

# Why Should I Defend my Country? Psychological, Moral and Cultural Factors in the 'Willingness to Fight'

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**Abstract:** *The psychological willingness to fight for one's country has become an increasingly important issue in light of Russia's invasion of Ukraine on 24 February 2022 and the ongoing war near the eastern flank of Europe. This article presents three new analyses of the seventh wave of the recently completed World Values Survey that are designed to shed light on the features and factors that play a role in citizens' attitudes toward defending their own country. Our goal was to find individual and societal characteristics that may help to explain variation in willingness to fight globally, as well as between and within two countries on the eastern flank that we use as case studies: the Czech Republic and Slovakia. In the conclusion, we explore some of the limitations of these studies, as well as some of their most important implications. Before reporting on and discussing our findings, we set the context for the rationale for our selection of material and methodology by briefly describing some of the relevant literature on the willingness to fight for one's country.*

**Key words:** *willingness to fight, personality factors, moral foundations, World Values Survey*

## Introduction

Earlier research has shown that the psychological willingness to fight to defend one's own country has been decreasing globally over the last few decades, a trend to which Eastern Europe is not an exception (Puranen 2014; Inglehart, Puranen & Welzel 2015). While attention to this waning willingness may not

have seemed urgent during peacetime, the military invasion of Ukraine by Russia on 24 February 2022 provided a jolt to wake Europe from its pre-war slumbers. Interest in the battle readiness of citizens and governments in the 'eastern flank' (and especially the Baltics and the Visegrad Group) has been suddenly renewed. The political, diplomatic and military need for knowledge about such readiness is obvious, but there has been relatively little academic research on the correlations, causes and consequences of the dwindling willingness to fight for one's own country in Eastern Europe (see literature review below). Understanding and facilitating the dynamics that could lead to an increase in social cohesion of a sort that could bolster a willingness to defend will require analyses that account for a wide range of psychological and sociological dimensions (Lane & Shults 2023).

A cautionary tale for all defence planners and analysts is the recent Defense Intelligence Agency's development of comprehensive 'will to fight' analytical methodologies. It gained unprecedented attention within the US intelligence community following the stark miscalculations regarding Ukraine's defensive capabilities in early 2022. Lieutenant General Jeffrey Kruse, director of the Defense Intelligence Agency, acknowledged this critical intelligence failure during a November 2024 address to the Intelligence and National Security Alliance: 'The Ukrainians exhibited a will to fight that was far beyond anything any of us had estimated'. This miscalculation, where US analysts predicted Kyiv would fall within three days, represented a fundamental failure to properly assess intangible human factors that ultimately proved decisive in military outcomes. It also demonstrates this concept's strategic importance (Ferran 2024).

It is in the interest of any country to inspire enough loyalty so there exists a group of its members willing to fight and die for it. Individuals with that level of commitment are also generally willing to perform lesser sacrifices for the country – e.g. spend their time, effort and resources for the good of their country. In contemporary Europe, army personnel and members of uniformed volunteer organisations are thus often used for different types of disaster response more often than for fighting itself. Across the eastern flank of Europe during the COVID-19 crisis, these groups helped coordinate the government responses to the pandemic. In Slovakia, for example, 95% of soldiers were busy managing the logistics of that crisis in 2021, leaving the country in a fragile position if another crisis (or war) had occurred (Vitko 2021). Only a country with high enough social cohesion and collective identity has enough individuals willing to sacrifice for it so it can manage large scale crises such as COVID, poly-crises or a war on a scale such that Ukraine is facing today. Such countries are safe not only because they have more people willing to fight for it, but more people generally willing to sacrifice their time and effort for the collective good.

In this context we follow the definition of social cohesion utilised by the Social Cohesion Radar (SCR) sociometric instrument, developed for the European

Commission by Bertelsmann Stiftung and Jacobs University (today rebranded as Constructor university) in Bremen (Dragolov 2013). This instrument is especially relevant for our study, since it was inspired by the World Value Survey and European Values Study design and is thus compatible methods-wise with the WVS datasets our study is based on. Social cohesion is understood as the quality of social cooperation and togetherness in a territorially delimited community. The SCR breaks down the concept of social cohesion into three domains – social relations, connectedness and focus on the common good. Each of these domains comprises three measurable dimensions: social networks, trust in people, acceptance of diversity, identification, trust in institutions, perception of fairness, solidarity and helpfulness, respect for social rules and civic participation. This bond with one's country and wider community, this willingness to follow the general idea of the common good translates not only into physical safety but also into other areas of solidarity with the wider community such as willingness to pay taxes and participation in the shadow (untaxed) economy, lower corruption, lower instability (susceptibility and hybrid threats) and the ability to muster a solid force for natural disaster response (COVID, floods, winter calamities).

This article presents three new analyses of the seventh wave of the World Values Survey that are designed to shed light on the features and factors that play a role in citizens' attitudes toward defending their own country. Our goal was to find individual and societal characteristics that may help to explain variation in 'willingness to fight' (WtF) globally, as well as between and within two countries on the eastern flank that we use as case studies: the Czech Republic and Slovakia. In the conclusion, we explore some of the limitations of these studies, as well as some of their most important implications. Before reporting on and discussing our findings, we set the context for the rationale for our selection of material and methodology by briefly describing some of the relevant literature on the willingness to fight for one's country.

## **Literature review**

One of the earliest academic treatments of WtF was a 1986 article based on data derived from the 1981–82 International Values Study, sponsored by the European Values Systems Study Group, which informed what became the World Values Survey (WVS) and the European Values Study (EVS). Analysing the responses of participants in 14 nations to the 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?', Listhaug found a number of relevant individual and societal variations (Listhaug, 1986). For example, women were far more reluctant than men to risk their lives for their own country. Levels of WtF were quite high in Hungary, Norway and Sweden, but far lower in Italy and West Germany. Listhaug hypothesised that the low willingness in the latter countries was shaped in part

by their experience of defeat in World War II, a hypothesis that found further confirmation in later studies (Bobowik et al. 2014).

Post-communist societies such as the Czech Republic and Slovakia experienced unique identity transformations that fundamentally altered their relationship with defence and military service. The communist regime fabricated idealised images of the ‘socialist man’ while simultaneously demobilising genuine civic engagement, creating what scholars term the ‘post-communist syndrome’ characterised by political passivity and ambivalent democratic values (Klicperová, Feierabend & Hofstetter 1997). This legacy manifests in problematic patterns where pro-democratic citizens remain politically passive while those who are politically mobilised often lack strong democratic commitments – a reversal of patterns found in established democracies. The transition from mandatory military service under communist regimes to professional armies occurred without adequate public discourse about defence responsibilities, leaving citizens psychologically detached from NATO membership despite formal accession. Research demonstrates that post-communist citizens display significant ‘participatory deficits’ and weaker support for democratic values compared to other democratising societies, with the middle class being pro-democratic but passive, while mobilised segments of the population exhibit questionable democratic commitments. There is no reason to expect that this passivity would not extend to the WtF.

Recent advances in identity fusion theory provide crucial insights missing from traditional willingness to fight research. Identity fusion – characterised by porous boundaries between personal and group identity – represents a more powerful predictor of extreme pro-group behaviour than conventional social identification measures (Swann et al. 2012; Gómez et al. 2019). Strongly fused individuals experience ‘identity synergy’ where personal agency channels directly into group-protective behaviours, explaining why attacks on the group are perceived as personal attacks requiring defensive response (Swann Jr, Klein & Gómez 2024). This theoretical framework helps explain why Ukrainian resistance exceeded material predictions – high identity fusion with national values created willingness to fight that transcended economic calculations. Identity fusion emerges from shared transformative experiences and perceived group formidability, suggesting that post-communist countries’ declining willingness to fight may reflect weak identity fusion with democratic institutions rather than purely economic factors (Whitehouse et al. 2014). For the Czech Republic and Slovakia, the absence of shared transformative experiences linking personal identity to democratic defence institutions may explain declining WtF trends even more effectively than economic prosperity.

Contemporary WtF research rarely addresses the impact of sophisticated disinformation campaigns targeting democratic institutions and NATO solidarity. Russian information warfare in the Czech Republic and Slovakia intensified

after 2014, utilising local collaborators and alternative media to spread anti-Western narratives and weaken defence commitments (Rechlik and Mareš 2021; Wenzel et al. 2024). These campaigns exploit existing democratic deficits in post-communist societies, where citizens already exhibit lower institutional trust and civic engagement than established democracies (Howard 2003), especially in Slovakia, which has the weakest Western identity of the whole NATO eastern flank. Pro-Russian messaging amplifies narratives portraying the United States as a greater threat than Russia, despite Russia's invasion of neighbouring Ukraine – a cognitive distortion that directly undermines defence willingness. The effectiveness of these campaigns reflects deeper cultural vulnerabilities rooted in post-communist political socialisation patterns, where critical media literacy and democratic civic education remain underdeveloped. Understanding declining WtF in eastern Europe requires analysing how information warfare exploits post-communist legacies to weaken democratic defence culture, since it strongly complements the natural attitude changes that are consequences of prosperity and peace, which is the current dominant explanation of declining WtF in Western Europe.

The 1990s and 2000s saw several studies that incorporated variables of different sorts that were more or less related to the WVS WtF question. In an article on the decline of nationalisms, which included special attention to Eastern Europe's relatively short post-communist experience, Dogan identified willingness (or reluctance) to fight for one's country in time of war as one of the main indicators of nationalist trends (Dogan 1994). Lagos explored the role of 'willingness to defend democracy' in Latin American countries which, like countries on what is now the eastern flank of Europe, were relatively new democracies (Lagos 1997). Torgler utilised the first three waves of the WVS to explore the relationship between 'willingness to go to war' and variables such as national pride and trust (as well as demographic variables). As with earlier studies, Scandinavian countries expressed far more WtF than countries such as Italy, Germany and Japan (Torgler 2003).

In 2006, Cronberg noted that 'an attack on the EU's borders is considered highly unlikely [and] Russia is seen as a strategic partner, not an enemy', as the context for understanding the 'Nordic divide' between the Scandinavian countries and Finland. Key factors influencing WtF included the role of conscription, a sense of threat and territorial defence (Cronberg 2006). In 2010, the first five waves of the WVS (1985–2005) were included in an analysis of the relationship between various cultural differences and WtF, which identified national pride as a major predictor. Here too, a country's socio-political context and relatively recent experiences of war also played an important role (Díez-Nicolás 2010). Also in 2010, Anderson and Hirsch-Hoefler used the WVS and other datasets to test WtF cross-culturally and found that 'while lower income individuals' willingness to fight is insensitive to the distribution of income in society, richer individuals

are less willing to fight as the distribution of incomes becomes more unequal' (Anderson & Hirsch-Hoefler 2010). A more recent study by Paez incorporated data from both the WVS and the World History Survey (WHS) in order to study the relationship between WtF and social representations of history and cultural values in 40 nations. WtF was found to be positively correlated with low human development and low levels of cultural individualism (Páez et al. 2016).

The World Values Survey (WVS) and European Values Study (EVS) are the only sources that provide consistent, long-term and cross-national data on willingness to fight (WtF) across Europe and much of the world, thanks to their standardised approach and four decades of data collection. However, relying solely on these surveys has drawbacks: Using the same questions everywhere can overlook differences in how people from various cultures interpret ideas like 'fighting for your country', which might skew results, and it's important for researchers to recognise these limits and, where possible, use local or qualitative studies to add depth and context to the big-picture findings (Rutkauskas 2018; Bērziņa & Zupa 2021). We recognise these limitations, but we don't really have much choice. There are no real alternatives to the WVS/EVS for broad and long-term trends. The unique longitudinal architecture of the WVS, spanning four decades across more than 100 countries with standardised questioning on defence attitudes, creates what Norris and others acknowledge as an irreplaceable comparative infrastructure for cross-national values research. For indeed, as the methodological literature confirms, no other survey programme matches the WVS/EVS's comprehensive temporal-spatial coverage for values research (Luijckx et al. 2021).

One of the most theoretically rich, comprehensive and influential analyses of WtF appears in a 2015 article by Inglehart, Puranen and Welzel, who also analysed all five waves of the WVS (Inglehart, Puranen & Welzel 2015). These authors found that willingness to fight for one's own country in the event of war had fallen in 37 of the 41 countries examined. Why the decrease? One answer, which they called the 'Democratic Peace' thesis, attributed the absence of a major war since 1945 to the spread of democracy. What they call the 'Capitalist Peace' thesis, on the other hand, argues that peace is driven by the rise of trade and knowledge economies. Building on Welzel's earlier proposal (Welzel 2013) for an evolutionary theory of moral change driven by 'emancipation' of individuals into a context where they have more opportunities for self-realisation (associated with rising incomes, education and longevity), Inglehart et al. proposed a complementary 'Emancipatory Lifestyle' hypothesis: Rising existential security has rendered peace more desirable to individuals in most parts of the world such that 'readiness to sacrifice one's life gives way to an increasing insistence on living it, and living it the way one chooses' (Inglehart, Puranen & Welzel 2015: 418). In a single authored chapter, Puranen provided additional analyses that bolstered the claim that a main cause of dwindling WtF is people's experience

of better material conditions (including longer life expectancy and access to education and information) that provide them with a sense that threats to life are less relevant than opportunities to thrive (Puranen 2014).

The first six waves of the WVS were included in a cross-country analysis by Anderson et al. of the relationship between WtF, income and inequality. They found that country-level income inequality is negatively correlated with individual WtF, especially among the rich, who may find it more attractive under such conditions to ‘buy themselves out’ of military service (Anderson, Getmansky & Hirsch-Hoefler 2020). This latter study is one of the few to include analysis of the Czech Republic and Slovakia. WtF was low in all of the eastern flank countries, but Slovakia and the Czech Republic were the lowest. Using both multiple waves of the WVS and other datasets, Kim found that individuals in countries with more salient territorial threats involving intangible values were more likely to express WtF for their country (Kim 2020). Several more recent studies have focused on specific countries or regions such as Taiwan, in which national identity and collective action play a significant role (Wang & Eldeberdash 2023), and the Baltics, where factors such as conscription, societal resilience and attitudes toward NATO are important factors (Andžāns et al. 2021). The seventh wave of the WVS played a role in a 2023 article by Reznik that assessed the willingness of Ukrainians to fight for their country on the eve of the military invasion by Russia, and found that WtF was influenced by factors such as pro-Western orientation, regional affiliation and language behaviour (Reznik 2023).

This last paper brings us back more directly to the immediate concern of the current article, the status of the population’s WtF on the eastern flank in response to the war in Ukraine and internal political and cultural shifts. As noted above, our special interest is in the Czech Republic and Slovakia. WtF has not been researched in depth in these two countries. However, as indicated in Table 1, such willingness has clearly decreased over the last decades.

**Table 1: WtF in the Czech Republic and Slovakia over 4 waves of the WVS/EVS**

	WVS 1990–94	WVS 1995–98	EVS 2017	WVS 2022
CZE	66.30%	43.90%	48.5%	34.4%
SK	65.50%	52.40%	38.1%	32.2%

Source: World Value Survey wave 2, World Value Survey wave 3, European Values Study 2017, and World Value Survey wave 7=Haerpfer et al. 2020

What has caused this dramatic decrease? No doubt the factors hypothesised in the research just surveyed contributed, including the change in values and living standard, and the ‘democratic peace’ that came to characterise Eastern Europe as a whole.

Moreover, like many other post-communist societies, citizens of the former Czechoslovakia had a suspicious attitude towards any security-related topics, since the security apparatus of the country – whether police, army, secret service or paramilitary units – was seen by many as an instrument of the oppression used by the government (Ntatzis 2023). Compulsory military service, which every citizen had an experience with directly or indirectly, had a bad reputation as well. It was seen by many as lost years of youth, spent in an environment that relatively openly supported bullying as a method of ‘toughening up’ young men (Tomek 2012: 30–4). These negative memories contributed to the lack of attention (or funds) given to the security apparatus in either country. Sociologically speaking, a career option in the police or in the army has been decreasing in prestige in the last 30 years in comparison with the communist era (pre-1989), which has hindered an influx of talent into these professions (Tuček 2016).

The reputation and public trust in the police and army has increased and stabilised over the years of professionalisation of the civil service over the 2000s and later, but it has never reached the height predating democratic transformation (Ntatzis 2023). Since the Czech Republic and Slovakia joined NATO, their military budgets have decreased and both societies have become more demilitarised, physically and mentally. All of this has damaged the historical military traditions of these countries, harming the natural patriotism and professional pride of the security forces. Without the latter, however, it is hard to maintain high morale and professionalism in the army. This is a significant challenge in times such as the Ukraine war, because it is professionals in the security forces that the population expects to be more willing to sacrifice themselves for society (Kosnáč & Gloss 2022). Our further analyses described and reported below are intended to shed further light on the decrease of WtF in Slovakia and the Czech Republic.

## Material and methodology

Like several of those studies just described, the current research analyses data from the World Values Survey (WVS), in our case Wave 7 (Haerpfer *et al.* 2020). This is the largest wave so far and the first that cooperates with the European Values Survey (EVS), so that it covers more countries than ever. Since 1981, the WVS has explored people’s values and beliefs and how they change over time. This is the longitudinal dataset that confirms that the willingness of Czech and Slovak populations to defend their homeland has declined since the 1990s (Inglehart, Puranen & Welzel 2015). However, we are focusing only on Wave 7. Fieldwork for this survey round occurred from early 2017 to mid-2022. The Slovak and Czech data are quite recent (early 2022).

Above we saw that a wide variety of variables have been hypothesised as influencing willingness to fight for or defend one’s country. These include gender, age,

religiosity, ethnicity, education, employment, national pride, recent historical experience and prevalence of conscription. The WVS presents an opportunity to analyse this data at different levels of analysis – global, regional and local – to better understand trends between nations and unpack with similarities and differences there may be. As suggested above, we ‘zoom in’ on Slovakia and the Czech Republic because of their shared history and cultural traits, as well as their differences.

Given the data of the World Values Survey, the dependent variable we are most interested in – ‘willingness to fight’ (WtF) – is captured in the following question from the WVS, Q151: ‘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?’ The question must be answered ‘yes’ or ‘no’.

The WVS dataset encompasses a total of 350 questions, spanning a wide array of socio-cultural and individual psychological dimensions, collected over several decades from countries across the globe. We hone in on a subset of questions for further investigation via 1) AutoML (Automated Machine Learning) methods to highlight key factors, and 2) theoretically driven hypotheses related to personality theory and the theory of moral foundations to pinpoint the most predictive factors of the willingness to fight. The two main hypotheses we test below are that

H1: *A subset of Big Five personality factors are predictive of willingness to fight (WtF).*

H2: *Moral signatures are predictive of willingness to fight (WtF).*

We focus on these topics here because they provide insights into the attitudes and beliefs most relevant to our research question.

In the ensuing sections, we employ a variety of statistical methods to dissect and interpret the complex web of socio-cultural and psychological determinants associated with the willingness to fight (WtF). Each analytical technique has been chosen to complement the data structure and to unveil the nuanced relationships within. This multipronged approach ensures robustness in our findings and allows for a comprehensive understanding of the underlying factors. Our analyses aim to unravel the intricacies of WtF by leveraging the rich and diverse data provided by the seventh wave of the World Values Survey.

In Analysis 1, we utilise AutoML in order to create an optimal model for understanding what best predicts the answers of people on Q151 on their WtF. Here, we set up our analysis as a classification task, rather than hypothesis testing, because we are most interested in whether their answer to the question is ‘yes’ or ‘no’. We begin by using all data in Wave 7 of the WVS. We then follow this by running specific models on subsets of the data from the Czech Republic and Slovakia separately.

In Analysis 2, we wanted to zoom in on the Czech Republic and Slovakia as specific countries, as both of them are unique in having included a measure of personality, using the IPIP-20 scale to capture a measure from the Big Five personality factors. This allows us to test H1 mentioned above: that *a subset of Big Five personality factors are predictive of willingness to fight (WtF)*. Here, since we have a predefined set of hypothesised variables, we analyse the data as a logistic regression, where their answer to the WtF question is the independent variable, and the dependent variables are their calculated measures of each of the Big Five personality traits: openness, conscientiousness, extraversion, agreeableness and neuroticism.

Lastly, in Analysis 3, we dive more deeply into the Slovakia data, as that data offers an additional opportunity for further analysis because that country was the only one in which the Wave 7 data for the WVS included the moral foundations questionnaire. This provides us the ability to test H2 mentioned above: that *moral signatures are predictive of willingness to fight (WtF)*. As in the previous analysis, we use participants' answers to Q151 as the independent variable in a logistic regression, while utilising the calculated measures of the moral foundations theory as independent variables in the analysis.

## Results and discussion

In this section, we present the results of each of the three analyses followed by a brief discussion. In the conclusion, we will return to a broader discussion of the relation between the studies and the limitations and implications of this research.

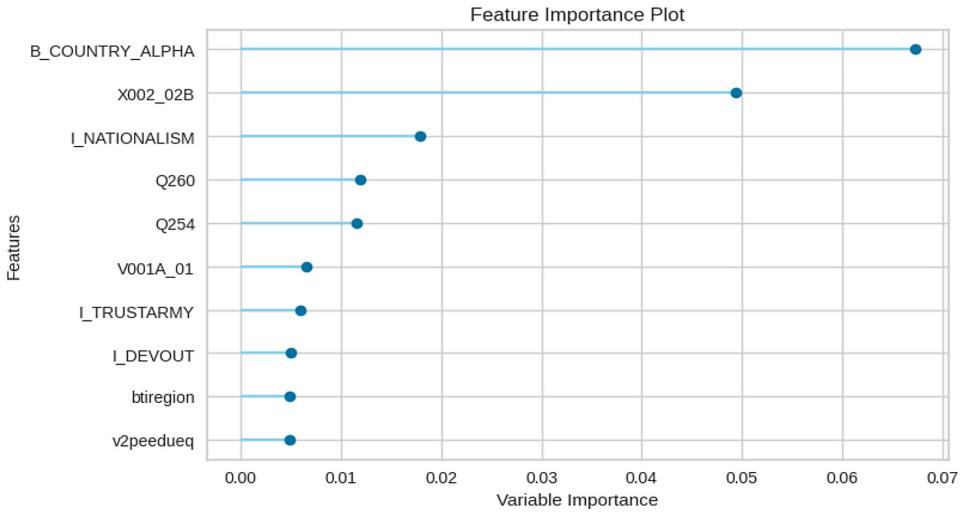
### ***Analysis 1 – WVS features of 'Willingness to Fight' globally***

#### *AutoML of global data*

The key results of the first analysis are displayed in Figure 1, which plots the importance of various features in the seventh wave of the WVS for all countries.

Our findings displayed in Figure 1 highlight the paramount importance of the country as a predictor of WtF, indicating a significant role of cultural context in shaping willingness to engage in national defence. This underscores the need for a deeper exploration of cultural factors, which we address in subsequent analyses. Another notable predictor is nationalism, along with trust in the military. Interestingly, trust in the military could influence willingness to enlist, whereas distrust might lead to involvement in paramilitary groups, as discussed in (Kosnáč et al. 2023).

**Figure 1: Feature importance plot for WVS wave 7 (all countries)**



Source: Compiled by authors based on Haerpfer et al 2022a

Codes for Figure 1:

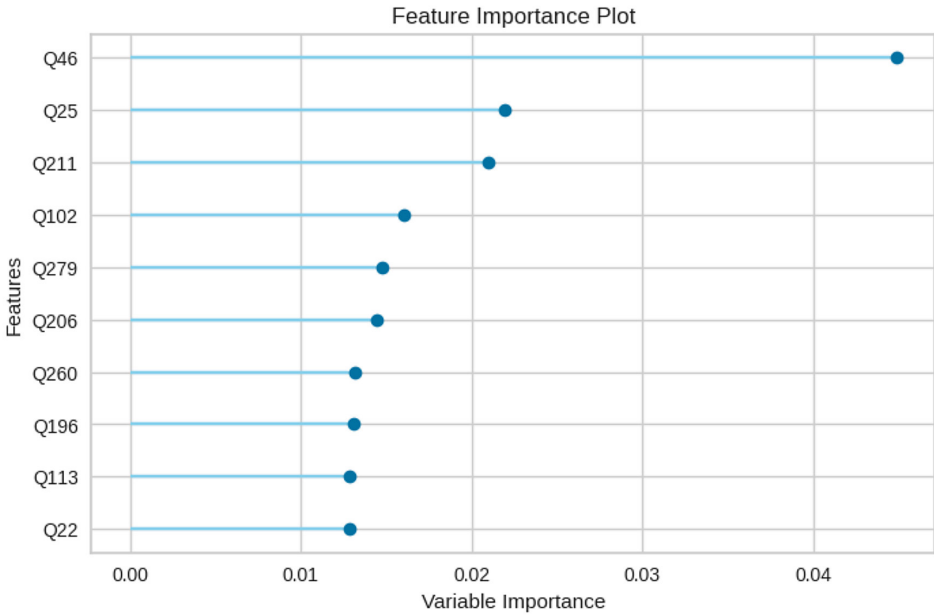
- B\_COUNTRY\_ALPHA** – The country from which the data was collected
- X002\_02B** – Respondents Country of Birth
- I\_NATIONALISM** – Welzel defiance – 2: Inverse national pride
- Q260** – Sex
- Q254** – National pride
- V001A\_01** – Father’s country of birth
- I\_TRUSTARMY** – Welzel scepticism – 1: Inverse trust in army
- I\_DEVOUT** – Welzel defiance – 3: Inverse devoutness
- Btiregion** – BTI Region (7 categories) [Bertelsmann Stiftung, 2018]
- V2peedueq** – Educational Quality

Religious devotion also emerged as a key feature, alongside regional origins and country of birth (x002), which is expected to correlate with the test location. The respondent’s paternal birthplace (V001) within the same country is also noted but does not present as particularly compelling, as it is highly likely that any one participant’s birthplace is the same as their father’s.

### *AutoML for feature selection in Slovakia and Czech Republic*

We also utilised AutoML to create best fit classification models for the Czech Republic and Slovakia. Figure 2 shows feature importance (related to WtF) in the Czech Republic.

**Figure 2: Feature importance plot for WVS wave 7 (Czech Republic)**



Source: Compiled by authors based on Haerper et al. 2022b

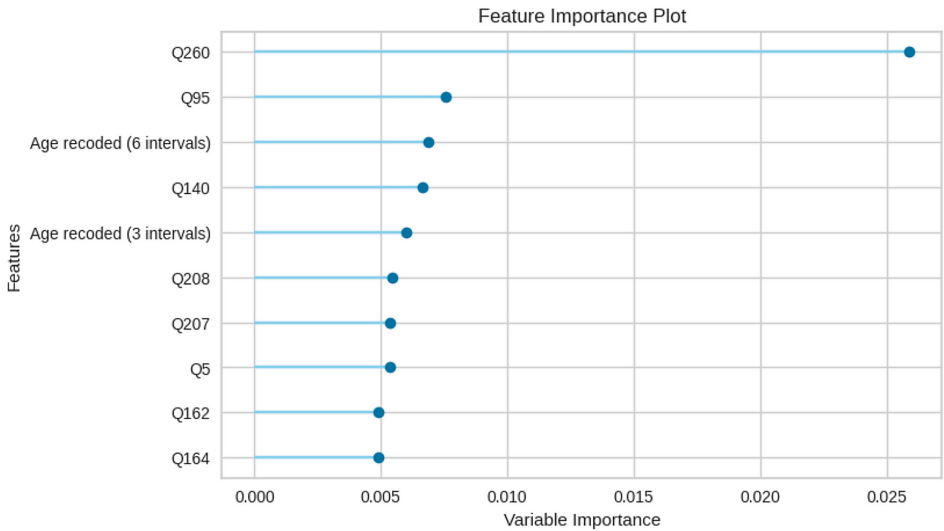
Codes for Figure 2:

- Q46** – Feeling of happiness
- Q25** – Neighbours: Unmarried couples living together
- Q211** – Political action: Attending lawful/peaceful demonstrations
- Q102** – Active/Inactive membership: consumer organisation
- Q279** – Employment status
- Q206** – Information source: Internet
- Q260** – Sex
- Q196** – Government has the right: Keep people under video surveillance in public areas
- Q113** – Involved in corruption: State authorities
- Q22** – Neighbours: Homosexuals

In examining the predictors of willingness to fight within the Czech Republic using data from the WVS Wave 7, the primary determinant appears to be happiness (Q46). This finding is particularly noteworthy given the stark contrast to the next most influential factors, which include preferences regarding living proximity to unmarried couples and consumer organisation membership. Employment status (Q279) also emerges as a significant predictor, alongside information sourcing, particularly from the internet (Q206), and the respondent's gender. Additional variables of import include attitudes towards government surveillance in public spaces, trust in state authorities and sentiments towards having homosexual neighbours. This array of factors underscores a multifaceted profile of influences, with happiness at the forefront.

The same method was used in Slovakia to discover the feature importance related to WtF in that country (see Figure 3).

**Figure 3: Feature importance plot for WVS wave 7 (Slovakia)**



Source: Compiled by authors based on Haerpfer et al. 2022b

Codes for Figure 3:

**Q260** – Sex

**Q95** – Active/Inactive membership: Sport or recreational organisation, football/baseball/rugby team

**Age recoded (6 intervals)** – 16–24yo, 25–34yo, 35–44yo, 45–54yo, 55–64yo, 65+yo

**Q140** – Things done for reasons of security: Preferred not to go out at night

**Age recoded (3 intervals)** – up to 29yo, 30–49yo, 50+yo

**Q208** – Information source: Talk with friends or colleagues

**Q207** – Information source: Social media (Facebook, Twitter, etc.)

**Q5** – Important in life: Work

**Q162** – It is not important for me to know about science in my daily life

**Q164** – Importance of God

Notably, in Slovakia gender emerges as a significant factor, along with engagement in recreational organisations and a subjective sense of safety at night. Information sources, such as friends, colleagues and social media, also play a substantial role. The data underscore the value placed on work and the relative indifference towards science, contrasting with a pronounced concern for religious beliefs.

It is also valuable to discuss the findings from both the Czech Republic and Slovakia in concert, as their similarities are as important as their differences, especially since they were the same country for the majority of the 20<sup>th</sup> century and separated only 30 years ago.

Our observations on feature importance suggest that variables such as occupation and gender (Q260) are significant. Given that a significant majority of wartime casualties are male, the gender disparity in willingness to fight is an expected but not particularly surprising finding. Across both the Czech Re-

public and Slovakia, one significant factor in both areas was where information is sourced, with a key focus being either from personal contacts in the Czech Republic or via social media in Slovakia. In addition, the avoidance of certain types of neighbours (e.g. homosexuals) may indicate underlying xenophobic attitudes, though this is not conclusively consistent across the data. It's noteworthy that the Czech Republic may have more diverse neighbour profiles compared to Slovakia, potentially influencing this observation.

The patterned findings regarding age, gender and information sources required additional analyses. While the AutoML method is a powerful method of analysis, particularly for exploratory analyses, knowing that a variable has an important relationship is not always theoretically rich, particularly when directionality and significance of the relationship should be taken into account. This is a common shortcoming of many ML models, but in our case can be easily overcome with additional statistical analyses.

### *Additional statistical tests*

First, we begin by running statistical tests for age in the Czech Republic. We found a significant correlation between age and WtF ( $r = 0.17, p < .001$ ), suggesting that the older the respondent, the less their WtF. In fact, when using a between groups analysis, a  $X^2$  test revealed a significant association between age groups and willingness to fight in the Czech Republic ( $X^2 = 11.306, p = .001$ ). This indicates that those born before the end of conscription were more willing to fight in the Czech Data. See Table 2.

**Table 2: Importance of age for WtF in Czech Republic**

	Mean	Median	Std	Count
Born after 1986	1.537500	2.0	0.500157	160
Born before 1986	1.678954	2.0	0.467156	841

Source: Compiled by authors based on Haerpfer et al. 2022b

Next, we ran a  $X^2$  test to test for a relationship between sex and WtF in the Czech data. Here we found a significant relationship ( $X^2 = 57.24, P < .001, Df = 1$ ). A crosstab table is shown below in Table 3.

**Table 3: Importance of sex for WtF in Czech Republic**

	WtF Yes	WtF No
Male	252	257
Female	158	425

Source: Compiled by authors based on Haerpfer et al. 2022b

This analysis suggests that while men are split almost 50/50 in their WtF, women are far more likely to respond ‘no’ in regards to WtF.

Lastly, we ran a logistic regression to see if there is a significant relationship between the information source and WtF and we do in fact find a significant relationship (Figure 4).

**Figure 4: Information source and WtF for Czech Republic**

Logit Regression Results						
Dep. Variable:	Q151	No. Observations:		1087		
Model:	Logit	Df Residuals:		1085		
Method:	MLE	Df Model:		1		
Date:	Wed, 20 Dec 2023	Pseudo R-squ.:		0.01965		
Time:	19:11:38	Log-Likelihood:		-706.17		
converged:	True	LL-Null:		-720.32		
Covariance Type:	nonrobust	LLR p-value:		1.037e-07		
		coef	std err	z	P> z	[0.025 0.975]
Intercept		0.0345	0.108	0.319	0.749	-0.177 0.247
Politics_InfoSource_Internet		0.2520	0.050	5.081	0.000	0.155 0.349

Source: Compiled by authors based on Haerpfer et al. 2022b

To check for the significance and directionality of age in our Slovakia sample, we ran a correlation to check for significance and directionality. We found a reasonably strong correlation ( $r=0.21$ ,  $p<.001$ ) between age and WtF, suggesting that the older one is, the less their WtF.

Similar to the analysis of the Czech Republic, we also wanted to see if conscription may be a driver in the relationships on age. A  $X^2$  test revealed a significant association between age groups and willingness to fight in Slovakia ( $X^2 = 7.76$ ,  $p = .005$ ), indicating those born before the end of conscription were more willing to fight. See Table 4 below.

**Table 4: Importance of age for WtF in Slovakia**

	Mean	Median	Std	Count
Born after 1987	1.549618	2.0	0.498484	262
Born before 1987	1.647768	2.0	0.477954	829

Source: Compiled by authors based on Haerpfer et al. 2022b

In addition, we wanted to see if gender was significantly related to WtF in Slovakia as well, particularly when it comes to the general observation that men

tend to be the perpetrators and victims of wartime combat. In running a X2 analysis to test for a significant relationship between gender and WtF we do in fact find a significant relationship ( $X^2 = 61.98, p < .001, Df = 1$ ). A crosstab table is shown below (Table 5).

**Table 5: Importance of sex for WtF in Slovakia**

	WtF Yes	WtF No
Male	226	253
Female	125	409

Source: Compiled by authors based on Haerpfer et al. 2022b

This analysis, similar to that of the Czech Republic, suggests that while Slovak men are split almost 50/50 in their WtF, Slovak women are far more likely to respond ‘no’ in regards to WtF. It is well known that almost all violence is committed by young males 18–25 (Peterson & Wrangham 1997; Ormhaug, Meier & Hernes 2009). But does this apply to the state-sanctioned violence involved in war? Our research confirms the idea that it is indeed younger men who are more WtF for their countries.

Lastly, we wanted to check for their ratings of WtF and their response to the information source of social media in Slovakia. By running a logistic regression between their answers regarding WtF and the importance of social media as an information source, we did find a significant model.

**Figure 5: Information source and WtF for Slovakia**

Logit Regression Results						
Dep. Variable:	Q151	No. Observations:	1009			
Model:	Logit	Df Residuals:	1007			
Method:	MLE	Df Model:	1			
Date:	Wed, 20 Dec 2023	Pseudo R-squ.:	0.01785			
Time:	19:11:59	Log-Likelihood:	-639.68			
converged:	True	LL-Null:	-651.30			
Covariance Type:	nonrobust	LLR p-value:	1.423e-06			
		coef	std err	z	P> z	[0.025 0.975]
Intercept		0.1443	0.120	1.206	0.228	-0.090 0.379
Politics_InfoSource_SocialMedia		0.1848	0.039	4.746	0.000	0.108 0.261

Source: Compiled by authors based on Haerpfer et al. 2022b

The observed positive relationship suggests that the more frequently Slovaks use social media, the less willing to fight they are.

## Analysis 2 – features and factors in ‘Willingness to Fight’ in Czech Republic and Slovakia

In the following analyses, we focused only on the Czech Republic and Slovakia with special attention on the features and factors (especially psychological) that are related to willingness to fight to defend one’s country. The Big Five personality scale, also known as the OCEAN model, categorises personality traits into five broad dimensions: Openness (creativity and willingness to explore new experiences), Conscientiousness (diligence and reliability), Extraversion (sociability and assertiveness), Agreeableness (compassion and cooperativeness) and Neuroticism (tendency towards emotional instability and anxiety). This model is widely used in psychology to understand human behaviour and personality.

In the context of understanding one’s willingness to fight for their country, these traits can offer significant insights. For example, high Extraversion might correlate with a greater propensity for social engagement and leadership roles, potentially influencing one’s inclination to participate actively in national defence. High Agreeableness could indicate a stronger sense of empathy and community, possibly motivating individuals to protect their country. Conversely, high Neuroticism might relate to a higher sensitivity to threats, possibly either increasing or decreasing willingness to fight depending on individual coping mechanisms and trust in institutions. Conscientiousness may be associated with a sense of duty and responsibility, influencing commitment to national causes. Openness could impact one’s perspective on global and national issues, thereby shaping their stance on defence and conflict. Thus, the Big Five traits provide a multifaceted framework to analyse the complex motivations behind one’s willingness to engage in national defence.

Figure 6: IP IP Czech Republic

Logit Regression Results						
Dep. Variable:	Q151	No. Observations:	1092			
Model:	Logit	Df Residuals:	1086			
Method:	MLE	Df Model:	5			
Date:	Mon, 11 Dec 2023	Pseudo R-squ.:	0.02874			
Time:	22:38:19	Log-Likelihood:	-701.92			
converged:	True	LL-Null:	-722.68			
Covariance Type:	nonrobust	LLR p-value:	7.323e-08			
		coef	std err	z	P> z	[0.025 0.975]
Intercept		0.3203	0.660	0.485	0.627	-0.973 1.614
Big_5_Openness		-0.1837	0.101	-1.827	0.068	-0.381 0.013
Big_5_Conscientiousness		0.2681	0.100	2.677	0.007	0.072 0.464
Big_5_Extraversion		-0.2422	0.087	-2.788	0.005	-0.412 -0.072
Big_5_Agreeableness		-0.0518	0.097	-0.537	0.591	-0.241 0.137
Big_5_Neuroticism		0.3185	0.110	2.903	0.004	0.103 0.533

Source: Compiled by authors based on Haerpfer et al. 2022b and Moravec, Kosnac and Gloss 2022

To measure personality, as stated above, we relied on the IPIP-20 scale, a short but well validated measure of personality. Figure 6 shows the personality summary for the Czech Republic.

The results indicated that Agreeableness was not a significant predictor of WtF in the Czech Republic. Neuroticism showed a positive relationship, which makes sense because Czechs trust their institutions (more than Slovaks). Extraversion displayed a negative association with the willingness to fight. Conscientiousness demonstrated a positive correlation, suggesting a potential influence on the decision to engage in national defence. Openness, conversely, showed a negative correlation, though this was not statistically significant, with a p-value of 0.068, slightly above the conventional threshold for significance.

Figure 7: IP IP Slovakia

Logit Regression Results							
Dep. Variable:	Q151	No. Observations:		1013			
Model:	Logit	Df Residuals:		1007			
Method:	MLE	Df Model:		5			
Date:	Mon, 11 Dec 2023	Pseudo R-squ.:		0.04782			
Time:	22:37:46	Log-Likelihood:		-622.38			
converged:	True	LL-Null:		-653.64			
Covariance Type: nonrobust		LLR p-value:		3.666e-12			
	coef	std err	z	P> z	[0.025	0.975]	
Intercept	0.0177	0.678	0.026	0.979	-1.311	1.346	
Big_5_Openness	-0.4201	0.106	-3.963	0.000	-0.628	-0.212	
Big_5_Conscientiousness	0.4729	0.116	4.086	0.000	0.246	0.700	
Big_5_Extraversion	-0.3653	0.096	-3.810	0.000	-0.553	-0.177	
Big_5_Agreeableness	0.1502	0.119	1.259	0.208	-0.084	0.384	
Big_5_Neuroticism	0.3490	0.122	2.865	0.004	0.110	0.588	

Source: Compiled by authors based on Haerper et al. 2022b and Kosnáč, Gloss and Podolinska 2022

Figure 7 shows the results for the logit regression personality in Slovakia. The Big Five personality traits were examined as predictors. Openness showed a significant negative association (coef = -0.4201,  $p < 0.001$ ), indicating that individuals scoring lower in Openness are more inclined to express WtF for their country. Conscientiousness presented a positive relationship (coef = 0.4729,  $p < 0.001$ ), suggesting that higher levels of Conscientiousness may increase the propensity to engage in national defence.

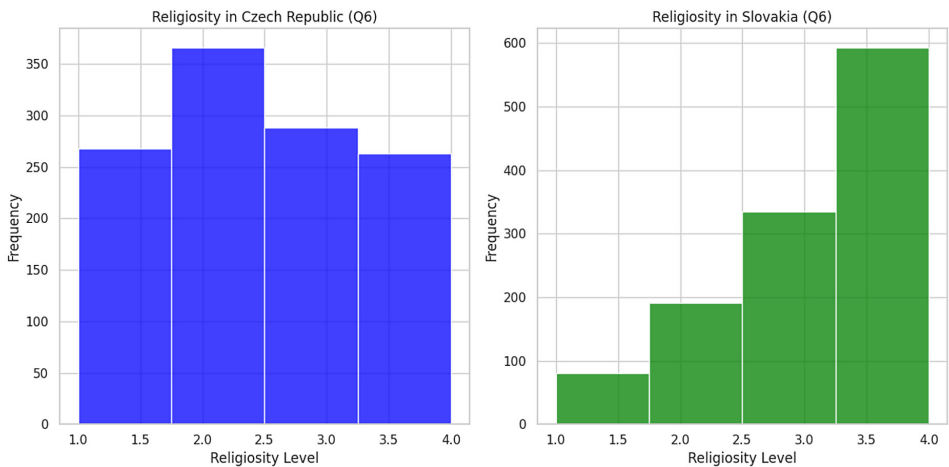
Extraversion was negatively correlated with the willingness to fight (coef = -0.3653,  $p < 0.001$ ), suggesting that less extraverted individuals might be more likely to express a WtF for their country. Agreeableness showed a positive but non-significant association (coef = 0.1502,  $p = 0.209$ ). Neuroticism also showed a positive correlation (coef = 0.3490,  $p = 0.004$ ), indicating that higher levels

of Neuroticism might be related to a greater WtF. These results provide an intriguing insight into the personality profiles of individuals in Slovakia and their stated willingness to engage in national defence, with significant roles for Openness, Conscientiousness, Extraversion and Neuroticism, while Agreeableness did not prove to be a significant factor.

In some of our previous research, we found that individuals who endorse extremist groups tend to be less agreeable, less neurotic and more open than non-extremists. Our results regarding the responses to the personality scale revealed that, generally, respondents were high in Agreeableness, but low in Neuroticism. Interviews with a Slovakian paramilitary group found that in this population Neuroticism was significantly lower than all other personality traits and that Openness was significantly higher than Extraversion. We also found that the paramilitary profile uncovered had Agreeableness as the highest scoring personality trait, followed by Openness (Kosnáč et al. 2023).

It is well known that variables such as religiosity or the importance of God play an important role in many global trends today. This, along with the finding reported above that aspects of religious beliefs appear to be affecting WtF prompted us to engage in a further exploration of the significant differences in WtF between Slovakia and the Czech Republic (see Figure 8).

**Figure 8: Religiosity in the Czech Republic and Slovakia**



Source: Compiled by authors based on Haerpfer et al. 2022b

In a comparative study of religiosity between the Czech Republic and Slovakia, a Shapiro-Wilk test was administered to assess the normality of responses. The test indicated a significant deviation from normal distribution for both the Czech Republic ( $W=0.869$ ,  $p<.001$ ) and Slovakia ( $W=0.783$ ,  $p<.001$ ). Given the non-normal distribution of data, a Mann-Whitney U test was employed to compare

religiosity levels between the two countries. The results revealed a statistically significant difference ( $U=337677.5$ ,  $p<.001$ ), suggesting notable disparities in religious attitudes or practices between the Czech Republic (mean response on religiosity question = 2.46, std = 1.06) and Slovakia (mean = 3.2, std = 0.94).

These issues can potentially be elucidated by adding some additional perspectives. For example, the Czech Republic's higher trust in institutions than in politicians can be interpreted through the lens of their historical, political and social evolution. This dichotomy likely reflects a public perception that institutions – representing systemic, bureaucratic and legal frameworks – are more stable and trustworthy compared to individual politicians, who may be seen as more susceptible to corruption or personal agendas. Such a distinction could influence the WtF for the country, as citizens may differentiate between defending the nation's established systems and values versus aligning with transient political leaders.

Similarly, understanding patterns of conservatism in the two countries can help add context. WtF aligns with traditional conservative values, which often emphasise nationalism, loyalty to one's country and a propensity to uphold and protect cultural and national heritage, aligning with the moral foundations of ingroup loyalty and purity. Along similar reasoning, it could be posited that less conservative populations, like those in the Czech Republic, might prioritise individualistic values over collective nationalistic endeavours, potentially reducing their WtF. However, if this were the case, it could be expected that Czechs' levels of openness (measuring how much individuals might seek unique experiences and hold personal beliefs that diverge from traditional or collective norms) would be positively correlated with WtF, or agreeableness (measuring one's tendency to be part of a larger collective and align with others) would be negatively correlated with WtF. However, in the Czech Republic, neither of these variables were significantly correlated; so any relative values of Czech measurements on these variables relative to Slovakia do not – at least in this analysis – have any bearing on WtF.

### ***Analysis 3 – moral foundations of 'Willingness to Fight' in Slovakia***

In this analysis we drill down and focus on a specific country – Slovakia. We selected this country both because it is our area of expertise and because we have data about moral foundations in the country that are not in any of the other WVS data for other countries.

To understand this requires a brief explanation of moral foundation theory (MFT). In its classic formulation, MFT hypothesises five evolutionarily grounded intuitive 'foundations' for morality (Haidt 2007; Graham, Haidt & Nosek 2009). The three labelled ingroup/loyalty, authority/respect and purity/sanctity are commonly referred to as 'binding' foundations because they are theorised to fa-

cilitate the cohesion of social coalitions. The other two (fairness/reciprocity and harm/care) are commonly referred to as ‘individualizing’ foundations and appear connected to the emphasis within the liberal philosophical tradition on the welfare and rights of individuals. The moral foundations questionnaire (MFQ) has been extensively utilised to show that while liberals tend to rely primarily on individualising foundations, conservatives are more likely to rely on all five foundations. This reveals various combinations of preferred intuitive foundations or ‘moral signatures’ (Haidt, Graham & Joseph 2009). In *The Righteous Mind*, Haidt added liberty, which we include in our analysis here (Haidt 2013).

In our moral foundations analysis within the Slovak context, we investigated the predictive power of various moral foundations on WtF for one’s country, as measured by responses to Q151 in the World Values Survey. The logistic regression analysis, based on 1013 observations, revealed that moral foundations such as Authority (MFQ\_AUTHORITY), Harm (MFQ\_HARM) and Fairness (MFQ\_FAIRNESS) were not statistically significant predictors of WtF. This aligns with Slovakia’s noted low trust in political authority, suggesting a complex relationship between institutional trust and combat readiness.

In contrast, Ingroup loyalty (MFQ\_INGROUP) displayed a significant negative effect (coef = -0.5126,  $p < 0.001$ ), which is contrary to expectations, as it indicates that a stronger emphasis on ingroup loyalty correlates with a reduced WtF. Purity (MFQ\_PURITY) and Liberty (MFQ\_LIBERTY) yielded positive but weak coefficients, suggesting that these moral dimensions, albeit significant (purity: coef = 0.3560,  $p < 0.01$ ; liberty: coef = 0.2642,  $p < 0.05$ ), play a modest role in influencing the decision to engage in national defence. Figure 9 displays our results for moral foundations in Slovakia as related to WtF.

**Figure 9: Moral foundations in WVS wave 7 (Slovakia)**

Logit Regression Results					
Dep. Variable:	Q151	No. Observations:		1013	
Model:	Logit	Df Residuals:		1006	
Method:	MLE	Df Model:		6	
Date:	Mon, 11 Dec 2023	Pseudo R-squ.:		0.01709	
Time:	22:37:16	Log-Likelihood:		-642.47	
converged:	True	LL-Null:		-653.64	
Covariance Type:	nonrobust	LLR p-value:		0.001050	
	coef	std err	z	P> z	[0.025 0.975]
Intercept	0.3694	0.493	0.750	0.453	-0.596 1.335
MFQ_AUTHORITY	0.2298	0.152	1.510	0.131	-0.068 0.528
MFQ_HARM	-0.0948	0.156	-0.608	0.543	-0.400 0.211
MFQ_FAIRNESS	-0.1602	0.170	-0.943	0.346	-0.493 0.173
MFQ_INGROUP	-0.5126	0.161	-3.188	0.001	-0.828 -0.197
MFQ_PURITY	0.3560	0.133	2.682	0.007	0.096 0.616
MFQ_LIBERTY	0.2642	0.107	2.478	0.013	0.055 0.473

Source: Compiled by authors based on Haerpffer et al. 2022b and Kosnáč, Gloss and Podolinska 2022

These findings suggest a nuanced moral landscape in Slovakia, where traditional conservative predictors such as Authority do not follow the expected pattern. This might be reflective of a unique Slovak identity that is not strongly tied to institutional authority, and a propensity for anti-systemic behaviour. It raises the possibility of a bimodal distribution, where individuals may be inclined to fight against or independent of traditional military structures, as exemplified by groups like Slovenski Branci. This complexity in moral underpinnings calls for further exploration to fully understand the motivational drivers behind the willingness to fight in Slovakia.

Individuals in society with ‘binding’ evolutionary moral foundations (measured by MFQ) typically are more willing to protect their communities and to make larger sacrifices for society. It is in the interest of the state to harness this positive communal energy and direct it in a prosocial manner, or individuals with such predispositions may start to seek alternatives that may eventually become problematic in the sense of social cohesion, or even national security. This is a situation documented in the emergence of paramilitary organisations in Slovakia (Kriglerová, Chudžíková & Kadlečíková 2017). This situation may be reinforced in an environment of low trust in state authorities, as is typical for Slovakia (Kosnáč & Gloss 2023, 13–15), which reinforces anti-establishment and anti-system sentiments and strengthens impulses for different groups in a society to create or seek alternatives to the state system, as we can see lately in the emergence of alternative currencies (the rise of cryptocurrency alternatives), alternative education, alternative lifestyles and in more problematic ways also alternative security (paramilitary organisations not affiliated with the state).

## Conclusion

In this article, we have presented a comprehensive analysis of the factors influencing an individual’s willingness to fight for their country, leveraging data from the World Values Survey with a particular focus on the Czech Republic and Slovakia. Utilising Automated Machine Learning (AutoML), we identified that within the Big Five personality traits, Conscientiousness and Neuroticism have a positive association, while Extraversion and Openness are negatively linked to the willingness to engage in national defence, with Openness’s effect being statistically insignificant. Our moral foundations analysis, specific to Slovakia, highlighted that Authority, Harm and Fairness are not significant predictors, whereas Purity and Liberty are positively correlated and Ingroup loyalty surprisingly inversely so. These findings are situated in the context of Slovakia’s low trust in traditional authority, suggesting a propensity for anti-systemic and non-traditional forms of defence engagement. The results from the Czech Republic underscore similar themes but also emphasise the role of cultural differences and the distinct sociopolitical landscape in shaping

these predispositions. The study elucidates the intricate relationship between personality, moral convictions and cultural context, challenging conventional paradigms and revealing a complex spectrum of motivations behind the willingness to fight for one's country.

A limitation shared by other survey analyses is vagueness of exactly what it means to 'fight for' or 'defend' one's country. Does it mean citizens' willingness to respond to an immediate threat from another country? Does fighting or defending include not just military or violent resistance but other forms of participation in defence (supporting military efforts indirectly, logistical support, hacking) or even acts of nonviolent critique? What level of intensity or involvement qualifies as fighting or defending? Another challenge is that defending or fighting will mean something different in various cultural contexts, both in terms of the emotional valence of words translated in the questions but also the value or meaning of defending or fighting. Finally, these findings would be strengthened if we compared additional countries and if other countries also gathered information about moral foundations in their versions of the WVS.

This analysis provides valuable insights into the psychological and moral underpinnings of national defence willingness, a subject of profound significance in understanding civic engagement and military participation across different cultures. By illuminating the nuanced interplay between individual personality traits, moral foundations and cultural contexts, our study offers a granular perspective on how citizens relate to the concept of fighting for their country. This is particularly relevant in an era where conventional warfare is augmented by cyber threats and ideological conflicts that transcend national boundaries. As we note below, our findings have practical implications for policy formulation, military recruitment strategies and the development of national unity campaigns, catering to the diverse motivational drivers of citizens. Moreover, these findings can inform cross-cultural communication strategies, contribute insights to the refinement of global conflict resolution approaches and aid in predicting societal responses to national crises. Ultimately, this research contributes to the broader discourse on how individual differences shape collective actions, which is pivotal for policymakers, defence organisations and social scientists aiming to foster cohesive and resilient societies in a rapidly evolving global landscape.

WVS offers a powerful analytical tool for the EU and NATO eastern flank countries and can aid their defence planners in understanding the basic attitudes of the population towards the defence of their countries. As the findings in this paper suggest, the main difference in WtF and defending one's country is mostly cultural. Understanding sacred values, collective identities and sources of self-identification with one's country is the key to understanding the reasons for this willingness and should be handled on the country-level. At the same time, the defence architecture of most European countries, and certainly of the

Czech Republic and Slovakia, similar to other smaller countries in the European eastern flank, such as the Baltics, is based on collective defence (known as Article 5 of the NATO Treaty). It is a key strategic need to understand not only one's WtF in one's own country, but also the willingness of one's allies, since the strategic doctrines of these countries rely on allies. The need may be especially important for the new eastern flank members joining collective defence, such as Finland and Sweden. That creates a need for a common survey on the EU/NATO level. It is not enough to build military interoperability – paying attention to willingness of populations of different countries sharing the same defence responsibilities should be a new norm as well – since the chain is only as strong as its weakest link.

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