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War and the Willingness to Resist and Fight in Ukraine

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ABSTRACT

This study explores the effects of Russia's use of military force on the Ukrainian willingness to fight and resist. We find assumptions from the theoretical literature on the willingness to fight of limited relevance. Instead, our analysis suggests that Ukrainian willingness to fight and resist correlates with (1) a growth in Ukrainian civic nationalism; (2) an increase in trust in Ukrainian political institutions, particularly the Ukrainian armed forces; and (3) a spread of the impressions that Ukraine is not alone in its struggle. We find little difference based on region and gender, but some on education and income.

Introduction

This article investigates what consequences Russia's use of force has had on the stated willingness of Ukrainians to fight for their country and in other ways to resist Russian aggression. It is primarily a before-and-after February 24, 2022, study, but it also takes into account the changes after the 2014 annexation of Crimea and onset of war in Donbas. Unsurprisingly to all who have followed recent events in Ukraine, the findings suggest that Russia's attack had a strongly positive impact on the stated willingness both to resist and to fight. Different surveys suggest somewhere between a doubling and a tripling of such willingness from before the annexation of Crimea in 2014 to after the Russian invasion in February 2022 (see [Table 1](#) in this article). Less explored, however, are how changes in Ukrainian popular belief may help explain why foreign armed aggression led to an increased stated willingness to resist and to fight.

“Willingness to fight and resist” should in this study be understood as *stated* willingness to fight and resist. To what extent these expressed sentiments translated into actual behavior is not yet possible to study. The reasons for this are partially the absence of data connecting intent and behavior, and partly the fact that Ukraine declared compulsory mobilization from day one of the conflict. Thus, after this date, at least as concerns regular Ukrainian armed formations, it is not possible to distinguish whether an individual joined the fight because he or she wanted to or had to.

The study indicates that a rise in civic nationalism and a very strong increase of trust in the political institutions have been the most significant factors. The latter includes both the political leadership, Ukrainian state institutions in general, and the Ukrainian armed forces in particular. It is noteworthy that there does not seem to have been any significant increase in ethnic nationalism (see also Pop-Eleches and Robertson 2018). Finally, there is some evidence indicating that an increasing popular perception of Ukraine not being


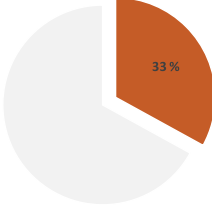
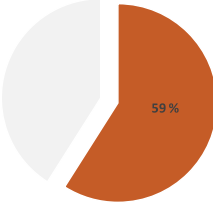
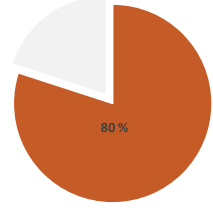

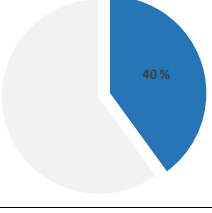
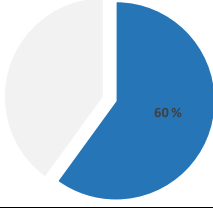

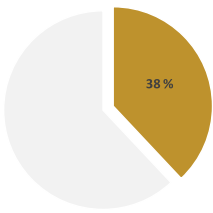

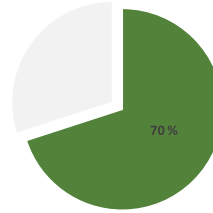
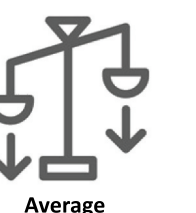
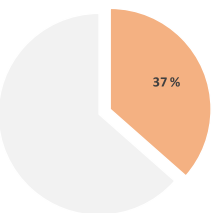
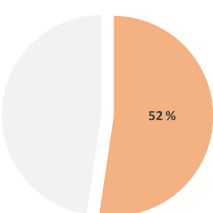
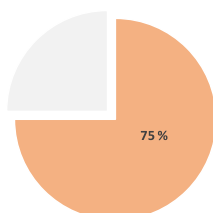
alone in this struggle has positively affected the willingness to resist and to fight.

In the study, we define “willingness to fight” as “using a weapon in armed combat against the enemy in defense of your country,” and “willingness to resist” as “any other type of activity deliberately undertaken to prevent or disrupt the hostile activities of the enemy in defense of your country.” In terms of fighting, we are talking about a societal “join or not join” armed formations phenomenon. We do not study the tactical-operational courage in battle of personnel who have already become members of such formations (Connable et al. 2018, 30).

The contribution of this study is twofold. First, it provides a fresh and comprehensive analysis of the willingness to resist and fight in Ukraine, with a special focus on people's motivation to join or support the military. Deeper insights into these motives are of policy relevance to decision makers both in Ukraine and abroad – regardless of when and how the war eventually ends. Second, the findings of this case study question some of the conclusions of the theoretical literature on the willingness to fight. Much of the willingness-to-fight literature is based on studies of how people feel about personal participation in combat when they live in a time of peace. Far less has been written about how an actual outbreak of war affects that phenomenon. The direction of such a response is not self-evident. One could imagine that it is easier to report willingness to fight when the likelihood of an actual war taking place is small. Once the reality presents itself, however, some of those who reported a willingness to fight may be scared away. Alternatively, those who did not report any willingness before the outbreak of war may find that things look very different once they see the human and material costs of combat up close. As a recent *Wall Street Journal* report on the February and March 2022 fight for Kyiv put it:

It is hard to know how people will react to a huge invasion force. Resistance requires a core of people in villages, towns and cities to

Table 1. Survey Results on the Ukrainian Willingness to Fight 2010–2022

Percentage of Ukrainians willing to fight for their country with arms in their hands		Before 2014	2014–2022	2022
Different Polling/Survey/Research Organizations				
				
				
				
				

find enough courage and motivation to fight rather than flee. (Marson 2022)

The empirical data in this study come from a survey conducted on April 18 and 19, 2022, by the Ukrainian survey agency InfoSapiens. This survey was commissioned by the international research project VALREF.¹ Both authors are affiliated with this project. In addition, data also come from a significant number of other opinion surveys conducted in Ukraine by different agencies both before and after the start of the Russian invasion. Thus, the purpose is both to establish the level of Ukrainian willingness to fight in April 2022 (VALREF/Info-Sapiens), and to explain changes in the level of willingness over time (VALREF/Info-Sapiens plus the other surveys). The

investigation can be termed an exploratory case study. The purpose is to uncover mechanisms in war that might generate an increased willingness to fight and resist and that would have been hard to measure in a pre-war setting (Gerring 2007; Levy 2008).

Theoretical Expectations and Ukrainian Realities

Previous large-scale statistical studies of the willingness to fight for your country have in particular highlighted three factors. First, a society's degree of modernity might significantly affect the willingness to fight. People tend to be less willing to fight in "modern" societies characterized by egalitarianism,

individualism, and concern for non-materialistic values than in “pre-modern” ones characterized by strong hierarchies, collectivism, and a focus on material values (Inglehart, Puranen, and Welzel 2015; Paez et al. 2016, 348). One exception, however, is the willingness to fight in “modern” societies that border a potentially aggressive society of the opposite sort. That is, for example, the case with Nordic nations close to Russia (Inglehart, Puranen, and Welzel 2015, 420; Kim 2020). These tend to score higher on the willingness to fight than other modern societies that have a safer geopolitical location. Second, and related to the first, the rich are generally less willing to fight than the poor in unequal societies. This difference, however, tends to disappear when inequality is low (Anderson, Getmansky, and Hirsch-Hoefler 2018). Third, there is a strong relationship between national pride and the willingness to fight for one’s country (Diez-Nicolas 2010; Paredes, Brinol, and Gomez 2018). We are open to the possibility that the theoretical claims of the current literature may explain well the willingness to fight in other parts of world. The mentioned Nordic countries may be a case in point. However, we still think the Ukrainian cases poses a significant challenge to this literature.

Several surveys and studies indicate that values such as hierarchy, collectivism, and materialism have a strong standing in Ukrainian society (Pivovarova and Khliapatura 2015; Starodubska 2022). True, Marina Starodubska moderates this picture by pointing out that Ukrainian collectivism is weakened by a significant dose of vertical individualism. This means that “improving one’s status by making an effort . . . and obtaining and demonstrating status and being competitive is not merely acceptable, but desired individual behavior” (Starodubska 2022). Still, based on the existing literature, we would expect that the prevalence of such values would make the Ukrainian population more willing to fight for their country compared to populations of more “modern” societies.

If we look at the reported Ukrainian willingness to fight prior to the first Russian use of force in 2014, that is not the case. Quite the opposite, among the ten post-Soviet countries that are included in the World Values Survey (WVS), Ukraine was by a wide margin the country where the fewest people declared themselves ready to fight for their country. In the WVS sixth wave study (2010–2014), only 40 percent of Ukrainians expressed such willingness. That was significantly below the Organization for Economic Cooperation and Development (OECD) average of 53 percent, and far below the Commonwealth of Independent States (CIS) average of 65 percent. It was even further below Poland at 71 percent – a country in a somewhat similar geopolitical situation to Ukraine.² Thus, at a time when war did not seem likely, the strong standing of hierarchy, collectivism, and materialism in Ukraine did not result in any particularly high degree of willingness to fight.

Concerning the relationship between income and willingness to fight, the Ukrainian *Rating* agency surveyed this relationship twice before the 2022 invasion, in 2017 and 2020. Both surveys gave the same result. The willingness to fight increased with income. It was between 60 and 70 percent for both wealthy and middle-income respondents in the two surveys, and between 40 and 60 percent for low income or poor respondents.³ That is the opposite of what the theoretical literature would expect if we

accept that Ukraine is at least partly an unequal society. We discuss that issue more thoroughly with the help of our own VALREF data later in this study.

Finally, as the existing literature would expect, a high level of national pride among Ukrainians goes hand in hand with a high willingness to fight. Interestingly, however, that seems most accurate if we look at the civic dimension of national pride. To be sure, there may have also been a slight increase in the ethnic dimension of national pride. That, however, seems to be more a result of historical long-term trends that have little to do with the war/not war distinction. The strong increase in the Ukrainians’ willingness to fight finds little or no correlation with the very slow but steady rise in the ethnic dimension of national pride.

Overall, the existing theoretical literature is hard pressed to explain the increased willingness of Ukrainians to fight. The case suggests that surveys in times of peace are of limited value to predict actual human behavior in times of war. These studies may be valuable in themselves in terms of gauging how other societal developments affect popular perceptions of what they would be willing to do if their country was attacked, but they seem to say relatively little about people’s actual willingness to fight once war is a fact. In the latter case, both positive and negative incentives can change people’s calculations of what they express themselves willing to do; during wartime, even identities can change with surprising speed.

The rest of this study will unpack and explain the findings outlined above more thoroughly. In particular, we detail the effects of the Russian use of force on Ukrainian society, and by extension, discuss how they relate to the increased willingness to fight and resist.

Changes in the Ukrainian Willingness to Fight and Resist

Already before the February 2022 Russian invasion of Ukraine, several surveys suggested a rise in the Ukrainian willingness to fight in response to military aggression. In 2012, before the 2014 annexation of Crimea and the Donbas war, the Ukrainian survey bureau *Rating* measured only a 33 percent “yes” response to the question “Are you ready to take up arms to defend your country if a threat to its territorial integrity occurs?” In 2017, that figure had risen to 54 percent. It continued to rise to 59 percent in 2020.⁴ It is difficult to imagine any other major changes to Ukrainian society during the 2012 to 2022 period than Crimea and Donbas that can explain this rise. Similar results are also found in the World Value Survey. Here, respondents were presented with the following question “Of course, we all hope that there will not be another war, but if it were to come to that, would you be willing to fight for your country?” According to the WVS wave six survey (2010–2014), 40 percent of Ukrainians answered in the affirmative. That figure rose to 59 percent in wave seven (2017–2020). This was, however, still slightly below the OECD average of 63 percent and far below the CIS average of 77 percent.⁵

The February 2022 invasion changed that. Already in March, *Rating* could report an 80 percent Ukrainian readiness to fight.⁶ Furthermore, a US National Democratic Initiatives

study from August 2022 suggests that an increased readiness to fight was combined with a readiness to engage in other forms of resistance. Asked about whether they had donated money to the Ukrainian armed forces during the war, 81 percent answered in the affirmative. This was so, despite the fact that as many as 70 percent of respondents stated that they had suffered a reduction in income since the war started. An additional 16 percent said they would have donated if their personal financial situation had allowed for this.⁷

Various organizations have conducted opinion surveys on the Ukrainian willingness to fight before and after the start of the February 2022 invasion. The results can be seen in [Table 1](#).

Two conclusions can be drawn from this general overview. First, the willingness to fight among Ukrainians increased with hostile Russian activity in Ukraine. On average, it has more than doubled, from 37 percent to 75 percent, since the outbreak of the war. Second, there is some spread of results among different surveys, suggesting that how the question is framed may significantly influence answers. Thus, comparisons across surveys must be done with some caution. [Table 1](#) should be regarded just as an indication of changes in Ukrainians' willingness to fight. Of the survey agencies presented in [Table 1](#), only *Rating* made comparable surveys both before and after the Russian annexation (2014) and full-scale invasion (2022). The reported finding of an increase by 21 percentage points in the willingness to fight after the Russian invasion is, in our view, a good approximation of the situation today.

Finally, there are many ways the Ukrainian population can counter foreign aggression other than taking up arms themselves. Many of these will also entail accepting considerable risk of violence or other forms of aggressor retribution. Therefore, the Ukrainian willingness to oppose foreign aggression cannot be measured without also investigating this nonmilitary aspect. That is especially so because military service is only compulsory for men. True, a government decree from December 2021 required Ukrainian women between the ages of 18 and 60 to register with the Ukrainian armed forces for potential mobilization. It was, however, explicitly pointed out that this was not the same as the male conscription. The purpose seems to have been to increase the Ukrainian state's legal foundation for conscripting women for non-combat roles in case of war. However, even if general conscription was expanded to include women, gender roles would probably still make a large part of the population see armed combat primarily as a male responsibility. Thus, unless non-military resistance is included, the study will both be unduly gender biased and unable to assess the total resistance potential.

Ways of Fighting and Resisting

The April 2022 VALREF and Info-Sapiens survey asked three questions:

- (1) Are you personally prepared to take part in armed resistance to end the Russian occupation of Ukraine?
- (2) Are you personally prepared to train in the use of weapons/light arms?
- (3) Are you personally prepared to help the Ukrainian army to end the Russian occupation of Ukraine?

The VALREF data collection process, a stratified random sample, was conducted by telephone on April 18 and 19, 2022. At that time, war with Russia had already significantly impacted everyday life in Ukraine. That included numerous civilian casualties in addition to damaged infrastructure. Figures from the UN Office of the High Commissioner for Human Rights suggest that by the end of April 2020 about 5,000 civilians were dead as a direct result of the invasion and a similar number were injured.⁸ Because of the short-lived Russian occupation of parts of Kyiv, Chernihiv, and Sumy oblasts as well as the longer occupation of parts of the East and South, and the refugee wave since February 24, there were significant challenges to upholding the principles of randomness and representation in the data collection process. There were three concerns in particular with this process: first, Ukrainian refugees outside Ukraine are not included in the sample; second, respondents from occupied areas are less likely to pick up the phone and answer the survey; and third, randomly selected respondents holding "pro-Russian" views are less likely to express their true opinions. This is not to say that the survey data are unreliable, or uncertain, in any way. The data collection was done in a wartime society, sometimes in occupied areas, and treated accordingly.

Given the variation in willingness to fight over time, as shown in [Table 1](#), one gets the impression that there is a positive relationship between willingness to fight and the proximity of hostile aggression. The closer a person is to hostile war-like aggression, the higher the willingness to fight. That relationship was specifically studied in a Peace Research Institute of Oslo (PRIO) March 2022 survey. Together with Info-Sapiens, PRIO organized a survey to explore whether there was a direct link between exposure to enemy military action and the willingness to fight. Respondents reported whether they personally had been victims of enemy violence or not, and if yes, whether that had taken place at least once or more than 10 times. The results showed that among those who had not been personally attacked, 48 percent "had intentions to engage in open battle against the Russian or pro-Russian forces." For those individuals who had been attacked once or more, this percentage rose to 55 percent, and for those who had been personally attacked 10 times or more to 65 percent (Bartusevicius, Mazepus, and van Leeuwen 2022). Thus, the more personal exposure to enemy use of force, the higher willingness to fight.

A similar effect may also have worked on the collective level, although we currently do not have survey data to corroborate that. It is likely that single in-war events such as the Russian atrocities in Bucha and Irpin had mobilization effects similar to the ones uncovered by the PRIO/Info-Sapiens survey. These atrocities received widespread media coverage after Russian troops withdrew in late March. Here, both anger at the Russian forces for what they had done and fear that similar events could take place in one's own communities may have convinced more people of the need to get engaged in resistance or fighting.

At first glance, the findings of the PRIO study are supported by the results from the VALREF survey. On the first question, "Are you personally prepared to take part in armed resistance to end the Russian occupation of Ukraine," 71 percent of the respondents throughout the country reported that they were

ready for this or already doing this. Central Ukraine, however, reported a higher readiness of 80 percent. Given the time that the survey was conducted, this may be due to the fact that this region had a significantly higher number of respondents who already had been engaged in helping the armed forces. Much of the fighting in March and April was concentrated in this region (Kyiv, Chernihiv, and Sumy in particular). We found no difference in willingness to fight related to education or income, but we did find that women were not as ready or personally prepared as men (60 percent versus 80 percent).

On the second question, “Are you personally prepared to train in the use of weapons/light arms,” 63 percent of the respondents reported that they were ready for this or already doing it. The readiness to use weapons/light arms varies somewhat across regions, from 73 percent in west and center to 51 percent in east and south. As will be explained later, this finding seems to be in contradiction with the PRIO study. However, there is a large difference in gender where 76 percent of men feel prepared to use weapons, compared to 52 percent of women. In addition, there is a small difference in income. The lower income class is somewhat less prepared (61 percent) to train in the use of weapons compared to the high-income class (67 percent). We found no difference in education.

The third question, “Are you personally prepared to help the Ukrainian army to end the Russian occupation of Ukraine,” is somewhat different from the two first. Here, respondents are asked about helping or assisting the Ukrainian armed forces, not about their willingness to directly participate or support. In this case, 67 percent of the respondents reported that they were personally prepared to help the Ukrainian army. There were no differences between men and women. The preparedness to help the Ukrainian army varied a little from region to region, from 63 percent in the west to 71 percent in the north. There was, however, a difference in income; respondents from the lower income class were much

more prepared (72 percent) to help the Ukrainian army compared to the respondents from the high-income class (51 percent). The same pattern emerges for those with basic education (76 percent) compared with high education (62 percent).

In short, VALREF data measure the expressed willingness to fight at around 70 percent about 7–8 weeks after the Russian invasion into Ukraine. The survey also finds some variation across region, gender, income, and education. These factors will be investigated more thoroughly in the next section.

Social Characteristics of Ukrainians Willing to Fight and Resist

There are many ways to subdivide the Ukrainian population into different categories. Here, we will limit ourselves to region, education, income and gender. Regional differences are probably what many would first think of, since Ukraine traditionally has been thought of as strongly divided by regional and partly overlapping language and ethnic divisions. There is some truth in that, but these divisions and their political consequences have probably never been as clear-cut as many have assumed (Barrington and Herron 2004). Furthermore, as we shall see, opinion polls suggest that a strong development toward national cohesion took place after the events of 2014 and continued after the February 2022 invasion. Nevertheless, because the regions of Ukraine differ with regard to their historical experience, it is important to investigate whether and to what extent that experience has an impact on the willingness to fight.

As noted above, the October 2020 and March 2022 *Rating* surveys show an overall increase in the willingness to fight from 59 percent before the Russian invasion to 80 percent after.⁹ The regional breakdown of the *Rating* surveys, compared to VALREF-survey results, is shown in Figure 1.

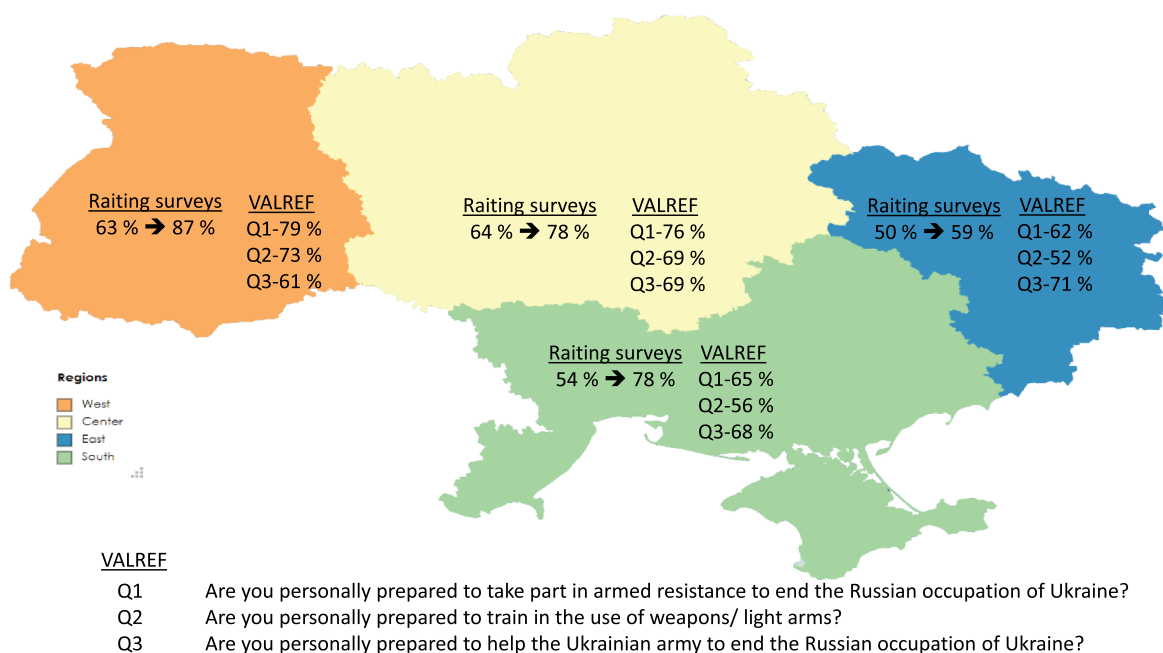


Figure 1. Changes in willingness to fight (from Rating surveys) and measured willingness to resist (in VALREF) after invasion, by region.

While the Russian invasion has led to an increased willingness to fight in all parts of Ukraine, [Figure 1](#) illustrates the regional differences in level and changes. The increase is significantly higher in the west (24 percentage points) and the south (24 percentage points) than in central Ukraine (14 percentage points) and the east (9 percentage points). Furthermore, the highest overall level (from the *Rating* surveys) is in the west with 87 percent. The highest level of resistance measured by VALREF is also in the west, followed by central and southern Ukraine.

Geographical Proximity to Combat

One reason for the difference in measured willingness to resist could be the fact that some oblasts are bordering Russia and some were also partly occupied by Russian forces immediately prior to the period of data collection. At the point of data collection, eight bordering oblasts had either experienced or were experiencing occupation. These oblasts were located across three different regions,¹⁰ as illustrated in [Figure 2](#).

Given this grouping of respondents, we can perform statistical analyses and investigate whether their answers differed systematically depending on the closeness to the occupying force, hostile neighboring nation, and preferred language. The green percentages inside the circles in [Figure 2](#) are the share of the Russian-speaking population (at home) from a December 2015 survey.¹¹ The yellow percentages are the share of respondents that chose to answer the VALREF survey in Russian. On average, the two datasets are very similar, showing a share of 34–37 percent Russian-speaking population in the partly occupied oblasts.

In our analysis, we will use the chosen language in the VALREF data as a demographic variable, together with gender, income, and education. The occasionally large difference in

percentages per oblast can be explained by either demographic mobility between oblasts from December 2015 or poor quality¹² in the VALREF data collection process. Most likely it is a combination of both.

Given the fact that we have nominal data, with categorical answers, we have performed a chi-square analysis and a post hoc test with Bonferroni correction. A chi-square test is used to help determine if observed results are in line with expected results, and to rule out that the observations are due to chance. The result of the test is a statistic that has a chi-squared distribution and can be interpreted to reject, or fail to reject, the null hypothesis that the observed and expected frequencies are the same.

When performing a hypothesis test with multiple comparisons, a result could occur that appears to demonstrate statistical significance in the dependent variable even when there is none. The Bonferroni correction¹³ complements and validates the chi-square analysis, reducing the chances of obtaining false positive results (type I errors) when multiple pairwise tests are performed on a single set of data. If the chi-square test rejects the null hypothesis, and the Bonferroni correction test fails to reject the null hypothesis, it is a false positive. In other words, we cannot prove a difference in the answers. However, if the Bonferroni test complements the chi-square test and rejects the null hypothesis, we also know *where the difference in answers lies* since the Bonferroni correction is a multiple pairwise test. [Table 3](#) below is investigating Q1, “Are you personally prepared to take part in armed resistance to end the Russian occupation of Ukraine,” across the two groups (respondents in either partly occupied oblasts or non-occupied oblasts).¹⁴

As shown in [Table 2](#), and indicated in green, we can *reject the null hypothesis*; the respondents in eight partly occupied oblasts ([Figure 2](#)) answer differently from the respondents in

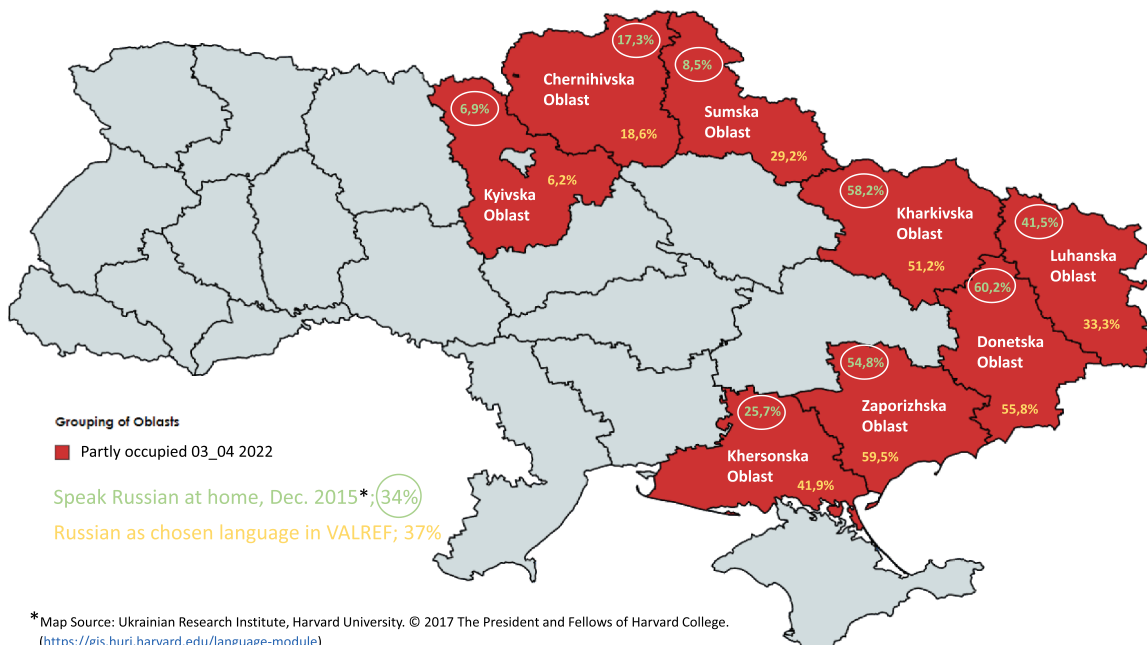


Figure 2. Share of Russian speakers in partly occupied oblasts.

other oblasts. The Bonferroni test tells us that the difference in answers lies in “fully prepared” and “not at all prepared.” Fewer respondents than expected in partly occupied oblasts answered “fully prepared” (negative number and red color in Bonferroni table), and more respondents than expected in partly occupied oblasts answered “not at all prepared” (positive number and yellow color in the Bonferroni table).

One plausible explanation might be that people, when directly exposed to the horror of war, realize they are not as prepared as they initially thought they were. When controlling the statistical data for language, gender, income, and education we can investigate the outcome shown in Table 2. We find that the share and number of respondents in partly occupied oblasts answering “fully prepared” are less than expected. In Table 3 we have indicated the post hoc Bonferroni results with colored cells¹⁵ and entered the text “Less than expected” or “More than expected” in the cell when the Bonferroni correction test rejects the null hypothesis. The results show that respondents answered differently on the question with a statistical significance level of five percent. Reading Table 3 one finds a consistent result among Ukrainian-speaking respondents, men, those with low and middle income, and those with intermediate and high education. The invalid tests¹⁶ are colored gray in Table 3.

In Table 3 the yellow/red cells indicate above/below Z-criteria in the Bonferroni pairwise test. Grey rows indicate no difference in answers (failed to reject null hypothesis). Given this simplified illustration of the statistical tests, one can clearly see that the post hoc Bonferroni multiple pairwise test is mostly confirmed in two areas for all variables: “fully prepared” and “not at all prepared.”

In the column “fully prepared,” the values of most¹⁷ variables are lower than expected (red color) and higher than expected in the column “not at all prepared” (yellow color), for the

respondents in partly occupied oblasts. All of the results are opposite for the respondents in non-occupied oblasts. In two tests, for low income and intermediate education, we also find that the respondents are answering more than expected on “somewhat not prepared.” In short, the respondents in partly occupied oblasts (Figure 2) feel less “fully prepared,” and more “not at all prepared” than respondents in non-occupied oblasts.

When investigating the other two questions we find a similar outcome. Table 4 shows the post hoc Bonferroni results for Q2, “Are you personally prepared to train in the use of weapons/light arms.”

As we can see from Table 4, the results are consistent with those we found regarding Q1 in Table 3. Respondents living in partly occupied oblasts answered differently from those living in non-occupied oblasts. The share of respondents answering “fully prepared” is lower than expected and the share answering “not at all personally prepared to train in the use of weapons” is higher than expected in the partly occupied oblasts. There is no difference in preparedness between respondents speaking Russian, men, middle income, and basic education living in partly occupied and non-occupied oblasts.

Table 5 shows the post hoc Bonferroni results for Q3, “Are you personally prepared to help the Ukrainian army to end the Russian occupation of Ukraine.”

The tests of Q3 listed in Table 5 show that the difference in respondent’s preparedness between partly occupied oblasts and non-occupied oblasts is very small. The only statistical significant difference is that Ukrainian-speaking respondents in partly occupied oblasts are more than expected “somewhat prepared” compared to those in non-occupied oblasts. All other tests in Table 5 are valid, but not able to reject the null hypothesis. The main reason for this is that most respondents use relatively few answer-alternatives from the 5-point Likert scale; the overall outcome is that the respondents feel prepared to help,

Table 2. Chi-square Test and Post Hoc Test with Bonferroni Correction on Q1, in Partly Occupied and non-occupied Oblasts

Observed	1 Fully prepared	2 Somewhat prepared	3 Somewhat not prepared	4 Not at all prepared	5 I am already doing this	Sum
Partly Occupied Oblasts	94	129	67	55	13	358
Non-Occupied Oblasts	271	212	83	47	29	642
Sum	365	341	150	102	42	1000

Expected	1 Fully prepared	2 Somewhat prepared	3 Somewhat not prepared	4 Not at all prepared	5 I am already doing this	Sum
Partly Occupied Oblasts	131	122	54	37	15	358
Non-Occupied Oblasts	234	219	96	65	27	642
Sum	365	341	150	102	42	1000

χ^2 -calc = 36,77 11,07 = χ^2 -crit
 p-value = 0,00 0,05 = α
 Degrees of freedom 4
 Williams correction 1,001
 1,000
 p-value = 0,00

Bonferroni	1 Fully prepared	2 Somewhat prepared	3 Somewhat not prepared	4 Not at all prepared	5 I am already doing this
Partly Occupied Oblasts	-5,024	0,963	2,457	4,029	-0,670
Non-Occupied Oblasts	5,024	-0,963	-2,457	-4,029	0,670

Significance test 0,05
 Number of tests 10
 Bonferroni adj sig test 0,005

 Z-criterie -2,807

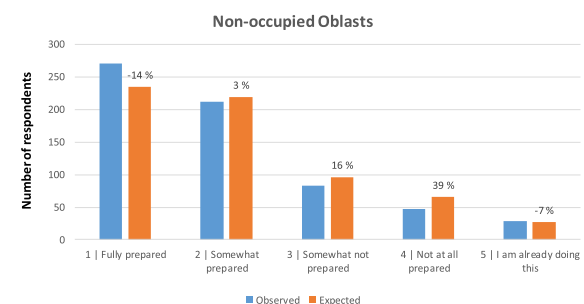
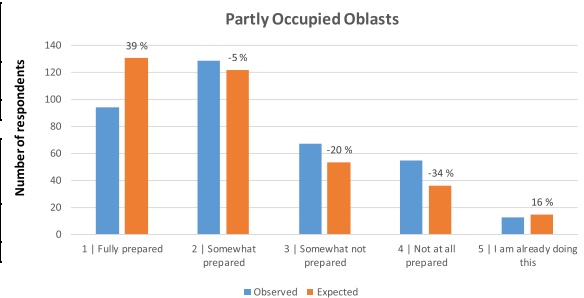


Table 3. Summary of Post Hoc Test with Bonferroni Correction on Q1

Control-variable in the multiple pair wise test (Bonferroni correction test)		Question and test criteria	Answer options: Colour indicate where the difference in answer lies (Bonferroni test outcome)					When p-value $\leq \alpha$: significant result: Reject null hypothesis. → The respondents in partly occupied Oblasts answers differently than respondents in non-occupied Oblasts
		Are you personally prepared to take part in armed resistance to end the Russian occupation of Ukraine?	1 Fully prepared	2 Somewhat prepared	3 Somewhat not prepared	4 Not at all prepared	5 I am already doing this	
All factors		Partly Occupied Oblasts	Less than expected			More than expected		Reject null hypothesis
		Non-Occupied Oblasts	More than expected			Less than expected		
Language	Ukrainian speaking	Partly Occupied Oblasts	Less than expected					Reject null hypothesis
		Non-Occupied Oblasts	More than expected					
	Russian speaking	Partly Occupied Oblasts						Failed to reject null hypothesis
		Non-Occupied Oblasts						
Gender	Male	Partly Occupied Oblasts	Less than expected					Reject null hypothesis
		Non-Occupied Oblasts	More than expected					
	Female	Partly Occupied Oblasts				More than expected		Reject null hypothesis
		Non-Occupied Oblasts				Less than expected		
Income	Low income	Partly Occupied Oblasts	Less than expected		More than expected	More than expected		Reject null hypothesis
		Non-Occupied Oblasts	More than expected		Less than expected	Less than expected		
	Middle income	Partly Occupied Oblasts	Less than expected					Reject null hypothesis
		Non-Occupied Oblasts	More than expected					
	High Income	Partly Occupied Oblasts						Failed to reject null hypothesis
		Non-Occupied Oblasts						
Education	Basic education	Partly Occupied Oblasts						Failed to reject null hypothesis
		Non-Occupied Oblasts						
	Intermediate education	Partly Occupied Oblasts	Less than expected		More than expected			Reject null hypothesis
		Non-Occupied Oblasts	More than expected		Less than expected			
	High education	Partly Occupied Oblasts	Less than expected			More than expected		Reject null hypothesis
		Non-Occupied Oblasts	More than expected			Less than expected		

Table 4. Summary of Post Hoc Test with Bonferroni Correction on Q2

Control-variable in the multiple pair wise test (Bonferroni correction test)		Question and test criteria	Answer options: Colour indicate where the difference in answer lies (Bonferroni test outcome)					When p-value $\leq \alpha$: significant result: Reject null hypothesis. → The respondents in partly occupied Oblasts answers differently than respondents in non-occupied Oblasts
		Are you personally prepared to train in the use of weapons/ light arms?	1 Fully prepared	2 Somewhat prepared	3 Somewhat not prepared	4 Not at all prepared	5 I am already doing this	
All factors		Partly Occupied Oblasts	Less than expected		More than expected	More than expected		Reject null hypothesis
		Non-Occupied Oblasts	More than expected		Less than expected	Less than expected		
Language	Ukrainian speaking	Partly Occupied Oblasts	Less than expected		More than expected			Reject null hypothesis
		Non-Occupied Oblasts	More than expected		Less than expected			
	Russian speaking	Partly Occupied Oblasts						Failed to reject null hypothesis
		Non-Occupied Oblasts						
Gender	Male	Partly Occupied Oblasts						Failed to reject null hypothesis
		Non-Occupied Oblasts						
	Female	Partly Occupied Oblasts	Less than expected					Reject null hypothesis
		Non-Occupied Oblasts	More than expected					
Income	Low income	Partly Occupied Oblasts	Less than expected			More than expected		Reject null hypothesis
		Non-Occupied Oblasts	More than expected			Less than expected		
	Middle income	Partly Occupied Oblasts						Failed to reject null hypothesis
		Non-Occupied Oblasts						
	High Income	Partly Occupied Oblasts						Failed to reject null hypothesis
		Non-Occupied Oblasts						
Education	Basic education	Partly Occupied Oblasts						Failed to reject null hypothesis
		Non-Occupied Oblasts						
	Intermediate education	Partly Occupied Oblasts				More than expected		Reject null hypothesis
		Non-Occupied Oblasts				Less than expected		
	High education	Partly Occupied Oblasts	Less than expected		More than expected	More than expected		Reject null hypothesis
		Non-Occupied Oblasts	More than expected		Less than expected	Less than expected		

independent of location, gender, income, and education. Twenty-eight percent of the respondents are already helping and 65 percent are either “fully prepared” or “somewhat prepared” to help the Ukrainian army to end the Russian occupation of Ukraine.

Doing a Poisson regression on the VALREF data set, using the responses from Q1, Q2, and Q3 as dependent variables and five independent variables (language, gender, oblast, income, and education), we find little or no coherence¹⁸ between the

dependent and independent variables. There is a minor coherence between income, education, and willingness to help the Ukrainian army (Q3), but the statistical coefficient is very small. However, we do find some covariance between income and education.

Income

When analyzing income and willingness to fight we find that lower income classes are more than expected “not at all

Table 5. Summary of Post Hoc Test with Bonferroni Correction on Q3

Control-variable in the multiple pair wise test (Bonferroni correction test)		Question and test criteria	Answer options: Colour indicate where the difference in answer lies (Bonferroni test outcome)					When p-value $\leq \alpha$: significant result: Reject null hypothesis. → The respondents in partly occupied Oblasts answers differently than respondents in non-occupied Oblasts
		Are you personally prepared to help the Ukrainian army to end the Russian occupation of Ukraine?	1 Fully prepared	2 Somewhat prepared	3 Somewhat not prepared	4 Not at all prepared	5 I am already doing this	
All factors	Partly Occupied Oblasts			More than expected				Reject null hypothesis
	Non-Occupied Oblasts			Less than expected				
Language	Ukrainian speaking	Partly Occupied Oblasts		More than expected				Reject null hypothesis
	Non-Occupied Oblasts			Less than expected				Failed to reject null hypothesis
Russian speaking	Partly Occupied Oblasts							
	Non-Occupied Oblasts							
Gender	Male	Partly Occupied Oblasts						Failed to reject null hypothesis
	Non-Occupied Oblasts							Failed to reject null hypothesis
Female	Partly Occupied Oblasts							
	Non-Occupied Oblasts							
Income	Low income	Partly Occupied Oblasts						Failed to reject null hypothesis
	Non-Occupied Oblasts							Failed to reject null hypothesis
	Middle income	Partly Occupied Oblasts						
Non-Occupied Oblasts								Failed to reject null hypothesis
	High Income	Partly Occupied Oblasts						
Non-Occupied Oblasts								
	Education	Partly Occupied Oblasts						Failed to reject null hypothesis
Basic education	Non-Occupied Oblasts							Failed to reject null hypothesis
	Intermediate education	Partly Occupied Oblasts						
Non-Occupied Oblasts								Failed to reject null hypothesis
	High education	Partly Occupied Oblasts						
Non-Occupied Oblasts								

prepared” compared to the other income classes. Furthermore, the high-income class is more than expected “already doing it” compared to the other income classes, but we have no valid tests across regions at this point.

Rating found in October 2020 that high income correlated with increased willingness to fight. In that year, 66 percent of those with high income reported willingness to fight.¹⁹ As the VALREF data shows, 35 percent of the respondents in all income classes were “fully prepared” to join the fight. The difference in willingness to fight is in “I am already doing it,” where high income has a share of 11 percent and the other income classes report around 3 percent. Table 6 below investigates Q2, “Are you personally prepared to train in the use of weapons/light arms,” across income classes.²⁰

As we can see in Table 6, we find some differences across income classes. The low-income class is more than expected using the answer option ‘not at all prepared’ and less than expected using the answer option “I am already doing it.” The high-income class answers more than expected option 5, “I am already doing it.” Similar findings are found on Q1 and Q3. In other words, respondents in high-income classes are more willing to fight and help the Ukrainian army than low-income classes.

Both the Rating results and VALREF data are in contradiction to the findings from the theoretical literature on income and the willingness to fight. Here, scholars have argued that the willingness to fight tends to be lower among the rich, at least in highly unequal societies (Anderson, Getmansky, and Hirsch-Hoefler 2018). The question of whether Ukraine is a highly unequal society or not is contentious. The GINI-coefficient, a standard measure of economic inequality, is one of the lowest in the world. However, economists warn that the size of the shadow economy probably is so large that

measures based only on official statistics give a false description of reality. Many observers maintain that inequality remains a serious problem in Ukraine despite the low Gini-coefficient (Cherep, Helman, and Makazan 2022, 164).

Gender

In terms of gender, it is likely that the existence of male conscription may have had its own effect on the reported willingness to fight: if you know you cannot refuse, then why not embrace the idea. A related factor may be that a significant part of the female and underage part of the population fled after February 2022. UNICEF estimated that by April 4, 2022, 5 million people had fled Ukraine. Of these, about 90 percent were women and children.²¹ With close family members safe and at a significant geographical distance, it may be easier to report willingness to fight than if they were close by.

The October 2020 Rating survey showed that the willingness to fight was significantly higher for men (73 percent) than for women (48 percent).²² However, the March 2022 survey from the same agency demonstrated that the mobilizing effect of the war in terms of taking up arms was even higher for women than for men. In the March survey, 90 percent of men declared a willingness to fight. That constituted a 17–percentage points increase since 2020. In the same survey, 73 percent of women declared a willingness to fight.²³ This represented a 25–percentage point increase. Thus, there was actually a higher willingness among Ukrainian women to take up arms after the outbreak of war in February 2022 than there had been among Ukrainian men before. The April 2022 VALREF and Info-Sapiens survey showed somewhat lower results for both genders, 82 percent for men and 60 percent for women.

Table 6. Chi-square Test and Post Hoc Test with Bonferroni Correction on Q2

Observed	1 Fully prepared	2 Somewhat prepared	3 Somewhat not repaired	4 Not at all prepared	5 I am already doing this	Sum
Low	179	118	87	91	16	491
Medium	130	103	60	45	25	363
High	50	24	13	10	14	111
Sum	359	245	160	146	55	965

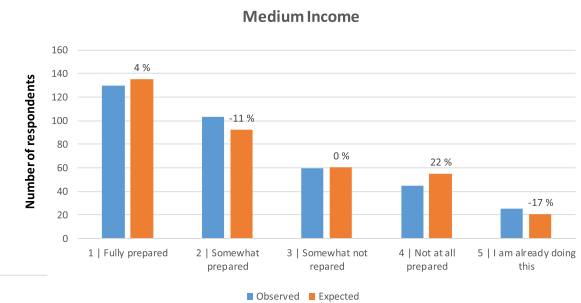
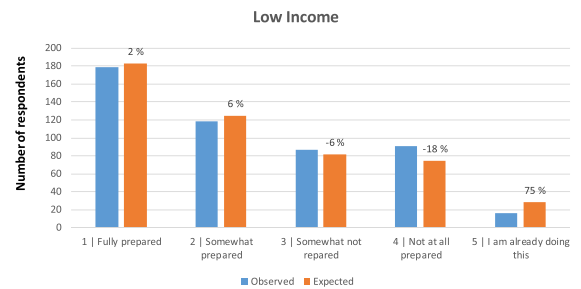
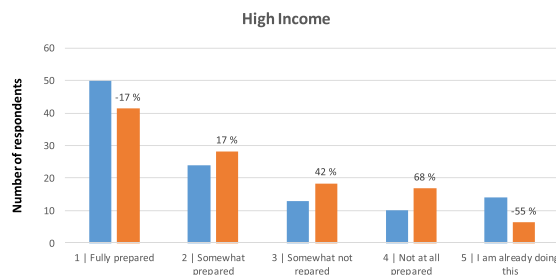
Expected	1 Fully prepared	2 Somewhat prepared	3 Somewhat not repaired	4 Not at all prepared	5 I am already doing this	Sum
Low	183	125	81	74	28	491
Medium	135	92	60	55	21	363
High	41	28	18	17	6	111
Sum	359	245	160	146	55	965

χ^2 -calc =	19,50	11,07 = χ^2 -crit
p-verdi =	0,00	0,05 = α
Frihetsgrader	3	
Williams correction	1,001	
	1,000	
p-verdi =	0,00	

Bonferroni	1 Fully prepared	2 Somewhat prepared	3 Somewhat not repaired	4 Not at all prepared	5 I am already doing this
Low	-0,488	-0,985	0,968	3,003	-3,329
Medium	-0,693	1,655	-0,033	-1,840	1,236
High	1,817	-0,969	-1,466	-1,913	3,340

Significance test	0,05
Number of tests	15
Bonferroni adj sig test	0,003

Z-criterie	-2,935
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Why the War Resulted in an Increased Willingness to Fight and Resist

Despite the fact that respondents living in partly occupied oblasts felt less “fully prepared” than respondents living in non-occupied oblasts, the VALREF survey shows an overall large share of willingness to fight (see Figure 1). Combining the VALREF survey with other surveys we see a significant overall increase in the willingness to fight after the Russian invasion. The question is whether there are reasons for this increase other than the social characteristics discussed above.

We identify at least four correlating changes in popular opinion that may be related to the increased reported willingness to fight and resist: (1) a rise in national pride; (2) a rise in trust in Ukrainian political institutions; (3) a rise in trust in the Ukrainian armed forces; and (4) an impression that Ukraine is not alone in its struggle. In terms of the latter, we mean both in the sense that Ukraine is fighting for something more than its own freedom and in the sense that other countries are ready to assist and share some of the burden. The first correlation is the only one of the three theoretically derived assumptions discussed at the beginning of the article for which we find support. The other three are inductively derived from our own observations of the war.

National Pride

Previous research has found a strong link between national pride and the willingness to fight. The term “national pride” in

this article simply refers to how people answered World Values Survey (WVS) question 254: “How proud are you to be Ukrainian?” The national pride effect is probably connected to a “oneness with a group” feeling (Paredes, Brinol, and Gomez 2018, 517). Such pride may come from both ethnic and civic sources. Two markers of ethnic pride would be self-identification as ethnic Ukrainian and the use of Ukrainian as opposed to Russian in daily conversations. The evidence suggests that the ethnic factor is of limited importance. It is true that the percentage of those who answered in Ukrainian to the question “Who are you by nationality?” rose from 88 percent in October 2020 to 92 percent in April 2022.²⁴ However, this was not a particularly big rise and is also not necessarily the same as ethnic self-identification. We do not know to what extent respondents saw nationality as an ethnic or civic category. More importantly, earlier statistics show the same rate in the rise of the answer “Ukrainian” to that question can be found all the way back to at least 2012. That was before both the annexation of Crimea, the war in the Donbas, and the expansion into the current war. Much of the same can be said for the increasing use of the Ukrainian language as the main means of communication in people’s homes. This rose from 46 percent in August 2020 to 51 percent in April 2022 and stayed at that level in August 2022.²⁵ Again, this is an increase but not a very dramatic one.

It should be noted, however, that *Rating* found a 42 percent rise in respondents who reported that they aimed to increase their overall use of the Ukrainian language from before to after

the February 2022 invasion. Similarly, an August 2022 National Democratic Institute (NDI) survey found that 82 percent had started to use Ukrainian more frequently after the start of the war (NDI August 2022).²⁶ Whether this is a sign of increasing ethnic nationalism can be discussed. Speaking Ukrainian in public may be as much a tribute to the independent Ukrainian state as it is to the ethnic Ukrainian nation. Of course, we cannot know this for sure without further investigation, but the latter finding at least suggests that a rise in the ethnic component of national pride should not be excluded as a cause for some of the rise in the willingness to resist and fight. Still, the evidence for a correlation between increased civic nationalism and the willingness to fight seems considerably stronger.

For example, when respondents were asked whether they would have supported independence for Ukraine if the 1991 referendum had been repeated today, 81 percent answered in the affirmative in August 2020. That figure had risen to 97 percent in August 2022.²⁷ Furthermore, in a July 2022 survey by the Kyiv International Institute of Sociology (KIIS), where respondents had to choose among several identities the one that was most important to them, 85 percent chose “citizen of Ukraine” and only 3 percent “representative of own ethnic group.” Those 85 percent had risen from 65 percent in a survey immediately prior to the invasion.²⁸

Similarly, in an August 2022 Info-Sapines Survey conducted together with the Ukrainian Academy of Sciences, 98 percent of respondents said they were proud to be citizens of Ukraine. Info-Sapiens had asked this question in surveys since 2002, but August 2022 was the first time that the “proud” response had been the same in all major regions of the country. In 2002, only 41 percent of respondents had been proud to be citizens of Ukraine. After the 2014 events, this figure rose to 67 percent, and then to 98 percent after the February 2022 attack.²⁹

Trust in Political Institutions

In addition to national pride, one would expect the stated willingness to fight to correlate with trust in the country’s political institutions. Most important among them would be the country’s political leadership. If you seriously question whether the political leadership has the right motives for sending you into war or the necessary competence to conduct the war, this would most likely negatively influence your willingness to fight. This is the variable where the sociological data show the strongest changes from before to after the onset of war.

To start with trust in the president; it rose from slightly less than 40 percent in October 2020 to 93 percent in March 2022.³⁰ Thus, trust in Volodymyr Zelensky more than doubled from before to after. There are probably a number of reasons for this radical change, but the fact that the president stayed in Kyiv to continue to govern the country from home was probably among the most important.

Ukrainian foreign minister Dmytro Kuleba thinks that if Zelensky had followed US advice and fled into exile, Ukraine would have lost the war (Gordon 2022). That statement is a counterfactual, impossible to prove or disprove, but the

popular trust in Zelensky’s leadership seems beyond doubt. This support is also overwhelming throughout the country. Although somewhat lower in the east, the support for him there was at 83 percent in March 2022. In the west and in central Ukraine it was 96 percent, and in the south it was 89 percent.³¹

Furthermore, the current trust in the Ukrainian state is not limited to the president. Asked to evaluate the efficiency of Ukrainian state structures as such, only 45 percent thought these performed well or rather well in November 2021. By May 2022, that figure had risen to 94 percent.³² It is of course likely that many respondents thought about different parts of the state structure at the two different points in time. The November 2021 poll most likely caught sentiments regarding structures and institutions relevant in a time of peace, such as social services, the legal system, or the battle against corruption. The May 2022 figures probably reflect more concern with the armed forces and war-related efforts of other state institutions. Nevertheless, the figures do suggest that the popular trust in political institutions is broader than just “the Zelensky effect.”

Finally, new figures showing a decreasing desire to emigrate support the trust in the political leadership findings. If people had little faith in the ability of the political leadership and state institutions to lead the country to victory, then we would expect more of them to think about leaving. The figures show that the desire to work abroad decreased from 35 percent in July 2020 to 28 percent in June 2022, and even more compellingly, the number of Ukrainians who would like to move permanently abroad declined from 27 percent in June 2020 to only 9 percent in June 2022.³³ Here, though, there seems to be a limit to the population’s endurance. Asked about whether they planned a future for their children in Ukraine even if the war with Russia were to continue indefinitely, only 43 percent answered in the affirmative. That percentage rose to 55 percent in case of a temporary ceasefire, 77 percent in case of an end to the war because of a democratic revolution in Russia, 85 percent in case of an end to the war by Russian capitulation, or in case of victory in the war and Ukraine joining NATO.³⁴

Of course, much of this optimism may be based on the fact that Ukraine has done much better in terms of resisting the Russian invasion than many, probably also in Ukraine, had thought possible before the onset of war. We do not know what effects military setbacks might have on those figures.

Furthermore, a courageous and competent political leadership and well-functioning state institutions alone are no guarantee of success in war. If they are combined with weak or incompetently led armed forces, the war may still end in defeat. Thus, a person considering his or her willingness to fight is also likely to assess the quality of the armed forces separately from other state institutions before making a decision to risk his or her life. If there is a high probability of losing your life because of incompetent operational or tactical leadership, one is unlikely to join. In order to evaluate this factor, the population would need to feel that they have an acceptable level of information about what is going on within the military organization. In this respect, it is important to note that already as of August 2022, 54 percent of Ukrainians

reported that they had someone close to them who either had fought or was currently fighting.³⁵ Thus, more than half of Ukrainians had by that time more or less direct access to information on how the troops themselves evaluated the performance of the organization in which they were fighting.

Trust in the institution of the armed forces has been relatively high in Ukraine at least since the mid-2000s (Pecheniuk and Pecheniuk 2021), but it seems beyond doubt that it has increased since the start of the war. In August 2022, after six months of war, approval of the armed forces stood at 98 percent of the population.³⁶ Important to notice here is that this poll was taken before the major breakthrough and liberation of Kharkiv Oblast in the beginning of September 2022 and the Russian retreat from Kherson in November of that year. Thus, approval of this institution was almost complete even at a time when the forces had not yet demonstrated a strong ability to retake territory.

Another potential indication of trust in the military is belief in military victory. The motivation for participating in combat is probably higher if you think your side is likely to win. In January 2022, before the invasion, 56 percent of respondents thought Ukraine might achieve victory in a war with Russia. In March 2022, after the invasion, that figure had risen to 93 percent.³⁷ This war optimism is probably also one reason why 89 percent of respondents in March 2022 were against a temporary ceasefire unless Russia first conducted a full withdrawal of its troops from Ukraine.³⁸

An August 2022 survey by the Democratic Initiatives Foundation found a similar strong belief in victory. Interestingly, however, the findings of this latter survey suggest that the war optimism is not necessarily preconditioned on a quick victory. Of the 90 percent who believed in victory, only 31 percent thought victory would come by the end of 2022; 34 percent thought it would take 1–2 years and 7 percent thought it could take 3–5 years.³⁹

International Solidarity

Finally, it is also reasonable to assume that a conviction that Ukraine is not alone in this struggle may contribute to the rise in the Ukrainian willingness to fight. This may take at least two forms. First, an understanding that Ukraine is not only fighting for its own survival but also for a bigger cause, such as the future of democracy, may increase the importance of the struggle in people's eyes. Second, a belief in the willingness and ability of other countries to support Ukraine in its struggle increase the chances of a victory, and thus the willingness of people to participate in the war.

Regarding the first, there is so far little survey evidence. True, the support for democracy as a system of government has increased significantly after the Russian invasion. An NDI survey from August 2022 found that 94 percent of respondents in central, eastern, and southern Ukraine said it was important to them that Ukraine became a full democracy. For western Ukraine, the figure was 96 percent. That was up from 82 percent in western Ukraine, 76 percent in central, 72 percent in southern, and 71 percent in eastern in August 2021.⁴⁰ Thus, the appreciation for democracy is now massive across Ukrainian regions. So far, however, we do not have data on the extent to which Ukrainians see their struggle

against Russia as a defense of democracy also beyond their borders.

On the issue of burden sharing by other countries, there was initially a feeling of disappointment that other countries did not do more. Info-Sapiens found at the end of May that Ukrainians were far from satisfied with other countries' willingness to share the military burden with them. No less than 71 percent agreed with the statement that military aid from NATO was insufficient.⁴¹ However, at about the same time, *Rating* found that 77 percent of the population thought that Ukrainians and "other European peoples" were fighting the war together.⁴² The latter view seems to have prevailed. At the end of September, a KIIS survey found that as many as 81 percent of respondents thought the Ukrainian progress on the battlefield was a result of joint Ukrainian–Western efforts. Of these 81 percent, 40 percent saw the advances as mainly Ukrainian but with some assistance from the West, 36 percent thought they were the results of equal efforts, and 5 percent found them mostly to be the result of Western efforts (KIIS, 2022–09–29).⁴³ Here, one could argue that foreign military aid may not necessarily increase the willingness to fight. It is also possible to imagine that many might be happy to let others do the job and take the risks for them, if possible. However, such an effect would be unlikely in the current case. No external country has been willing to supply troops. Foreign aid in terms of armaments, intelligence, and training would have been useless unless the Ukrainians themselves stepped up in terms of manpower.

Conclusion

Based on the findings of this study, there is no doubt that Russian president Vladimir Putin's use of armed force against Ukraine turned the Ukrainians into staunch defenders of their country. Before the annexation of Crimea and the outbreak of war in the Donbas in 2014, figures from the World Value Survey showed them to be among the most pacifist peoples of Europe. Today, the stated willingness to fight and resist is generally strong throughout the country. Nevertheless, we found that respondents in partly occupied areas were somewhat less prepared to take part in armed resistance or train in the use of weapons than those in non-occupied areas. That finding partly seems to contradict the results from the March 2022 PRIO survey that exposure to combat made people more willing to fight.

In terms of the willingness to fight versus the willingness to resist (in terms of assisting the Armed Forces of Ukraine in other ways than taking part in combat yourself), we find no major differences based on gender or region. Individuals from all regions and both genders report such willingness in roughly equal degrees. However, we do find that people with higher education and higher income tend to report a higher willingness to fight whereas the opposite group to a larger extent see their role as supporting by other means. So far we do not have any evidence to explain why this is the case.

The study also shows that the rapid changes in Ukrainians' willingness to fight and resist challenge some of the postulates of the existing theoretical literature. The

strong standing of hierarchy, collectivism, and materialism in Ukraine did not result in a high willingness to fight prior to Putin's use of force. After that use of force, however, the willingness to fight doubled with a speed that cannot be explained by any significant shift in these values. Furthermore, the assumption that the wealthy are less willing to fight than the poor in unequal societies is not confirmed by the VALREF dataset. We find that the wealthy, although not the very richest, are already participating in fighting to a much greater degree than either the less wealthy or the "extremely" wealthy. In other words, respondents in the high-income classes are more willing both to fight and to help the Ukrainian army.

Finally, national pride is confirmed as something that correlates strongly with the willingness to fight and resist. However, in the Ukrainian case, we find a significant correlation only with a rise in the civic as opposed to the ethnic version of national pride. Whether that is only a Ukrainian phenomenon or a more general trend could be a topic for further investigation. Overall, however, we question to what extent the existing theoretical literature is able to predict behavior in this regard once enemy use of force is a fact.

To draw valid conclusions about causality is difficult given the limited availability of data and the exploratory nature of this study. Still, our findings indicate that trust in Ukrainian political institutions, trust in the Ukrainian armed forces, and a rising recognition that Ukraine is not alone in its struggle affect the willingness to fight and resist. It would therefore seem logical to explore these factors more thoroughly in future studies. A more general finding of this study is that a protracted war may not necessarily reduce the willingness to fight and resist. We must of course hope that we never have to find out if that is true. However, if the war drags on for years, this will be one of the most important questions to study for both politicians and analysts alike.

Notes

1. National Values and Political Reforms in Post-Maidan Ukraine, or in short, VALREF, is an international project financed by the Norwegian Research Council.
2. Authors' own calculation based on the WVS database available at <https://www.worldvaluessurvey.org/wvs.js>.
3. <https://ratinggroup.ua/en/research/ukraine/fbb3f3c52d452cdd1646d4a62b69dba5.html> and Rating databases available at https://ratinggroup.ua/en/research/ukraine/ko_dnyu_zaschitnika_ukrainy.htm.
4. https://ratinggroup.ua/files/ratinggroup/reg_files/rg_ua_1200_032022_war_press.pdf.
5. Authors' own calculation based on the database at <https://www.worldvaluessurvey.org/wvs.js>.
6. https://ratinggroup.ua/en/research/ukraine/ko_dnyu_zaschitnika_ukrainy.htm.
7. <https://www.ndi.org/sites/default/files/Opportunities%20and%20Challenges%20Facing%20Ukraine%E2%80%99s%20Democratic%20Transition%20August%20%28English%29.pdf>.
8. See <https://www.ohchr.org/en/news/2023/07/ukraine-civilian-casualty-update-31-july-2023> (downloaded September 6, 2023).

9. <https://ratinggroup.ua/en/research/ukraine/fbb3f3c52d452cdd1646d4a62b69dba5.html> and https://ratinggroup.ua/en/research/ukraine/ko_dnyu_zaschitnika_ukrainy.htm.
10. Central, east, and south region.
11. This is the most updated language mapping we could find.
12. The VALREF data in the oblasts are not a good representation of the local population.
13. The Bonferroni correction refers to the process of adjusting the alpha level so that we control for the probability of committing a false positive, or incorrectly reject a true null hypothesis (type 1 error).
14. Bordering Russia, and occupied (April 2022) after the full-scale invasion, see Figure 2.
15. Red indicates "less than expected" and yellow indicates "more than expected."
16. Russian-speaking, high income, and basic education.
17. No significant result for Russian-speaking respondents and females. The other tests (low income and basic education), not shown in Table 3, were returned as no valid tests.
18. Coherence measures whether datasets correspond to each other. Correlation measures degree of similarity.
19. https://ratinggroup.ua/files/ratinggroup/reg_files/rg_defenders_day_102020_press.pdf.
20. In the VALREF data collection income was classified by 6 options that we have categorized in three: Low income (1 | Need to save on food and 2 | Enough for food. To buy clothes, shoes, you need to save up or borrow). Medium income (3 | Enough for food and the necessary clothes, shoes. For a good suit, a mobile phone, need to save up or borrow and 4 | Enough for food, clothes, shoes. But to buy expensive things (TV, refrigerator) need to save up or borrow). High Income (5 | Enough for food, clothes, shoes, expensive purchases. For car, an apartment, need to save up or borrow and 6 | I can make any necessary purchases at any time).
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23. https://ratinggroup.ua/files/ratinggroup/reg_files/rg_ua_1200_032022_war_press.pdf.
24. https://ratinggroup.ua/files/ratinggroup/reg_files/rg_ua_1000_ideological_markers_ua_042022_press.pdf.
25. https://ratinggroup.ua/files/ratinggroup/reg_files/rg_ua_1000_independence_082022_xvii_press.pdf.
26. https://ratinggroup.ua/files/ratinggroup/reg_files/rg_ua_1000_independence_082022_xvii_press.pdf and <https://www.ndi.org/sites/default/files/Opportunities%20and%20Challenges%20Facing%20Ukraine%E2%80%99s%20Democratic%20Transition%20August%20%28English%29.pdf>.
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