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Who Supports Violent Extremism in Developing Countries?

Analysis of Attitudes Based on Value Surveys

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Abstract

What are the common characteristics among radicalized individuals, willing to justify attacks targeting civilians? Drawing on information on attitudes toward extreme violence and other characteristics of 30,787 individuals from 27 developing countries around the world, and employing a variety of econometric techniques, this paper identifies the partial correlates of extremism. The results suggest that the typical extremist who supports attacks against civilians is more likely to be young, unemployed and struggling to make ends meet, relatively uneducated, and not as religious as others, but more willing to sacrifice own life for his or her beliefs. Gender and marital status are not found to explain significantly the individual-level variation in attitudes toward extremism. Although these results may vary in magnitude and significance across countries and geographic regions, they are robust to various sensitivity analyses.

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Who Supports Violent Extremism in Developing Countries?

Analysis of Attitudes Based on Value Surveys

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1. Introduction

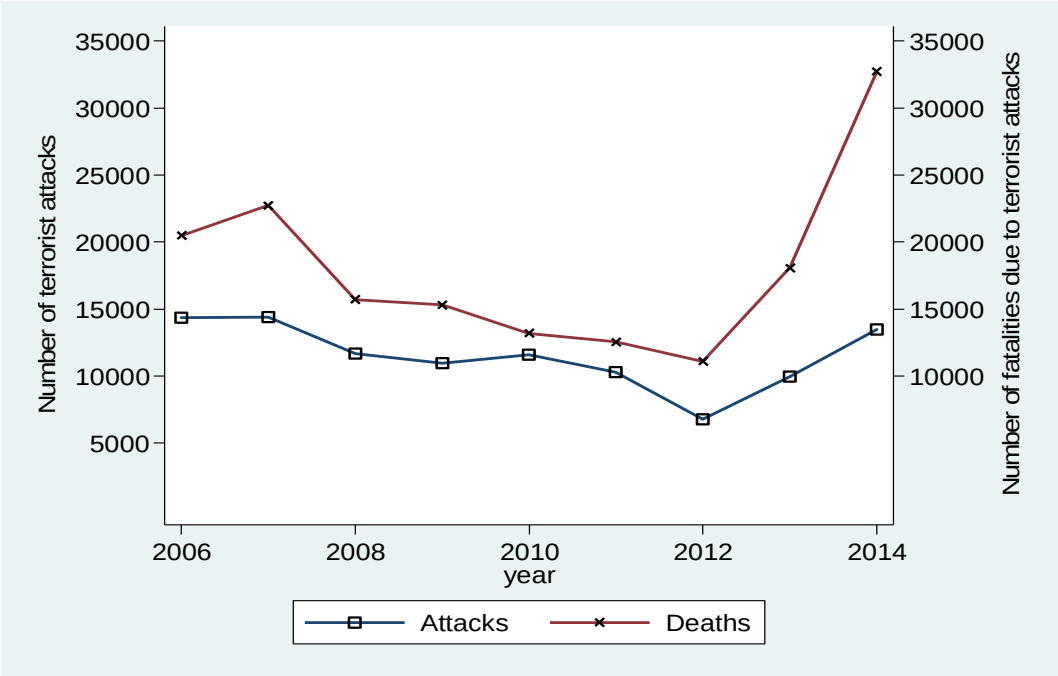
Interstate wars and political violence have often had devastating effects upon the lives of innocent civilians. Over the past three centuries, civilian deaths represented half of all war-related casualties (Downes, 2008). In the twentieth century alone tens of millions of people perished during two world wars and a host of political violence events, including civil wars, political terror, terrorism acts and political assassinations. Since the end of World War II, the incidence of large-scale interstate wars has declined but that of bilateral militarized conflicts has kept rising steadily (Harrison and Wolf, 2012). The global incidence of civil wars also rose during this period, but the trend reversed in the 1990s (Besley and Persson, 2008). Since then political violence has started manifesting increasingly in the form of terrorist attacks. This paper focuses on attitudes towards terrorist attacks by non-government groups targeting innocent civilians. This type of political violence poses important and urgent questions[1] in the context of the recent worldwide surge in terrorist attacks and associated civilian deaths (Figure 1), their economic costs,[2] and the steep increase in spending on counter-terrorism activities.[3]

This paper focuses on the question of whether there are common characteristics among radicalized individuals, defined as those willing to justify the targeting and killing of innocent civilians. These individuals hold extreme views and represent the group of potential terrorism supporters, namely those who may sympathize with and collaborate with extremists. They may be at a higher risk than others to eventually become terror recruits, although they may not be involved

[1] The issue of violent extremism was on the top of the policy agenda during the 70th Session of the UN General Assembly.
[2] Terrorist acts have been shown to raise the cost of doing business in affected areas, with negative effects on tourism, employment, and economic growth (Blomberg et al., 2004a and Larocque et al. 2008).
[3] In the US, federal government spending on homeland security increased from $20.1 billion in 2001 to $75 billion in 2009.

directly in terrorist activities. So understanding how extremists stand out vis a vis others is an important step in the quest for developing policies that can effectively deal with this issue.

Figure 1: Worldwide number of terrorist attacks and related deaths



Source: Statistica (http://www.statista.com/statistics/202864/number-of-terrorist-attacks-worldwide/).

To study the individual-level determinants of extremism, we employ the World Gallup Poll data set. It provides information that allows us to identify the full spectrum of views on terrorist activities of individuals residing in 27 developing countries. The question on attitudes toward violent extremism is asked in only a small number of OECD countries.[4] For this reason, the paper focuses on attitudes regarding attacks against civilians in the developing world. This focus is also warranted because there are substantial differences between the economic and social conditions in the developed and developing countries. Employing a variety of estimation techniques, we find robust econometric evidence that the average radicalized individual in the developing world is

[4] The question on attitudes toward extremism is asked in the following OECD countries: Chile, Estonia, France, Germany, Turkey, and the UK.

relatively poor, young, unemployed or out of the workforce, uneducated, and not as religious as others, but more willing to sacrifice own life for his or her beliefs. These results may vary in magnitude and significance across countries and geographic regions, but are robust to changes in econometric techniques, model specifications, and a number of robustness checks, including tests dealing with the issue of non-responses, the inclusion of developed countries in the sample, various definitions of the dependent variable, and the inclusion of a variety of additional controls. Despite our efforts, given the fact that we rely on repeated cross-sectional data and therefore cannot deal with unobservable heterogeneity as well as fully address all simultaneity issues in our model, our results should be interpreted as conditional associations, rather than causal relationships.

As this paper explores attitudes towards terror acts, it is linked to two bodies of literature: one on the feelings of discontent and economic performance and another on the political economy of terrorism. Gurr (1971) argues that failure to realize gains during periods of modernization can lead to discontent among those with stagnant incomes, and therefore to political instability and uprisings. However, several case studies show that the occurrence of revolutions is more likely during times of improving economic conditions, underscoring the alternative possibility that improved conditions reduce frustration but enable revolutions due to increases in rebel resources, power, chances of winning, and consequently the expected utility of participation in their movement. Cross-country comparative studies on the link between political violence and economic performance produce mixed evidence, with some studies finding a negative association with per capita income (Parvin, 1973; Sigelman and Simpson, 1977) and others finding a positive association (Muller, 1985). More recently, Gurr and Moore (1997) explore the possibility that relative deprivation, not absolute income, drives discontent, while Fearon and Laitin (2003) use

panel data to show that growth in per capita incomes is significantly and negatively associated with civil conflict.

This paper is closest to the literature that relies on data from value surveys to explore the link between attitudes towards revolution and the role of income, economic growth, and a range of other correlates such as religion and freedom (MacCullogh, 2004 and MacCullogh and Pezzini, 2010). In these studies, people's tastes for revolution are revealed by their answers to the question whether they would like the organizational structure of society to be overturned by revolutionary actions. They identify people as having a preference for revolution if they answer "yes" to this question. Using probit regressions MacCullogh and Pezzini (2010) find that a number of individual characteristics seem to be robustly correlated with a taste for revolution. Men, the young, unmarried and individuals with political opinions to the left of the political spectrum are more likely to have a taste for revolution, while economic growth, being Christian, and being relatively affluent reduces the likelihood of having a preference for revolution. Average per capita income in a country and individual school attainment are not significantly associated with the likelihood of having a taste for revolution.

The literature on the political economy of terrorism consists mainly of case studies. A review by De Mesquita (2008) points to a lack of a thorough understanding of the explanatory factors of terrorism and highlights endogeneity issues that make it difficult to investigate the determinants of extremism. In a study of the main factors that led to sectarian radicalism in the Punjab,[5] Zaman (1998) shows that sectarian conflict has mainly been associated with the emergence of sectarian organizations and the proliferation of madrasas, but finds that economic and social volatility,

[5] Punjab is Pakistan's most populous province.

ambiguities about the place of Islam in public life, and international developments such as the Iranian revolution have also played a role in inflaming sectarian violence. Using terrorist profiling techniques based on a review of case studies and past terrorist attacks, Hudson (1999) finds that although there is no single terrorist personality, there is little evidence to support the notion that terrorists are psychologically disturbed individuals. Hegghammer (2006) constructs the profile of radical militants in Saudi Arabia and concludes that socioeconomic factors provide a limited explanation for their radicalization, but Jenkins (2011) finds that terrorist recruits in the US tend to be young and relatively uneducated.

McCauley and Moskalenko (2008) study the mechanisms of political radicalization defined as a dimension of increasingly extreme beliefs, feelings, and behaviors in support of intergroup conflict and violence. Using real world case studies and a survey of the literature, they conclude that radicalization occurs in a context of group identification or from the dynamics of intergroup conflict rather than from the vicissitudes of individual psychology. Walters et al. (2013) explore the sources and consequences of radicalization and terrorism through a compilation of interdisciplinary research, theory, and analysis by authors from eight countries. They conclude that violent conflict and extremism in Arab countries is the result of a combination of internal and external factors, including resource dependence, tribalism, social inequality, prolonged existence of oppressive hereditary regimes, militarization, and corruption.

The findings of the few empirical studies on the determinants of radicalization are mixed. Blomberg et al. (2004b), who estimate the relationship between economic growth and terrorism using Markov processes, find that economic contractions lead to increased likelihood of terrorist activities, particularly in democratic, high income countries. Their conclusion that economic growth fluctuations tend to be the main driver of terrorism is problematic as they are not able to

implement an empirical approach that deals with simultaneity and to appropriately identify all relevant correlates of radicalization. A more recent paper by Benmelech and Klor (2016) draws the opposite conclusion. It argues that poor economic conditions and human development conditions do not drive participation in the Islamic State (ISIS), instead ideology and difficulties of assimilation into homogeneous Western countries play a key role.

The most relevant to our analysis is an article by Haddad (2004) who relies on survey data from Lebanon to assess Palestinian refugees' and Lebanese Muslim perceptions of suicide bombings. Except for their finding that support for suicide attacks is stronger among women than men, Haddad's findings are consistent with ours as they indicate that support for terror attacks is stronger among low-income people, those living in camps and therefore experiencing hardship, and among people committed to their beliefs as part of political Islam.

In sum, the existing literature associates violent extremism with economic and social deprivations or with religious and ideological beliefs, but does so based mostly on the findings of country-case studies. It is problematic to generalize the findings in such studies as they employ data that are not harmonized and comparable across countries. The lack of rigorous empirical evidence on attitudes towards terrorist attacks and more generally the causes of radicalization is striking and reflects the fact that a better understanding of these issues requires detailed cross-country data at the individual level, which unlike macro data, are difficult to collect or gain access to. This paper is the first to utilize such data to study the factors affecting attitudes towards terrorist acts in a cross-country framework.

The remainder of the paper is structured as follows. Section 2 defines the concept of radicalization and describes the data used to measure the extent of radicalization in a country and the main variables of interest. Section 3 discusses the methodology, the identification issues, and

the empirical strategy. Section 4 discusses the main results, while Section 5 presents results from a number of robustness tests. Section 6 concludes and suggests possible directions for future research.

2. Concept definition and data

This paper focuses on attitudes toward violent extremism. We do not study the process of becoming radicalized but the traits of people who justify terrorist attacks which target civilians. These extremists may not commit terrorist acts themselves but may be at high risk for being recruited by terrorist organizations or may sympathize and assist these organizations. The comprehensive survey data from the Gallup World Poll for the period 2006-12 include detailed information on individual wellbeing, attitudes, and a host of objective individual and household characteristics, along with views that indicate an individual's position on the radicalization spectrum. This spectrum includes at one extreme individuals who are completely against attacks targeting civilians and at the other extreme features people who completely justify such attacks. Specifically, the survey includes the question Q1: "*I would like you to indicate to which extent it can be morally justified: attacks in which civilians are the target*".[6] The answers to this question reveal the individuals' attitudes toward attacks targeting civilians, with responses ordered from 1 for those who believe that such attacks "*cannot be justified at all*" to 5 for those who consider such attacks "*completely justifiable*".

[6] There is a similar question related to individuals' preferences for targeting civilians by the military, but the answers to it capture a different story from the one in this study.

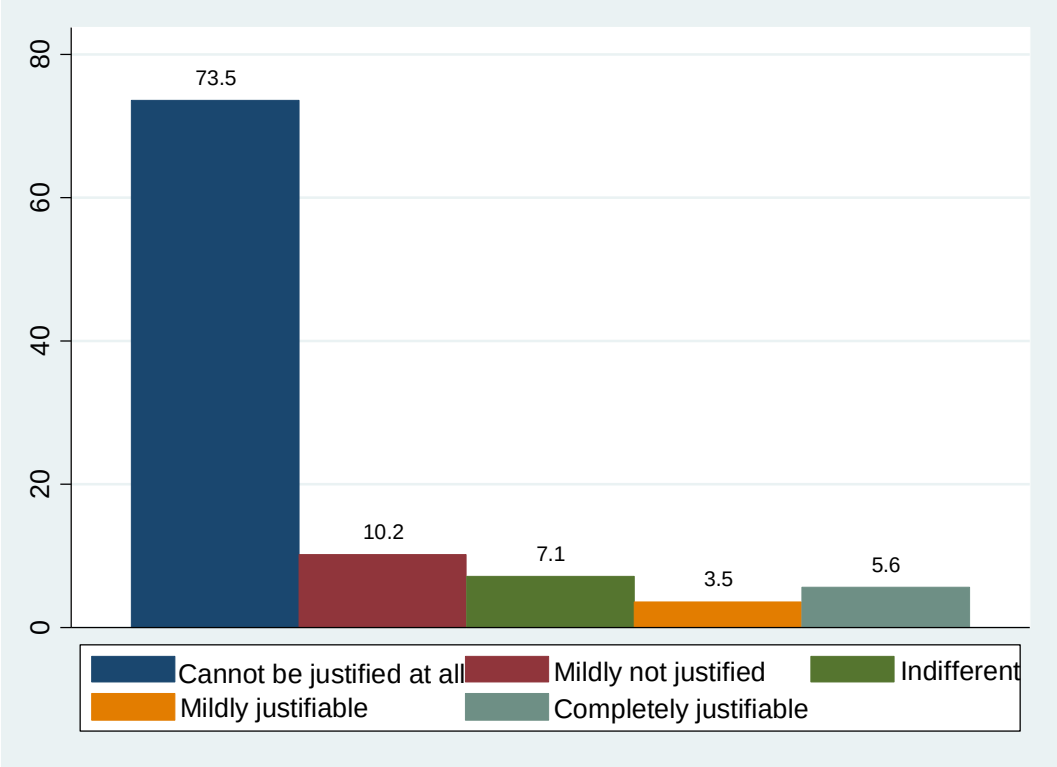
Figure 2 presents the distribution of answers to Q1 in the pooled global sample.[7] The vast majority of respondents (73.5%) believe that attacks on civilians cannot be justified at all. Some 10.2% of respondents find such attacks to be mildly unjustifiable, whereas 7.1% of them are indifferent on this issue (they score 3). Although the overall picture suggests that most people do not support targeting civilians, nearly 10% (3.5% and 5.6%) of respondents believe that attacks on civilians are "mildly justifiable" or "completely justifiable". We are interested in profiling the latter group of respondents with most extreme views; they find attacks on civilians completely justifiable. The proportion of such respondents varies substantially across regions and countries, ranging from 0.2% in Thailand to 33.7% in Djibouti (Figure 3) and averaging close to 6% worldwide. Overall, Sub-Saharan Africa (SSA) stands out with the highest incidence of individuals with extreme views as during most years in the period of interest, their share is above 10% (Figure 4). The region with the second highest rate of people with extreme views is South Asia (SA). In both regions, the prevalence of such individuals increased after 2007. It is important to note that in the Middle East and North Africa (MENA) the incidence of extremists was low throughout the period and increased only after the Arab Spring events in 2011.

Without controlling for other factors, the data suggest that there are no major differences of opinion on this issue between men and women (Figure 5). However, compared to other parts of the radicalization spectrum (categories 1-4), the data suggest that people with extreme views tend to live in rural areas (Figures 5), tend to be poor (Figure 6), and predominantly have elementary education or less (Figure 6). A more detailed breakdown by residence reveals that these people tend to live in small towns and villages (Figure 7). It is striking that all people with extreme

[7] The number of observations in each figure varies depending on the data available for the combination of variables included in it and the sample includes all countries in the Gallup World Poll for which there is information on the radicalization question (Q1).

attitudes are willing to sacrifice own life for their beliefs compared to just 30% for category 4, 17-19% for categories 2-3, and only 12% for category 1.

Figure 2: Distribution of responses to the radicalization question (Q1)
(% of all respondents in pooled sample)

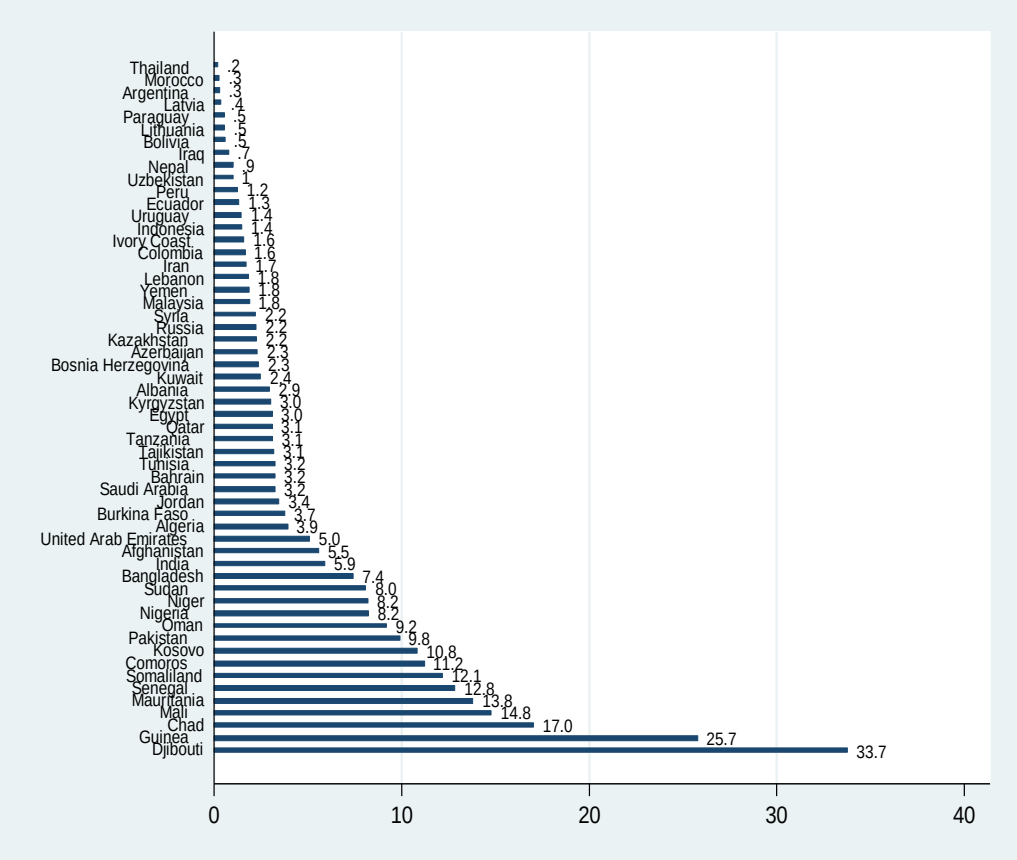


Note: The number of observations included is 144,200.

Contrary to common perceptions, extremely radicalized people and those who mildly support attacks on civilians (categories 4 and 5) tend to be less religious than other categories of respondents (categories 1-3). Almost three-quarters of all respondents say that religion is important in their daily life, but among the most radicalized respondents of our sample, less than a fifth think that religion is important in their daily life (Figure 8).[8]

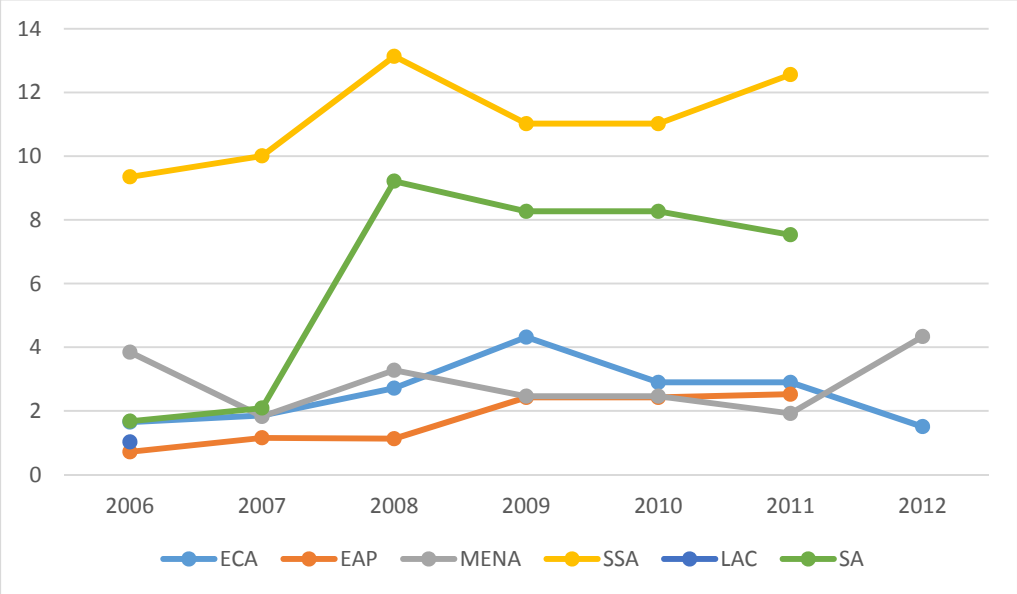
[8] The Gallup World Poll does not have sufficient information to allow us to identify the religious affiliation of respondents.

Figure 3: Incidence of extremists by country (% of total respondents)



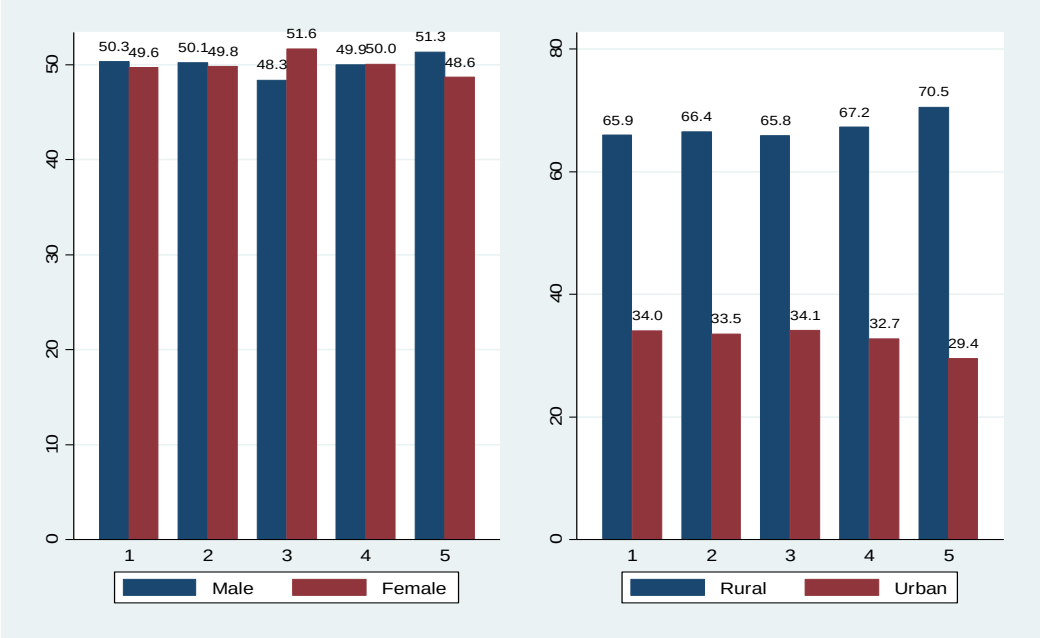
Note: The number of observations included is 144,200.

Figure 4: Incidence of extremists by region (% of respondents)



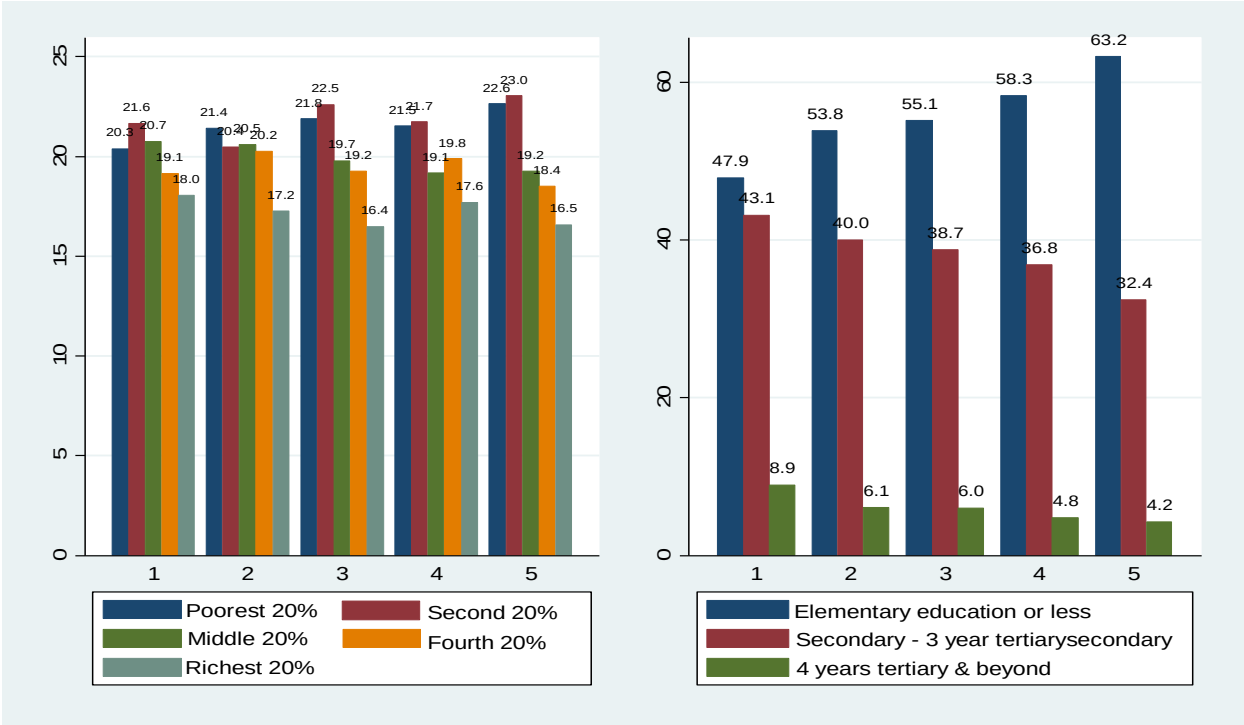
Notes: The number of observations included is 144,200. The regions are defined following the World Bank's regional definitions.

Figure 5: Distribution of respondents to radicalization question (Q1) by gender and locality



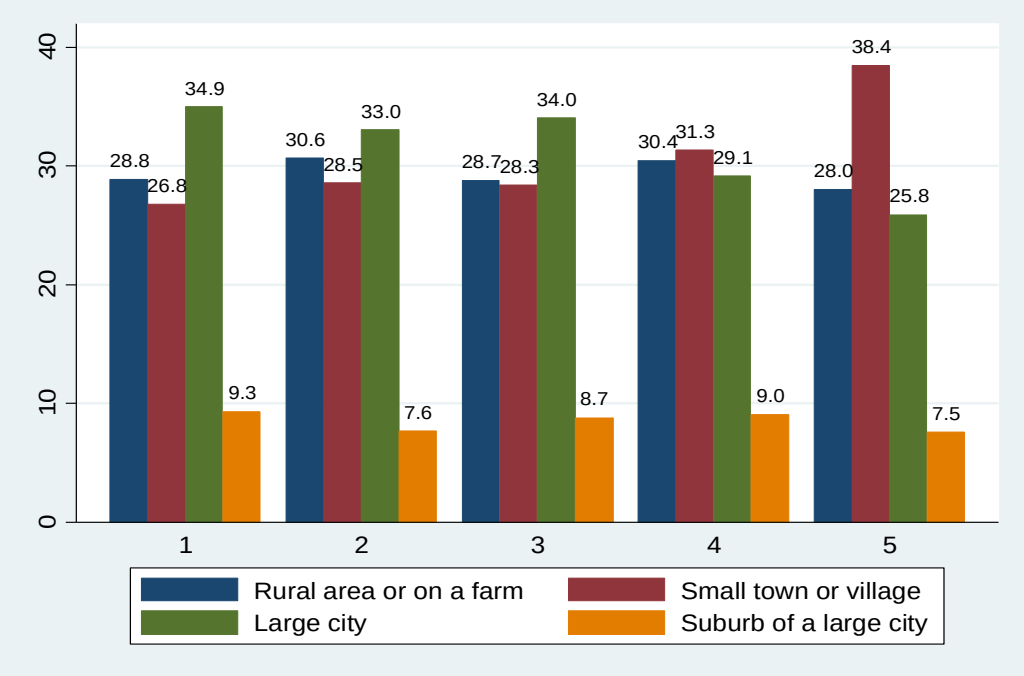
Note: The number of observations included is 144,200 for gender and 69,068 for locality.

Figure 6: Distribution of respondents to radicalization question (Q1) by income quintile and education level



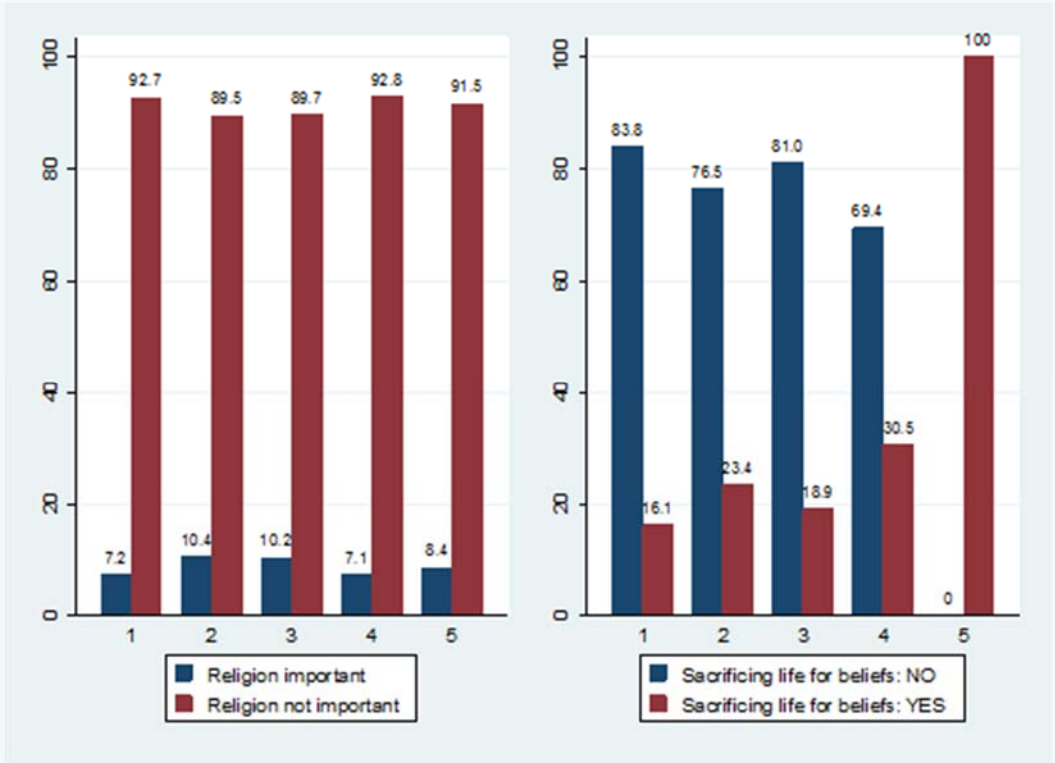
Note: The number of observations included is 107,031 for income quintiles and 120,562 for education.

Figure 7: Distribution of respondents to radicalization question (Q1) by respondent's locality



Note: The number of observations included is 118,183.

Figure 8: Distribution of respondents to the radicalization question (Q1) with respect to the importance of religion and sacrificing one's life for beliefs



Note: Number of observations included is 136,646 for religion and 133,204 for sacrificing life.

3. Methodology and empirical strategy

We use an univariate ordered probit (UOP) regression to identify the association between attitudes toward terrorist activities and a set of individual characteristics, including age, gender, marital status, employment situation, education attainment, family demographics, importance of religion in one's life, willingness to sacrifice one's life for beliefs, and locality, as well as country-level common factors.

We recognize that individuals' attitudes towards extreme violence and a number of individual characteristics, including income, education, and employment status are likely to be simultaneously determined by a set of factors. Although we cannot address all these sources of simultaneity individually, we choose to focus on the simultaneity between subjective wellbeing and extremism as income, education, and employment are significant correlates of wellbeing (Arampatzi et al. 2015). Individuals with lower wellbeing are more likely to be low income, less educated and unemployed or underemployed, and they may be more likely to support attacks targeting civilians. At the same time, extremists may have lower wellbeing and may be less interested in devoting time to income-generating and learning activities. By addressing the simultaneity between extremism and subjective wellbeing, we are able to estimate more precisely the association between extremism and income, education, employment and other variables that affect wellbeing. In a univariate specification, the subjective wellbeing variable is excluded, so the effect of income and other variables that affect wellbeing on attitudes toward radicalization is expected to be biased given that these covariates correlate with subjective wellbeing.[9]

[9] The direction of the bias depends on the sign of the correlation between subjective wellbeing and each covariate on the one hand and, on the other, the sign of the correlation between subjective wellbeing and radicalization.

To account for this, we estimate a bivariate model explaining both radicalization and economic welfare. We follow the literature and measure welfare using a subjective self-assessment of economic wellbeing[10] (Ravallion and Lokshin, 2001; Ravallion and Lokshin, 2002; Lokshin and Ravallion, 2008). We use the following question included in the survey (Q2): "*Please imagine a ladder with steps numbered from zero at the bottom to ten. On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?*" This measure captures the multidimensional nature of economic welfare.

The two left-hand sides (LHS) of our bivariate model are the responses to questions Q1 (described in the previous section) and Q2, respectively. We express these two LHS variables as functions of individual characteristics, locality, and country-level common factors. More formally, let (Y_{i1}^*, Y_{i2}^*) be a vector of two random continuous latent variables for individual i, with $i = 1,...,n$. Variables Y_{i1}^* and Y_{i2}^* describe the subjective self-assessments of economic welfare and radicalization, respectively, and can be expressed as linear combinations of a set of covariates X_{ij} plus disturbance terms. The bivariate model can then be specified by the following system of equations:

$$Y_{i1}^* = X_{i1}^{'}\beta_1 + \varepsilon_{i1} \quad (1)$$

$$Y_{i2}^* = \delta Y_{i1}^* + X_{i2}^{'}\beta_2 + \varepsilon_{i2} \quad (2)$$

[10] The notion of economic welfare is much broader than income.

with $E(\varepsilon_1 \varepsilon_2) = \rho$ and β_1, β_1, and δ denoting the coefficients that will be estimated in the next section. The main identifying assumptions are that $E(X_{i1}\varepsilon_{i1}) = E(X_{i2}\varepsilon_{i2}) = 0$ and the observed outcomes associated with the underlying continuous latent variables are defined as follows:

$$Y_{ij} = k \Leftrightarrow \mu_{j(k-1)} < Y_{ij}^{*} \leq \mu_{jk}, \text{ where } j = 1,2,\ k = \begin{cases} 0,...,10 \text{ when } j = 1 \\ 1,...,5 \text{ when } j = 2 \end{cases}$$

and $\mu_{1(-1)} = -\infty$, $\mu_{2(0)} = -\infty$, $\mu_{1(10)} = +\infty$, and $\mu_{2(5)} = +\infty$.[11] Assuming that the error terms, ε_{i1} and ε_{i2}, are normally distributed, we can adopt a bivariate ordered probit (BOP) modelling of the responses to Q1 and Q2.[12] The BOP is a generalization of the ordered probit, allowing for two equations with correlated disturbances, which in turn is a generalization of the binary response model.

Our specification relies on the values taken by the correlation coefficient (ρ) between ε_{i1} and ε_{i2} and the parameter (δ) associated with Y_{i1}^{*} in (2). If $\delta = 0$ and $\rho = 0$, then each equation can be estimated separately using a univariate ordered probit. If $\delta = 0$ and $\rho \neq 0$, then we can use a seemingly unrelated bivariate ordered (SUR) approach to estimate the system. If $\delta \neq 0$, then we need to estimate a simultaneous specification using a full information maximum likelihood (FIML) estimator. The parameters β_1 and β_2 are identified by imposing the following exclusion restrictions on X_1 and X_2. At least one element of X_1 (say Z_1) should not be included in X_2.

[11] Recall that Q1 is *"I would like you to indicate to which extent it can be morally justified: attacks in which civilians are the target".*

[12] Although, the normal and logistic distributions are close, we prefer the former given that the latter contains a higher degree of kurtosis, thus attributing higher probabilities to extreme events. Furthermore, if the idiosyncratic latent heterogeneity in economic welfare and radicalization can be viewed as sums of small elements, the central limit theorem can be used to justify this assumption.

Similarly, we include a set of regressors Z_2 in X_2, but not in X_1; Z_1 and Z_2 are then interpreted as instruments for Y_{i1} and Y_{i2}, respectively, in the system of equations (1) and (2).

The explanatory factors that are common to both equations are income, the natural logarithm of age and its squared term, and dummy variables for gender, marital status, employment status, and education level. The specific regressors in the self-assessed wellbeing (SAW) equation (1) are the number children under 15 years of age living in the household and a dummy indicating the status of economic conditions in the respondent's city. The number of children under 15 years of age living in the household is regarded as a proxy for the household's age dependency. The regressors specific to the self-assessed radicalization (SAR) equation (2) are the dummy variables indicating whether religion is important in the respondent's daily life and his willingness to sacrifice own life for beliefs. The direct association of these two factors with wellbeing is weak,[13] so they appear to meet the exclusion restriction as they appear to be only indirectly associated with wellbeing via their effect on attitudes towards extreme violence. So we exclude these two attitudinal variables from equation (1).[14]

In this specification the latent variable for extremism depends on the latent variable for self-reported well-being through the parameter δ as we are interested in the correlates of radicalization. However, well-being may also be influenced by attitudes on extremism. Therefore

[13] We included the two variables in equation (1), estimated using UOP. Importance of religion is not significantly associated with subjective wellbeing, while willingness to sacrifice own life for beliefs is only weakly associated with wellbeing. This result is in line with the literature on subjective wellbeing which generally excludes these attitudinal variables as covariates of subjective wellbeing (Ravallion and Lokshin 2002; Arampatzi *et al.* 2015; Djankov *et al.* 2016).

[14] The instruments included in the self-assessed wellbeing equation are city economic conditions and the presence of children in the family.

in the robustness checks we estimate an alternative specification in which well-being is a function of radicalization and find similar results.

Another serious challenge in identifying the parameters in (1) and (2) is unobservable heterogeneity. The observable covariates are unlikely to pick up all the latent heterogeneity in individuals' subjective assessment of radicalization. For instance, individuals' mental health may well influence both his income and his preference for attacks against civilians. If individuals with poor mental health, who are more likely to have lower income levels, tend to be more radicalized, the omission of the mental health status would bias downwards the coefficient on income from a univariate estimate of (2). We are unable to address the unobservable heterogeneity issue with the repeated cross-sectional data from the World Gallup Poll.[15] A non-random reporting bias may also be present. For example, if there is a systematic reporting error in the education level, the univariate estimate of the coefficient on education would be attenuated (over-estimated) if respondents tend to understate (overstate) education levels.

All of these concerns suggest that we should adopt a simple econometric strategy, relying on the UOP approach. In addition, we estimate the simultaneous system (1) and (2) ($\delta \neq 0, \rho \neq 0$) using the BOP FIML estimator as this approach addresses some, but not all, simultaneity concerns.[16] We also perform a number of robustness checks with alternative specifications, including a fully observed recursive mixed-process model, and check the sensitivity of the baseline

[15] If we had panel data we could have addressed unobserved heterogeneity using individual fixed effects.
[16] The estimation procedure is described in Sajaia (2008).

results to other concerns, including the omission of relevant regressors and alternative definitions of the dependent variable of interest (SAR).[17]

Furthermore, because we have multiple waves within a country/year, our results might be influenced by the fact that each country changes over the sample period and in very different ways. We deal with this issue by first including country/wave fixed effects and then clustering the standard errors at the country/wave level, thus allowing for within country-wave intra-cluster correlations.[18] Thus, our results can be viewed as covariates of radicalization within the same country/wave group.

Another potential problem is the item nonresponse bias, which is frequent in household surveys in developing countries. Item nonresponses are characterized by survey noncompliance in which some of the participating individuals refuse to answer some questions. If the process driving these nonresponses is not random, then the parameter estimates from the system (1) and (2) may be biased (see, among others, Van Praag et al., 1983; Korinek et al., 2006). We deal with this problem in three different ways. First, we check whether there is a systematic association between the distribution of item nonresponses on our LHS variable of interest (SAR) and our covariates. Our estimates would be contaminated if this association is significant. Second, we follow the empirical literature on this issue (see, among others, Lillard et al., 1986; Little and Rubin, 1987) and estimate the system (1) and (2) using an extended sample. The extended sample is obtained by imputing the nonresponses using the within country-wave sample median of each variable in the system.

[17] Due to missing observations and therefore reduced sample sizes, we include these additional controls only in the sensitivity checks. We believe that the resulting potential sampling bias due to limited sample size may be a more serious concern than the omitted variable bias.
[18] However, this does not allow for correlations across clusters.

Finally, we consider the possibility that the non-responses occur because of "reticent" behavior that signals sympathy with radical beliefs.

The Gallup World Poll includes the question (Q1) on attitudes toward extreme violence in 27 developing countries from five geographic regions around the world during the period 2006-12 (Table A1). The full sample for this set of countries consists of 245,064 observations, but once we drop the instances with nonresponses on Q1, the sample size reduces to 92,993 observations. Since we have also many instances of nonresponses to questions related to the covariates of radicalization, the baseline sample we use in the regression analysis contains only 30,787 observations. As shown in Table A1, the small country sample sizes imply that country-level regressions would have limited degrees of freedom because our main regressor variables are dummies describing the respondents' status in terms of different characteristics. We overcome this problem by relying on pooled samples in all regressions and including country and locality fixed effects to control for country-level and locality-level unobserved heterogeneity.

4. Estimation results

This section discusses first the unconditional association between radicalization and subjective wellbeing. Then, we present our baseline results obtained using UOP and BOP estimations and the issues of non-responses to the radicalization question, Q1.

4.1 Association between radicalization and subjective economic welfare

The incidence of radicalization and the level of subjective economic welfare are relatively low in our sample. The self-assessed radicalization and economic welfare indexes are 1.718 and 4.751, on average, given their ranges of [1, 5] and [0, 10], respectively (Appendix A, Table A2). However,

as depicted in Section 2, the incidence of radicalization varies widely across countries and regions and the relatively low level of economic welfare is consistent with the fact that our sample includes only developing countries.

Overall, there is no systematic unconditional association between radicalization and economic welfare, as shown in Appendix Table A3, which presents the association between radicalization and subjective economic welfare using the Cramer's V statistic. This statistic is appropriate for measuring correlations between two categorical variables and ranges between 0 and 1, with higher values indicating stronger correlations between the two variables. The Cramer's V statistic of 0.050 for the whole sample suggests a positive but very weak correlation between radicalization and economic welfare. We find the same correlation pattern after splitting the sample into sub-samples of men and women, with Cramer's V statistics of 0.057 and 0.049, respectively. The distribution of the conditional modal radicalization category (3 "Indifferent") with respect to subjective economic welfare is non-linear: the frequencies of respondents thinking that they are "radical-neutral" are very low for both lower and higher assessments of economic welfare, but relatively high for the intermediate assessments. This situation is similar for men and women.

This weak association between radicalization and subjective economic welfare suggests that we can estimate a radicalization equation ignoring the effect of economic welfare. However, as we show in the next section, the effects of the covariates associated significantly with subjective wellbeing are likely to be biased as they will pick up the association with subjective wellbeing. In the case of income and education, the pure effect on radicalization attitudes is expected to be larger and more significant when the effect of wellbeing is controlled for in a bivariate specification than in a univariate equation that omits wellbeing. This is the case because both income and education are strongly and positively correlated with wellbeing.

4.2 Baseline results: Covariates of radicalization

Table 1 reports UOP results in columns (1) and the BOP results, showing results for the self-assessed wellbeing (SAW) in column (2) and for the self-assessed radicalization in column (3). The first thing to note is that the results from the UOP and BOP specification are very similar qualitatively and quantitatively. The biggest difference is that income is not significantly associated with SAR in the UOP specification in column (1), but its coefficient is significant and negative in the BOP specification in column (3). This is an expected result as income is significantly and positively associated with subjective wellbeing so the omission of subjective wellbeing reduces its significance and biases the result towards 0. Similarly, the effect of education strengthens in the BOP compared to the UOP specification. The p-value of 0.036 associated with the Wald test of independence of the equations in the BOP lends further support to our decision to include the BOP specification and to estimate the SAW and SAR equations jointly.

While life satisfaction levels tend to rise with income, the opposite tends to be the case with radicalization. This result is consistent with the findings in Arampatzi et al. (2015) and our intuition that the higher prevalence of suffering among the poor may make some of them more susceptible to extreme views.

Another predictor of radicalization is the respondent's age. The inclusion of its squared term is motivated by the non-linear nature of its relationship with radicalization, i.e. we expect radicalization to increase in the early stages of life, but then after a peak, we expect it to fall with age. Indeed, our results indicate that the incidence of radicalization increases with the respondent's age up to a certain cut-off level of age (33 years old), beyond which the relationship becomes

negative.[19] Since the median respondent in our sample is 32 years old, in the majority of our data, radicalization tends to increase with age. On the other hand, the association between subjective wellbeing and age is not statistically significant.

The respondent's employment status has a significant effect on the extent to which an individual holds extreme views. Part/full time employed respondents (self-employed or not) are less likely to be radicalized than those who are unemployed or those who are out of the workforce. The relationship is relatively more pronounced for the respondents who are full-time self-employed. This result is consistent with our belief that employed people spend much more time at work and are, therefore, less exposed to network-induced externalities leading to radicalization. They are also likely to be in the top half of the income distribution and, therefore, are more averse to risks associated with attacks.

[19] The turning point is given by the exponential of $\beta/2*\beta^2$, where β and β^2 are the absolute values of the coefficients on age and its squared term, respectively.

Table 1: Baseline results, Non-OECD sample

	UOP	BOP	
	SAR	SAW	SAR
	(1)	(2)	(3)
Income (#)	-3.5e-03 [0.026]	0.288 [0.029]***	-0.101 [0.036]***
Age (#)	0.799 [0.370]**	-0.667 [0.397]	1.061 [0.314]***
Age (#), squared	-0.116 [0.055]**	0.085 [0.055]	-0.151 [0.046]***
Female	-1.8e-03 [0.038]	0.063 [0.023]***	-0.024 [0.032]
Single, never married	-0.014 [0.029]	-0.051 [0.021]**	1.09e-03 [0.027]
Employment status			
Employed part time want full time	-0.030 [0.055]	-0.031 [0.027]	-0.022 [0.058]
Employed part time do not want full time	-0.072 [0.022]***	0.073 [0.029]**	-0.099 [0.027]***
Employed full time for self-employment	-0.122 [0.040]***	0.010 [0.030]	-0.127 [0.039]***
Employed full time for an employer	-0.088 [0.023]***	-0.012 [0.036]	-0.089 [0.024]***
Highest education level			
Secondary to 3 year of tertiary	-0.050 [0.021]**	0.222 [0.015]***	-0.126 [0.037]***
4 years of tertiary and beyond	-0.197 [0.062]***	0.337 [0.045]***	-0.306 [0.055]***
Instruments for SAW			
City economic conditions are good		0.384 [0.044]***	
Children under 15 in this household (@)		-0.055 [0.017]***	
Instruments for SAR			
Religion is important	-0.184 [0.080]**		-0.184 [0.074]**
Sacrificing one's life for beliefs	1.363 [0.087]***		1.317 [0.111]***
Country fixed effects	Yes	Yes	
Locality fixed effects	Yes	Yes	
Survey waves fixed effects	Yes	Yes	
c11	2.341 [0.682]***	-0.824 [0.802]	
c12	2.790 [0.674]***	-0.294 [0.791]	
c13	3.199 [0.680]***	0.300 [0.790]	
c14	3.639 [0.696]***	0.951 [0.785]	
c15		1.526 [0.787]*	
c16		2.367 [0.798]***	
c17		2.937 [0.803]***	
c18		3.426 [0.805]***	
c19		3.884 [0.799]***	
c110		4.196 [0.813]***	
c21		1.022 [0.653]	
c22		1.457 [0.647]**	
c23		1.854 [0.651]***	
c24		2.284 [0.669]***	
Observations	32663	30787	
Pseudo R2	0.148		
Log Pseudolikelihood	-29115.229	-85076.036	
Wald test of indp. Eqns. (p-value)		0.036	

Notes: SAW stands for self-assessed wellbeing and SAR is self-assessed radicalization. The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Education is an important predictor of extremism. Respondents with completed secondary and tertiary education levels are less likely to be radicalized than the reference category of respondents who have "completed elementary education or less". The coefficient on the dummy for "4 years of tertiary and beyond" (0.306, s.e.=0.055) is more than two times higher than that on the dummy for "Secondary to 3 year of tertiary" (0.126, s.e.=0.037), suggesting a strong negative association between extremism and educational attainment. The role of education in lowering the incidence of individuals with extreme attitudes has been pointed out in numerous country-case studies and is consistent with the view that education tends to make people more willing to accept different opinions or cultures and to live in harmony with those who do not share their opinions or those from a different culture. At the same time, the results from the SAW equation indicate that educated people also tend to be happier than the less educated ones.

The radicalization-related factors, included only in the SAR equation, are dummies for the importance of religion and for the willingness to sacrifice one's life for own beliefs. Consistent with the religion-radicalization correlation depicted in Figure 7, we find that respondents who find religion to be an important part of their daily life are less likely to justify attacks in which civilians are targeted than others. This result seems surprising since people who support or operate violent extremism usually claim that terrorist attacks are in the name of religion.[20] Yet, others insist that the motivation behind terrorist attacks are all but religious and these results are consistent with this view. Finally, the results suggest that people committed to sacrificing their lives for their beliefs tend to be more likely to justify attacks in which civilians are targeted. This result suggests that extremists may sympathize with terrorists who often operate through suicide-style attacks. The

[20] For instance, in the case of the terrorist acts perpetrated by various Islamist groups, the usual claim is that these attacks are in line with "Jihadism", which is directly connected to Islam.

inclusion of the country fixed effects, reveals that, conditional on the other included covariates, there is a wide variation in the incidence of radicalization across countries.

As discussed in the previous section these results may be biased if item nonresponses are prevalent and nonrandom. The average rate of nonresponses on Q1 in our sample is high (61.94%), although it varies substantially across countries and regions. Importantly, the covariates are not systematically correlated with the item nonresponses. The Cramer's V statistics, reported in Table A4 in the appendix, range from 0.5 percent to 7.9 percent, suggesting a weak association between our regressor variables and the distribution of nonresponses.

Furthermore, as shown in column 1 of Table 3 and also Appendix Table A5, the results from the extended sample, in which the item non-responses are imputed using within country-wave sample medians, are very similar to the baseline results in Table 1, suggesting that our results are not driven by nonresponses. However, some of the non-responses may occur because of "reticent" behavior signaling sympathy with radical beliefs. We test the effect of refusals to answer the radicalization question on the results by setting the non-responses at specific values indicating the strength of radicalization attitudes. In all cases, these results, shown in Appendix Table A6, are similar to the baseline results in Table 1. The results are also robust to representing the dependent variable as a binary variable (see Appendix Table A7).

In short, our main results suggest that the average individual who espouses extreme views in our sample has low income, is young and unemployed or out of the workforce, is less educated, and less religious than others but more willing to sacrifice own life for his or her beliefs. Next, we explore the robustness of the results.

5. Robustness analysis

This section discusses the sensitivity of the baseline results to a number of robustness checks with respect to the country-sample composition, the type of estimator, and the issue of income endogeneity.

5.1 Region-level estimates

It is reasonable to expect that the factors behind extreme attitudes vary across countries and geographic regions. For instance, the factors that motivate Islamist terrorist attacks in the Middle East may be very different from those motivating inter-ethnic attacks in Sub-Saharan Africa or inter-caste radical conflicts in Asia. Although the inclusion of country-fixed effects allows us to capture some aspects of these regional specifics, it appears prudent to replicate our baseline regression by region.

We conduct region-specific regression analysis pulling the observations by region, following the World Bank's geographic regional classification for developing countries. We omit LAC as we have information on very few LAC countries in our sample and present the results for EAP, ECA, MENA, SA, and SSA in Tables A8 to A12, respectively. As in the baseline results, radicalization falls with income, notably in SA (Table A11). In all regions, income improves significantly the likelihood of experiencing a high quality life, although the size of the coefficient on income varies across regions, ranging from 0.197 (s.e.=0.034) in SSA to 0.556 (0.037) in SA.

The inverted U-shaped relationship between the respondent's age and radicalization is significant only in SSA, where the turning points is 32 years of age. The association between age and radicalization has the expected inverted U-shape but is not significant in the other regions. The

effect of the respondent's age on subjective wellbeing is also non-linear but only significant in ECA and MENA.

As in the baseline results, the respondent's gender and marital status do not explain the variance in radicalization. At the regional level, single people are more likely to hold extreme views than others, only in ECA. Women tend to have higher happiness levels than men in all regions except ECA and SSA. By contrast, single people are less happy than married ones, although this effect is insignificant in EAP and SA.

In the case of SSA, and to a lesser extent, EAP and SA, the unemployed or those out of the workforce are at a higher risk of becoming radicalized than others. In contrast, the employment status does not matter much for radicalization in MENA, although the related coefficients enter with the right sign in most cases. Only in ECA those who are employed part time but want full-time employment are more likely to be radicalized than the unemployed. People who are unemployed or out of the workforce are also on average less likely to have high levels of subjective wellbeing.

As in the baseline, the level of education explains significantly and robustly the variability of radicalization in all the regions. People with secondary and tertiary education are less likely to have extreme attitudes than those who only have elementary education or less. Nevertheless, this education effect varies in magnitude across regions. As expected, the result on the positive and significant association between education attainment and subjective wellbeing holds in all regions.

The finding that more religious people are significantly less likely to be radicalized holds only in EAP, MENA and SA. In SSA, this effect is not significant, but has the expected sign, and in ECA the effect is positive and significant. In other words, only in ECA, people who think that

religion is an important part of their daily life tend to have more extreme views than other people. Finally, the willingness to sacrifice one's life for own beliefs has a robust positive and significant effect on radicalization in all regions, but varies in magnitude across regions.

Based on the analysis in this section, we conclude that our main results hold at the regional level, although the magnitude of the effects of some factors on radicalization varies across regions. The results are also robust to the inclusion of the few OECD countries on which we have sufficient data to estimate the model discussed in section 2. The results from the BOP estimation using the full sample are presented in Appendix Table A13.

5.2 Sensitivity to alternative estimators

In section 4, we presented results from two alternative specifications: the univariate ordered probit ($\delta = 0$) and the bivariate ordered probit ($\delta \neq 0, \rho \neq 0$). In this section, we test the robustness of the results in the case of bivariate SUR ordered probit ($\rho = 0$). The Wald test rejects the hypothesis of independence of the two equations as the estimated correlation coefficient between the error terms is statistically significant at the 1% level. The results reported in Table A14 show that, with the exception of income, all regressors keep their signs and significance in explaining radicalization. This confirms our presumption that income is the main endogeneous variable in our model. In the SAW equation, the coefficients on income, gender and marital status remain statistically significant and retain their expected signs.

Second, we estimate our preferred simultaneous equations specification using a fully observed recursive mixed-process (Roodman, 2011). Instead of multistage procedures for fitting mixed models, this technique uses simulated likelihood methods for estimating higher-dimensional cumulative normal distributions. These results are identical to those from the bivariate SUR

specification reported in Table A14. The two alternative specifications for estimating the system of equations (1) and (2) provide lower Log Pseudolikehood statistics relative to that of our baseline specification, while our main results continue to hold.[21]

We also test a specification in which well-being is associated with attitudes toward violent extremism. The results of this specification, presented in Appendix Table A15, are quantitatively and qualitatively similar to those obtained using a UOP.

5.3 Sensitivity to controlling for the endogeneity of income

In this section, we test the robustness of our baseline results to three sensitivity checks dealing with the endogeneity of income. The main reason for this endogeneity stems from latent determinants of radicalization influencing individual income that are omitted from our model. As mentioned above, the individual's mental health may well influence both his degree of radicalization and level of income. Since individual income is also likely to be related to the remaining regressors, the error term would then be correlated with other regressors as well, violating the orthogonality conditions.

We check whether our main results are not driven by such an endogeneity bias by using three techniques. First, we follow Lokshin and Ravallion (2008) and after dropping individual income from the regression we check the behavior of the coefficients on the non-income regressors. We expect these coefficients to be insensitive in terms of magnitude, signs and significance to the exclusion of individual income. Second, we interact individual income with the country-level weighted average income.[22] This can be interpreted as a difference-in-difference approach, given that the coefficient on the interaction term is the impact of income on radicalization with respect

[21] These statistics are -85107.808 against -85076.036 in our baseline specification.
[22] Sampling weights are used in this procedure.

to the level of development of the respondent's country. We expect this coefficient to be negative, suggesting that the impact of income on radicalization is likely to be more pronounced in low income countries. Third, we replace individual income with the within-country income quintiles as alternative regressors. The income quintiles capture the within-country income distribution, which depends on individual income, but also and importantly on income of other individuals in the country. So this indicator is likely to be more exogeneous than personal income. We expect the likelihood of radicalization to be higher at the bottom tail of the income distribution.

The results from these three tests are summarized in Table 2 and presented in detail in the appendix in Tables A16, A17, and A18, respectively. Our main results are robust to dropping individual income from the baseline regression (Table 2, column 1). Although the inverted U-shaped relationship between age and radicalization continues to hold, the magnitude of the coefficients on age and its squared term declines as a result of excluding income. The coefficients on the dummies for gender and marital status remain statistically insignificant in the radicalization equation. The negative relationship between employment and radicalization is strengthened after dropping income, signaling the fact that the dummies for employment status are now picking up the effect of income. This is also the case for the dummies for education, religion, and sacrificing life for beliefs (Table 2).

Similarly, the results reported in column 2 of Table 2 and in detail in Table A17 in the appendix indicate that using a difference-in-difference approach to deal with the endogeneity of income does not alter our main results. The negative and statistically significant coefficient of -0.013 (s.e.=4.27e-03) on the interaction term suggests that the impact of income on radicalization is significantly stronger when the average income in a country is low. This is consistent with our

expectation that the level of individual income will influence radicalization disproportionately more in low-income countries. The coefficients on the other regressors are changed only slightly.

Table 2: Endogeneity tests, Non-OECD sample (Only SAR equations are reported)

	(1)	(2)	(3)
Income (#)			
Income (#) (interacted)		-0.013 [4.27e-03]***	
Second 20%			-0.078 [0.031]**
Middle 20%			-0.125 [0.040]***
Fourth 20%			-0.117 [0.046]**
Richest 20%			-0.274 [0.081]***
Age (#)	1.022 [0.326]***	1.059 [0.315]***	1.044 [0.308]***
Age (#), squared	-0.146 [0.048]***	-0.151 [0.046]***	-0.148 [0.045]***
Female	-0.024 [0.032]	-0.024 [0.032]	-0.023 [0.032]
Single, never married	-3.52e-03 [0.027]	1.43e-03 [0.027]	1.49e-03 [0.027]
Employment status			
Employed part time want full time	-0.022 [0.059]	-0.021 [0.058]	-0.023 [0.058]
Employed part time don't want full	-0.101 [0.026]***	-0.098 [0.027]***	-0.099 [0.027]***
Employed full time for self-empl.	-0.137 [0.040]***	-0.126 [0.038]***	-0.127 [0.038]***
Employed full time for an empl.	-0.102 [0.025]***	-0.088 [0.024]***	-0.089 [0.023]***
Highest education level			
Secondary to 3 year of tertiary	-0.161 [0.044]***	-0.126 [0.037]***	-0.125 [0.036]***
4 years of tertiary and beyond	-0.369 [0.059]***	-0.302 [0.055]***	-0.296 [0.055]***
Instruments for SAR			
Religion is important	-0.187 [0.074]**	-0.184 [0.074]***	-0.184 [0.073]**
Sacrificing one's life for beliefs	1.322 [0.107]***	1.317 [0.111]***	1.317 [0.110]***
Country fixed effects	Yes	Yes	Yes
Locality fixed effects	Yes	Yes	Yes
Survey waves fixed effects	Yes	Yes	Yes
Observations	30787	30787	30787
Log Pseudolikelihood	-85783.329	-85066.37	-85087.194
Wald test of indp. Eqns. (p-value)	0.030	0.034	0.031

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1. The country-level income used in interaction with individual income is weighted using sampling weights. Columns 1, 2, and 3 report the results excluding income, interacting income with country-level income, and using income quintiles.

Finally, the results presented in column 3 of Table 2 (detailed results are in Table A18) confirm the robustness our main results. As mentioned above, the within country income distribution is likely to be a more exogeneous proxy for income and allows us to see how the likelihood of

radicalization varies across socioeconomic groups. The results show that although all dummies for income quintiles enter the equations significantly with the expected signs, the coefficients on the remaining regressors are broadly stable. We find that in our sample, the individuals in the bottom 20% of the income distribution are much more likely to be radicalized. At the other extreme, the likelihood of radicalization is lowest for the top 20% of the income distribution.

The Log Pseudolikelihood statistic decreases from -85076.036 to -85783.329 and -85087.194, respectively, after excluding income and after replacing income with income quintiles. It remains slightly the same (-85066.37) when we interact individual income with the country-level weighted average income. This suggests that our baseline specification broadly remains the best one.

5.4 Sensitivity to additional controls

Although in our baseline regression we already control for a variety of covariates at the individual, locality, and wave levels, our results may still be subject to other omitted factors. In this section, we trade-off between omitted variable bias and sample size as adding additional controls helps alleviate possible omitted variable bias but reduces our sample size due to important missing observations. The results from this sensitivity check are presented in columns 2 and 3 of Table 3 and in detail in Tables A19 and A20 in the appendix. The additional regressors are indexes for community basics, community attachment and civic engagement, and a dummy variable indicating whether the respondent is satisfied with the freedom to choose what to do with his or her life. Conditional on the other regressors, individuals who are not satisfied with the freedom to choose are more likely to be radicalized and less likely to have better economic welfare. The indexes for community attachment, community basics, and community engagement do not relate significantly with radicalization, possibly because their impact is already picked up by the covariates already included in the equation; but their inclusion does not change our baseline results.

Table 3: Sensitivity to imputing missing values (1), including additional controls (2), and controlling for the incidence of conflicts (3) (Only SAR equations are reported)

	(1)	(2)	(3)
Income (#)	-0.090 [0.035]**	-0.115 [0.045]**	-0.099 [0.035]***
Age (#)	1.088 [0.326]***	0.988 [0.285]***	1.045 [0.307]***
Age (#), squared	-0.158 [0.047]***	-0.139 [0.041]***	-0.147 [0.045]***
Female	-0.032 [0.028]	-0.027 [0.032]	-0.022 [0.032]
Single, never married	0.012 [0.026]	6.7e-03 [0.029]	0.014 [0.025]
Employment status			
Employed part time want full time	-9.4e-03 [0.053]	6.3e-03 [0.058]	-0.013 [0.060]
Employed part time don't want full	-0.091 [0.026]***	-0.079 [0.031]**	-0.089 [0.028]***
Employed full time for self-empl.	-0.112 [0.038]***	-0.105 [0.034]***	-0.126 [0.034]***
Employed full time for an empl.	-0.086 [0.021]***	-0.074 [0.022]***	-0.087 [0.022]***
Highest education level			
Secondary to 3 year of tertiary	-0.108 [0.034]***	-0.128 [0.042]***	-0.130 [0.036]***
4 years of tertiary and beyond	-0.302 [0.066]***	-0.306 [0.058]***	-0.294 [0.059]***
Instruments for SAR			
Religion is important	-0.152 [0.073]**	-0.171 [0.070]**	-0.191 [0.074]**
Sacrificing one's life for beliefs	1.321 [0.096]***	1.290 [0.127]***	1.308 [0.113]***
Additional controls			
Weighted Conflict Index			1.7e-05 [7.4e-06]**
Community attachment index		-6.8e-04 [6.7e-04]	
Community basics index		2.3e-04 [7.8e-04]	
Civic engagement index		9.6e-04 [8.1e-04]	
Satisfied with freedom to choose		-0.122 [0.040]***	
Country fixed effects	Yes	Yes	Yes
Locality fixed effects	Yes	Yes	Yes
Survey waves fixed effects	Yes	Yes	Yes
Observations	37556	30192	29151
Log Pseudolikelihood	-102838.94	-83589.897	-81039.659
Wald test of indp. Eqns. (p-value)	0.063	0.046	0.038

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1. Column 1 reports results with imputed missing values. Column 2 reports results with controls for conflict. Column 3 reports results with additional controls.

Furthermore, country-level time-varying omitted factors may also influence our results. It may be the case that support for violent extremism may be affected by terrorist incidents at the country/year level (See, among others, Blair et al., 2013; Lyall et al., 2013). For instance, wartime victimization may influence attitudes toward violent extremism. To control for this, we augment our baseline regression by controlling for the incidence of conflicts using the time-varying country-

level weighted conflict index from the Databanks International Cross-National Time-Series Database.[23] The results reported in column 3 of Table 3 show that controlling for the incidence of conflicts does not alter our baseline results. Quite intuitively, conflicts are negatively (positively) associated with SAW (SAR), although the associated coefficients are very small in magnitude.

Our baseline results are robust to the inclusion of additional regressors. Income continues to negatively influence radicalization and the negative effect strengthens. The inverted U-shaped relationship between age and radicalization also persists and the coefficients on the dummies for employment status, education levels, radicalization and sacrificing life for believes also remain unchanged in sign and significance.

6 Concluding remarks

This paper studies the common characteristics of extremists in the developing world. Using information from the Gallup World Poll on attitudes towards extreme violence and other characteristics of 30,787 individuals from 27 developing countries around the world and employing a variety of econometric techniques, we identify a set of factors that are associated significantly with extremism. The results suggest that the typical extremist who supports attacks on civilians tends to be relatively young (below 33), unemployed and struggling to make ends meet, poorly educated, and not as religious as others but more willing to sacrifice own life for his or her beliefs. These results are robust to various estimation techniques, approaches for dealing with non-responses to the radicalization question, and additional controls. They also hold for a global sample that includes both non-OECD and a few OECD countries and across geographic regions although the effects may vary in magnitude and significance across countries and regions.

[23] These data are available at http://www.databanksinternational.com.

As we use repeated cross-section data we are unable to deal with individual-level unobserved heterogeneity and our results should be interpreted as partial correlations. In order to gain a better understanding of the causes behind radicalization, there is a need for an effort to improve data collection, particularly of panel data. Progress in this area will enable researchers to address causality issues and ultimately propose policies aimed at addressing the risk factors for radicalization.

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Appendix A

Table A1: Sample description of observations for the period 2006-12

Region	Country	Full sample with radicalization question	Full sample excluding non-responses to radicalization question	Full sample size excluding non-responses to radicalization question and information on covariates
East Asia & Pacific	Indonesia	9393	3889	1683
	Malaysia	7259	3927	1431
Europe & Central Asia	Azerbaijan	7003	3682	676
	Kyrgyzstan	7003	3471	786
	Tajikistan	7003	2485	643
Middle East & North Africa	Algeria	9135	3084	950
	Egypt	16778	5037	960
	Iraq	8996	1957	628
	Lebanon	11056	4961	634
	Qatar	6066	2835	730
	Tunisia	9291	3080	749
	Yemen	9002	1813	678
South Asia	Afghanistan	8210	5062	810
	Bangladesh	9251	2336	1411
	India	32436	5831	3175
	Pakistan	13154	819	666
Sub-Saharan Africa	Burkina Faso	6004	3801	920
	Chad	7003	4964	1860
	Comoros	7006	1918	950
	Guinea	3007	1862	740
	Mali	6004	3918	1765
	Mauritania	8988	3749	902
	Niger	7003	4894	1885
	Nigeria	8003	2715	543
	Senegal	7003	4970	1817
	Somaliland	7004	1946	958
	Tanzania	7003	3987	1837
	Total	245064	92993	30787

Table A2: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Self-assessed radicalization	30787	1.718	1.252	1	5
Self-assessed economic welfare	30787	4.751	1.849	0	10
Income (#)	30787	8.262	1.063	4.605	12.347
Age (#)	30787	3.479	0.411	2.564	4.595
Age (#), squared	30787	12.275	2.878	6.578	21.115
Female	30787	0.474	0.499	0	1
Single, never married	30787	0.307	0.461	0	1
Employed part time want full time	30787	0.110	0.313	0	1
Employed part time do not want full time	30787	0.068	0.253	0	1
Employed full time for self-employment	30787	0.185	0.388	0	1
Employed full time for an employer	30787	0.188	0.390	0	1
Secondary to 3 year of tertiary	30787	0.415	0.492	0	1
4 years of tertiary and beyond	30787	0.076	0.266	0	1
City economic conditions are good	30787	0.529	0.499	0	1
Children under 15 in the household (@)	30787	1.030	0.741	0	4.605
Religion is important	30787	0.936	0.244	0	1
Sacrificing one's life for beliefs	30787	0.201	0.401	0	1
Community attachment index	30787	73.306	31.547	0	100
Community basics index	30787	53.604	29.924	0	100
Civic engagement index	30787	28.968	30.398	0	100
Satisfied with freedom to choose what you do	30192	0.695	0.460	0	1
Second 20%	30787	0.205	0.404	0	1
Middle 20%	30787	0.190	0.392	0	1
Fourth 20%	30787	0.2033	0.4025	0	1
Richest 20%	30787	0.2030	0.4022	0	1

Notes: X(#) and X(@) denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable.

Table A3: Self-assessed radicalization and subjective economic welfare

		Radicalization					
		1	2	3	4	5	Total
Subjective economic welfare	Cramer's V=0.050			Full sample			
	0	283	16	6	11	14	330
	1	579	58	46	36	44	763
	2	1429	236	177	73	148	2063
	3	2995	490	336	197	340	4358
	4	3662	695	413	289	443	5502
	5	5912	997	631	462	626	8628
	6	3033	565	365	225	291	4479
	7	1692	226	166	146	210	2440
	8	883	141	80	67	104	1275
	9	257	103	39	20	48	467
	10	346	19	18	13	86	482
	Total	21071	3546	2277	1539	2354	30787
	Cramer's V=0.057			Men			
	0	177	11	3	5	10	206
	1	328	31	23	22	23	427
	2	765	119	89	32	82	1,087
	3	1633	242	168	94	178	2,315
	4	1983	372	191	146	238	2,930
	5	3092	523	325	231	340	4,511
	6	1550	307	199	116	162	2,334
	7	856	114	88	76	126	1,260
	8	451	65	36	35	54	641
	9	117	53	18	14	29	231
	10	162	9	11	7	46	235
	Total	11114	1846	1151	778	1288	16177
	Cramer's V=0.049			Women			
	0	106	5	3	6	4	124
	1	251	27	23	14	21	336
	2	664	117	88	41	66	976
	3	1362	248	168	103	162	2043
	4	1679	323	222	143	205	2572
	5	2820	474	306	231	286	4117
	6	1483	258	166	109	129	2145
	7	836	112	78	70	84	1180
	8	432	78	44	32	50	634
	9	140	50	21	6	19	236
	10	184	10	7	6	40	247
	Total	9957	1700	1126	761	1066	14610

Table A4: Association between non-responses to Q1 and covariates at the country-wave level

		Non-response?	
		No	Yes
Gender (Cramer's V=0.0103)	Female	37.56	62.44
	Male	38.57	61.43
Single, never married? (Cramer's V=-0.0345)	No	36.41	63.59
	Yes	40.02	59.98
Employment Status (Cramer's V=0.0793)	Unemployed	21.37	78.63
	Employed part time want full time	33.73	66.27
	Employed part time do not want full time	24.01	75.99
	Employed full time for self-employment	25.69	74.31
	Employed full time for an employer	22.20	77.80
Highest education level (Cramer's V=0.0337)	Completed elementary education or less	33.69	66.31
	Secondary to 3 year of tertiary	37.01	62.99
	4 years of tertiary and beyond	34.22	65.78
Religion is important? (Cramer's V=-0.0059)	No	40.64	59.36
	Yes	41.69	58.31
Willing to sacrifice one's life for belief? (Cramer's V=-0.0385)	No	92.12	7.88
	Yes	94.73	5.27
City economic conditions are good? (Cramer's V=-0.0149)	No	33.20	66.80
	Yes	34.60	65.40
Locality (Cramer's V=0.0351)	Rural area or on a farm	35.37	64.63
	Small town or village	31.75	68.25
	Large city	35.63	64.37
	Suburb of a large city	33.98	66.02
Income quintiles (Cramer's V=0.0126)	Poorest 20%	34.29	65.71
	Second 20%	35.84	64.16
	Middle 20%	34.44	65.56
	Fourth 20%	35.50	64.50
	Richest 20%	35.23	64.77

Note: Non-responses are within country waves.

Table A5: Results from BOP regression in which non-responses to Q1 are imputed using within country-wave sample median responses

	(1) SAW equation	(2) SAR equation
Income (#)	0.290 [0.028]***	-0.090 [0.035]**
Age (#)	-0.771 [0.352]	1.088 [0.326]***
Age (#), squared	0.099 [0.048]**	-0.158 [0.047]***
Female	0.055 [0.021]**	-0.032 [0.028]
Single, never married	-0.039 [0.019]**	0.012 [0.026]
Employment status		
Employed part time want full time	-0.013 [0.027]	-9.4e-03 [0.053]
Employed part time do not want full time	0.094 [0.025]***	-0.091 [0.026]***
Employed full time for self-employment	0.019 [0.032]	-0.112 [0.038]***
Employed full time for an employer	5.5e-03 [0.039]	-0.086 [0.021]***
Highest education level		
Secondary to 3 year of tertiary	0.222 [0.016]***	-0.108 [0.034]***
4 years of tertiary and beyond	0.367 [0.046]***	-0.302 [0.066]***
Instruments for SAW		
City economic conditions are good	0.352 [0.038]***	
Children under 15 in this household (@)	-0.043 [0.016]***	
Instruments for SAR		
Religion is important		-0.152 [0.073]**
Sacrificing one's life for beliefs		1.321 [0.096]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-0.303 [0.737]	
c12	0.216 [0.737]	
c13	0.805 [0.741]	
c14	1.422 [0.740]*	
c15	1.975 [0.743]***	
c16	2.815 [0.753]***	
c17	3.371 [0.756]***	
c18	3.849 [0.753]***	
c19	4.310 [0.746]***	
c110	4.600 [0.763]***	
c21	1.476 [0.671]**	
c22	1.904 [0.667]***	
c23	2.307 [0.664]***	
c24	2.728 [0.668]***	
Observations	37556	
Log Pseudolikelihood	-102838.94	
Wald test of indp. Eqns. (p-value)	0.063	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A6: Results from UOP estimations in which missing observations to Q1 are set at specific values indicating strength of attitudes towards violence

Variable	SAR '1'	SAR '2'	SAR '3'	SAR '4'	SAR '5'
Income (#)	-0.0033	-0.0115	-0.0146	-0.0169	-0.0184
	(0.0253)	(0.0252)	(0.0251)	(0.0252)	(0.0243)
Age (#)	0.8395**	0.7924**	0.7849**	0.7512**	0.6548*
	(0.3645)	(0.3355)	(0.3357)	(0.3364)	(0.3438)
Age (#), squared	-0.1241**	-0.1187**	-0.1177**	-0.1131**	-0.1001*
	(0.0543)	(0.0505)	(0.0507)	(0.0508)	(0.0519)
Female	-0.0064	0.0178	0.0246	0.0305	0.0416
	(0.0344)	(0.0374)	(0.0388)	(0.0396)	(0.0407)
Single, never married	-0.0114	-0.0239	-0.0263	-0.0297	-0.0376
	(0.0271)	(0.0291)	(0.0295)	(0.0298)	(0.0300)
Employment status					
Employed part time want full time	-0.0261	-0.0289	-0.0298	-0.0281	-0.0237
	(0.0507)	(0.0500)	(0.0501)	(0.0495)	(0.0491)
Employed part time do not want full time	-0.0612**	-0.0715***	-0.0750***	-0.0749***	-0.0722**
	(0.0239)	(0.0240)	(0.0255)	(0.0275)	(0.0315)
Employed full time for self-employment	-0.1130***	-0.1150***	-0.1154***	-0.1137***	-0.1077***
	(0.0380)	(0.0379)	(0.0380)	(0.0378)	(0.0379)
Employed full time for an employer	-0.0783***	-0.0919***	-0.0955***	-0.0977***	-0.0998***
	(0.0223)	(0.0218)	(0.0215)	(0.0211)	(0.0211)
Highest education level attained:					
Secondary to 3 year of tertiary	-0.0300	-0.0616***	-0.0687***	-0.0761***	-0.0896***
	(0.0225)	(0.0215)	(0.0214)	(0.0217)	(0.0233)
4 years of tertiary and beyond	-0.1605***	-0.1987***	-0.2057***	-0.2120***	-0.2263***
	(0.0584)	(0.0682)	(0.0704)	(0.0730)	(0.0761)
Religion is important	-0.1640**	-0.1550*	-0.1519*	-0.1485*	-0.1393*
	(0.0827)	(0.0846)	(0.0839)	(0.0842)	(0.0833)
Sacrificing one's life for beliefs	1.3387***	1.2950***	1.2858***	1.2716***	1.1584***
	(0.0819)	(0.0788)	(0.0787)	(0.0782)	(0.0752)
c1	2.4891	2.0336	1.9434	1.8198	1.5606
	(0.6858)	(0.6080)	(0.5928)	(0.5767)	(0.5745)
c2	2.9298	2.5717	2.3456	2.2222	1.9625
	(0.6817)	(0.5985)	(0.5828)	(0.5649)	(0.5607)
c3	3.3337	2.9729	2.8753	2.5594	2.3000
	(0.6865)	(0.6029)	(0.5845)	(0.5706)	(0.5660)
c4	3.7670	3.4014	3.3033	3.1658	2.6074
	(0.7012)	(0.6206)	(0.6033)	(0.5838)	(0.5824)
N	33688	33688	33688	33688	33688
Log Pseudolikelihood	-3.457e+04	-3.629e+04	-3.667e+04	-3.701e+04	-3.667e+04

Note: All missing values are replaced by the following numbers: 1 in model (1); by 2 in model (2); by 3 in model (3); by 4 in model (4) and by 5 in model (5).

Table A7: Binary UOP estimates

Variable	1	2	3	4+
Income (#)	0.0077	-0.0125	-0.0212	-0.0137
	(0.0269)	(0.0250)	(0.0239)	(0.0477)
Age (#)	0.4395	1.0418***	1.6208***	2.4218***
	(0.3961)	(0.3893)	(0.4685)	(0.7140)
Age (#), squared	-0.0705	-0.1540***	-0.2277***	-0.3387***
	(0.0588)	(0.0586)	(0.0693)	(0.1026)
Female	0.0115	0.0139	0.0021	-0.0402
	(0.0353)	(0.0391)	(0.0464)	(0.0425)
Single, never married	-0.0416	-0.0230	0.0447	0.0668
	(0.0268)	(0.0336)	(0.0315)	(0.0490)
Employment status				
Employed part time want full time	-0.0028	-0.0468	-0.1085*	-0.0922
	(0.0485)	(0.0647)	(0.0621)	(0.0761)
Employed part time do not want full time	-0.0398	-0.0608	-0.1426***	-0.0490
	(0.0342)	(0.0375)	(0.0470)	(0.1197)
Employed full time for self-employment	-0.0961**	-0.1315***	-0.1891***	-0.2193***
	(0.0390)	(0.0473)	(0.0583)	(0.0758)
Employed full time for an employer	-0.0848***	-0.0935***	-0.1058***	-0.1146**
	(0.0287)	(0.0346)	(0.0349)	(0.0570)
Highest education level attained:				
Secondary to 3 year of tertiary	-0.0674**	-0.0351	-0.0017	0.0128
	(0.0276)	(0.0274)	(0.0259)	(0.0417)
4 years of tertiary and beyond	-0.2073***	-0.1747***	-0.1187	-0.0366
	(0.0639)	(0.0615)	(0.0884)	(0.0930)
Religion is important	-0.1452	-0.1721*	-0.1549**	-0.3196*
	(0.0893)	(0.0933)	(0.0605)	(0.1894)
Sacrificing one's life for beliefs	1.0246***	1.2092***	1.6244***	
	(0.0787)	(0.0715)	(0.0681)	
Constant	-1.8005**	-2.9954***	-4.5383**	-4.4648***
	(0.7581)	(0.8012)	(0.8131)	(1.1380)
Country fixed effects	Yes	Yes	Yes	Yes
Locality fixed effects	Yes	Yes	Yes	Yes
Survey waves fixed effects	Yes	Yes	Yes	Yes
Observations	32663	32663	32663	32663
Pseudo-R2	0.1651	0.2104	0.3352	0.1951
Log Pseudolikelihood	-2.036e+04	-1.632e+04	-1.230e+04	-4329.8196

Note: (1) Dependent variable defined as 1 if answer to radicalization question is 1 and 0 otherwise; (2) Dependent variable defined as 1 if answer to radicalization question is 1 or 2 and 0 otherwise; (3) Dependent variable defined as 1 if answer to radicalization question is 1, 2 or 3 and 0 otherwise; (4) Dependent variable defined as 1 if answer to radicalization question is 1, 2, 3 or 4 and 0 otherwise. + The variable describing willingness to sacrifice one's life for beliefs is omitted in column (4) because there is no variation in the answers to this question among those whose responses are coded as 0.

Table A8: Baseline results, EAP

	SAW equation	SAR equation
Income (#)	0.340 [0.043]***	7.7e-03 [0.064]
Age (#)	-1.205 [0.744]	-1.050 [1.147]
Age (#), squared	0.170 [0.108]	0.138 [0.157]
Female	0.122 [0.018]***	1.2e-03 [0.099]
Single, never married	0.015 [0.056]	-0.047 [0.098]
Employment status		
Employed part time want full time	-0.124 [0.067]*	-0.086 [0.045]*
Employed part time do not want full time	-0.052 [0.120]	-0.055 [0.068]
Employed full time for self-employment	-0.116 [0.089]	0.017 [0.138]
Employed full time for an employer	-0.188 [0.050]***	-0.113 [0.110]
Highest education level		
Secondary to 3 year of tertiary	0.185 [0.064]***	-0.031 [0.098]
4 years of tertiary and beyond	0.306 [0.065]***	-0.450 [0.216]**
Instruments for SAW		
City economic conditions are good	0.371 [0.085]***	
Children under 15 in this household (@)	7.6e-03 [0.026]	
Instruments for SAR		
Religion is important		-0.252 [0.050]***
Sacrificing one's life for beliefs		1.270 [0.094]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-1.559 [1.225]	
c12	-1.118 [1.126]	
c13	-0.647 [1.136]	
c14	-0.133 [1.191]	
c15	0.400 [1.194]	
c16	1.448 [1.173]	
c17	2.133 [1.170]*	
c18	2.779 [1.213]**	
c19	3.413 [1.274]***	
c110	3.862 [1.328]***	
c21	-1.702 [1.955]	
c22	-1.120 [1.878]	
c23	-0.695 [1.881]	
c24	0.054 [1.853]	
Observations	3114	
Log Pseudolikelihood	-8101.506	
Wald test of indp. Eqns. (p-value)	0.273	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A9: Baseline results, ECA

	SAW equation	SAR equation
Income (#)	0.491 [0.094]***	-0.200 [0.223]
Age (#)	-4.407 [0.873]***	3.342 [2.448]
Age (#), squared	0.563 [0.116]***	-0.453 [0.330]
Female	0.018 [0.078]	0.013 [0.055]
Single, never married	-0.171 [0.070]**	0.289 [0.129]**
Employment status		
Employed part time want full time	0.011 [0.138]	0.140 [0.070]**
Employed part time do not want full time	0.204 [0.178]	-0.164 [0.106]
Employed full time for self-employment	0.212 [0.091]**	-0.072 [0.243]
Employed full time for an employer	0.022 [0.105]	-0.029 [0.179]
Highest education level		
Secondary to 3 year of tertiary	0.160 [0.099]	-0.297 [0.038]***
4 years of tertiary and beyond	0.250 [0.073]***	-0.335 [0.144]*
Instruments for SAW		
City economic conditions are good	0.449 [0.079]***	
Children under 15 in this household (@)	-0.093 [0.058]**	
Instruments for SAR		
Religion is important		0.208 [0.035]***
Sacrificing one's life for beliefs		1.267 [0.300]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-6.046 [1.384]***	
c12	-5.424 [1.263]***	
c13	-4.907 [1.311]***	
c14	-4.340 [1.306]***	
c15	-3.752 [1.312]***	
c16	-2.695 [1.364]**	
c17	-2.071 [1.380]	
c18	-1.697 [1.411]	
c19	-1.392 [1.436]	
c110	-1.121 [1.474]	
c21	5.098 [1.494]***	
c22	5.524 [1.494]***	
c23	5.926 [1.501]***	
c24	6.205 [1.461]***	
Observations	2105	
Log Pseudolikelihood	-4786.792	
Wald test of indp. Eqns. (p-value)	0.916	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A10: Baseline results, MENA

	SAW equation	SAR equation
Income (#)	0.277 [0.069]***	-0.102 [0.077]
Age (#)	-2.801 [0.435]***	0.688 [1.090]
Age (#), squared	0.374 [0.073]***	-0.121 [0.145]
Female	0.222 [0.099]**	-0.041 [0.055]
Single, never married	-0.071 [0.039]*	-0.027 [0.065]
Employment status		
Employed part time want full time	-0.171 [0.047]***	0.139 [0.136]
Employed part time do not want full time	0.179 [0.119]	-0.068 [0.114]
Employed full time for self-employment	0.050 [0.085]	-0.067 [0.112]
Employed full time for an employer	0.042 [0.075]	-0.023 [0.052]
Highest education level		
Secondary to 3 year of tertiary	0.170 [0.051]***	-0.049 [0.052]
4 years of tertiary and beyond	0.408 [0.047]***	-0.321 [0.177]*
Instruments for SAW		
City economic conditions are good	0.386 [0.104]***	
Children under 15 in this household (@)	-5.7e-03 [0.037]	
Instruments for SAR		
Religion is important		-0.204 [0.107]*
Sacrificing one's life for beliefs		0.730 [0.193]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-4.889 [1.200]***	
c12	-4.471 [1.175]***	
c13	-4.043 [1.157]***	
c14	-3.567 [1.165]***	
c15	-3.155 [1.205]***	
c16	-2.347 [1.203]*	
c17	-1.786 [1.275]	
c18	-1.232 [1.345]	
c19	-0.675 [1.335]	
c110	-0.424 [1.326]	
c21	0.322 [2.556]	
c22	0.700 [2.568]	
c23	1.131 [2.622]	
c24	1.486 [2.685]	
Observations	5329	
Log Pseudolikelihood	-13341.728	
Wald test of indp. Eqns. (p-value)	0.414	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A11: Baseline results, SA

	SAW equation	SAR equation
Income (#)	0.556 [0.037]***	-0.274 [0.038]***
Age (#)	-0.248 [0.743]	0.480 [0.488]
Age (#), squared	0.032 [0.099]	-0.066 [0.064]
Female	0.076 [0.043]*	0.021 [0.037]
Single, never married	-0.038 [0.063]	-9.3e-03 [0.094]
Employment status		
Employed part time want full time	0.092 [0.053]*	0.048 [0.074]
Employed part time do not want full time	0.276 [0.172]	-0.211 [0.167]
Employed full time for self-employment	-0.061 [0.109]	-0.056 [0.067]
Employed full time for an employer	-0.034 [0.046]	-0.063 [0.029]**
Highest education level		
Secondary to 3 year of tertiary	0.151 [0.037]***	-0.176 [0.047]***
4 years of tertiary and beyond	0.110 [0.071]	-0.204 [0.064]***
Instruments for SAW		
City economic conditions are good	0.460 [0.061]***	
Children under 15 in this household (@)	-0.078 [0.011]***	
Instruments for SAR		
Religion is important		-0.343 [0.066]***
Sacrificing one's life for beliefs		0.856 [0.060]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	1.441 [1.333]	
c12	2.037 [1.305]	
c13	2.742 [1.334]**	
c14	3.426 [1.334]**	
c15	3.975 [1.350]***	
c16	4.865 [1.298]***	
c17	5.414 [1.304]***	
c18	5.800 [1.306]***	
c19	6.242 [1.292]***	
c110	6.728 [1.339]***	
c21	1.724 [1.212]	
c22	2.241 [1.239]*	
c23	2.588 [1.233]**	
c24	2.861 [1.197]**	
Observations	6062	
Log Pseudolikelihood	-17161.429	
Wald test of indp. Eqns. (p-value)	0.011	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A12: Baseline results, SSA

	SAW equation	SAR equation
Income (#)	0.197 [0.034]***	-0.049 [0.037]
Age (#)	0.036 [0.800]	1.549 [0.499]***
Age (#), squared	-0.012 [0.111]	-0.223 [0.075]***
Female	-0.018 [0.020]	-0.021 [0.044]
Single, never married	-0.066 [0.039]*	-4.6e-03 [0.033]
Employment status		
Employed part time want full time	6.0e-04 [0.043]	-0.087 [0.073]
Employed part time do not want full time	0.045 [0.034]	-0.106 [0.041]**
Employed full time for self-employment	0.062 [0.034]*	-0.186 [0.063]***
Employed full time for an employer	0.094 [0.059]	-0.112 [0.055]**
Highest education level		
Secondary to 3 year of tertiary	0.272 [0.019]***	-0.116 [0.054]**
4 years of tertiary and beyond	0.271 [0.100]***	-0.168 [0.079]**
Instruments for SAW		
City economic conditions are good	0.346 [0.051]***	
Children under 15 in this household (@)	-0.084 [0.031]***	
Instruments for SAR		
Religion is important		-0.118 [0.108]
Sacrificing one's life for beliefs		1.711 [0.136]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-1.348 [1.353]	
c12	-0.712 [1.340]	
c13	-0.034 [1.328]	
c14	0.700 [1.305]	
c15	1.357 [1.294]	
c16	2.141 [1.318]	
c17	2.699 [1.315]**	
c18	3.188 [1.308]**	
c19	3.576 [1.294]***	
c110	3.809 [1.304]***	
c21	2.940 [1.009]***	
c22	3.330 [1.006]***	
c23	3.745 [1.000]***	
c24	4.247 [1.012]***	
Observations	14177	
Log Pseudolikelihood	-40363.943	
Wald test of indp. Eqns. (p-value)	0.121	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A13: Results from BOP using the full sample including a few OECD countries

	(1) SAW equation	(2) SAR equation
Income (#)	0.286 [0.028]***	-0.101 [0.035]***
Age (#)	-0.676 [0.392]*	1.082 [0.312]***
Age (#), squared	0.086 [0.054]	-0.154 [0.046]***
Female	0.059 [0.023]***	-0.023 [0.031]
Single, never married	-0.056 [0.021]***	3.70e-03 [0.028]
Employment status		
Employed part time want full time	-0.029 [0.027]	-0.014 [0.054]
Employed part time do not want full time	0.080 [0.030]***	-0.084 [0.032]**
Employed full time for self-employment	5.33e-03 [0.028]	-0.118 [0.039]***
Employed full time for an employer	-0.013 [0.035]	-0.080 [0.027]***
Highest education level		
Secondary to 3 year of tertiary	0.217 [0.014]***	-0.118 [0.037]***
4 years of tertiary and beyond	0.335 [0.045]***	-0.302 [0.054]***
Instruments for SAW		
City economic conditions are good	0.381 [0.043]***	
Children under 15 in this household (@)	-0.054 [0.017]***	
Instruments for SAR		
Religion is important		-0.202 [0.071]***
Sacrificing one's life for beliefs		1.299 [0.110]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-0.219 [0.815]	
c12	0.313 [0.805]	
c13	0.899 [0.806]	
c14	1.545 [0.802]*	
c15	2.116 [0.803]***	
c16	2.954 [0.814]***	
c17	3.524 [0.819]***	
c18	4.015 [0.820]***	
c19	4.476 [0.814]***	
c110	4.790 [0.828]***	
c21	3.110 [0.654]***	
c22	3.539 [0.647]***	
c23	3.944 [0.652]***	
c24	4.376 [0.670]***	
Observations	31440	
Log Pseudolikelihood	-87142.609	
Wald test of indp. Eqns. (p-value)	0.034	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A14: Results from alternative specification: bivariate SUR

	Bivariate (SUR)	
	(1) SAW equation	(2) SAR equation
Income (#)	0.289 [0.029]***	-1.3e-03 [0.026]
Age (#)	-0.666 [0.396]*	0.778 [0.367]**
Age (#), squared	0.084 [0.055]	-0.114 [0.054]**
Female	0.063 [0.023]***	-4.0e-05 [0.038]
Single, never married	-0.052 [0.021]**	-0.014 [0.029]
Employment status		
Employed part time want full time	-0.031 [0.028]	-0.030 [0.055]
Employed part time do not want full time	0.073 [0.029]**	-0.072 [0.022]***
Employed full time for self-employment	0.011 [0.030]	-0.122 [0.040]***
Employed full time for an employer	-0.012 [0.036]	-0.089 [0.023]***
Highest education level		
Secondary to 3 year of tertiary	0.222 [0.015]***	-0.049 [0.021]**
4 years of tertiary and beyond	0.337 [0.045]***	-0.193 [0.061]***
Instruments for SAW		
City economic conditions are good	0.375 [0.042]***	
Children under 15 in this household (@)	-0.062 [0.018]***	
Instruments for SAR		
Religion is important		-0.185 [0.081]**
Sacrificing one's life for beliefs		1.355 [0.086]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-0.180 [0.826]	
c12	0.348 [0.815]	
c13	0.944 [0.816]	
c14	1.594 [0.811]**	
c15	2.169 [0.813]***	
c16	3.010 [0.824]***	
c17	3.581 [0.829]***	
c18	4.069 [0.830]***	
c19	4.527 [0.825]***	
c110	4.839 [0.839]***	
c21	0.932 [0.671]	
c22	1.379 [0.664]**	
c23	1.785 [0.669]***	
c24	2.227 [0.687]***	
Observations	30787	
Pseudo R2		
Log pseudo likelihood	-85107.808	
Wald test of indep. eqns. (p-value)	0.003	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A15: Results from alternative specifications in which well-being depends on radicalization

	SAR equation (1)	SAW equation (2)
Income (#)	-1.33e-03 [0.026]	0.291 [0.028]***
Age (#)	0.777 [0.367]**	-0.745 [0.392]*
Age (#), squared	-0.113 [0.054]**	0.096 [0.054]*
Female	-3.38e-05 [0.038]	0.064 [0.022]***
Single, never married	-0.014 [0.029]	-0.052 [0.021]**
Employment status		
Employed part time want full time	-0.030 [0.055]	-0.031 [0.030]
Employed part time do not want full time	-0.072 [0.022]***	0.078 [0.028]***
Employed full time for self-employment	-0.122 [0.040]***	0.019 [0.032]
Employed full time for an employer	-0.089 [0.023]***	-6.73e-03 [0.036]
Highest education level		
Secondary to 3 year of tertiary	-0.049 [0.021]**	0.226 [0.015]***
4 years of tertiary and beyond	-0.193 [0.061]***	0.351 [0.050]***
Instruments for SAR		
Religion is important	-0.183 [0.082]**	
Sacrificing one's life for beliefs	1.362 [0.087]***	
Instruments for SAW		
City economic conditions are good		0.375 [0.043]***
Children under 15 in this household (@)		-0.062 [0.018]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	0.933 [0.674]	
c12	1.379 [0.667]**	
c13	1.786 [0.671]***	
c14	2.227 [0.690]***	
c15	-0.364 [0.863]	
c16	0.167 [0.853]	
c17	0.765 [0.854]	
c18	1.418 [0.851]*	
c19	1.995 [0.852]**	
c110	2.840 [0.863]***	
c21	3.412 [0.867]***	
c22	3.903 [0.867]***	
c23	4.363 [0.861]***	
c24	4.676 [0.877]***	
Observations	30787	
Log Pseudolikelihood	-85091.052	
Wald test of indp. eqns. (p-value)	0.705	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A16: Endogeneity tests, Non-OECD sample (excluding income)

	(1) SAW equation	(2) SAR equation
Age (#)	-0.583 [0.411]	1.022 [0.326]***
Age (#), squared	0.075 [0.056]	-0.146 [0.048]***
Female	0.065 [0.022]***	-0.024 [0.032]
Single, never married	-0.033 [0.022]**	-3.5e-03 [0.027]
Employment status		
Employed part time want full time	-0.033 [0.027]	-0.022 [0.059]
Employed part time do not want full time	0.083 [0.026]***	-0.101 [0.026]***
Employed full time for self-employment	0.038 [0.027]	-0.137 [0.040]***
Employed full time for an employer	0.024 [0.034]	-0.102 [0.025]***
Highest education level		
Secondary to 3 year of tertiary	0.333 [0.019]***	-0.161 [0.044]***
4 years of tertiary and beyond	0.539 [0.046]***	-0.369 [0.059]***
Instruments for SAW		
City economic conditions are good	0.422 [0.041]***	
Children under 15 in this household (@)	-0.031 [0.016]***	
Instruments for SAR		
Religion is important		-0.187 [0.074]**
Sacrificing one's life for beliefs		1.322 [0.107]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-2.581 [0.776]***	
c12	-2.060 [0.769]***	
c13	-1.479 [0.770]*	
c14	-0.845 [0.763]	
c15	-0.284 [0.767]	
c16	0.536 [0.778]	
c17	1.092 [0.782]	
c18	1.570 [0.784]**	
c19	2.020 [0.779]***	
c110	2.329 [0.789]***	
c21	1.192 [0.607]**	
c22	1.629 [0.596]***	
c23	2.026 [0.601]***	
c24	2.458 [0.621]***	
Observations	30787	
Log Pseudolikelihood	-85783.329	
Wald test of indp. Eqns. (p-value)	0.030	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A17: Endogeneity tests, Non-OECD sample (interacting with country-level income)

	(1) SAW equation	(2) SAR equation
Income (#), interacted with country-level income	0.035 [3.5e-03]***	-0.013 [4.27e-03]***
Age (#)	-0.654 [0.397]*	1.059 [0.315]***
Age (#), squared	0.083 [0.055]	-0.151 [0.046]***
Female	0.062 [0.023]***	-0.024 [0.032]
Single, never married	-0.051 [0.021]**	1.43e-03 [0.027]
Employment status		
Employed part time want full time	-0.033 [0.028]	-0.021 [0.058]
Employed part time do not want full time	0.071 [0.029]**	-0.098 [0.027]***
Employed full time for self-employment	8.2e-03 [0.030]	-0.126 [0.038]***
Employed full time for an employer	-0.014 [0.036]	-0.088 [0.024]***
Highest education level		
Secondary to 3 year of tertiary	0.224 [0.015]***	-0.126 [0.037]***
4 years of tertiary and beyond	0.334 [0.044]***	-0.302 [0.055]***
Instruments for SAW		
City economic conditions are good	0.384 [0.044]***	
Children under 15 in this household (@)	-0.055 [0.017]***	
Instruments for SAR		
Religion is important		-0.184 [0.074]***
Sacrificing one's life for beliefs		1.317 [0.111]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-0.746 [0.808]	
c12	-0.217 [0.798]	
c13	0.378 [0.799]	
c14	1.028 [0.794]	
c15	1.603 [0.796]**	
c16	2.444 [0.807]***	
c17	3.015 [0.812]***	
c18	3.504 [0.814]***	
c19	3.962 [0.808]***	
c110	4.274 [0.822]***	
c21	2.689 [0.695]***	
c22	3.125 [0.687]***	
c23	3.521 [0.694]***	
c24	3.951 [0.718]***	
Observations	30787	
Log Pseudolikelihood	-85066.37	
Wald test of indp. Eqns. (p-value)	0.034	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1. The country-level income used in interaction with individual income is weighted using sampling weights.

Table A18: Endogeneity tests, Non-OECD sample (using income quintiles)

	(1) SAW equation	(2) SAR equation
Second 20%	0.204 [0.031]***	-0.078 [0.031]**
Middle 20%	0.345 [0.038]***	-0.125 [0.040]***
Fourth 20%	0.494 [0.046]***	-0.117 [0.046]**
Richest 20%	0.691 [0.054]***	-0.274 [0.081]***
Age (#)	-0.627 [0.405]	1.044 [0.308]***
Age (#), squared	0.079 [0.056]	-0.148 [0.045]***
Female	0.063 [0.023]***	-0.023 [0.032]
Single, never married	-0.051 [0.021]**	1.49e-03 [0.027]
Employment status		
Employed part time want full time	-0.031 [0.028]	-0.023 [0.058]
Employed part time do not want full time	0.071 [0.031]**	-0.099 [0.027]***
Employed full time for self-employment	9.7e-03 [0.028]	-0.127 [0.038]***
Employed full time for an employer	-0.013 [0.035]	-0.089 [0.023]***
Highest education level		
Secondary to 3 year of tertiary	0.217 [0.016]***	-0.125 [0.036]***
4 years of tertiary and beyond	0.328 [0.043]***	-0.296 [0.055]***
Instruments for SAW		
City economic conditions are good	0.384 [0.046]***	
Children under 15 in this household (@)	-0.053 [0.017]***	
Instruments for SAR		
Religion is important		-0.184 [0.073]**
Sacrificing one's life for beliefs		1.317 [0.110]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-2.799 [0.748]***	
c12	-2.270 [0.737]***	
c13	-1.677 [0.736]**	
c14	-1.028 [0.730]	
c15	-0.453 [0.734]	
c16	0.388 [0.744]	
c17	0.959 [0.748]	
c18	1.446 [0.750]*	
c19	1.903 [0.745]**	
c110	2.215 [0.753]***	
c21	3.120 [0.604]***	
c22	3.555 [0.593]***	
c23	3.952 [0.601]***	
c24	4.382 [0.625]***	
Observations	30787	
Log Pseudolikelihood	-85087.194	
Wald test of indp. Eqns. (p-value)	0.031	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A19: Baseline results, Non-OECD sample (additional controls)

	(1) SAW equation	(2) SAR equation
Income (#)	0.273 [0.028]***	-0.115 [0.045]**
Age (#)	-0.619 [0.433]	0.988 [0.285]***
Age (#), squared	0.074 [0.060]	-0.139 [0.041]***
Female	0.057 [0.024]**	-0.027 [0.032]
Single, never married	-0.051 [0.024]**	6.7e-03 [0.029]
Employment status		
Employed part time want full time	-0.031 [0.030]	6.3e-03 [0.058]
Employed part time do not want full time	0.079 [0.030]**	-0.079 [0.031]**
Employed full time for self-employment	-2.5e-03 [0.029]	-0.105 [0.034]***
Employed full time for an employer	-0.021 [0.037]	-0.074 [0.022]***
Highest education level		
Secondary to 3 year of tertiary	0.214 [0.019]***	-0.128 [0.042]***
4 years of tertiary and beyond	0.332 [0.046]***	-0.306 [0.058]***
Instruments for SAW		
City economic conditions are good	0.256 [0.041]***	
Children under 15 in this household (@)	-0.053 [0.018]***	
Instruments for SAR		
Religion is important		-0.171 [0.070]**
Sacrificing one's life for beliefs		1.290 [0.127]***
Additional controls		
Community attachment index	2.00e-03 [3.3e-04]***	-6.8e-04 [6.7e-04]
Community basics index	3.4e-03 [4.9e-04]***	2.3e-04 [7.8e-04]
Civic engagement index	1.0e-03 [4.0e-04]**	9.6e-04 [8.1e-04]
Satisfied with freedom to choose what you do	0.088 [0.027]***	-0.122 [0.040]***
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-0.478 [0.872]	
c12	0.051 [0.856]	
c13	0.649 [0.854]	
c14	1.298 [0.848]	
c15	1.878 [0.849]**	
c16	2.722 [0.860]***	
c17	3.294 [0.864]***	
c18	3.784 [0.866]***	
c19	4.241 [0.862]***	
c110	4.557 [0.876]***	
c21	2.159 [0.650]***	
c22	2.584 [0.648]***	
c23	2.971 [0.654]***	
c24	3.394 [0.671]***	
Observations	30192	
Log Pseudolikelihood	-83589.897	
Wald test of indp. Eqns. (p-value)	0.046	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table A20: Baseline results, Non-OECD sample (Controlling for the incidence of conflicts)

	(1) SAW equation	(2) SAR equation
Income (#)	0.282 [0.031]***	-0.099 [0.035]***
Age (#)	-0.617 [0.398]	1.045 [0.307]***
Age (#), squared	0.078 [0.055]	-0.147 [0.045]***
Female	0.055 [0.020]***	-0.022 [0.032]
Single, never married	-0.046 [0.023]**	0.014 [0.025]
Employment status		
Employed part time want full time	-0.026 [0.029]	-0.013 [0.060]
Employed part time do not want full time	0.074 [0.031]**	-0.089 [0.028]***
Employed full time for self-employment	0.015 [0.033]	-0.126 [0.034]***
Employed full time for an employer	-0.021 [0.035]	-0.087 [0.022]***
Highest education level		
Secondary to 3 year of tertiary	0.219 [0.017]***	-0.130 [0.036]***
4 years of tertiary and beyond	0.323 [0.045]***	-0.294 [0.059]***
Instruments for SAW		
City economic conditions are good	0.389 [0.042]***	
Children under 15 in this household (@)	-0.043 [0.020]**	
Instruments for SAR		
Religion is important		-0.191 [0.074]**
Sacrificing one's life for beliefs		1.308 [0.113]***
Additional controls		
Weighted Conflict Index	-3.0e-05 [2.04e-06]***	1.7e-05 [7.4e-06]**
Country fixed effects	Yes	
Locality fixed effects	Yes	
Survey waves fixed effects	Yes	
c11	-0.760 [0.820]	
c12	-0.236 [0.810]	
c13	0.364 [0.807]	
c14	1.019 [0.799]	
c15	1.597 [0.799]**	
c16	2.442 [0.810]***	
c17	3.017 [0.811]***	
c18	3.510 [0.809]***	
c19	3.978 [0.797]***	
c110	4.301 [0.807]***	
c21	1.028 [0.661]	
c22	1.471 [0.652]**	
c23	1.876 [0.652]***	
c24	2.312 [0.668]***	
Observations	29151	
Log Pseudolikelihood	-81039.659	
Wald test of indp. Eqns. (p-value)	0.038	

Notes: The reference categories for the employment status is "Out of workforce or unemployed", for the highest education level is "Completed elementary education or less", and for the locality fixed effects is "Rural area or on a farm". X(#) and X(@)denote Ln(X) and Ln(X+1), respectively. We use Ln(X) for income to exclude individuals with zero income and Ln(X+1) for the number of children under 15 in the household to not exclude households with zero values on this variable. Standard errors are clustered by country/wave and robust to heteroscedasticity. Asterisks denote significance levels as follows: *** p<0.01, ** p<0.05, * p<0.1.