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IZA DP No. 17457

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ABSTRACT

How Has the War in Ukraine Affected Russian Sentiments?*

We analyze the effects of Russia's invasion of Ukraine, the partial military mobilization, and the Wagner Group rebellion on a broad set of sentiments in the Russian population, using the exogenous timing of surveys from Gallup World Poll and the Levada Center. Our results show strong rally 'round the flag effects and widespread domestic support for the war, sustained despite high casualties through strategic recruitment and economic compensations. While it thus seems unlikely that a public uprising will end the war soon, we also find that sentiments among Russians abroad have shifted against Putin, aligning with global views.

JEL Classification: D72, F51, H56

Keywords: war, Russia, sentiments, rally 'round the flag, Putin

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1 Introduction

On February 24, 2022, Russia invaded Ukraine. Two years later, on May 7, 2024, Vladimir Putin was inaugurated as President for a fifth term with 88 percent of the reported votes and massive support in public opinion polls (Levada-Center, 2024c, 2024d). Given that polls indicated record-low support for Putin before the invasion (Levada-Center, 2024e), the boost in his popularity suggests that the invasion spurred strong "rally 'round the flag" effects[1] in the Russian population (Kizilova and Norris, 2024). Similar boosts in Putin's popularity have been documented in connection with both the annexation of Crimea and the subsequent war in the Donbas region in 2014 (Balzer, 2015; Hale, 2022; Theiler, 2018), as well as after the invasion of Georgia in 2008 (Guriev and Treisman, 2020; Treisman, 2011), which suggests that Putin increases his popular support by military interventions in neighboring countries (Gorodnichenko and Sologoub, 2024).

Relying on election results to assess Putin's popularity and Russians' sentiments about the war is however problematic, since election results are likely to be manipulated (BBC, 2021; Enikolopov et al., 2013; Robertson, 2017; Vitkine, 2024).

For this reason, researchers typically rely on opinion polls rather than election results to assess the popularity of authoritarian leaders. However, fear of repercussions may lead citizens to withhold their true opinions (Chapkovski and Schaub, 2022; Hale and Colton, 2017; Kuran, 1995). Consequently, various methods for mitigating this problem by using data from reliable independent polling organizations have been developed (Frye et al., 2023; Guriev and Treisman, 2020; Kizilova and Norris, 2024).[2]

[1] Rally 'round the flag effects refer to the phenomenon where support for leaders increases during times of war or in response to attacks by enemies (Levy, 1998; Mueller, 1970). The traditional explanation is that these events foster patriotism and nationalism, intensifying the divide between the in-group and out-group (Mueller, 1973). Because the leader is often viewed as a symbol of the nation, these sentiments are reflected in increased popularity ratings (Kam and Ramos, 2008).

[2] Guriev and Treisman (2020) use data from all non-democratic countries in the Gallup World Poll (GWP), including Russia, and find no statistically significant relationship between political repression and leader approval, nor between repression and refusals to answer or "don't know" answers, which argues against preference falsification. In fact, greater repression appeared to be associated with lower leader approval, indicating that outrage may outweigh fear.

A proper understanding of how wars affect public opinion in authoritarian countries is key to understanding the political dynamics of conflicts, including regime resilience and conflict duration, as well as informing effective measures for conflict resolution and peace. Currently, scholars and political experts hold differing views on the key drivers behind Putin's decision to invade Ukraine (Egorov and Sonin, 2023). Some argue that the war stems from Putin's personal ambition to restore the former Soviet empire's global power (Florea, 2022), while others argue that the historical narrative is mainly used as a justification for the invasion, which serves Russia's contemporary geopolitical interests (Kragh, 2022; Plokhy, 2023). Another argument is that the annexation of Crimea and the subsequent invasion of Ukraine are diversionary strategic moves by Putin to increase his popularity and strengthen his political power domestically (Kizilova and Norris, 2024; Theiler, 2018).[3] Hence, an important question for understanding the motives behind the war is to what extent it is supported by the Russian population.

The war has undoubtedly been accompanied with negative consequences for many Russians. More than half a million young men have been sent to the frontlines, and by October 25, 2024, more than 75,000 of those were confirmed dead by Mediazona's recorded names count (Mediazona, 2024). The true number is likely much higher with hundreds of thousands killed or seriously injured. Moreover, domestic policies, ranging from restrictions on media and freedom of speech (Enikolopov et al., 2018; Enikolopov et al., 2011; United Nations, 2022), to political oppression (Snegovaya, 2023), along with increased military expenditures (VOA, 2022) and economic sanctions from the West (Becker et al., 2024; European Council, 2024; Simola, 2022), have dramatically deteriorated the opportunities of many Russians (VOA, 2023).

At the same time, there are also reports indicating that life in Russia goes on as usual (AFP, 2024; Al Jazeera, 2024), and that many Russians believe Russia is doing the right

[3]Egorov and Sonin (2023) present a theoretical model of non-democratic regimes in which Putin's decision to invade Ukraine is a consequence of the poor quality of advice resulting from repression against political opponents.

thing to defend itself against the West and the expansion of the North Atlantic Alliance, NATO (Theiler, 2018; Volkov and Kolesnikov, 2022). Hence, the war with Ukraine may also have spurred pride, cohesion and optimism among the Russian population (Volkov and Kolesnikov, 2022, 2023).[4]

In other words, the war can affect many different sentiments, and to what extent rally 'round the flag effects can be expected from international conflicts and wars is an empirical question (Seo and Horiuchi, 2024). Moreover, different segments of the Russian population may have different feelings and attitudes about, for example, whether Russia has become a better or worse country to live in after the invasion, and if Putin is leading the country in the right direction or not.

The aim of this study is to analyze how the war in Ukraine has affected Russians' support for Putin as well as several other sentiments and opinions.[5] We do this by using individual-level microdata from two different and highly respected polling institutions: the Levada Center, an independent, non-governmental polling and sociological research organization in Moscow (Levada-Center, 2024a), and the Gallup World Poll (GWP), the most comprehensive and farthest-reaching survey of the world (Gallup, 2024b). GWP is conducted annually with between 2,000–4,000 respondents in Russia per year, and the Levada survey is conducted monthly with a sample size of approximately 2,000 respondents per month.

We make several novel and important contributions to the growing literature on the political economics of Russia.

First, by using two independent surveys—one from a Russian and one from an American institution—, we can compare and cross-validate our findings across the two data sources.

Second, while Russians might be reluctant to truthfully report their opinions about Putin, we also analyze responses to other, less sensitive questions, such as their optimism about

[4]Guriev and Melnikov (2016) show that the conflict in East Ukraine in 2014 spurred increased in-group solidarity in the Russian population.

[5]Other studies have investigated how the Russian invasion of Ukraine has affected political support and sentiments in other countries (Adema et al., 2024; Balcells et al., 2024; Fukumoto and Tabuchi, 2023; Gehring, 2022).

the future, current mood and life satisfaction, attitudes toward the West, and desires to move abroad. As such, we can assess if changes in Putin's approval ratings are consistent with respondents' sentiments in other dimensions. In addition, our broad set of sentiments, capturing both the individuals' views of the country and their personal situations, also provides a more encompassing picture of Russians' opinions about the war.

Third, we use the unexpected timing of the invasion, as well as the partial military mobilization of young men on September 21, 2022, and the Wagner Group rebellion on June 23, 2023, to elicit plausibly causal effects of various events of the war on sentiments. We argue that the timing of these events is exogenous with respect to the polling periods, providing us with a quasi-experimental setting (Muñoz et al., 2020). Similar strategies have been employed by others to examine the impact of shocks on political sentiments and social and economic outcomes (for example, Bateson and Weintraub, 2022; Boungou and Yatié, 2022; Casas et al., 2024; Costa-Font and Ljunge, 2023; Dinesen and Jæger, 2013; Hariri et al., 2016; Jakiela and Ozier, 2019; Metcalfe et al., 2011; Montalvo, 2011; Seo and Horiuchi, 2024).

Fourth, we carefully examine how different segments of the Russian population responded to these events, including how the war has impacted the approval of Putin among Russians abroad. These analyses are important, as aggregate statistics may hide important heterogeneities in the population.

Fifth, to further understand the political dynamics of Russia's war policies, and the development of Russian sentiments during the war, we also analyze the regional differences in rally 'round the flag effects and their correlations with war casualties and income changes over time.

Our findings show that the invasion significantly increased support for Putin and optimism about the future, fueled anti-West attitudes, and reduced migration aspirations. Heterogeneity analyses reveal that these rally 'round the flag effects were strikingly similar across demographics, indicating broad support for the invasion of Ukraine. The September

2022 mobilization, however, had temporary negative effects on the regime support, while the 2023 Wagner group rebellion had no impact. Our analysis also indicates that the Kremlin appears to have employed a recruitment strategy aimed at sustaining broad public support. Finally, we document that Russians abroad have become more critical of Putin, aligning with global attitudes.

2 Data and methods

2.1 Data sources

2.1.1 Gallup World Poll

The Gallup World Poll (GWP) conducts annual surveys on attitudes and behaviors in more than 160 countries around the world, corresponding to 99 percent of the world's adult population (Gallup, 2024b).[6] The survey includes at least 1,000 individuals per country and year, but in some large countries, including Russia, sample sizes of at least 2,000 individuals per year are collected. Gallup uses either telephone surveys, using a random-digit-dial method or a nationally representative list of phone numbers, or face-to-face interviews in randomly selected households using an area frame design. Face-to-face interviews are approximately one hour, and telephone interviews are about 30 minutes. The samples are probability based and nationally representative of the resident population aged 15 years and older. The coverage area is the entire country including rural areas, and the sampling frame represents the entire civilian, non-institutionalized adult population of the country. The final GWP samples are weighted to correct for unequal selection probability, non-response, and double coverage of landline and cellphone users when using both cellphone and landline frames. Gallup also weights its final samples to match the national demographics of each selected country.

In Russia, the mode of interviewing was face-to face in 2006–2019, landline and mobile

[6]The GWP has been used extensively in research (for example, Adema et al., 2024; Aksoy and Poutvaara, 2021; Deaton, 2008; Elinder et al., 2023; Falk et al., 2018), including studies analyzing the support for leaders in authoritarian countries (for example, Aksoy et al., 2024; Guriev et al., 2021; Guriev and Treisman, 2020).

Table 1: Variable definitions: Sentiments

Survey	Variable question
	Approval of Putin
Levada	Do you generally approve or disapprove of the activities of the President of Russia? (0 *Disapprove*, 1 *Approve*)
GWP	Do you approve or disapprove of the job performance of the leadership of this country? (0 *Disapprove*, 1 *Approve*)
	Optimism about future
Levada	Do you think that things in the country are going in the right direction, or do you think the country is going the wrong way? (0 *The country is going the wrong way*, 1 *Things are going in the right direction*)
GWP	Just your best guess, on which step do you think you will stand on in the future, say about five years from now? Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you, and the bottom of the ladder represents the worst possible life for you. (0 *Worst possible 0–4*, 0.5 *5*, 1 *Best possible 6–10*)
	Subjective well-being
Levada	What can you say about your mood in recent days? (0 *I feel fear, melancholy / I feel tension, irritation*, 0.5 *Normal, even mood*, 1 *In a great mood*)
GWP	On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel? Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you, and the bottom of the ladder represents the worst possible life for you. (0 *Worst possible 0–4*, 0.5 *5*, 1 *Best possible 6–10*)
	Positive about West
Levada	How do you generally feel about the European Union now? (0 *Very bad / Mostly bad*, 1 *Very good / Mostly good*)
GWP	Do you approve or disapprove of the job performance of the leadership of Germany? (0 *Disapprove*, 1 *Approve*)
	Migration aspirations
Levada	Would you like to move abroad for permanent residence? (0 *Definitely no / More likely no*, 1 *Definitely yes / More likely yes*)
GWP	Ideally, if you had the opportunity, would you like to move permanently to another country, or would you prefer to continue living in this country? (0 *Like to continue living in this country*, 1 *Like to move to another country*)
	Support for military
Levada	Do you personally support or not the actions of the Russian Armed Forces in Ukraine? (0 *Definitely no / More likely no*, 1 *Definitely yes / More likely yes*)
GWP	In this country, do you have confidence in the military, or not? (0 *No*, 1 *Yes*)

Note: Response options in parentheses (our coding). Levada also includes the option "Hard to answer". GWP also includes the options "Don't know (DK)" and "Refused".
Source: Levada-Center (2024a) and Gallup (2024a).

telephone in 2020–2021, face-to-face in 2022, and mobile telephone in 2023. The interview language was Russian. In some years, people living in very remote or difficult to access areas were excluded. In these cases, the excluded areas represent five percent or less of the population (Gallup, 2024a).

In the analysis, we use the individual-level GWP data from 2007–2023. The annual sample sizes and survey dates in GWP are shown in Table A1 in the Appendix.

2.1.2 Levada Center

The Levada Center is an independent, non-governmental polling and research organization based in Moscow (Levada-Center, 2024a). The center has conducted regular, nationally representative surveys and public opinion polls across Russia since 1988. Since 2016, it has been labelled a foreign agent under the Russian foreign agent law. The Levada data have been widely used in research (for example, Gorodnichenko and Sologoub, 2024; Kizilova and Norris, 2024; Szakonyi, 2022; Treisman, 2011) and are often considered the most reputable series of public opinion data in Russia (Frye et al., 2023; Kizilova and Norris, 2024).

In the analysis, we use monthly, individual-level microdata from the Levada Center between January 2021 and April 2023.[7] Data are weighted using the main vector provided by Levada. The Levada survey dates and sample sizes are shown in Table A2 in the Appendix.[8]

2.1.3 Sentiment variables

Our main variables of interest are measures of sentiments collected in the Levada and GWP surveys. We study five dimensions of sentiments in the Russian population, capturing various aspects of nationalism and related feelings and attitudes. Our primary outcome variable is

[7]Due to the current sanctions against Russia we are not able to extend these series with more recent data from Levada.

[8]Both the Levada and GWP data are repeated cross-sections, meaning that we, unfortunately, cannot follow the same individuals over time.

the support for President Putin (*Approval of Putin*), measured by the individuals' responses to questions about whether they approve or disapprove of the Russian leader.[9] Our other outcomes are if the respondents think that things in Russia are going in the right direction or not, and to what extent they will have a good life in five years (*Optimism about future*); the respondents' current mood as well as life satisfaction as measured by the Cantril (1965) ladder (*Subjective well-being*); attitudes about the European Union (EU) and Germany (*Positive about West*); and if they would like to move permanently to another country or not (*Migration aspirations*). After the invasion, we can also directly analyze the stated support for the war in Ukraine (*Support for military*).[10] For the exact survey questions and variable definitions, see Table 1.[11]

2.1.4 Mediazona

For our regional analyses, we also use data on the number of casualties per region, using the Mediazona (2024) count on Russian losses in the war with Ukraine. In collaboration with BBC News Russian service and a team of volunteers, Mediazona maintains a named list of deceased Russian military personnel. This list is compiled from verified, publicly available sources, including social media posts by family members, local news reports, and official announcements from regional authorities. The list is not exhaustive, as not every military death becomes public knowledge.

In the analysis, we use Mediazona's number of confirmed military deaths (all troops) between February 24, 2022, and April 30, 2023, by Russian region in which they lived. The

[9] We also analyze variations of this question in a number of robustness checks (see Table 2).

[10] The Levada question asks the respondents if they personally support or not the actions of the Russian Armed Forces in Ukraine. In March 2022, directly after the invasion, 85 percent of the respondents in Levada answered that they personally supported these actions. In the year following the invasion, between April 2022 and April 2023, the stated support rate for the war varied between 77 and 82 percent. Because the question was not asked before the invasion, however, we cannot directly analyze the effect of the invasion on this outcome.

[11] These sentiments have previously been analyzed using similar questions, albeit in different contexts, in a multitude of studies (see, for example, Adema et al., 2024; Deaton, 2008; Elinder et al., 2023; Guriev et al., 2021; Guriev and Treisman, 2020; Kahneman and Krueger, 2006; Newport and Saad, 2021; Seo and Horiuchi, 2024).

absolute numbers are adjusted for population by dividing them with regional populations in 2020 from the Federal State Statistics Service (Rosstat).

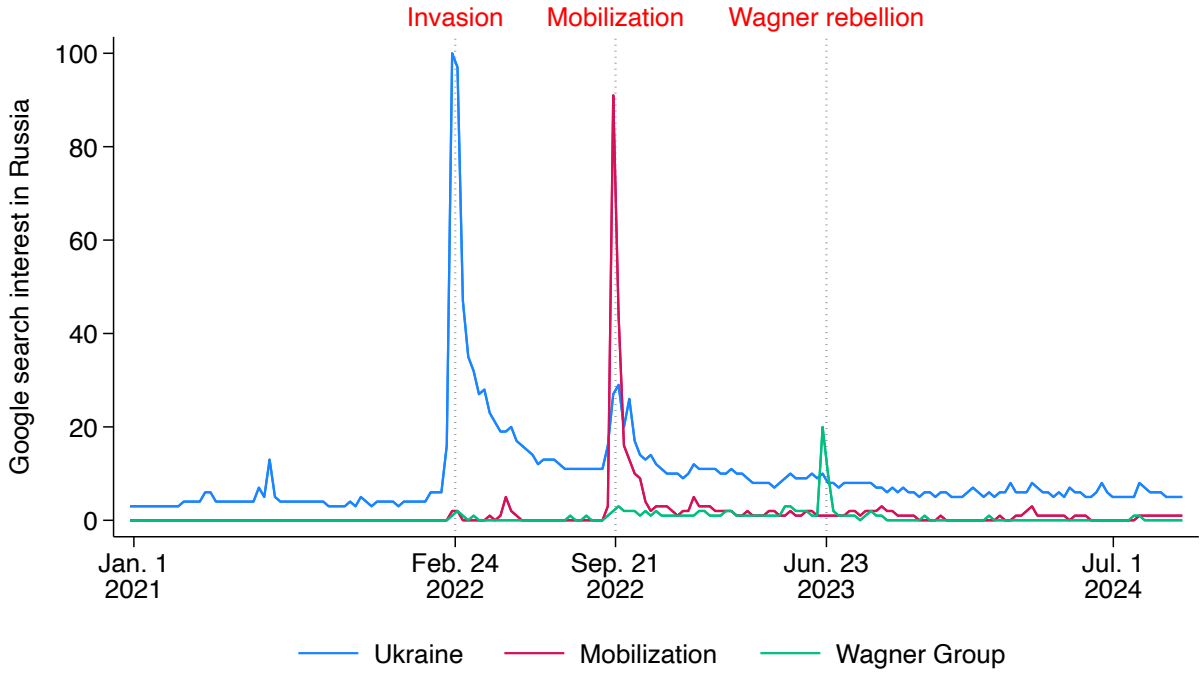

Figure 1: Google search trends in Russia

Note: The figure shows the Google search trends in Russia for the search queries "Ukraine" (Украина), "mobilization" (мобилизация) and "Wagner Group" (Группа Вагнера) by week between January 2021 and September 2024. The numbers indicate web search interest relative to the highest number in the chart. A value of 100 indicates the highest interest for the given time period and search queries, 50 indicates that it is half as popular, and 0 means that there is not enough data for the search term.
Source: Data from Google Trends (2024).

2.2 Methods

The aim of our empirical approach is to assess how the Russian invasion of Ukraine on February 24, 2022, the partial military mobilization between September 21–October 28, 2022, and the Wagner Group rebellion on June 23–24, 2023, have impacted sentiments in the Russian population.

To identify plausibly causal effects, we use the high frequency and timing of survey waves

to compare sentiments just before versus just after these significant events.[12] To the extent that the events were salient, unexpected, and unrelated to the timing of surveys by Levada and GWP, any observed changes in sentiments immediately around the events should credibly reflect causal effects (Casas et al., 2024; Muñoz et al., 2020; Seo and Horiuchi, 2024).

To evaluate the validity of these assumptions we do a number of checks (in line with the best practices suggested by Muñoz et al., 2020).

First, Figure 1 displays Google search trends in Russia for the terms "Ukraine", "mobilization", and "Wagner Group" (in Russian). Notably, each event generated a significant spike in searches for the corresponding keyword precisely at the time of the event. The search frequency for "Ukraine" indicates that the invasion, referred to by Putin as a 'special military operation in Ukraine' during a televised speech on the morning of February 24 (Al Jazeera, 2022), garnered significant attention within the Russian population. Similarly, the relative search frequencies for "mobilization" and "Wagner Group" suggest that these subsequent events were also highly salient for the Russian population. We also find the same results for search trends from Yandex, the leading search engine in Russia (see Figure A1 in the Appendix).[13]

Second, the timing of these spikes in search activity also suggests that the events were unanticipated. This is in line with multiple studies showing that the financial markets' response to the invasion was negative and immediate, suggesting that, despite the buildup of Russian forces along the Ukrainian borders, an actual invasion was not expected by the

[12]This identification strategy, exploiting the occurrence of unexpected events during the fieldwork of public opinion surveys to estimate causal effects by comparing responses of those interviewed before the event (control group) to those interviewed after (treatment group), is sometimes referred to as the *unexpected event during survey design* (UESD) method. The two key identifying assumptions in this design are excludability and temporal ignorability, where the latter means that selection of the moment of the interview should be as good as random (Muñoz et al., 2020).

[13]While Yandex is the most popular search engine in Russia, followed by Google, long-run search trends for Yandex are only available at the monthly level. In February 2022, the number of searches for "Ukraine" on Yandex in Russia increased from 8 million to 62 million queries compared to the previous month. Searches for "Ukraine" peaked in March 2022, with 104 million search queries, corresponding to 0.9 percent of the total number of queries on Yandex in Russia during that month. In September 2022, searches for "mobilization" rose from 0.4 million to 49 million compared to the previous month, and in June 2023, searches for "PMC" or "Wagner" increased from 8 million to 20 million queries (Yandex Wordstat, 2024).

markets and considered unlikely, even within Russia, until it occurred (Izzeldin et al., 2023; Yousaf et al., 2022). For the mobilization, Avila-Uribe and Nigmatulina (2023) document a substantial spike in ticket prices for flights leaving Russia shortly after the announcement, indicating that it was both unexpected and impactful. The unforeseen nature of the Wagner Group rebellion is supported by reports that even Putin and the Russian military leadership appeared to have been caught off guard (Nakashima and Harris, 2023).

Third, to test that the survey data collections were unaffected by these events, we also do a number of balance tests, reported in Figure A2 in the Appendix. Importantly, the events did not seem to affect who responded to the surveys in terms of their observable characteristics. That is, with the exception of a marginally significant coefficient on the share with higher education after the Wagner rebellion, there were no statistically significant differences in the respondents' demographics before and after these events. The same is also true for the share of missing values, that is, respondents answering "Hard to answer", "Don't know" or who refused to answer the question about their approval of Putin. Finally, for the GWP, we can also see that the distributions of number of interviews per day as well as the survey period lengths were fairly similar across these waves (see Figure A3 in the Appendix).

Below we provide further details about our empirical specifications and how we estimate the impacts of the three war events.

2.2.1 Invasion

The full-scale Russian invasion of Ukraine began on February 24, 2022. To evaluate its impact on sentiments, we leverage the timing of the Levada polls in February (conducted just before the invasion, between February 14–20) and March (conducted approximately one month after the start of the invasion, between March 27–April 2).

The effects of the invasion on sentiments are estimated using the following linear regression:

$$y_i = \alpha + \beta Post_i + \epsilon_i, \tag{1}$$

where y_i is the survey response of individual i for the relevant sentiment; $Post_i$ is a dummy variable which takes value 0 if individual i is interviewed in the time period before the invasion and value 1 if the individual is surveyed in the period after the invasion; β is the coefficient of interest; α the intercept; and ϵ_i an error term.[14]

While the Levada survey samples are selected to be representative of the Russian population, our estimates could be biased if respondents after the invasion differ systematically from those before the invasion. Panel A in Appendix Figure A2 shows that the pre- and post-invasion samples are strongly balanced in terms of observable characteristics, including the share of respondents answering "Hard to answer" to the approval of Putin question. To further validate this, we also run our baseline regression adding individual-level control variables for a basic and extended set of demographic characteristics. In another sensitivity analysis, we test if the results are robust to variations in the time frame of the analysis. To assess whether the results could potentially be driven by seasonal effects, we also do two placebo tests where we run the same regression as in Equation (1) but instead compare the Levada polls between February and March in the year before (2021) and after (2023) the invasion. All of these tests suggest that our baseline results are robust and can plausibly be interpreted as causal effects of the invasion (see Table 2).

To assess potential heterogeneities in the effects, we also estimate Equation (1) for different subgroups in the Russian population, including with respect to gender, age, marital status, education, income, and geographical area.[15]

Since the GWP surveys are only collected annually, for GWP, we estimate the effects of the invasion by comparing responses from the 2021 (conducted approximately nine months

[14] All regressions are estimated with robust standard errors and 95 percent confidence intervals. Estimations include sampling weights. Missing values are excluded. Similar results are found when using the unweighted values, and when including missing values imputed as each one of the possible responses to the question (see Table 2).

[15] For the exact survey questions and definitions of these variables, see Table A3 in the Appendix.

before the invasion, between May 14–July 14) and 2022 (collected about seven months after the invasion, between August 13–November 2) survey waves, using Equation (1).

2.2.2 Mobilization

On September 21, 2022, Vladimir Putin declared a partial military mobilization of recruits for the war. One month later, on October 28, the mobilization was announced completed. During the mobilization, all men of conscription age (18–27 years old) faced the risk of being sent to the frontlines in Ukraine. While young men were hence the group most likely to be personally affected by the mobilization, it is still plausible that other groups, such as parents and partners, were also directly or indirectly affected by this war policy.

A difference compared to the invasion, which is still ongoing, is that for the mobilization we observe both the beginning and ending of the event, meaning we can analyze both its announcement and completion effects.

To estimate the dynamic impacts of the mobilization over time, we use data from the monthly Levada polls conducted between May 2022 and February 2023 and estimate an event-study type of regression that compares responses from each month to those from the month before the mobilization (that is, August 2022), as follows:

$$y_i = \alpha + \sum_{\substack{m=-4 \\ m\neq -1}}^{5} \beta_m D_{m,i} + \epsilon_i, \tag{2}$$

where y_i is the survey response of individual i for the relevant sentiment; $D_{m,i}$ is a dummy variable which takes value 1 if individual i is interviewed in month m (where $m = -4$ for May 2022, ..., -1 for August 2022, 0 for September 2022, 1 for October 2022, ..., and $m = 5$ for February 2023) and value 0 if the individual is not interviewed in that month (with August 2022 as the omitted month); β_m is the coefficients of interest; α the intercept; and ϵ_i an error term. The coefficient for September 2022 (β_0) thus captures the announcement effect of the mobilization by comparing responses just after the start of the mobilization (collected

between September 24–30) to those just before (collected between August 27–September 2). The coefficient for October 2022 (β_1) captures the total effect of both the announcement and completion of the mobilization by comparing responses at the end of the mobilization (October 23–29) to those before the announcement (August 27–September 2). Appendix Figure A2 (Panel B) shows that the Levada sample compositions in the month before versus after the mobilization announcement are strongly balanced.

We also assess heterogeneous responses to the mobilization announcement for four different subgroups: young men, which was the subgroup targeted by the mobilization (that is, men aged 18–27), young women, which are women in the same age group as the targeted men, as well as old men and women, aged 28 and above.

In GWP, we take advantage of the coincidence that the mobilization announcement happened in the middle of the 2022 polling period in Russia, which took place between August and November, providing a natural experiment to estimate the effects of the mobilization on sentiments in the Russian population.[16] We estimate the effects using Equation (1) but with respect to the date of the mobilization announcement instead of the invasion. Testing for potential sample differences before and after the mobilization, we do not find any statistically significant differences in observable characteristics of the respondents, including if they responded to the approval of Putin question or not (see Panel C in Appendix Figure A2).

2.2.3 Wagner rebellion

On June 23–24, 2023, there was a rebellion by the Wagner Group, a Russian private military company (PMC) led by Yevgeny Prigozhin. Although the rebellion lasted only one day, there were reports of people supporting the Wagner troops as they captured the Russian city of Rostov-on-Don and advanced toward Moscow (Kirby, 2023).

By chance, the rebellion coincided with the 2023 GWP survey wave in Russia, which was

[16] 942 individuals were interviewed before the announcement (between August 13–September 20) and 1,064 were interviewed after (September 21–November 2).

collected between May and July, providing us with another natural experiment to estimate the causal effects on sentiments.[17] For approval of Putin, we estimate the weekly effects of the rebellion using the event-study type of regression specified in Equation (2), but comparing responses to those from the week before the rebellion.[18] For all sentiments, we also estimate the total rebellion effect using Equation (1) but with the dummy variable indicating if the individual was surveyed in the time period before (May 23–June 22) or after (June 23–July 29) the rebellion. As shown in Panel D in Appendix Figure A2, the samples before versus after the rebellion are demographically balanced (except for a slightly higher share of respondents with high education in the post-rebellion sample) including in terms of non-responses.

3 Results

3.1 Invasion spurred positive sentiments in Russian population

Figure 2 display time-series data on sentiments in the Russian population from the Levada (Column 1) and GWP (Column 2) surveys, before and after the invasion. Both surveys show that support for Putin (Panel A) increased following the invasion and remained on a higher level during the first year of the war. The immediate effect shows an increase of 13 percentage points between February and March in Levada, and an increase of 25 percentage points between 2021 and 2022 in GWP. These results suggest significant rally 'round the flag effects in Russia caused by the invasion of Ukraine.[19]

Regarding the other sentiments, both surveys reveal a similar persistent increase in opti-

[17] 893 individuals were interviewed before the rebellion (between May 23–June 22) and 1,124 were interviewed after (between June 23–July 29).

[18] We estimate the weekly effects from four weeks before, to four weeks after, the rebellion (that is, for the period between May 26–July 20), with the week before the rebellion (June 16–22) as the omitted week.

[19] Compared with other rally 'round the flag effects found in the literature, these are large effects (Seo and Horiuchi, 2024). At the same time, the invasion also spurred large rally 'round the flag effects in Ukraine, where the approval of President Volodymyr Zelenskyy increased by 41 percentage points between July 2021 and September 2022 according to the GWP data for Ukraine.

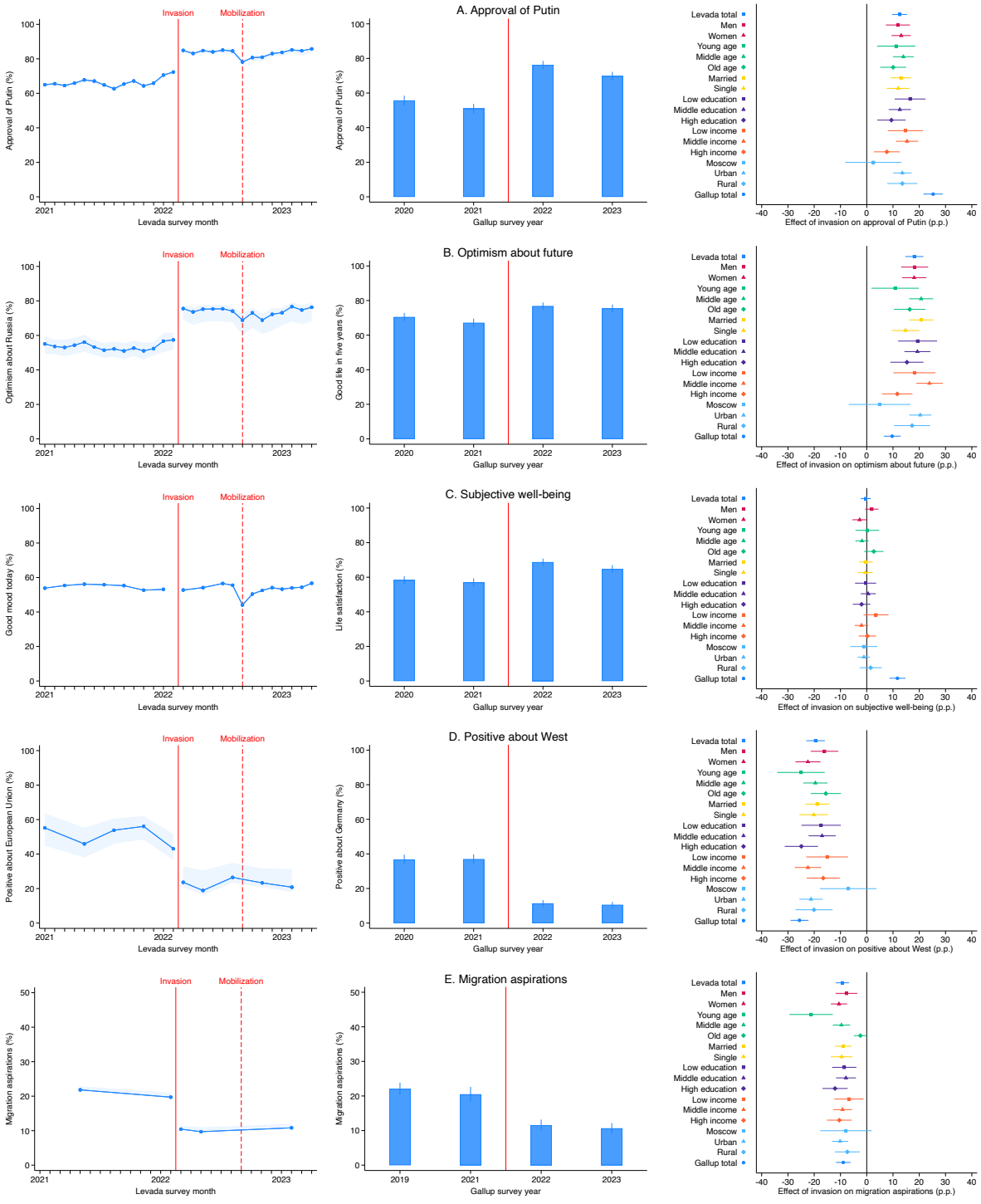

Figure 2: Effects of the invasion on sentiments in Russia

Note: The figure shows the effects of the Russian invasion of Ukraine on February 24, 2022, on the approval of Putin (Panel A), optimism about the future (Panel B), subjective well-being (Panel C), attitudes about the West (Panel D), and migration aspirations (Panel E). Column 1 shows monthly averages from the Levada Center's public opinion surveys in Russia between January 2021 and April 2023, where the shaded areas show the results when all "Hard to answer" responses are recorded as positive (upper bound) and negative (lower bound) responses. Solid red line indicates the full-scale invasion on February 24, and dashed line the mobilization on September 21, 2022. Column 2 shows yearly averages from the Gallup World Poll (GWP) in Russia between 2020 and 2023 (for migration aspirations, the first year is 2019 because the migration question was not asked in 2020), with 95 percent confidence intervals. Column 3 shows the invasion effects in percentage points (p.p.) for various segments of the Russian population, estimated as the difference between the March (Mar. 27–Apr. 2) and February (Feb. 14–20) 2022 Levada surveys for each subgroup (for current mood the comparison is between January and March because the mood question was not asked in February 2022), with 95 percent confidence intervals estimated by a linear regression with robust standard errors (Equation 1). "Gallup total" estimates the difference between the 2022 (Aug. 13–Nov. 2) and 2021 (May 14–Jul. 14) survey waves in Gallup. For exact variable definitions, sample sizes, and survey dates, see Table 1 and Appendix Tables A1–A3.
Source: Authors' calculations based on data from Levada and GWP.

mism about the future (Panel B), a decrease in the share with a positive attitude towards the West (Panel D), and a reduction in migration aspirations (Panel E). Interestingly, the latter result suggests that, after the invasion, there are fewer—not more—Russians who would like to move abroad. The response in subjective well-being (Panel C), however, is less consistent; while Levada does not reveal any change in current mood following the invasion, GWP suggests a surge in life satisfaction.

In Column 3, we provide estimates of the immediate effects of the invasion on sentiments, as measured by a comparison of responses to the Levada survey conducted just before (February 14–20) versus just after (March 27–April 2) the invasion (Equation 1). The effects, except for mood, are all statistically significant at the 5 percent level. Estimates based on the GWP data from 2021 versus 2022 (bottom estimates in Column 3) confirm the Levada estimates, but also reveal a statistically significant increase in life satisfaction following the invasion.

Heterogeneity analyses, based on the monthly data from Levada (Column 3), indicate that the immediate responses are remarkably similar across various demographics and population groups, consistent with broad popular support for the invasion of Ukraine. The small differences in point estimates are generally not statistically different from the average effect. The main exception is found for residents in Moscow, for who we find statistically insignificant effects.

Table 2: Regression results for sensitivity and robustness analysis

Approval of Putin *Panel A.*	**Baseline**	**Controls basic**	**Controls extended**	**6 months**	**1 year**
Effect of invasion	12.57***	12.58***	12.35***	14.70***	25.28***
	(1.47)	(1.46)	(1.54)	(0.87)	(1.88)
Number of obs.	3,199	3,199	2,871	9,606	3,686
Control variables	No	Few	Many	No	No
Pre-period	Feb. 2022	Feb. 2022	Feb. 2022	Dec. 2021–Feb. 2022	May–Jul. 2021
Post-period	Mar. 2022	Mar. 2022	Mar. 2022	Mar.–May 2022	Aug.–Nov. 2022
Survey question	President	President	President	President	Leadership
Sample weights	Yes	Yes	Yes	Yes	Yes
Missing values	Excluded	Excluded	Excluded	Excluded	Excluded
Data source	Levada	Levada	Levada	Levada	GWP

Panel B.	**Prime Minister**	**Government**	**Unweighted**	**Missing approve**	**Missing disapprove**
Effect of invasion	11.62***	15.33***	12.75***	12.45***	12.07***
	(1.70)	(1.73)	(1.44)	(1.46)	(1.50)
Number of obs.	3,075	3,158	3,199	3,250	3,250
Control variables	No	No	No	No	No
Pre-period	Feb. 2022	Feb. 2022	Feb. 2022	Feb. 2022	Feb. 2022
Post-period	Mar. 2022	Mar. 2022	Mar. 2022	Mar. 2022	Mar. 2022
Survey question	Prime Minister	Government	President	President	President
Sample weights	Yes	Yes	No	Yes	Yes
Missing values	Excluded	Excluded	Excluded	Approve	Disapprove
Data source	Levada	Levada	Levada	Levada	Levada

Panel C.	**Crimea invasion**	**Crimea annexation**	**Placebo pre**	**Placebo post**
Effect of invasion	8.67***	13.76***	-1.03	-0.51
	(1.62)	(1.79)	(1.76)	(1.30)
Number of obs.	4,716	3,163	3,163	3,168
Control variables	No	No	No	No
Pre-period	Feb. 2014	Feb. 2014	Feb. 2021	Feb. 2023
Post-period	Mar. 2014	Apr. 2014	Mar. 2021	Mar. 2023
Survey question	President	President	President	President
Sample weights	Yes	Yes	Yes	Yes
Missing values	Excluded	Excluded	Excluded	Excluded
Data source	Levada	Levada	Levada	Levada

Note: Robust standard errors in parentheses. Effect sizes in percentage points. Baseline estimation same as in the main analysis. Basic specification with control variables controls for gender and age. Extended control variables specification controls for gender, age, marital status, education, income percentile group, and geographical area. 6-months specification expands the window of analysis and compares the responses of individuals surveyed in December 2021–February 2022 (pre-invasion period) to those surveyed in March–May 2022 (post-invasion period). 1-year specification compares responses in the 2021 (May–July) versus 2022 (August–November) survey waves in GWP. Prime Minister and government specifications analyze the effects of the invasion on two different survey questions in Levada: "Do you generally approve or disapprove of the activities of the Prime Minister of Russia?" and "Do you generally approve or disapprove of the activities of the government of Russia as a whole?". Unweighted specification does the baseline estimation but without the sampling weights. Missing approve and disapprove specifications include missing values and recode them as either approval or disapproval of Putin, respectively. Crimea specifications analyze the effects of the 2014 invasion and annexation of Crimea on approval of Putin (Crimea invasion effect compares survey responses in February versus March 2014, and Crimea annexation effect compares February versus April 2014). Placebo tests analyze the change in approval of Putin in the same months as the invasion (February versus March) but for the years before (2021) and after (2023) the invasion instead. *** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.
Source: Authors' calculations based on data from Levada and Gallup.

Taken together, the analysis indicates that the invasion had large and persistent impacts on a variety of sentiments, including increased support for Putin, in broad segments of the Russian population. These rally effects are also confirmed in a large set of robustness and sensitivity analyses (see Table 2). First, adding individual-level control variables for various demographic characteristics to our baseline regression does not change our main results. Second, we find very similar (but slightly larger) estimates when expanding the event window. Third, we also obtain similar rally 'round the flag effects for the approval of Prime Minister Mikhail Mishustin and for the Russian government as a whole. Fourth, our results are not driven by the sample weights, not by the handling of missing values and non-responses. Fifth, we also find similar rally effects for the invasion and annexation of Crimea in 2014. Finally, our placebo tests, using the same months but in the year before and after the invasion instead, reassuringly yield no statistically significant estimates.

3.2 Mobilization created a temporary crack in war support

Figure 3 shows Russians' sentiments during the months surrounding the mobilization of young men that took place between September 21 and October 28, 2022. Column 1 shows the results from the event-study regression (Equation 2), where Panels A–D are based on

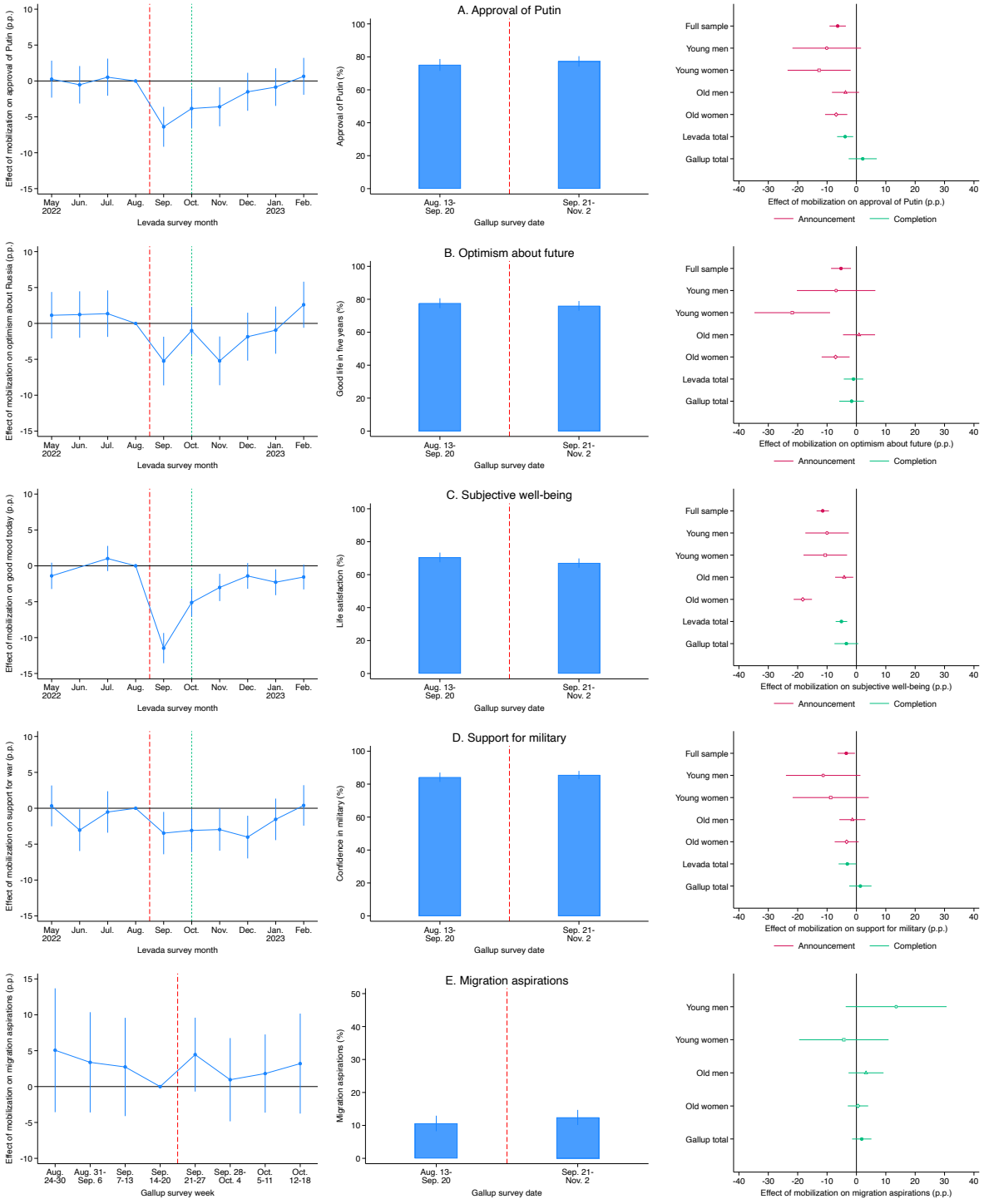

Figure 3: Effects of the mobilization on sentiments in Russia

Note: The figure shows the effects of the partial military mobilization of young men (aged 18–27) that took place between September 21 and October 28, 2022, on the approval of Putin (Panel A), optimism about the future (Panel B), subjective well-being (Panel C), support for the military (Panel D), and migration aspirations (Panel E). Column 1 shows the effects of the mobilization in percentage points (p.p.) per month in Levada, estimated as the differences relative to August (Aug. 27–Sep. 2) 2022 with 95 percent confidence intervals and robust standard errors (Equation 2). Dashed red line indicates the start of the mobilization on September 21, 2022, and green line the end of the mobilization on October 28, 2022. Column 2 shows averages before and after the mobilization from the Gallup survey wave in 2022, with 95 percent confidence intervals. Column 3 shows the mobilization announcement effects (red) for the full sample as well as for young (ages 18–27) and old (ages 28–99) men and women in the Levada surveys, estimated as the difference between September (Sep. 24–30) and August 2022, with 95 percent confidence intervals and robust standard errors. "Levada total" estimates the total mobilization effect (green) as the difference between the October (Oct. 23–29) and August 2022 Levada surveys. "Gallup total" estimates the total mobilization effect in the 2022 Gallup survey wave. For migration aspirations, all columns are based on Gallup because the migration question was not asked in Levada in these months, and Column 1 shows the effects of the mobilization per week. For exact variable definitions, sample sizes, and survey dates, see Table 1 and Appendix Tables A1–A3.
Source: Authors' calculations based on data from Levada and GWP.

Levada. The immediate impact of the mobilization was a clear negative effect on the support for Putin (Panel A), optimism about the future (Panel B), current mood (Panel C), and support for the military actions of the Russian Armed Forces in Ukraine (Panel D). The interpretation that these effects were caused by the mobilization are supported by the fact that we see no trends in sentiments in the months prior to the mobilization. The mobilization effects, however, were short-lived and had all disappeared within one to five months.

If we look at the heterogeneity of these immediate effects (Column 3), we can see that young men, who were more directly targeted by the mobilization, did not seem to respond more strongly than other groups. Young women, however, appeared to respond more negatively in terms of their optimism about the future, and old women more negatively in terms of their current mood. A breakdown of the respondents' mood shows that there was an increase in the feelings of fear, melancholy, tension and irritation during the month of the mobilization, while no such mood changes were shown at the time of the invasion (see Figure A4 in the Appendix). As soon as the mobilization was completed, however, the Russian mood went back to normal.

In GWP (Column 2), a comparison of responses among those interviewed before (August 13–September 20) versus after (September 21–November 2) the announcement shows

a negative and marginally statistically significant effect on subjective well-being (Panel C). However, the other sentiments were largely unaffected, which confirms the mobilization's short-lived impact.[20] For migration aspirations (Panel E), we note a positive, but not statistically significant, increase in young men's willingness to leave the country.[21]

In sum, this analysis suggests that while the mobilization appears to have been broadly disliked when announced, this effect only lasted until its completion. As such, it essentially just created a temporary crack in the generally positive view of Putin and the war. Moreover, the fact that we find opposing effects of the mobilization and invasion strengthens our assumption that Russians dare to answer these surveys truthfully.

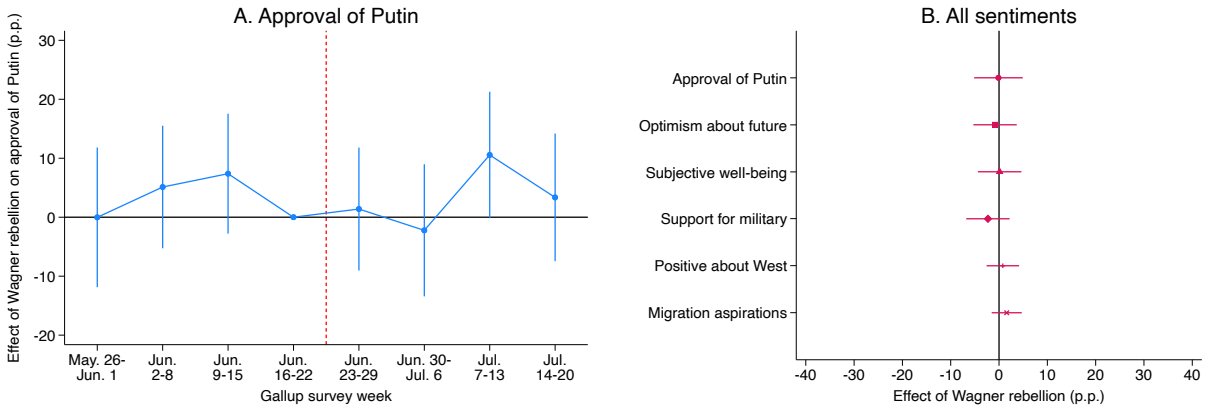

Figure 4: Effects of the Wagner Group rebellion on sentiments in Russia

Note: The figure shows the effects of the Wagner Group rebellion on June 23–24, 2023, on the approval of Putin (Panel A), optimism about the future, subjective well-being, support for the military, attitudes about the West, and migration aspirations (Panel B). Panel A shows the effects of the rebellion in percentage points (p.p.) per week in Gallup, estimated as the differences relative to the week before the rebellion (Jun. 16–22), with 95 percent confidence intervals and robust standard errors (Equation 2). Dashed line indicates the rebellion on June 23, 2023. Panel B shows the rebellion effects in the Gallup 2023 survey, estimated as the difference before (May 23–Jun. 22) and after (Jun. 23–Jul. 29) the rebellion, with 95 percent confidence intervals and robust standard errors (Equation 1). For exact variable definitions, sample sizes, and survey dates, see Table 1 and Appendix Table A1.
Source: Authors' calculations based on data from GWP.

[20]It should be noted, however, that nine days after the announcement of the mobilization, on September 30, 2022, Putin announced a Russian annexation of the four Ukrainian regions Donetsk, Kherson, Luhansk, and Zaporizhzhia (Berlinger et al., 2022). To the extent that this spurred rally effects among Russians, it may lead us to underestimate the negative sentiments caused by the mobilization.

[21]This is consistent with reports of large spikes in flight prices around the time of the mobilization, and particularly so for flights leaving Russia within a short time, suggesting demand rather than supply effects (Avila-Uribe and Nigmatulina, 2023).

3.3 Russians appeared indifferent to Wagner Group rebellion

The Wagner Group rebellion on June 23–24, 2023, generated significant media attention worldwide and, as shown in Figure 1, it also spurred interest among the Russian population. A priori, we can think of different ways in which the rebellion could affect the approval of Putin and Russian's sentiments. On the one hand, it may be viewed as a sign of weakness in the Kremlin, potentially leading to a decrease in Putin's support. On the other hand, if the mutiny is seen as an attack on Russia, it could lead to increased support, potentially strengthened by the fact that it was ended swiftly.

In Figure 4, we exploit the fact that the Wagner rebellion took place in the middle of the 2023 GWP survey period in Russia. Panel A shows the event-study regression results, finding no statistically significant effects, neither positive nor negative, on the approval of Putin. Moreover, a comparison of responses in the weeks before (May 23–June 22) versus after (June 23–July 29) the rebellion shows no statistically significant impact on any other sentiments (Panel B). In other words, Russians appeared indifferent to the rebellion.

3.4 Strategic recruitment, war casualties, and economic compensations

Interestingly, the support for Putin and the war appears to have remained high even after the invasion, despite an increasing number of Russian casualties. In Figure 5, we do a regional correlation analysis looking at a potential explanation for this.

According to the rally 'round the flag theory, there should be more room for rally effects when political support is low (Murray, 2017). Consistent with this, we find that in federal districts where the support for Putin was lower before the invasion, the rally effects of the invasion were stronger (see Panel A).

Since stronger rally effects can also be interpreted as stronger support for the war, recruiting soldiers from regions with stronger rally effects might be less costly in terms of political

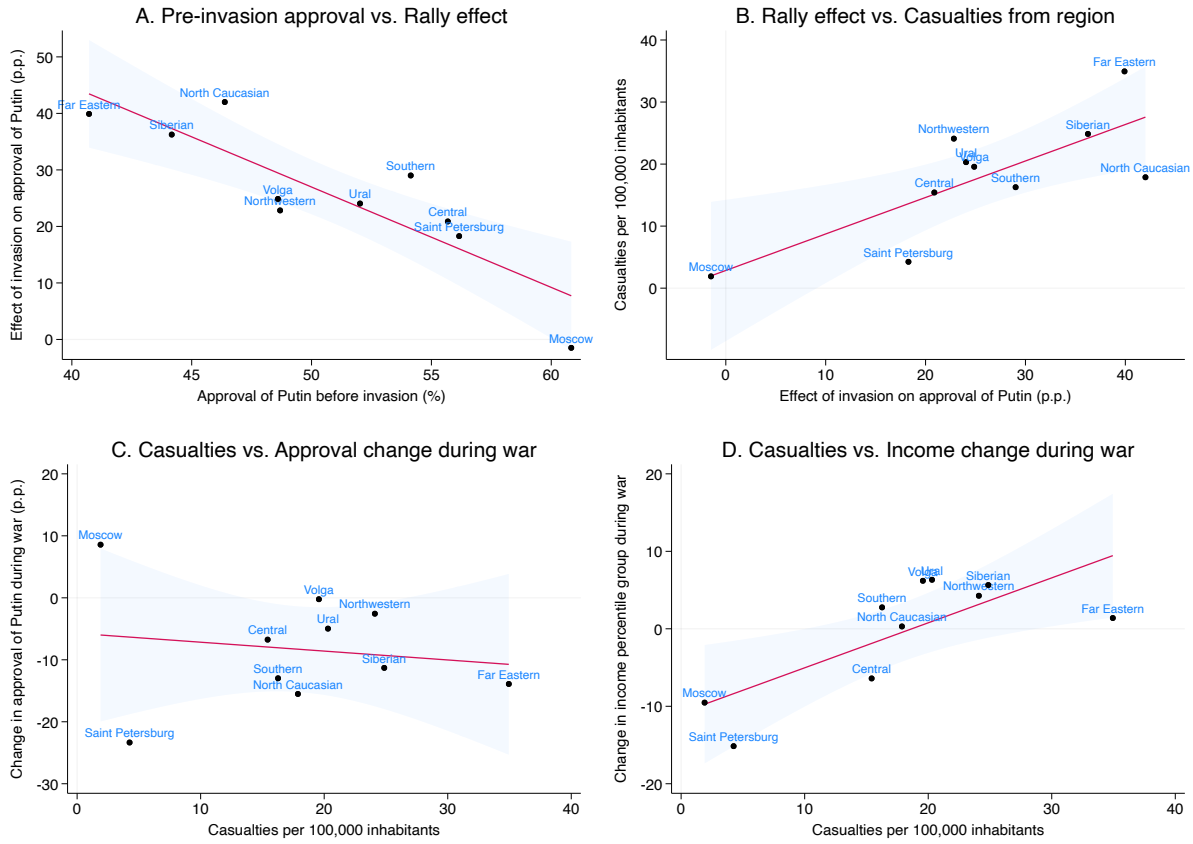

Figure 5: Regional casualties and support for Putin

Note: Panel A shows that the invasion rally effect on approval of Putin was higher in regions with lower pre-invasion support for Putin (Pearson's correlation coefficient, $r = -0.87$, and $p < 0.01$). Panel B shows that the number of casualties per capita has been higher in regions with higher invasion rally effects ($r = 0.77$, $p < 0.01$). Panel C shows no statistically significant relationship between regional-level casualties per capita and change in approval of Putin during the war ($r = -0.15$, $p > 0.1$). Panel D shows that the relative income increase during the war has been higher in regions with higher casualties per capita ($r = 0.75$, $p < 0.05$). Red lines show linear predictions with 95 percent confidence intervals. Central region excludes Moscow, and Northwestern region excludes Saint Petersburg. Approval of Putin before invasion measured as average approval of Putin per federal district, Moscow and Saint Petersburg in the 2021 (May 14–Jul. 14) Gallup survey wave. Effect of invasion on approval of Putin estimated as the difference in percentage points (p.p.) between the 2022 (Aug. 13–Nov. 2) and 2021 survey waves in Gallup for each region. Casualties per 100,000 inhabitants measured as the number of confirmed military deaths per region between February 24, 2022, and April 30, 2023, as reported by Mediazona and divided by population figures from the Federal State Statistics Service (Rosstat) in 2020. Change in approval of Putin during war measured as the percentage point difference between the 2023 and 2022 survey waves in Gallup for each region. Change in income percentile group during war measured as the difference in mean per capita income percentile group between the 2023 (May 23–Jul. 29) and 2022 survey waves in Gallup for each region. For exact variable definitions, sample sizes, and survey dates, see Appendix Tables A1 and A3.
Source: Authors' calculations based on data from GWP and Mediazona (2024).

support. Analyzing Mediazona's data on Russian casualties in Ukraine (Mediazona, 2024), as a proxy for recruitment intensity,[22] we find that the number of confirmed military deaths per capita indeed is higher in regions with stronger rally effects from the invasion (Panel B), suggesting that recruitment has been more intense in regions with stronger support for the war.

However, as casualties accumulate, the political support for war in foreign countries is expected to decrease (Duvanova et al., 2023; Kuijpers, 2019). In contrast to this prediction, we do not find any evidence that the support for Putin fades more quickly in regions with more casualties (Panel C). While this can partly be explained by a stronger support for the war in these regions, another contributing factor could be that that soldiers' families gain financially from the war, as the government pays out economic compensations to families in which a member has been injured or killed (Kuijpers, 2019; Solanko, 2024). In line with this explanation, we find that incomes have grown more rapidly during the war in regions with more casualties (Panel D).

Taken together, these results are consistent with a strategic war plan that maximizes the public support for Putin.

3.5 Russians abroad have turned against Putin

Our analyses above show that the Russian population in general seem to be supportive of Putin and the war in Ukraine. But how is the war perceived in the rest of the world, and in particular by Russians living outside of Russia?

To analyze this, we use a question in GWP about the approval of Russia's leadership, which has been asked annually in more than 100 countries all around the world.[23] Regarding the invasion, there is a sharp drop in approval rates between 2021 and 2022 in these countries (see Figure 6, Panel A), both in anti-Putin and pro-Putin ones (Panel B),[24] suggesting a

[22] For variable definitions, see Table A3 in the Appendix.

[23] For the exact survey question see Appendix Table A3, and for sample sizes see Appendix Table A1.

[24] Anti-Putin countries are defined as countries in which less than 50 percent of the population approved

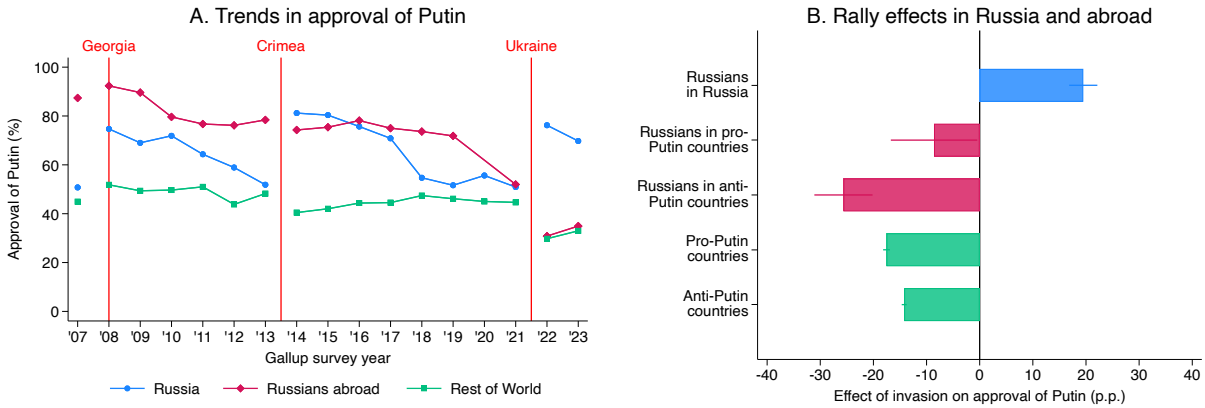

Figure 6: Long-run trends and support for Putin among Russians abroad

Note: The figure shows the approval of Putin in Russia (blue), among Russians abroad (red), and in the rest of the world (green). Russians abroad include people in other countries who were born in Russia and/or have a Russian nationality. Panel A shows the trends in Gallup between 2007 and 2023, where solid lines indicate the war in Georgia in August 2008, the annexation of Crimea in February–March 2014, and the invasion of Ukraine in February 2022 (for Russians abroad, 2021 includes both 2020 and 2021 because of a small number of respondents for these questions in 2020 due to the COVID-19 pandemic). Panel B shows the effects of the invasion in percentage points (p.p.), estimated as the difference between the 2022–2023 and 2020–2021 Gallup survey waves, with 95 percent confidence intervals and robust standard errors. Pro-Putin countries are defined as countries in which 50 percent or more approved of Putin in 2020–2021, and anti-Putin countries as countries where less than 50 percent of the population approved of Putin in 2020–2021. For exact variable definitions, sample sizes, and survey dates, see Appendix Tables A1 and A3.
Source: Authors' calculations based on data from GWP.

global dislike of the war. In fact, there are only six countries outside of Russia (Afghanistan, Algeria, Bangladesh, India, Mali, and Tunisia) in which the invasion had a positive effect on the approval of Putin (see Figure A5 in the Appendix).

It can also be noted that, while the annexation of Crimea in 2014 and the invasion of Georgia in 2008 both increased the support for Putin in Russia with rally effects of similar magnitudes, these events were not associated with as large drops in the foreign approval rate of Putin as the 2022 full-scale invasion.[25]

Analyzing the approval of Putin among Russians abroad (that is, people born in Russia or with a Russian nationality),[26] we find a negative effect of the invasion, suggesting that,

of Putin in 2020–2021, and pro-Putin countries as countries where 50 percent or more approved of Putin in 2020–2021.

[25]For estimates of these effects, comparing the GWP survey waves before and after the events, see Appendix Table A4.

[26]Estimates suggest that the Russian diaspora is scattered in some 100 countries around the world

unlike their countrymen in Russia, Russians abroad generally oppose the war. Panel B in Figure 6 shows that this effect is particularly pronounced among Russians in anti-Putin countries, where it is even stronger than for the general population. We can also note that, in most previous years, the support for Putin has been higher among Russians abroad than those living in Russia (see Panel A). With the 2022 invasion of Ukraine, however, Putin's support among Russians abroad has diverged from the population in Russia and instead converged with the worldview outside of Russia. In other words, the domestic rally effects have this time come at the cost of the previously patriotic diaspora's support, who now for the first time ever mostly disapprove of Putin.

4 Concluding remarks

Our analysis, based on two independent surveys, shows strong and persistent rally 'round the flag effects, in broad segments of the Russian population, on a wide range of sentiments. These results indicate strong domestic support for the invasion of Ukraine in Russia, suggesting that the war is unlikely to be ended due to public uprising within a foreseeable future.

It should be noted, however, that our analysis does not explain why we observe such strong rally effects following the invasion. During the war, Western sanctions against Russia have likely contributed to increased polarization between Russia and the West (Bunce and Wolchik, 2011; Grauvogel and von Soest, 2014), including the observed rise in anti-Western sentiments within Russia (Gold et al., 2024). Another potentially contributing mechanism is the Kremlin's influence on the narrative in Russian media, along with direct censorship and propaganda (Alyukov, 2022; Baker and Oneal, 2001; Guriev and Treisman, 2019), which may lead to stronger rally 'round the flag effects (Hale, 2022; Newman and Forcehimes, 2010). A burgeoning body of literature studies the impacts of media in Russia on various political

(Aleshkovski et al., 2023). The GWP sample includes Russians in 74 countries outside of Russia between 2007–2023 and in 51 countries between 2020–2023.

outcomes (for example, Bursztyn et al., 2019; Enikolopov et al., 2018; Enikolopov et al., 2011; Simonov and Rao, 2022). In particular, Melnikov (2019) finds that censorship and propaganda, measured through Internet searches of various media sources across Russian regions, increase support for Putin, especially among consumers of government-controlled media outlets.

While it would be interesting to investigate to what extent our results could be explained by propaganda, we are unfortunately unable to do so directly because our individual-level data from Levada and Gallup do not contain information about media consumption. However, aggregate data from Levada (see Figure A6 in the Appendix) indicate that pro-war sentiments are stronger among individuals who express greater trust in potentially state-controlled news sources, such as television and Internet media, rather than alternative sources like social media, Telegram channels, and YouTube (Levada-Center, 2024b). Similar results are also found with respect to nationalist sentiments and optimism about Russia's future (El Baz et al., 2024).

In contrast to the positive sentiments connected to the invasion, we find that Russians disliked the partial mobilization, which may be one reason why Putin has postponed a larger general mobilization. Moreover, as casualties accumulate, the compensation scheme for war casualties may eventually become too costly for the Russian state budget, which may then weaken public support for the war, especially in the most severely affected regions. Such an outcome, however, is closely related to the extent, enforcement, and efficacy of the economic sanctions against the country (Becker et al., 2024).

Finally, our analysis indicates that the Russian diaspora, which previously has been supportive of the Russian leadership, has now turned against Putin, in accordance with the rest of the world. Although Putin appears to care little about the outside world's view of Russia, it is possible that the sentiments among Russians abroad may eventually spread to their relatives and friends in Russia.

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Appendix A.

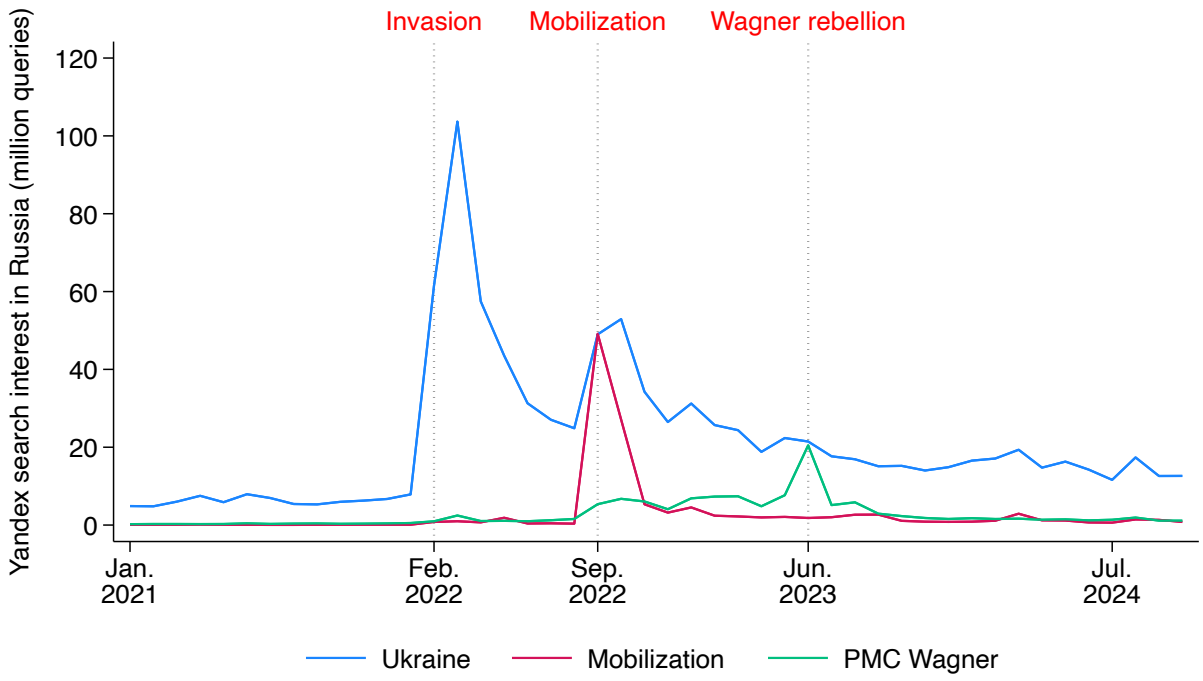


Figure A1: Yandex search trends in Russia

Note: The figure shows the Yandex search trends in Russia for the search queries "Ukraine" (Украина), "mobilization" (мобилизация) and "PMC" (ЧВК) or "Wagner" (Вагнера) by month between January 2021 and October 2024. Number of total search queries (in millions) on all devices (desktops, smartphones, and tablets).
Source: Data from Yandex Wordstat (2024).

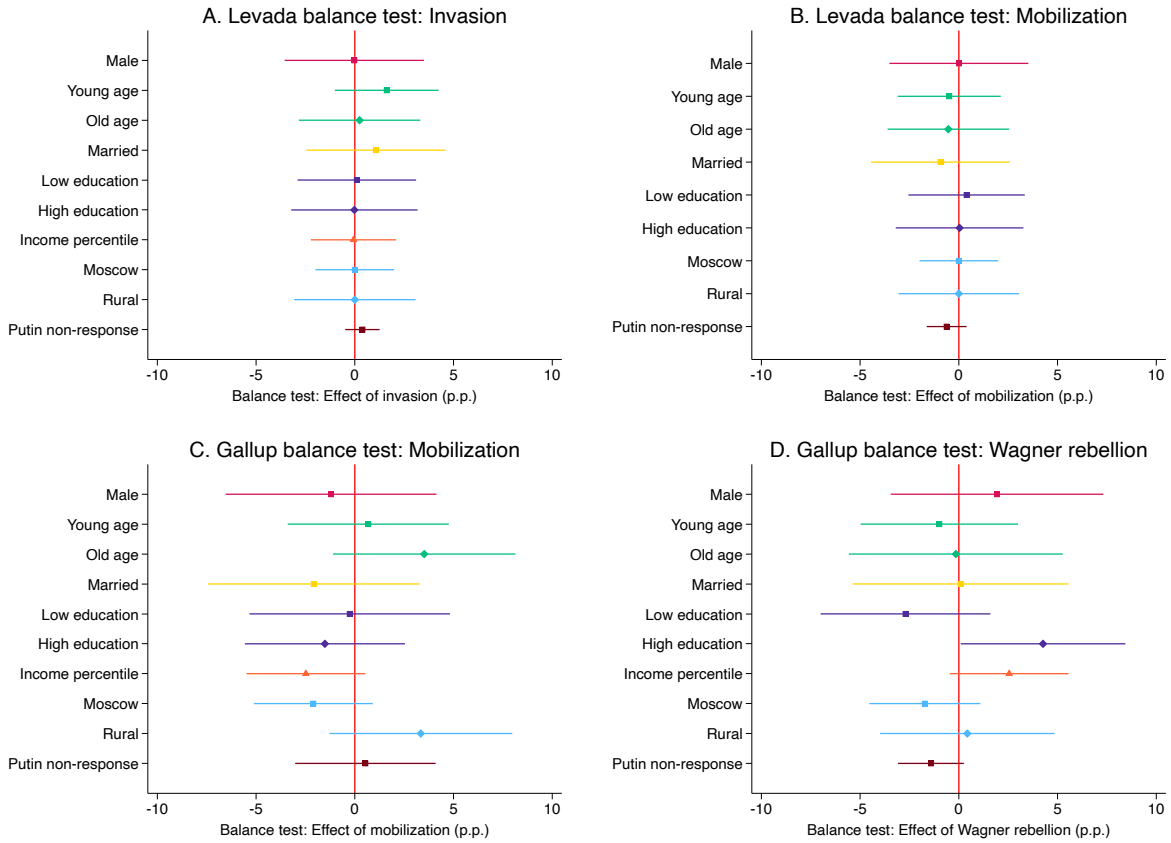


Figure A2: Balance tests

Note: Coefficient plots showing balance tests in the Levada and Gallup data estimated by a linear regression with robust standard errors and 95 percent confidence intervals (Equation 1). Panel A estimated as the difference between the March and February 2022 Levada surveys. Panel B estimated as the difference between the September and August 2022 Levada surveys. Panel C estimated as the difference between the post- (Sep. 21–Nov. 2) and pre-mobilization (Aug. 13–Sep. 20) samples in the 2022 Gallup survey wave. Panel D estimated as the difference between the post- (Jun. 23–Jul. 29) and pre-rebellion (May 23–Jun. 22) samples in the 2023 Gallup survey wave. Effect sizes in percentage points (p.p.). Estimations include sampling weights. Missing values excluded. Each coefficient corresponds to a separate regression. Cut points for income percentiles defined in the period before each corresponding event. Income percentile excluded from Panel B because income variable not available in the September 2022 Levada survey. For "Putin non-response", the outcome is a dummy variable which takes value 1 if the individual has answered "Hard to answer" (in Levada) or "Don't know" or "Refused" (in Gallup) to the approval of Putin question, and 0 otherwise. For exact variable definitions, sample sizes, and survey dates, see Table 1 and Appendix Tables A1–A3.
Source: Authors' calculations based on data from Levada and GWP.

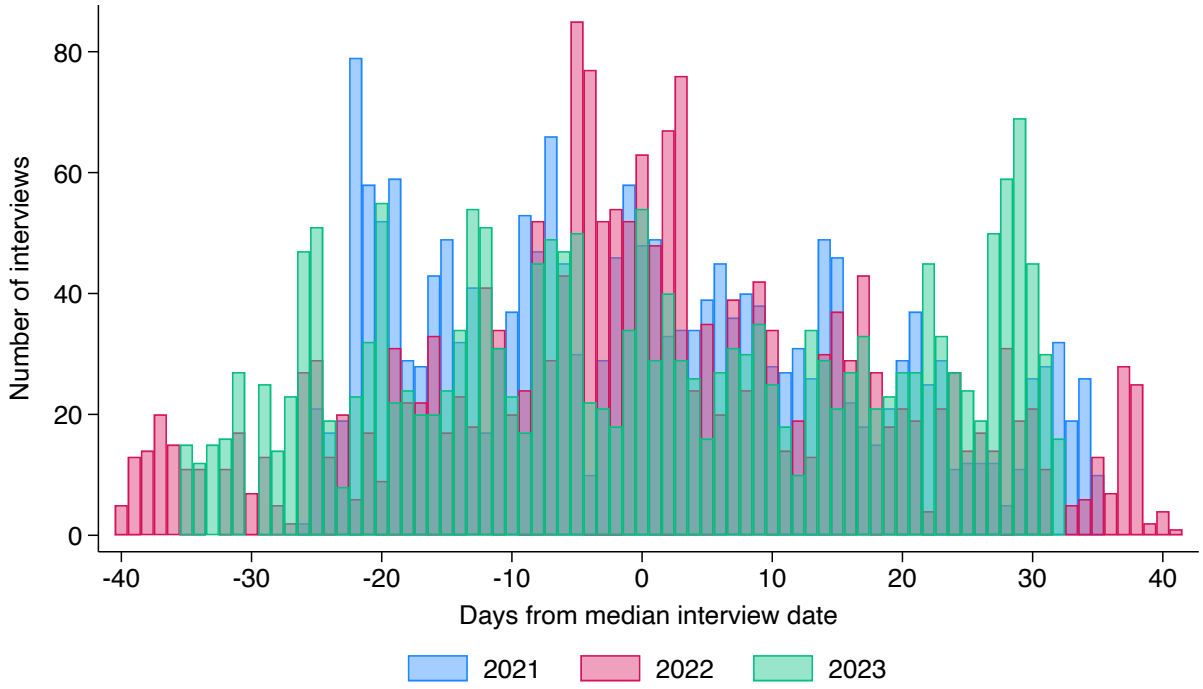


Figure A3: Gallup interview days

Note: This figure shows the survey period lengths and number of interviews per day in the GWP waves 2021–2023. Median interview date indicated by 0. Total number of interview days was 62 in 2021, 82 in 2022, and 68 in 2023.
Source: Data from GWP.

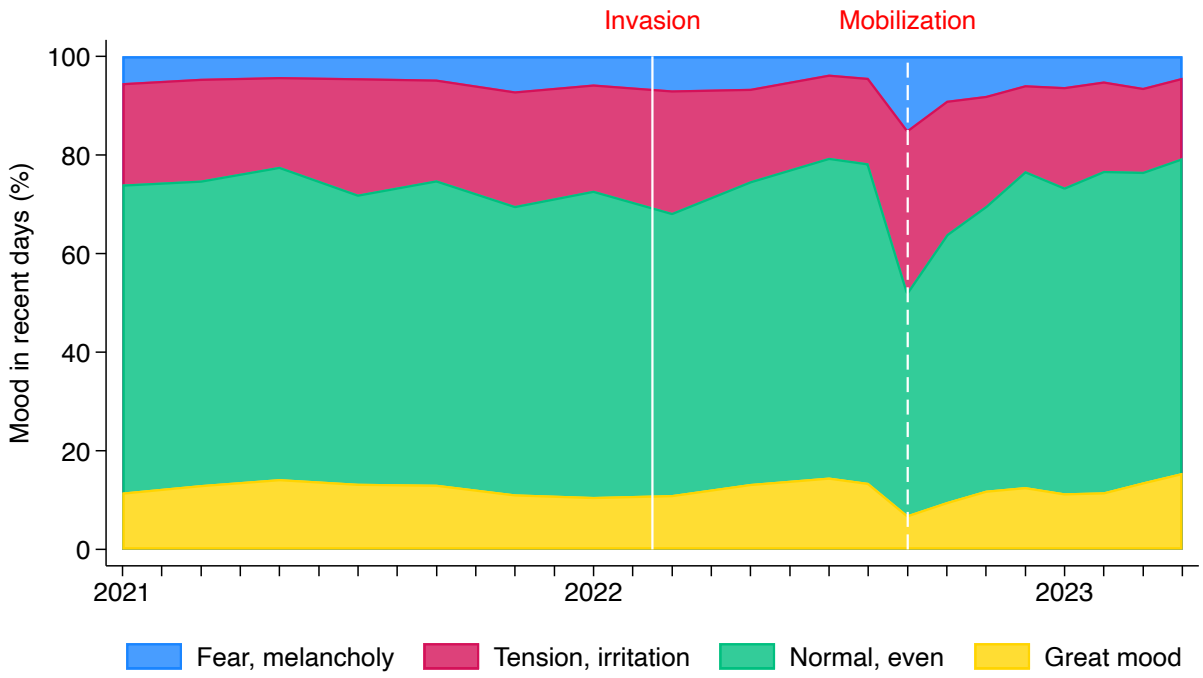
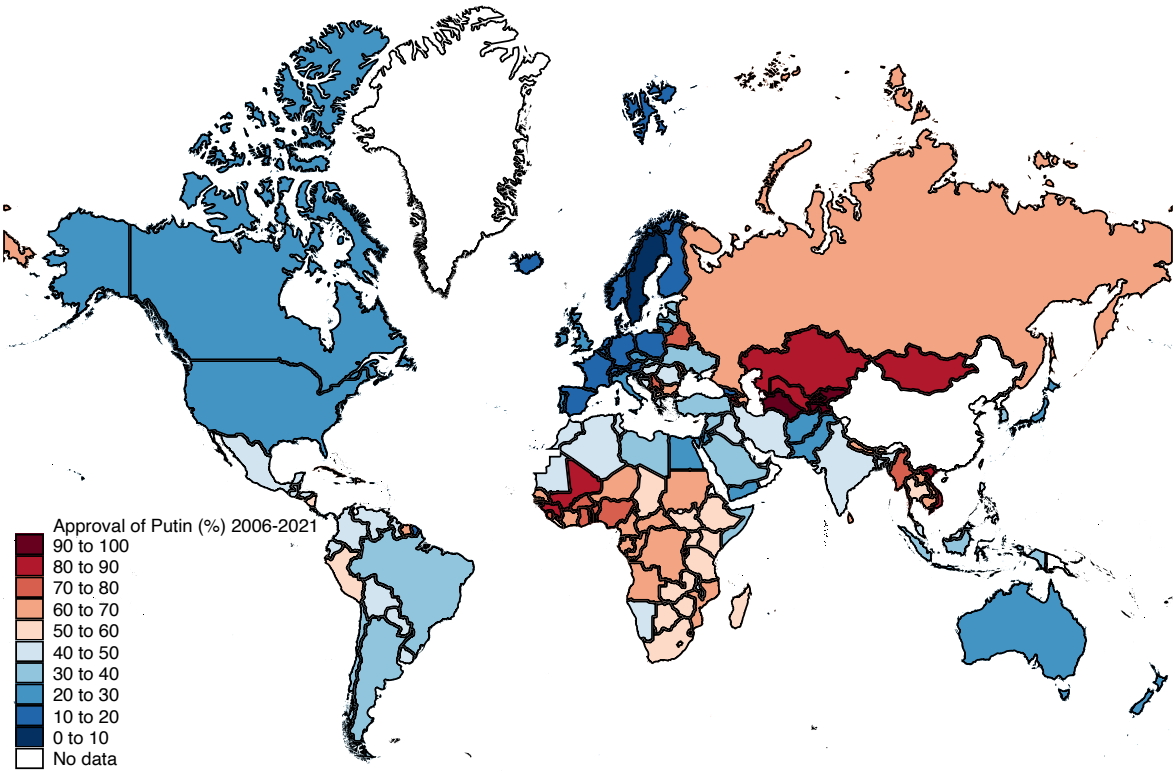


Figure A4: Mood in the Russian population, January 2021–April 2023

Note: Graph showing the mood composition in Russia as measured in the monthly Levada data between January 2021 and April 2023. Solid red line indicates the full-scale invasion on February 24, and dashed line the mobilization on September 21, 2022. Shares weighted using the Levada sampling weights. Missing values and "Hard to answer" responses excluded.
Source: Data from Levada.

A. Approval of Putin before invasion



B. Effect of invasion on approval of Putin

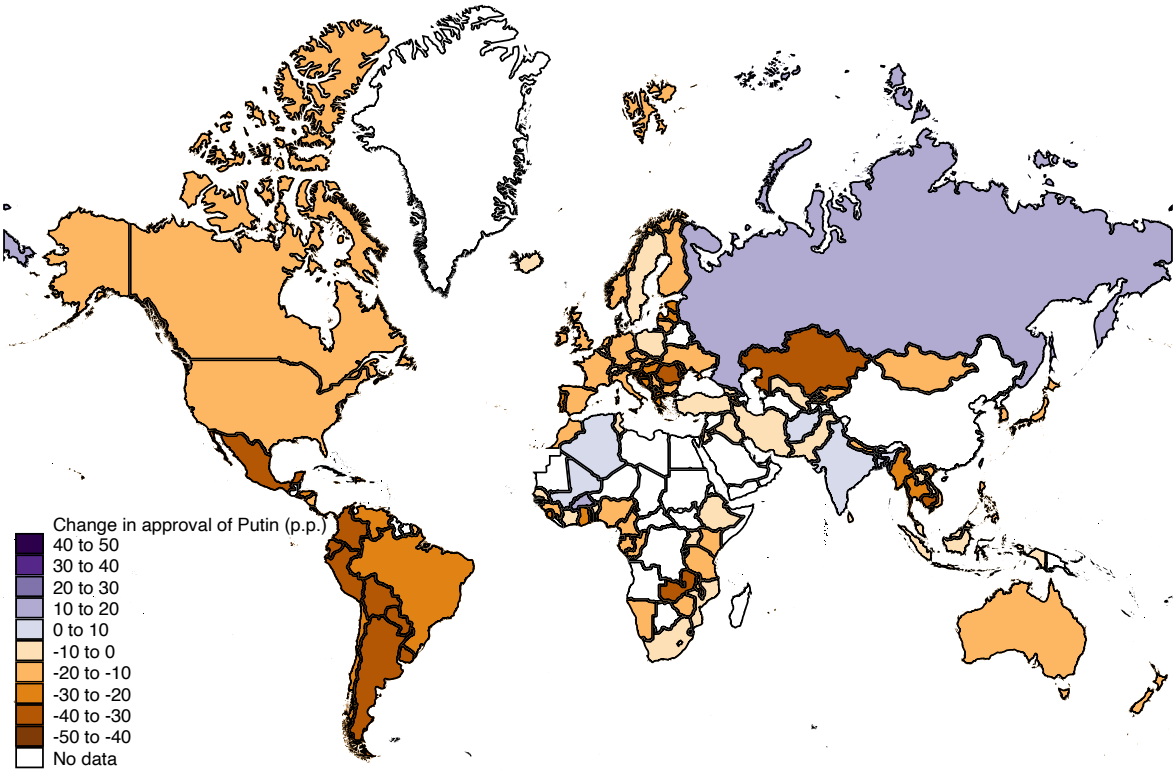


Figure A5: Approval of Putin and invasion effects around the World

Note: Maps showing the average approval of Putin before the invasion 2006–2021 (Panel A) and the effects of the invasion in percentage points (p.p.) on approval of Putin (Panel B) using the GWP data in different countries around the world. Effects of the invasion measured as the difference between the average approval of Putin in 2022–2023 (after the invasion) versus 2020–2021 (before the invasion). Estimations include sampling weights. "Don't know" and "Refused" responses excluded.
Source: Authors' calculations based on data from GWP.

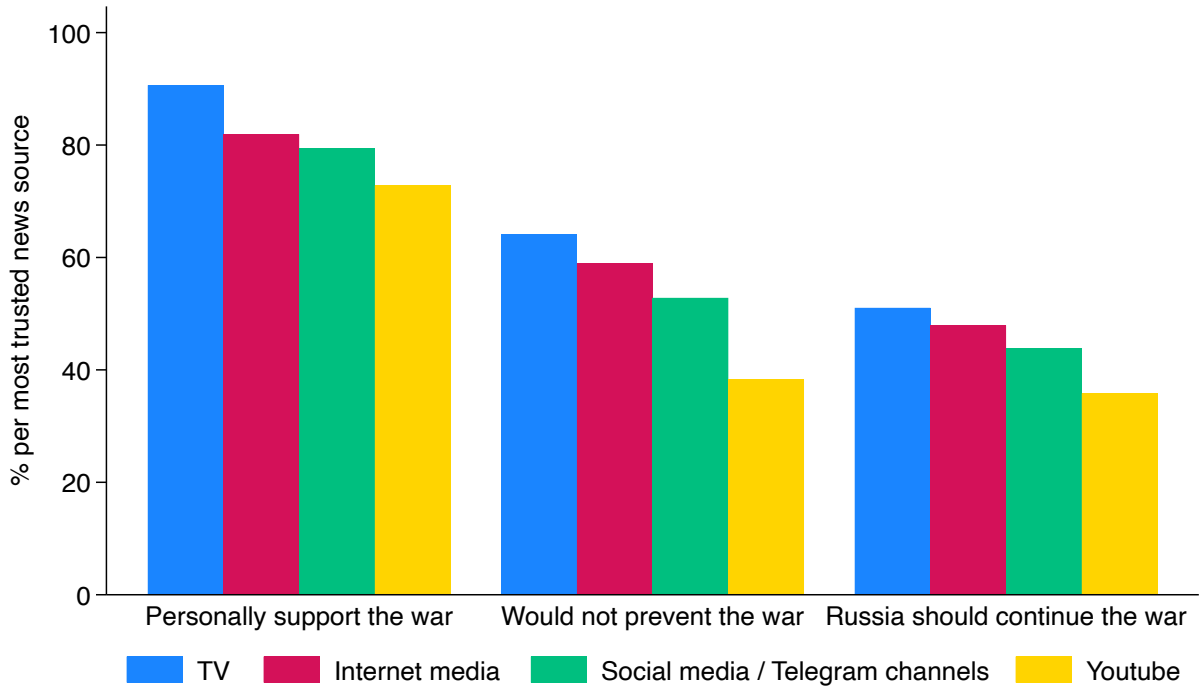


Figure A6: Support for the war in May 2024 by most trusted news source

Note: Graph showing the share of respondents in the May 2024 Levada survey who supported the war, separated per their most trusted news source. *Personally support the war* shows the share of respondents who answered "Definitely yes" or "Yes" to the question "Do you personally support the actions of the Russian Military Forces in Ukraine?". *Would not prevent the war* shows the share answering "Definitely support it" or "Support it" to the question "If you had a chance to go back in time and prevent or support the start of the Special Military Operation, you would…". *Russia should continue the war* shows the share answering "Definitely continue the military actions" or "Continue the military actions" to the question "Do you think Russia should continue the military actions or move to peace talks?". Respondents who answered "Can't say" are excluded. The "Social media / Telegram channels" category shows the average value of the social media and Telegram channels categories. The survey was conducted between May 23–29, 2024, and the sample consisted of 1,601 individuals.
Source: Levada-Center (2024b).

Table A1: GWP survey dates and sample sizes 2007–2023

Year	Survey dates Russia	Russia	Russians Abroad	Rest of World
2007	May 1–31	2,949	1,582	100,300
2008	May 1–30	2,019	1,222	129,261
2009	Apr. 2–Jun. 14	2,042	1,597	134,410
2010	Apr. 29–Nov. 8	4,000	1,150	145,706
2011	May 8–Jun. 30	2,000	1,251	192,213
2012	Feb. 9–Oct. 8	3,000	1,032	226,051
2013	Jul. 3–Aug. 8	2,000	1,134	135,539
2014	Apr. 22–Jun. 9	2,000	1,620	186,728
2015	Jul. 2–Sep. 17	2,000	1,556	144,676
2016	Apr. 15–Jun. 22	2,000	1,489	147,235
2017	Jun. 9–Aug. 20	2,000	1,388	151,778
2018	Jun. 24–Oct. 4	2,000	1,349	149,525
2019	Nov. 6–Feb. 10	3,003	1,273	171,977
2020	Aug. 19–Oct. 2	2,022	381	127,071
2021	May 14–Jul. 14	2,001	1,059	123,842
2022	Aug. 13–Nov. 2	2,006	902	140,778
2023	May 23–Jul. 29	2,017	850	103,921
Total		39,059	20,835	2,511,011

Note: Russia refers to individuals surveyed in Russia. Russians abroad are defined as individuals who live in another country than Russia, but who were born in Russia and/or have Russian nationality. Rest of the world is the non-Russian GWP sample.
Source: Gallup (2024a).

Table A2: Levada survey dates and sample sized 2021–2023

Month	**Year**	**Survey dates**	**Sample size**
January	2021	Jan. 25–31	1,616
February	2021	Feb. 15–21	1,601
March	2021	Mar. 22–28	1,623
April	2021	Apr. 19–25	1,614
May	2021	May 19–25	1,620
June	2021	Jun. 14–27	3,253
July	2021	Jul. 19–25	1,619
August	2021	Aug. 16–22	1,621
September	2021	Sep. 20–26	1,634
October	2021	Oct. 18–24	1,636
November	2021	Nov. 22–28	1,603
December	2021	Dec. 13–19	1,640
January	2022	Jan. 24–30	1,626
February	2022	Feb. 14–20	1,618
March	2022	Mar. 27–Apr. 2	1,632
April	2022	Apr. 27–May 3	1,616
May	2022	May 2–8	1,634
June	2022	Jun. 26–Jul. 2	1,628
July	2022	Jul. 23–29	1,617
August	2022	Aug. 27–Sep. 2	1,612
September	2022	Sep. 24–30	1,631
October	2022	Oct. 23–29	1,604
November	2022	Nov. 23–29	1,601
December	2022	Dec. 16–22	1,611
January	2023	Jan. 25–31	1,616
February	2023	Feb. 25–Mar. 3	1,626
March	2023	Mar. 25–31	1,633
April	2023	Apr. 21–27	1,623
Total			47,008

Note: The monthly data collection usually takes maximum one week. Survey dates approximated as ±3 days around the mean survey date.
Source: Levada-Center (2024a).

Table A3: Additional variable definitions

Survey	**Variable question**
Gender	Gender
Levada / GWP	(Men *Male*, Women *Female*)
Age	Age
Levada	(Young *18–27*, Middle *28–59*, Old *60–99*)
Age	Please tell me your age
GWP	(Young *18–27*, Old *28–99+*)
Marital status	Marital status
Levada	(Married *Married / Not registered, but live together*, Single *Not registered, live separately / Single (not married), never been married / Live separately, but not divorced / Divorced / Widower (widow)*)
Education	Education
Levada	(Low *Other*, Middle *Professional*, High *Higher education*)
Income	How would you describe the material status of your family?
Levada	(Low *We barely make ends meet, we don't even have enough money for food / We have enough money for groceries, but buying clothes causes financial difficulties*, Middle *We have enough money for groceries and clothes, but buying durable goods causes financial difficulties*, High *We can afford quite expensive household items / We can easily buy durable goods*)
Income percentile	Income percentile group
GWP	Per capita income quintiles * 20 (20 *Poorest 20%*, 40 *Second 20%*, 60 *Middle 20%*, 80 *Fourth 20%*, 100 *Richest 20%*)
Geographical area	Size of the populated area
Levada	(Moscow *Moscow*, Urban *Cities up to 100 thousand / From 100 to 500 thousand / More than 500 thousand*, Rural *Village*)
Region	Region 3 Russia
GWP	(Moscow *Moscow city capital*, Saint Petersburg *Saint-Petersburg city*, Central *Center excl Moscow city*, Northwestern *Northwest excl Saint-Petersburg city*, Southern *South*, Volga *Privolzhskiv*, Ural *Urals*, Siberian *Siberia*, Far Eastern *Far East*, North Caucasian *North Caucasus*)
Casualties	Casualties per 100,000 inhabitants
Mediazona	Casualties from region (Feb. 24, 2022–Apr. 30, 2023) / Population in region before invasion (2020) * 100,000
Russians abroad	What is your nationality? / In which country were you born?
GWP	(*Russian / Russia*)
Approval of Putin	Do you approve or disapprove of the job performance of the leadership of Russia? (Russians abroad and rest of world)
GWP	(0 *Disapprove*, 1 *Approve*)
Anti-Putin country	Mean approval of Putin in country
GWP	Anti-Putin *Mean approval of Putin before invasion (2020–2021) 0–50%*
Pro-Putin country	Mean approval of Putin in country
GWP	Pro-Putin *Mean approval of Putin before invasion (2020–2021) 50–100%*

Note: Response options in parentheses (our coding). For age, Levada also includes the options "15–17" and "Refused". For marital status and income, Levada also includes the option "Refusal to answer". For region and approval of Putin, GWP also includes the options "Don't know (DK)" and "Refused". "In which country were you born?" asked only of those who were not born in this country.
Source: Levada-Center (2024a), Gallup (2024a), and Mediazona (2024).

Table A4: Regression results for invasion, Crimea, and Georgia—in Russia and abroad

Approval of Putin	**Russians in Russia**	**Russians abroad**	**Rest of World**
Panel A.			
Effect of invasion	25.28***	-25.19***	-14.79***
of Ukraine	(1.88)	(3.10)	(0.27)
Number of obs.	3,686	1,488	198,807
Pre-period	2021	2021	2021
Post-period	2022	2022	2022
Panel B.			
Effect of annexation	29.31***	-4.12*	-7.91***
of Crimea	(1.92)	(2.13)	(0.29)
Number of obs.	3,273	2,167	172,056
Pre-period	2013	2013	2013
Post-period	2014	2014	2014
Panel C.			
Effect of war	18.26***	2.21	4.51***
in Georgia	(1.99)	(1.56)	(0.35)
Number of obs.	3,964	2,198	117,414
Pre-period	2007	2007	2007
Post-period	2009	2009	2009

Note: Robust standard errors in parentheses. Effect sizes in percentage points estimated by the linear regression specified in Equation (1). Effect of invasion of Ukraine estimated as the difference between the 2022 and 2021 survey waves in GWP. Effect of annexation of Crimea estimated as the difference between the 2014 and 2013 GWP waves. Effect of war in Georgia estimated as the difference between the 2009 and 2007 GWP waves. Russians abroad include people in other countries who were born in Russia and/or have a Russian nationality. Estimations include sampling weights. "DK" and "Refused" responses excluded. *** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.
Source: Authors' calculations based on data from GWP.