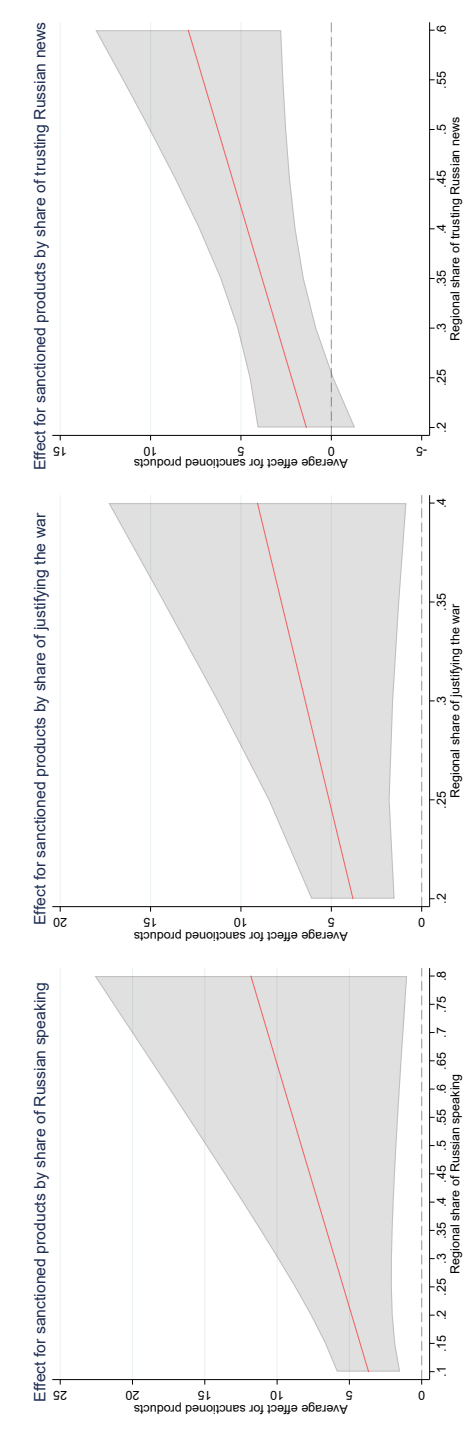
Note. The graph shows the event study coefficients from (10) (Panel A) and (11) (Panel B). As a measure of treatment exposure, it considers firm heads' answers from CAB 2022-2023 surveys. For the rest, see note of Figure D2.

Figure D4: Sanctions circumvention by regional treatment exposure, based on answers of firm owners and managers from CAB



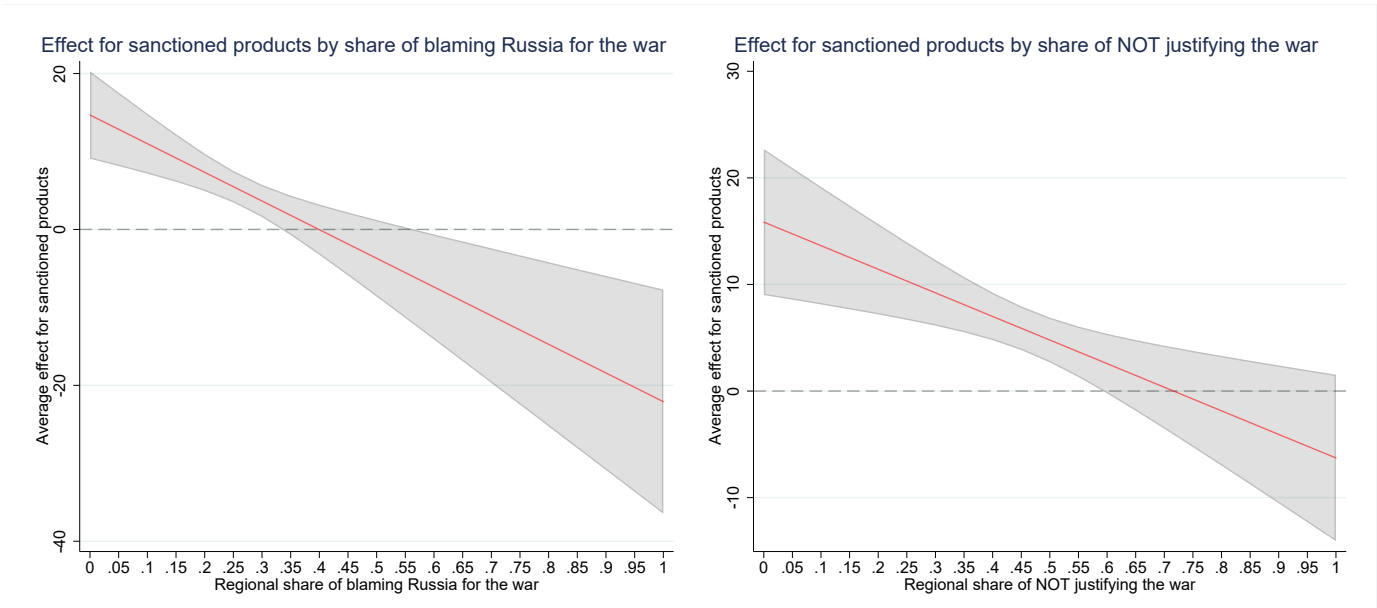
Note. The figure shows $\beta + \gamma \cdot Treat$ from the specification (6). As a measure of treatment exposure, it considers firm heads' answers from CAB 2022-2023 surveys. For the rest, see note of Figure 6.

Figure D5: Sanctions circumvention by regional treatment exposure, cleaned of Russian ethnicity exposure



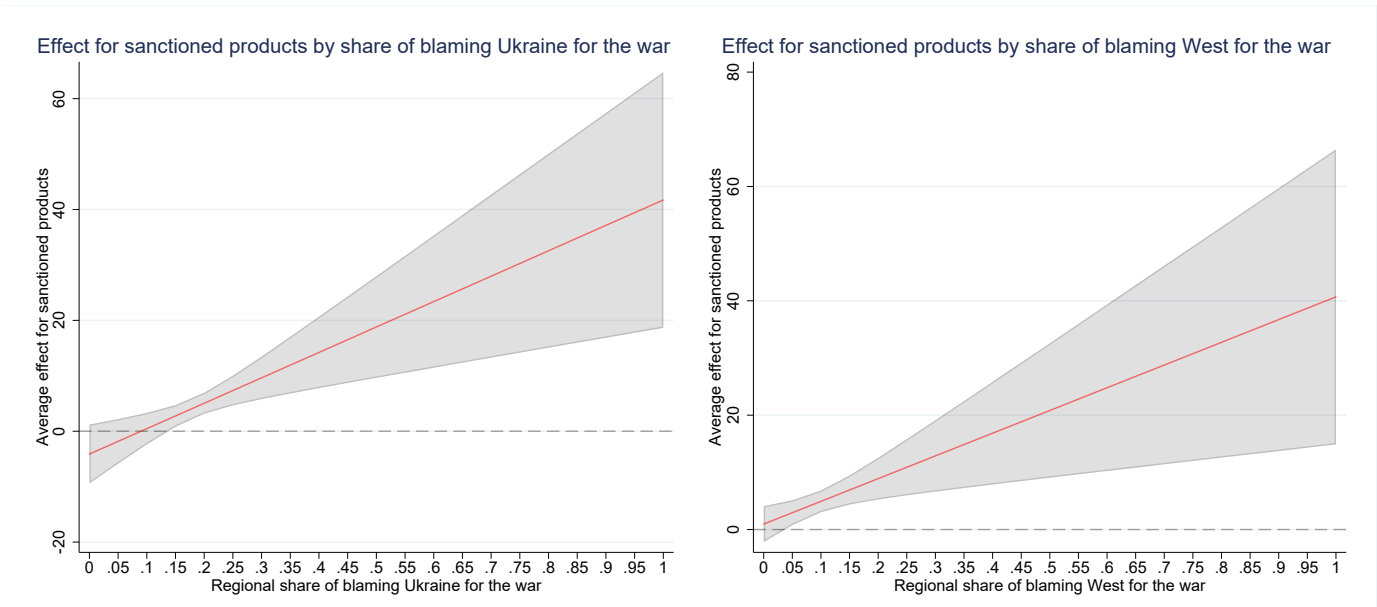
Note. The figure shows $\beta + \gamma \cdot Treat$ from the specification (7). Treatment exposures are the share of Russian speakers, the share of justifying the war, and the share of trusting Russian news cleaned of Russian ethnicity from CAB 2022-2023 surveys. For the rest, see note of Figure 6.

Figure D6: Sanctions circumvention by regional treatment exposure: share of blaming Russia and NOT justifying the war in Ukraine



Note. The figure shows $\beta + \gamma \cdot Treat$ as a function of $Treat$ from the specification (6). The treatment exposures are the shares of respondents blaming Russia as the most responsible for the war in Ukraine(left) and claiming that the war is NOT justified (right) using CAB 2022-2023 surveys. The dependent variable is the value of exports to Russia in a region-month (M USD). For the rest, see note of Figure 6.

Figure D7: Sanctions circumvention by regional treatment exposure: share of blaming Ukraine and Western countries



Note. The figure shows $\beta + \gamma \cdot Treat$ as a function of $Treat$ from the specification (6). The treatment exposures are the shares of respondents blaming Ukraine(left) and Western countries (right) as the most responsible for the war in Ukraine using CAB 2022-2023 surveys. The dependent variable is the value of exports to Russia in a region-month (M USD). For the rest, see note of Figure 6.