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Zohar, Gabriel; Domènech-Abella, Joan; De Backer, Free; Lombaerts, Koen

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RESEARCH ARTICLE



The relationship between level of education and household income in the justification of political violence in the EU. the moderating effect of poverty at the country level

Gabriel Zohar ^a, Joan Domènech-Abella ^{b,c,d}, Free De Backer ^e and Koen Lombaerts ^f

^aDepartment of Educational Sciences, Vrije Universiteit Brussel, Brussels, Belgium; ^bDepartment of Sociology, Universitat de Barcelona, Barcelona, Spain; ^cDepartment of Sociology, Universitat de Barcelona, Barcelona, Spain; ^dCentro de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Instituto de Salud Carlos III, Madrid, Spain; ^eDepartment of Educational Sciences, Vrije Universiteit Brussel (VUB), Brussels, Belgium; ^fDepartment of Educational Sciences, Vrije Universiteit Brussel (VUB), Brussels, Belgium

ABSTRACT

Several studies show that political violence justification (PVJ) is associated with unfavourable social and economic characteristics such as poor education, low income, and poverty at the national level. However, the mechanisms by which these factors interact remain unclear. This study aims to find out whether poverty at the country level (*contextual poverty*) moderates the relationship between individuals' *educational level* and *household income*, and PVJ in the European Union (EU).

We perform an analysis using a dataset of 15.347 individuals from twelve EU countries who participated in the European Values Survey, 2017. Logistic regressions models with interaction terms were used to analyze factors related to PVJ. Our findings are twofold.

First, we find no evidence of *educational level* and PVJ's relationship in countries with medium levels of *contextual poverty*. In contrast, in countries with low levels of *contextual poverty*, individuals with medium *educational level* were associated with higher PVJ. Second, individuals living in countries with lower levels of *contextual poverty* and higher *household income* were associated with higher PVJ.

We conclude that more individuals tend to justify political violence in countries with lower *contextual poverty* levels—individuals with medium *educational level* and higher *household income*. To our knowledge, this is the first study to find evidence that education and socioeconomic status may amplify PVJ in the EU.

KEYWORDS

Education; europe; income; political-violence; poverty

CONTACT Gabriel Zohar gabriel.zohar@yahoo.com Ph.D. Researcher at Department of Educational Sciences, Vrije Universiteit Brussel. Pleinlaan 2, 1050 Brussels, Brussels, Belgium

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Introduction

Research on violence has widely established that violence (as a noun) has mainly a moral dimension, requiring moral legitimization, which distinguishes it from aggression (Bufacchi 2007; Workman et al. 2020). So political violence combines the moral characteristic of violence with the need to achieve political objectives (Sousa 2013), making it the product and manifestation of a political will (Alimi et al. 2016). It can develop through multiple manifestations, such as violent extremism (Crone 2016), terrorism (Della Porta and LaFree 2012), civil war, guerrillas, insurgency, revolution, or riots, and are distinguished by their objectives, goals, and organizational structure (Bosi et al. 2014, 1). These manifestations are considered forms of political violence (Alimi et al. 2016; Findley and Young 2012) because they use violence as a form of contention to balance power relations when they are at stake (Alimi et al. 2016; Bufacchi 2007), hence their instrumental character (Arendt 1970).

The aim of this research is not to delve into the normative character of political violence, but to measure its justification as a sign of possible feelings of discontent in power relations in the EU. In this study, political violence is considered as any use of violence as a means of contention within power struggles, to achieve political goals.

The paradox of violence and education

The literature on political violence and education generally assumes that education reduces the likelihood of political violence. One of the frequently used arguments is the evidence that education can foster some attitudes—such as tolerance (Van Driel et al. 2016) and democratic perspective (Glaeser et al. 2007)—and therefore reduce the likelihood of a wide range of conflicts and violations against others. For this reason, policy-makers and researchers suggest that increasing access to education will reduce the likelihood of political violence.

However, these arguments are questioned by evidence which shows a more complex story, although there is proof of the effect of education in the relationship between inequalities [socioeconomic, political, and demographic] and political violence (Brockhoff et al. 2015; Nepal et al. 2011). The effect of education, under certain circumstances, seems to reinforce political violence (Lange and Dawson 2010) because education can serve as an empowering tool, which individuals may or may not use, to challenge authority and the status quo (Friedman et al. 2016).

There are three central positions on the effects of education in terms of PVJ. The first position proposes that there is an inverse link between the level of education of individuals and PVJ. Higher levels of education result in lower PVJ (Frindte et al. 1996; Hegre et al. 2013; Moskalenko and McCauley 2009; Østby 2016; Zhirkov et al. 2014). The main argument is that inequalities between individuals in education increase the risk of political violence due to individuals' lack of opportunities. (Bartusevičius 2014; Nepal et al. 2011; Østby 2008; 2016; 2019). Therefore, higher educated individuals have a lower risk of PVJ (Brockhoff et al. 2015).

The second—and opposite—view to the first suggests a direct relationship between education and PVJ, particularly terrorism and violent extremism (Bhatia and Ghanem 2017; Berrebi 2007; Davies 2009; Gambetta and Hertog 2016; Krueger and Malekova

2003; Lafree et al. 2018; Lee 2011; Perliger et al. 2016; Pyrooz et al. 2018; Verwimp 2016). They argued that PVJ could result from unfulfilled expectations, such as the idea that a higher level of education would lead to higher expectations in terms of prosperity. If these expectations remain unfulfilled, grief can translate into political violence (Barakat and Urdal 2009; Østby et al. 2019).

Although evidence shows that people with lower levels of education tend to be involved in more visible forms of political violence, such as participation in armed conflict, individuals with higher levels of education are generally associated with logistics (Brockhoff et al. 2015; Perliger et al. 2016). There is no evidence to suggest that raising the level of education in a society will subsequently increase participation in acts of political violence (Østby et al. 2019).

Nevertheless, in countries where there are high levels of social inequalities in place, universities and other higher education institutions may be a fertile setting for legitimizing narratives that justify political violence (Diab 2016). After all, education enhances political awareness and participation (Moskalenko and McCauley 2009) and provides political knowledge, which often translates into challenging the status quo of political authorities while increasing the perception of political violence's legitimacy (Friedman et al. 2016; Zhirkov et al. 2014).

The third position suggests an ambivalent relationship between education and PVJ, which depends on individuals' educational level. I.e. Berrebi (2007), Lee (2011), Tadjeddin and Murshed (2007) found a bell-shaped relationship between education and political violence: At lower levels of education, the correlation is positive and increases to an inflection point, then it eventually becomes negative as education levels rise further and PVJ decreases.

The common denominator between these previous positions is the existence of context-dependent and context-independent variables as predictors for political violence. On the one hand, inequalities, whether in opportunities of education (Perliger et al. 2016) or expectations such as employment (Diab et al. 2016; Vijaya et al. 2018), job opportunities (Nepal et al. 2011; Stern 2016), or even gender balance in education (Østby et al. 2016), are context-specific either in a country (14 countries in the case of the analysis of Perliger et al. 2016) or in a city (34 cities in Africa and Asia in the case of Østby 2016).

On the other hand the existence of context-independent variables, such as age-group (Lafree et al. 2018; Pauwels and Schils 2016; Pedersen et al. 2018; Pyrooz et al. 2018; Vijaya 2018; Zhirkov et al. 2014), attitudes towards violence (Pauwels 2014 2016; Van Bergen 2015 2016), beliefs (Van Brunt 2017), cognitive inflexibility (Zmigrod et al. 2019), ideology (Besta 2015), intentions towards violent change in society (Besta 2015; Doosje 2013), or sex (Pauwels and De Waele 2014; Pauwels and Schils 2016; Pedersen et al. 2018; Van Bergen et al. 2016), both positions allow us to hypothesize a connection between dependent, independent variables and political violence.

The hypothesis of context-dependent and independent variables and political violence is supported by research on the polarization as a cause for conflict, where Esteban et al., (2012) identified two forms of conflict of interest in political violence: private and public. While the former refers to conflict that directly affects the well-being of the individual, such as economic goods, the latter includes social status and power dynamics between individuals and groups within a society (i.e. political violence is the result of the clash between interests that involve both context-dependent and context-independent

variables which have manifested through competition for power, political opportunities, and bidding between opposing groups. (Alimi et al. 2016))

Therefore we argue that any research that considers PVJ must include both forms of spheres in a conflict of interest: the public, such as a country's poverty levels, and the private, such as individuals' economic and educational status.

Contextual poverty and income inequality

The notion of poverty is a measure that varies by country, institution, and over time. A common approach in the literature of poverty is the differentiation between, mainly, three notions of poverty: absolute poverty, relative poverty, and contextual poverty.

Absolute poverty is related to people's general lack of means to cover basic needs, such as food, clothing, and shelter, independent of the context; it is considered the general baseline, which delimits the minimum to guarantee the subsistence of individuals. The existing literature on political violence has found no evidence of a direct relationship between absolute poverty and political violence (Asongu et al. 2021; Baek and Bouzinov 2021; Esteban and Ray 1994; Ezcurra and Palacios 2016; Nepal et al. 2011; Krueger and Malečková 2003). Often the argument used to support this finding is that in a society where poverty is widespread, there is no need for redistribution of income.

In contrast, relative poverty refers to the disadvantaged position that some individuals may have compared to a particular standard in a specific population (Eskelinen 2011), such as income. There is evidence of the link between relative poverty across communities in political violence (Bhatia and Ghanem 2017; Diab et al. 2016; Kelejian and Mukerji 2021; Lafree and Gruenewald 2018; Nepal et al. 2011; Østby 2016; Perliger et al. 2016; Pyrooz et al. 2018; Vijaya 2018; Zhirkov et al. 2014), which can be an expression of frustration resulting from economic inequality between the reality of the conditions in which some individuals live and their expectations (Moghaddam 2005; Østby et al. 2019).

However, the dilemma with the concept of relative poverty is that all incomes below a set level are relativized, thus denying the existence of multiple poverty groups below the established threshold (Marx and Van den Bosch 2007). The formation of groups is essential in defining contextual poverty, which is the measure that reflects the formation of multiple rates of poverty groups in a population distribution (Eskelinen 2011; Petrović et al. 2021). Moreover, it is worth mentioning the importance of understanding poverty, not only in terms of income but also in terms of deprivation of individuals' capabilities (Sen 2001). We argue; inequalities in both income and education are valuable in understanding the justification for political violence. For example, in Europe, the number of people who joined terrorist organizations was higher in countries with higher levels of social welfare and significant disparities in access to the labour market and educational outcomes (Verwimp 2016).

The literature on political violence has shown the influence that relative and contextual poverty have on political violence. Inequalities, whether economic or educational, are affected to a greater or lesser extent depending on the environment in which they occur. Consequently, it is essential to have reference measurements of the contextual conditions in which relative poverty occurs.

The group formation within a population is relevant because the antagonism created by the conflict of interest and competition for resources and power is a risk factor for political violence (Alimi et al. 2016; Duclos et al. 2004; Esteban et al. 2012; Notten and Witte 2011). Thus, in addition to knowing the percentage of people living below the poverty line by country -contextual poverty-, it is necessary to know how individuals are positioned within the national income scales to assess their relative-poverty position better. Given that some individuals in the population are not considered sources of income, either due to unemployment, school-age, handicap, or illegality, considering household income will allow us to better measure individuals' ability to meet their basic needs. Moreover, while individual income is useful for comparing incomes between groups, household income is a good indicator of income distribution. Furthermore, it is less influenced by outliers on the income scale (Donovan et al. 2021).

Framing violence

Many of the studies in Europe on the relationship between education and attitudes towards political violence and its justification tend to limit their scope to framing political violence within a particular context, such as Muslim students in the Netherlands (Doosje 2013; Zhirkov et al. 2014), right-wing students in Germany (Frindte et al. 1996), students in Belgium (Pauwels 2014 2016), students in Norway (Pedersen et al. 2017), and then establish correlations with socioeconomic variables. We argue that the specificity of these studies is often at the expense of forgetting the intersectionality of individuals, which is central to the understanding that contextual frameworks go beyond a specific attributes such as religion, or ethnicity. It encompasses all these and manifests through the way individuals think and justify their attitudes and behaviours, as well as their support for political violence (Al-Badayneh et al. 2016; Besta 2015; Crenshaw 1991; Pauwels 2014 2016; Pederson 2017; Van Bergen 2015 2016; Van Brunt 2017). Moreover, the specificity of such studies does not consider structural violence, which refers to *inequities* based, among many others, on socioeconomic class and/or conditions of class-based educational oppression (Shapiro 2018). For example, Doosje (2013), using structural equation modelling, found a path from attitudes towards violence by others to violent intentions themselves. However, this finding may raise the question of whether this relationship can be generalized to populations other than the respondents of this sample, namely the 131 Muslim students in the Netherlands. In other words, the relationship between attitudes toward violence by others, and violent intentions exist, but only for a specific sample. The relationship cannot be generalized to all Muslims, or students, or people living in the Netherlands. For the reasons stated above, we found the European Value Survey (2019) question on the justification of political violence valuable, because the question is not linked to specific attributes such as 'religion,' 'ethnicity,' or other variables that risk stigmatizing sectors of the population. In addition, by using variables such as household income as a way to measure differences in income distribution and levels of education, we can infer forms of structural violence.

Why is important to measure the justification of violence?

In his research on moral judgment, Haidt (2001) described the role of rationalization in judgment as 'The emotional dog and its rational tail' (2001). Although it would not be

precise to assume that intentions (such as the justification of political violence) are similar to factual behaviour; they are closely related (Sageman 2008). Affective (Haidt 2001; Huebner, Dwyer, & Hauser 2009) and cognitive aspects have a measurable effect on behaviour (Lind 2008). For example, individuals who have higher levels of competence in moral judgment, i.e. those who can apply moral preferences to different dilemmas of everyday life (cognitive aspect), favour higher stages of moral development (affective aspects) to resolve moral conflicts and vice versa (Prehn 2009).

Evidence to support these findings in the field of political violence is found in the research on Islamic terrorists by Putra and Sukabdi (2014), who found a positive correlation between low levels of confidence in peacefully establishing Islam and high justification for political violence, and vice versa. High levels of confidence in peacefully establishing Islam were related to lower levels of justification of political violence.

Based on the evidence and literature presented, we formulate the hypothesis that contextual poverty moderates the effect of individuals' educational level and household income in PVJ in the EU.

Methodology

Data

We used two datasets in this study: a) The 2017 (updated in 2018) European Values Survey (EVS), available through the Data Archive from the Gesellschaft Sozialwissenschaftlicher Infrastruktureinrichtungen (GESIS) institute for the social sciences in Cologne, Germany. The EVS has several 'waves,' which refers to changes in the main structure of the survey. The 'releases' are successive updates, as it is impossible to collect information from all countries at the same time. The year 2017 is the last 'wave.' In this study we used the 2018 release, as well as a dataset from the statistical office of the European Union, Eurostat (2018). The same challenge was presented when collecting the Eurostat information on the percentage of people at risk of poverty, since not all countries update their information annually.

The EVS is a cross-national, longitudinal survey on basic human values across European countries. It contains measures about the attitudes and values of citizens all over Europe. The EVS draws probabilistic representative samples of the resident population over 18 years of age from several European countries. Participants were interviewed face to face and also completed a self-administered web survey. For the present study, we analyzed the results obtained from 15347 residents in 12 European countries. The Eurostat (2018) dataset was accessed to retrieve information about the percentage 'of the individuals at risk of poverty after social transfers' (p.1) and family income. Only those countries that appear in both datasets were selected (for the year 2017). The final sample contains 12 countries, Austria ($n = 1,644$), Bulgaria ($n = 1,560$), Croatia ($n = 1,488$), Czech Republic ($n = 1,812$), Germany ($n = 1,494$), Iceland ($n = 915$), Netherlands ($n = 686$), Poland ($n = 1,352$), Slovak Republic ($n = 1,435$), Slovenia ($n = 1,076$), Spain ($n = 1,212$), and Switzerland ($n = 1,644$).

European context

In order to provide an overview of the political and socioeconomic landscape in Europe at the time of data collection (2017), we present below a summary of relevant facts.

First, on the political front, there were general elections in Germany, France, and the Netherlands. These three countries represented 56% of the Eurozone economy. In addition, two significant referenda took place: (i) the United Kingdom began the process of leaving the European Union; (ii) the referendum for the independence of Catalonia from the rest of Spain. In economic terms, Europe's economy continued to grow (1.8%), surpassing that of the United States (1.6%) in 2016. On a social level, in the Eurobarometer survey (Jacques 2017) 63% of respondents considered the actions taken to 'fight against unemployment' insufficient, while 58% thought the same about 'the issue of immigration.' Moreover, 80% of Europeans believed that more should be done in 'the fight against terrorism,' while 78% thought the same about the 'fight against unemployment,' and 73% about the 'issue of immigration.' The Eurobarometer concludes: 'When asked about the inequalities between the different social groups in their country, an overwhelming majority of respondents (84%) think that, currently, they are large' (2017, 17).

Measures

Dependent variable

The dependent variable is political violence justification (PVJ). The respondents were asked: 'Can this always be justified, never be justified, or something in between?: Political Violence' Respondents were positioned on a Likert scale from zero to ten, where zero indicated 'never justify,' and then indicated 'always justify.' For the present study, we categorized the variable to distinguish those who never justify political violence from those who justify it to some extent. It would not be accurate to assume that intentions (such as the justification of political violence) are similar to actual behaviour. This research is designed to predict the likelihood for its justification, not to predict support of or participation in political violence.

Independent variables

The independent variables were *educational level*, *contextual poverty* at country level, and *household income*.

Educational level was categorized as either low, medium, or high. Low corresponded to primary, medium to secondary, and high to tertiary education.

Contextual poverty is defined as the *percentage* of 'persons with an equivalized disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalized disposable income (after social transfers)' (Eurostat 2018, 1) per country.

Household income is generally taken as an indicator of the standard of living. It includes available family income after taxes while recognizing that family members benefit from sharing some costs and expenses. Household income was categorized using terciles in low, medium, and high levels. It was measured through the question:

'Here is a list of incomes, and we would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come in. Just give the letter of the group your household falls into, after taxes and other deductions.' (Eurostat 2018, 1).

For the present study, we categorized the household income variable as high (1st to 3rd decile), medium (4th to 7th decile), and low (8th to 10th decile).

Following the literature reviewed on political violence, we used four confounding variables; *age group*, *sex*, *marital status* (categorized as married, widowed, divorced/separated, or never married), and ideology, which was obtained by classifying a left-right axis from zero to ten (0–4 left, 5–6 centre, and 7–10 right).

Statistical analysis

We report frequencies, percentages, means and standard deviations for descriptive analysis. The association between each variable - age, sex, marital status, ideology, household income and contextual poverty - and PVJ were assessed using univariate logistic regression models. The interactions between poverty*educational-level and poverty*household-income were explored in logistic regression models with PVJ as the dependent variable, adjusted for age-group, sex, marital status, and household income. Variables that predicted the outcome ($p < 0.20$) in univariate models (Mickey and Greenland 1989) and significant ($p < 0.05$) were introduced into the multivariate logistic regression model of factors related to PVJ. Adjusted odds ratios (ORs) with 95% confidence intervals (CI) and p values were reported as well as standardized coefficients and standard errors.

Probabilities (95% CI) for PVJ were calculated using margins (Williams 2012), depending on the contextual poverty level. According to the statistically significant interactions, the sample was stratified by educational level and, subsequently, by household income. Stata version 13.1 (StataCorp 2013) was used to analyze the data.

Results

The sociodemographic characteristics of the study sample are illustrated in Table 1. A total of 23.58% of the participants reported PVJ. Several factors associated with higher odds for PVJ were identified in the multivariate logistic regression analyses showed in Table 2. Both education-level and household income significantly interacted with contextual poverty as risk factors for PVJ in the multivariate regression model in Table 3.

The interaction between *education level* and *contextual poverty* as a factor related to PVJ is represented in Figure 1. We found no significant differences in PVJ according to educational level in countries with medium levels of contextual poverty, such as Austria, Germany, The Netherlands, Poland, Slovenia, and Switzerland. Higher levels of education are related to lower odds for PVJ in countries with low levels of contextual poverty (Czech Republic, Iceland, and Slovak Republic) and high levels of contextual poverty (Bulgaria, Croatia, and Spain). In countries with low levels of contextual poverty, people with low educational levels have a probability of 29% for PVJ, whereas the probabilities among people with medium and high educational levels are 33% and 19%, respectively. In countries with medium levels of contextual poverty, these

Table 1. Descriptive statistics of factor related to political violence justification (PVJ)

Variable	Observations	Mean	SD	Min	Max
Age	15,347	50.4	17.5	18	82
Country Poverty	15,347	15.4	4.5	8.8	23.4
Ideology	15,347	5.4	2.2	1	10
PVJ	15,347	1.7	1.7	1	10

Table 2. Sample's characteristics and factor related to political violence justification (PVJ)

N = 15,347	Observations	%
Sex		
Male	6758	44.0
Female	8589	56.0
Age		
From 18 to 35	3703	24.3
From 36 to 50	3814	25.0
From 51 to 65	4205	27.6
From 66 to 80	2994	19.6
More than 80	544	3.6
Country of residence¹		
Austria (14.4)	1644	10.7
Bulgaria (23.4)	1560	10.2
Croatia (20.2)	1488	9.7
Czech Republic (9.1)	1812	11.8
Germany (16.1)	1494	9.7
Iceland (8.8)	915	6.0
Netherlands (13.2)	686	4.5
Poland (15.0)	1352	8.8
Slovak Republic (12.4)	1435	9.4
Slovenia (13.3)	1076	7.0
Spain (21.6)	1212	7.9
Switzerland (15.5)	1644	10.7
Country-Poverty¹		
Low (less than 13)	4162	27.1
Medium (from 13 to 17)	6925	45.1
High (more than 17)	4260	27.8
Household-Income		
Low	3005	23.5
Medium	5723	44.7
High	4081	31.9
Marital status		
Married	8464	55.5
Widowed	1572	10.3
Divorced/separated	1694	11.1
Never married	3524	23.1
Education level		
Low	3056	20.0
Medium	8122	53.2
High	4088	26.8
Ideology		
Left (1–4)	3793	29.67
Centre (5–6)	5490	42.94
Right (7–10)	3503	27.40
Political Violence Justification		
Any PVJ (>1)	3530	23.58

¹In parentheses: percentage of people at risk of poverty after social transfers.

probabilities are 22%, 20%, and 24%, whereas they are 28%, 13%, and 15% in countries with high levels of contextual poverty.

The interaction between *household income* and *contextual poverty* as a factor related to PVJ is represented in [Figure 2](#). People living in countries with low levels of contextual poverty and with high levels of household income reported the highest odds for PVJ. In countries with low levels of contextual poverty, people with low household income have a probability of 23% for PVJ, whereas the probabilities among people with medium and high household income are 29% and 33%, respectively. In countries with medium levels of contextual poverty, these probabilities are 22%, 21%, and 21%, whereas they are 18%, 15%, and 18% in countries with high levels of contextual poverty.

Table 3. Adjusted logistic regression models of factors related to PVJ

	OR (95% CI)	Coef. (SE)
Education level		
Lower	Ref.	Ref.
Medium	1.21 (0.95, 1.54)	0.19 (0.12)
Higher	0.57*** (0.43, 0.77)	−0.54*** (0.15)
Household-Income		
Lower	Ref.	Ref.
Medium	1.31** (1.07, 1.62)	0.27** (0.10)
Higher	1.58*** (1.26, 1.99)	0.46*** (0.11)
Country-poverty		
Lower	Ref.	Ref.
Medium	0.92 (0.65, 1.31)	−0.07 (0.17)
Higher	1.40 (0.96, 2.05)	0.34 (0.19)
Interactions		
Country-poverty ## Educational-level		
Low-Low	Ref.	Ref.
Medium-medium	0.71* (0.53, 0.96)	−0.33* (0.15)
Medium-high	1.91*** (1.34, 2.73)	0.65*** (0.18)
High-medium	0.31*** (0.23, 0.44)	−1.14*** (0.16)
High-high	0.77 (0.52, 1.14)	−0.24 (0.19)
Country-poverty ## Household-income		
Low-Low	Ref.	Ref.
Medium-medium	0.74* (0.57, 0.96)	−0.29* (0.13)
Medium-higher	0.59*** (0.44, 0.79)	−0.51*** (0.14)
High-medium	0.64** (0.46, 0.87)	−0.44** (0.15)
High-high	0.63** (0.44, 0.88)	−0.46** (0.17)

Models adjusted for sex, age, and marital status.

Odds ratio (OR) and 95% confidence interval as well as standardized coefficient (Coef) and standard error (SE) for two tailed regression analysis are displayed. Statistically significant associations

*** $p < 0.001$,

** $p < 0.01$,

* $p < 0.05$

Discussion

To the best of our knowledge, this is the first study analyzing the moderating effect of contextual poverty at country levels in the association between socioeconomic factors at individual level, such as educational level and household income and their effect on PVJ, carried out through a sample of several European countries.

Our results confirm previous studies (Doosje et al. 2013; Frindte et al. 1996; Moskalenko and McCauley 2009; Østby et al. 2019; Pauwels and De Waele 2014; Pauwels and Schils 2016; Pedersen et al. 2018; Van Bergen et al. 2015 2016; Verwimp 2016, Zhirkov et al. 2014) that found evidence of a relationship between educational level in PVJ in Europe. The results also confirm other findings on the relationship between relative poverty and PVJ (Cavalcante and Goldson 2009)

However, our results show that this relationship is not always linear and unidirectional; instead, it is influenced by contextual poverty. Therefore, we confirm our hypothesis that contextual poverty moderates the relationship between educational level and household income in the PVJ through three main findings:

- 1) A high educational level is related to lower odds for PVJ in countries with high and low levels of contextual poverty. This finding is partially supported by previous research (Barakat and Urdal 2009; Brockhoff et al. 2015; Bussmann 2010; Collier and Hoeffler 2004; Collier et al. 2004; Hegre et al. 2013; Hegre 2014; Lange 2011; Thyne 2006;

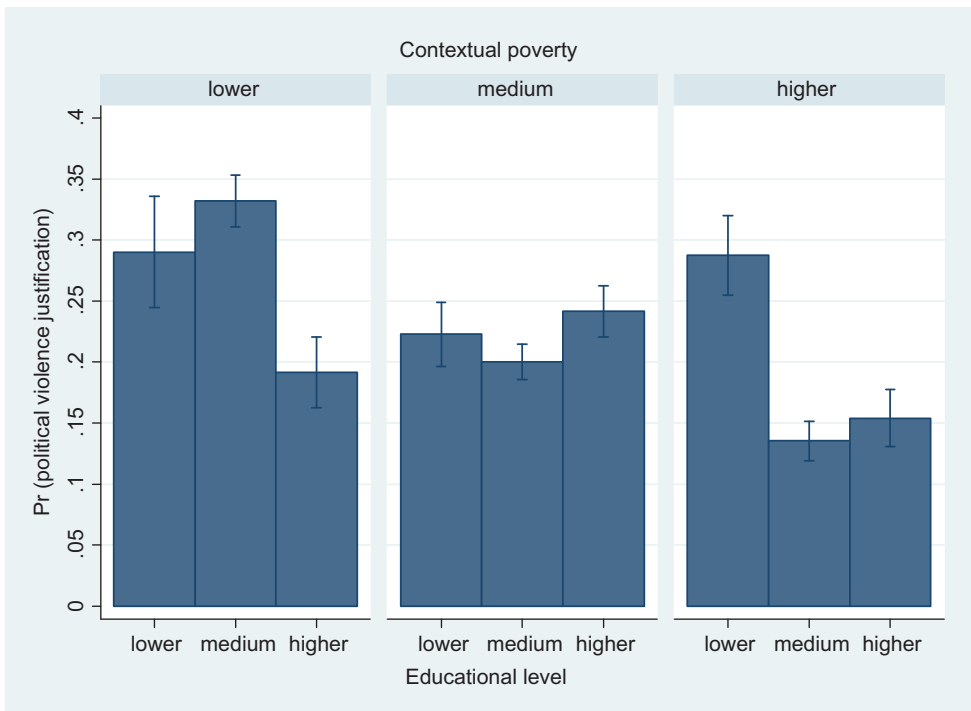


Figure 1. Probability of PVJ according to education level and contextual poverty (country-level) with 95% CI

Urdal and Hoelscher 2009) that found an inverse relationship between medium levels of education and political violence. Berrebi (2007) suggested that this effect might be the consequence of the impact of education, arguing that once a tertiary level of education is reached, individuals are more interested in further employment than in participation in any sort of political violence.

As for the causal explanation of the significant interaction of our first finding, we found the opportunity-cost theoretical framework ideal for explaining how individuals evaluate their PVJ. The opportunity cost of violence is a conceptual framework that suggests that individuals with limited assets of social and human capital, such as family, education, and job opportunities, carry less risk when engaging in political violence, as their chances of coming out ahead by challenging the status quo far outweigh any potential losses they may suffer, contrary to those with higher social and human capital assets, who have far more to lose and far less to gain (Lee 2011). The opportunity cost of PVJ increases for individuals with higher incomes and active political participation (Brockhoff et al. 2015) when applying the conceptual framework (opportunity cost) to education. Voiculescu (2009) suggests that there are a series of variables adjacent to economic income, which are generally associated with the fruit of investment in education. These adjacent variables affect people's quality of life beyond economics, such as improved health and status in society, among many others. The opportunity-cost framework is well supported by theories such as the 'loss-aversion theory' in economics, which refers to individuals' preference to avoid the risk of losses over acquiring equivalent gains (Kahneman and Tversky 1979).

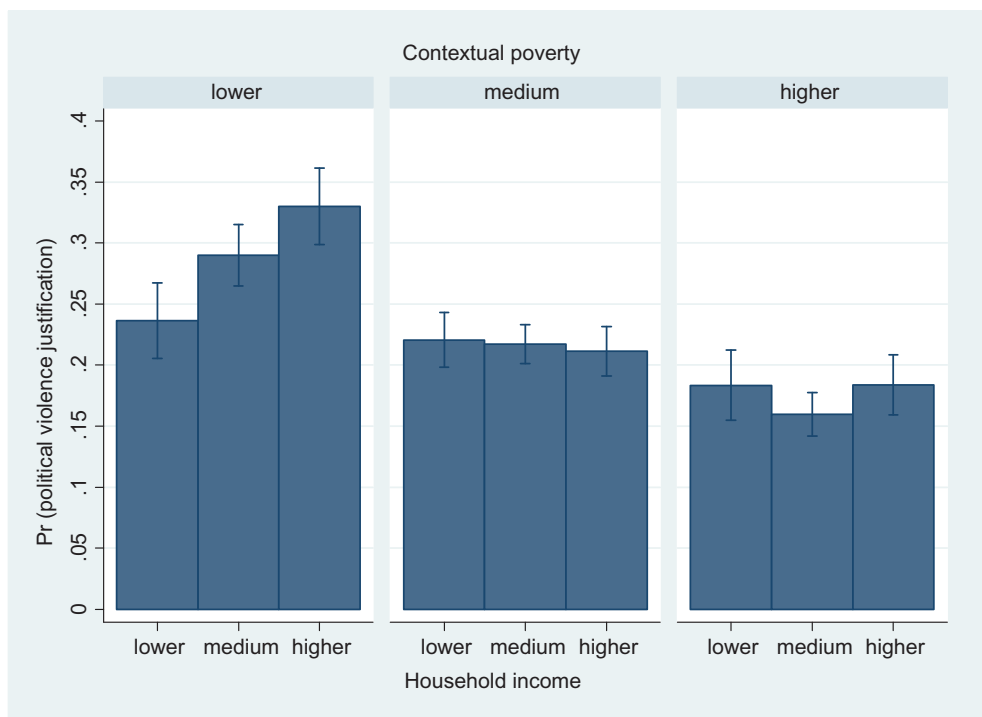


Figure 2. Probability of PVJ, according to household income and contextual poverty (country-level) with 95% CI

The opportunity cost framework may help to understand how individuals evaluate their chances of success when engaging in political violence. Through research on the relationship between inequalities and political violence, Nepal et al. (2011) suggest that ‘violent redistribution requires [...] personal assessment by each potential participant, of the probability of success and failure [...] and its rewards or consequences’ (p. 889). This assessment of consequences seems to be most evident in Lee’s (2011) study, which found that individuals with lower socioeconomic status have higher engagement levels in political violence, while those with higher socioeconomic status engage more frequently in political activism. The study concludes that this difference in behavior might be the consequence of an opportunity cost assessment, where poverty and education are the most important predictors of political violence. Thus, the opportunity cost framework is relevant for the causal explanation of the results, as multiple sources widely support it. The evidence shows that individuals weigh up their chances of losing or winning when deciding on their participation, whether it is in political violence, education, or in a simple bet.

- 2) There are no significant differences in PVJ with educational level in countries with medium levels of contextual poverty, whereas in countries with low levels of contextual poverty, medium levels of education seem to empower individuals to extent of questioning the status quo. In countries with higher levels of contextual poverty, education may reclaim its value as human capital, raising the levels of PVJ from those who

have the most to *lose* and *gain* through the contention, meaning those with the *highest levels* and *lowest levels* of education, respectively. Our findings confirm previous research which found that the relationship between inequalities and political conflict is almost non-existent in places where the population has a uniform income distribution; however, in populations with a segmented income distribution, political conflict rates increase (Esteban and Ray 1994).

- 3) Individuals living in countries with low levels of contextual poverty, high household income, and medium levels of education are associated with higher probabilities of PVJ. Our finding is supported by previous research which found that secondary education has no effect in lowering PVJ (Bussmann 2010).

To our knowledge, this is the first research that found evidence that in Europe—and under conditions of low levels of contextual poverty—medium levels of education *increase* the likelihood for PVJ.

Our findings provide an essential nuance to previous research which suggested that when socioeconomic conditions are favourable, education level is a protective factor; otherwise, it is a risk factor (Diab et al. 2016; Brockhoff et al. 2015; Østby et al. 2019). Our results seem to indicate that, at least in Europe, the opposite is true when contextual poverty is high: education remains a protective factor. However, when conditions are favourable (low levels of contextual poverty) education may lose its protective character. This effect might be due to the magnifying effect of education on expectations and political awareness (Friedman et al. 2016) of power dynamics in society (Gereluk 2012) making individuals more prone to PVJ (33%)

Regarding household income, it is plausible that individuals at the top of social structures (as measured by household income) may be unwilling to share opportunities and resources down through the dominant hierarchy, as there is a risk of losing their privilege, thus making them more prone to PVJ (33%). Individuals with higher incomes might not have a direct deprivation of their capabilities, and therefore their PVJ may result from a potential threat to losing them.

Since political violence is associated with power dynamics, it may be suggested that PVJ is aimed at gaining a more influential role in society (for those with lower levels of education) or at maintaining social status (for those with higher household income). Perhaps not coincidentally, the European Union's report on the development of educational training in Europe found that Spain (one of the countries in our sample with high levels of contextual poverty) is the country with the highest rate of overqualified workers, with a total of 38.8% of tertiary education graduates aged 25–34, while Slovakia (one of the countries in our sample with low levels of contextual poverty) has a total of 30.1%; both are above the EU mean of 24.1% (Cedefop 2019). I.e. education may not be providing the expected opportunities, which is consolidating two antagonistic groups; those with a low educational level - eager to climb the social ladder - and those with higher incomes - ready to protect their position.

Limitations and further research

Our study presents some limitations: First, although our results were all significant, they should be taken with reserve as the b-coefficients were small (most of them with values

lower than .10). Moreover, the model explains only 3% of the PVJ variance, with only .05% of the variance explained by the interaction between educational level and poverty.

Second, all The EVS data was derived from self-administered questionnaires, which did not capture the source of justification of political violence, as participation in it may be the result of dissatisfaction, inequalities, frustration (Verwimp 2016), or cooperation with terrorist organizations that follow a political agenda (Berrebi 2007; Krueger and Malečková 2003; Lee 2011).

This study is not designed to predict the use of political violence; it is designed to estimate the likelihood of its justification. It is important to emphasize that during the survey, respondents were asked how often they justified political violence, with a response scale ranging from 'never' to 'always.'

Third, there is a lack of information on the average number of household members, so it is difficult to quantify the impact that an individual has on household income.

Fourth, a gap in the literature on political violence and education is that multiple studies only consider educational level rather than inequalities in expectations and access to education.

This study confirms the idea that not taking these aspects into account may underestimate the influence of expectations on notions of human capital and, therefore, its effect on the feelings of discontent in younger populations (Barakat and Urdal 2009; Brockhoff et al. 2015; Østby et al. 2019).

It is suggested that further research investigates a) how the access to the labour market may moderate the relationship between education and the justification for political violence b) what makes higher-income individuals in countries with low levels of contextual poverty more prone to PVJ. c) the relationship between education, qualified and under-qualified jobs and PVJ in Europe, d) the relationship between expectations in education and individuals who have been identified as participating in acts of political violence in Europe.

Finally, as this is a quantitative estimate of the degree of justification for political violence, it is impossible to know whether the participants in the study do not approve of or engage in political violence. In addition, the authors of this research are unaware of the interpretive context surrounding the justification for violence in each case. Nevertheless, this study contributes to quantifying the role of socioeconomic variables, both at the individual and the country level, in PVJ.

We recommend that future research with a qualitative approach addresses the limitations derived from our quantitative method, such as using only one variable for contextual poverty per country. Cultural and socio-political differences between countries may help to improve this understanding and decrease the bias caused by limited variables. To this end, we used individual-level confounders in the statistical analyses to reduce this bias in our research.

Policy implications and recommendations

In September 2020, the European Commission published a communication on the objective of consolidating the European educational area by 2025, stating that 'Education is the foundation for personal fulfilment, employability, and active and responsible citizenship' (European Commission 2020, 1).

As we have argued, education can foster or diminish the justification for political violence, reason why we propose some recommendations to be considered when considering the aforementioned areas of fulfilment, employability, and citizenship.

- 1) Education must review its effectiveness in offering people real possibilities to improve their quality of life, and not only as a tool to access the labour market. In this sense, we recommend that education policies designed to improve access to the labour market in Europe should be adapted to the national contexts of each country. Expanding the access to education without expanding the access to well-paying jobs may be a factor in fostering political violence in Europe.
- 2) Education should not be considered as the only basis for active citizenship because those who do not have access to it will be left out. We propose that a European education for an active and responsible citizenship should be a space that a) fosters social relations through commitment for and from the community, and b) promotes respect for human dignity, and equity in access to opportunities that develop the potential capabilities of individuals.

Conclusion

In countries with high levels of contextual poverty, PVJ could be an instrument aimed at the redistribution of opportunities. Whereas in countries with low levels of contextual poverty, political violence may predominantly address threats of a private nature, such as the relative deprivation of opportunities, and therefore it is strongly related to household income.

Concerning education, although higher levels of education were associated with lower levels of PVJ across all three levels of contextual poverty, our research found a decreasing effect of medium levels of education on PVJ, but only in countries with high and medium levels of contextual poverty. In contrast, in countries with low levels of contextual poverty, medium levels of education *increase* PVJ.

Both economic and educational inequalities are strong predictors of the justification for political violence in Europe. Attempting to reduce poverty only through economic expansion measures is as futile as increasing access to higher education without expanding the real opportunities for young graduates to get a well-paid job at the end of their studies. Both are interdependent and therefore need to be tackled simultaneously.

A prosperous European future, far from the risk of political violence, is possible to the extent that inequalities are considered not only in terms of income or access to education but also in terms of deprivation of individuals' capabilities. The development of antagonistic groups, based on their opportunities to achieve a better way of life, is perhaps the most critical factor for political violence in Europe.

Declaration of conflicting interests

The authors declared no potential conflicts of interest concerning the research, authorship, and publication of this article. Any possible errors in this publication are entirely the responsibility of the first author.

Availability of data

The data that support the findings of this study are available in the public domain: Eurostat [https://ec.europa.eu/eurostat/databrowser/view/t2020_52/default/table?lang=en] and European Value Survey [<https://doi.org/10.4232/1.13314>].

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Gabriel Zohar  <http://orcid.org/0000-0003-3056-6518>

Joan Domènech-Abella  <http://orcid.org/0000-0001-7605-3887>

Free De Backer  <http://orcid.org/0000-0002-4196-5082>

Koen Lombaerts  <http://orcid.org/0000-0002-6073-0254>

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