# THE LESS EXTREME, THE MORE YOU LEAVE: RADICAL ISLAM AND WILLINGNESS TO MIGRATE

CHIARA FALCO VALENTINA ROTONDI

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*DIPARTIMENTO DI ECONOMIA, MANAGEMENT E METODI QUANTITATIVI*

**Via Conservatorio 7**
**20122 Milano**
**tel. ++39 02 503 21501 (21522) - fax ++39 02 503 21450 (21505)**
**http://www.economia.unimi.it**
**E Mail: dipeco@unimi.it**

# The Less Extreme, the More You Leave: Radical Islam and Willingness to Migrate*

Chiara Falco† and Valentina Rotondi‡

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**Abstract**

This paper presents a model to explain how cultural traits affect the willingness to migrate, focusing in particular on the role played by radical Islam. In our model, more radical values imply a higher psychological cost of migrating deriving from the fact that connections with socio-religious friends and neighbors are not maintained after migration, thus deterring individuals from migrating. We test the prediction of the model by using micro-level data from the Arab Barometer. We find that, ceteris paribus, more radical individuals are less willing to migrate. This finding is robust to alternative specifications of the model and to the use of econometric techniques aimed at addressing the potential endogeneity of radical Islam. The result is also qualitatively unchanged when using aggregate data on actual outflows of migrants.

**Keywords:** Migration, Culture and Economics, Radical Islam.
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†Department of Economics, Management and Quantitative Methods, University of Milan. E-mail: chiara.falco@unimi.it

‡Corresponding author. Department of Management, Economics and Industrial Engeneering (DIG), Politecnico di Milano and LCSR, National Research University, Moscow. E-mail: valentina.rotondi@polimi.it

# 1 Introduction

On January 7, 2015, 12 people were killed in a terrorist attack in Paris in the offices of *Charlie Hedbo*, a satirical French magazine well-known for its provocative cartoons lampooning politicians and religions. The political reaction from leaders around Europe and the international community was unanimous in condemning the terrorist attacks. At the same time, an anti-immigrant sentiment has spread around Europe, supported by populist and right-wing parties, who found in the attacks an opportunity to reclaim the need of closing borders to immigrants.

This paper studies radical Islam as a determinant of individuals' willingness to migrate. Surprisingly, despite its relevance in the political debate, this topic has not been investigated empirically in the literature. In order to fill this gap, we develop a model of the decision to migrate focusing on the role played by economic motives and cultural traits. We then test empirically the predictions of the model, using individual-level data from the second (2010-2011) and third (2012-2014) waves of the Arab Barometer.

Following Berman (2003), we define radical Islam as a set of ideologies, also referred to as *Political Islam*, holding that Islam should guide not only personal life, but also social and political life. In our model, more radical values imply a higher psychological cost of migrating. This cost derives from the fact that connections with socio-religious friends and neighbors are generally not maintained after migration, thus deterring individuals from migrating (Mayers, 2000).

Our work contributes to the literature on the individual-level determinants of the willingness to migrate (Borjas, 1987; Hagen-Zanker, 2008; Mayda, 2010) and the cultural determinants of economic outcomes (Fogli and Fernandez, 2009; Guiso et al., 2006, 2009; Tabellini, 2010). Although the literature on migration has studied extensively several economic factors affecting the individual willingness to migrate (i.e., employment and educational opportunities, expected income, relative deprivation, etc.), other non-pecuniary and cultural motivations, such as religion and religiosity, have been almost completely ignored. In fact, while some studies have looked at religiosity among migrants in their host country, there is little evidence about the association between migration aspirations and religiosity in the migrants' native country (Hoffman et al., 2015; Mayers, 2000; Stinner et al., 1992). According to the migration literature, however, migration motivations can be described as a combination of push

and pull factors.[1] While pull factors are those in the destination country attracting the individual to leave his home, such as prospects of net economic advantages, employment, family reunification (Harris and Todaro, 1970; Sjaastad, 1962; Massey, 1994; Mayda, 2010), push factors are forces driving the individual to move voluntarily from his own country, including conflict, drought, famine, or extreme religious activity. We consider radical Islam as a push factor affecting migration behavior in the Arab world.

One limitation of our empirical analysis is that we do not consider actual migration decisions, but individual willingness to migrate. Although other papers in the literature have already used this measure (Stinner et al., 1992; Otrachshenko and Popova, 2014; Hoffman et al., 2015), emphasizing the importance of studying its determinants (e.g., Becerra, 2012), we are aware of the fact that willingness to migrate is not equivalent to the decision to migrate. Nevertheless, from an economic perspective, migration is often the result of a process involving several steps, that ends with the matching between individual willingness and actual opportunities to migrate (Docquier et al., 2014). Migration flows are therefore determined by the interaction between the pool of would-be migrants, i.e. people exerting a preference for migration, and actual migration opportunities. Unfortunately, the Arab Barometer does not contain measures of actual migration at the individual level. Therefore, we also provide evidence, at the aggregate level, indicating that radical Islam is correlated with actual migration. This additional evidence helps us to bridge the theoretical model of migration decisions with the empirical analysis of the effects of radical Islam on the willingness to migrate.

Our findings indicate that, controlling for a wide set of individual characteristics, more radical individuals are less willing to migrate. This result is robust to alternative specifications of the model and to the use of econometric techniques aimed at addressing the potential endogeneity of radical Islam. The key findings are also robust to the use of aggregate data on actual migrants' outflows.

The rest of the paper is organized as follows. Section 2 reviews the related literature. Section 3 presents the theoretical framework. Sections 4 and 5 describe the data and methods, respectively. Section 6 presents the results. Section 7 concludes.

[1] See among others Stark and Bloom (1985); Stark and Taylor (1991); Berger and Blomquist (1992); Stark and Wang (2002); Dustmann (2003); Gibson and McKenzie (2012).

## 2 Related Literature

In the economic literature there is a growing body of research indicating that cultural factors play an important role for economic behavior (Fogli and Fernandez, 2009; Guiso et al., 2006, 2009; Tabellini, 2010). Recently, part of this literature has shown how religiosity affects, among other things, school attendance (Freeman, 1986), educational attainment of women (Lehrer, 2004), tax-morale (Torgler, 2006), corruption (Sommer et al., 2013), well-being (Opfinger, 2010; Gundlach and Opfinger, 2013), health (Ellison, 1991) and, most importantly, wages (Chiswick, 1983), income and growth (Guiso et al., 2003; Barro and McCleary, 2003).[2]

So far, the link between religion and migration has mainly focused on the effects of migration on religiosity at individual level (Smith et al., 1998; Bosswick and Husband, 2005; Connor, 2008). While Finke and Stark (1992) suggest that migration lowers religious participation, other studies emphasize the fact that migration increases an immigrant's spiritual consciousness and participation (Hagan and Ebaugh, 2003; Warner, 1998). Religion and religiosity among migrants in their home country can be considered a push factor influencing their willingness to migrate. The literature on this topic is relatively underdeveloped. Stinner et al. (1992) analyze how factors related to Mormon beliefs influence migration aspirations in Utah, finding that church-active individuals are less likely to migrate. Mayers (2000) finds that religious networks may not persist after migration, deterring individuals from migrating. Using data collected in 2007 among students enrolled in a high school program located in the state of Guanajuato (Mexico), Hoffman et al. (2015) focus on the extent to which internal and external religiosity influence migration aspirations of young individuals. Their findings indicate that, as external religiosity rises, the desire to work or live in the US falls. Furthermore, higher internal religiosity increases the desire to work or live in the US and plans to migrate.

## 3 Theory

In our theoretical framework, risk-neutral agents from country 0 (the source country)[3] have to choose between migrating to country 1 (the host country), or staying in country 0. If an agent stays in country

[2] Weber (1930) started the discussion about religion and income, showing that the attitudes of protestants resulted in higher income growth.

[3] With the population of the country normalized to unity.

0 he enjoys a (log) income $w_0^s$, where $s$ are the years of schooling (with $\frac{\partial w_0}{\partial s} > 0$). If the agent chooses to move to country 1 he will enjoy a (log) income $w_1^s$ (with $w_1^s > w_0^s$ and $\frac{\partial w_1}{\partial s} > 0$), but will face a cost $C$. This cost is composed of a material component ($c_f$, e.g., travel expenses) and a psychological component ($c_p$) deriving from experiencing a loss of cultural and religious customs determined by the adjustment to a new culture (Mayers, 2000). As in Akerlof (1980), this cost depends not only on the importance of values for the agent ($V$), but also on his sensitivity to the social norm imposing the respect of these values ($\varepsilon$), and on how much these values are widespread in the source country ($\beta$ with $0 < \beta \leq 1$). $c_p$ is therefore given by:

$$c_p = \beta \varepsilon V \tag{1}$$

with $\frac{\partial c_p}{\partial \beta} > 0$, $\frac{\partial c_p}{\partial \varepsilon} > 0$ and $\frac{\partial c_p}{\partial V} > 0$. The density function of $\varepsilon$, denoted by $f(\varepsilon)$, is assumed to be uniform with support on $[0, 1]$.

An agent will choose to migrate if the net benefit from migration is higher than income in the home country:

$$w_1^s - c_f - c_p > w_0^s \tag{2}$$

Therefore, given $c_p(\varepsilon, V, \beta)$, agents with a lower value of $\varepsilon$ are more likely to emigrate. The critical $\varepsilon$ which makes an agent just indifferent between emigrating or not is given by:

$$\varepsilon^* = \frac{w_1^s - w_0^s - c_f}{\beta V} \tag{3}$$

Denoting by $\alpha$ the willingness to migrate, and given the assumption that $\varepsilon$ has a uniform distribution between 0 and 1, we have:

$$\varepsilon^* = \int_0^{\varepsilon^*} f(\varepsilon) d\varepsilon = \alpha \tag{4}$$

Equation (3) indicates that the higher the (log) income in the source/host country, the lower/higher the willingness to migrate ($\frac{\partial \alpha}{\partial w_0^s} < 0$ and $\frac{\partial \alpha}{\partial w_1^s} > 0$); the higher the level of education, the higher the willingness to migrate ($\frac{\partial \alpha}{\partial s} > 0$, under the condition $w_1^s > w_0^s$); the higher the fixed cost of migration, the lower the willingness to migrate ($\frac{\partial \alpha}{\partial c_f} < 0$); and, finally, the higher the importance of values for

the agent in the home country, the lower the willingness to migrate ($\frac{\partial \alpha}{\partial V} < 0$), with this effect being higher/lower, the higher/lower the share of agents adhering to these values ($\beta$).

It is reasonable to assume that an individual cultural value becomes a pull factor, rather than a push factor, when migration occurs towards countries where this value is more widespread than in the home country. In this case, an agent would compare the strength or the diffusion of the value in both countries and, on the basis of this comparison, he will choose whether to migrate or not. This is equivalent to assuming the presence of two psychological costs born by the agent when he chooses to migrate or not to migrate, respectively. [4]

The model also provides an explicit prediction on how the willingness to migrate is affected by the share of agents adhering to a specific value in the source country. Taking the partial derivative of (3) with respect to $V$, we obtain:

$$\frac{\partial \alpha}{\partial V} = -\frac{w_1^s - w_0^s - c_f}{\beta V^2} \tag{6}$$

The expression in (6) indicates that the effect of individual values on the probability to migrate is higher when these values are more widespread in the source country ($\frac{\partial^2 \alpha}{\partial V \partial \beta} = \frac{w_1^s - w_0^s - c_f}{\beta^2 V^2}$).

# 4 Data

Our micro-level empirical analysis is based on the second (2010-2011) and third (2012-2014) waves of the Arab Barometer, a project developed by a network of regional barometers in Latin America, Sub-Saharan Africa, East and South Asia.[5] The sample includes 9 countries[6], covering 11,378 individuals for 2010-2011 and 11,425 individuals for 2012-2014, respectively. Face-to-face interviews were conducted using multistage random sampling. The questionnaire in the Arab Barometer included, among others, items on citizens' attitudes about public affairs and governance, religion and religiosity, social

[4] Assuming that the psychological costs born by the agent when he chooses not to migrate is $c_{p_n m} = \gamma \varepsilon V$ (where $\gamma$ indicates how much radical values are widespread in the host country), the critical $\varepsilon$ which makes an agent just indifferent between emigrating or not is given by:

$$\varepsilon^* = \frac{w_1^s - w_0^s - c_f}{(\beta - \gamma)V} \tag{5}$$

With: $\frac{\partial \alpha}{\partial \beta} < 0$ and $\frac{\partial \alpha}{\partial \gamma} > 0$

[5] http://www.globalbarometer.net.

[6] Algeria, Egypt, Iraq, Jordan, Lebanon, Palestine, Sudan, Tunisia and Yemen.

capital, family status, employment and economic morality. One key question on the intention to migrate was also included in the questionnaire ("Do you think about emigrating from your country?"). For ease of interpretation, we re-coded the original four-item migration variable into a dummy variable, with "I think about emigrating from my country" =1 and "I do not think about emigrating from my country"=0. Table 1 reports summary statistics for all variables used in the empirical analysis.

[Table 1 about here]

Table 2 reports average willingness to migrate by country, gender, and educational level. For the 9 countries in the sample, 32% of the individuals report having thought about emigrating from their country. There is substantial variability across countries, with Sudan having the highest score (54%) and Egypt the lowest one (16%).

[Table 2 about here]

We define radical Islam as a set of ideologies holding that Islam should guide social, political, as well as personal life. We measure radical Islam on the basis of three questions regarding subjects' opinion (on a scale from 1 to 4) about the use of Islamic law in the formulation of (1) penal laws, (2) personal status laws and (3) inheritance laws in their countries.[7] Based on these three items, we created an additive scale index, ranging from 1 to 10, indicating the degree of individual radicalization. Principal component analysis was also conducted on the three items listed above, and the first component was extracted and used to assess the robustness of our results.

In our empirical specifications we included among control variable individual socio-demographic characteristics (i.e., gender, age, etc.), the respondent's subjective evaluation of family income (Graves and Linnerman, 1977; Borjas, 1987; Lauby and Stark, 1988; Massey et al., 1993; Chiquiar and Hanson, 2005; Gibson et al., 2011; Stillman et al., 2015), employment status (Beine et al., 2001; Dustmann et al., 2012; Dustmann and Preston, 2011), education (Dustmann and Fabbri, 2005; Dustmann and Glitz, 2011; Beine and Salomone, 2013; Stark and Dorn, 2013), internet use (Wellman et al., 2001; Castles and Miller, 2003; Hiller and Franz, 2004) and trust. The estimated specifications also include

[7] "To what extent do you agree or disagree with each of the following principles in the formulation of your country's laws and regulations? The government and parliament should enact penal laws in accordance with Islamic law (1), The government and parliament should enact personal status laws (marriage, divorce) in accordance with Islamic law (2), The government and parliament should enact inheritance laws in accordance with Islamic law (3)."

a variable accounting for the time spent in Western countries ("During the past five years, did you spend time in a Western country?") and a variable accounting for subjective satisfaction with the government ("Suppose that there was a scale from 1-10 to measure the extent of your satisfaction with the government, in which 1 means that you were absolutely unsatisfied with its performance and 10 means that you were very satisfied, to what extent are you satisfied with the government's performance?") in order to control for systematic effects of institutional context.

Due to the fact that willingness to migrate does not necessarily imply actual migration, we conduct a secondary analysis using an original dataset composed by aggregate variables that are proxies of those used at the micro level. The sample includes 8 countries for 2010 and 2013.[8] Table 3 reports summary statistics.

In order to measure international migration outflows we use the percentage of actual migrants in 2010 and 2013 for the countries considered in the micro analysis.[9] Radical Islam is the same variable presented above aggregated at the country level. We include among control variables per capita GDP (current US$) in the country of origin,[10] life expectancy at birth[11] and the unemployment rate.[12] Years of schooling is the average number of years of education received by people aged 25 and above.[13] As an indicator of the level of democracy in these countries, we use the Democracy Index, based on 60 indicators grouped in five different categories measuring pluralism, civil liberties and political culture, calculated by the Economist Intelligence Unit for the period 2010-2013.

[Table 3 about here]

[8] Algeria, Egypt, Iraq, Jordan, Lebanon, Sudan, Tunisia and Yemen. We do not include Palestina, as in the individual micro-level analysis, due to the lack of comparable macro-data among different data sources.

[9] United Nations, Department of Economic and Social Affairs (2010-2013). Trends in International Migrant Stock: Migrants by Destination and Origin (United Nations database, POP/DB/MIG/Stock/Rev.2010, POP/DB/MIG/Stock/Rev.2013).

[10] Source: World Bank and OECD national accounts data files. GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

[11] Source: Derived from male and female life expectancy at birth from sources such as: (1) United Nations Population Division. World Population Prospects, (2) United Nations Statistical Division. Population and Vital Statistics Report (various years), (3) Census reports and other statistical publications from national statistical offices, (4) Eurostat: Demographic Statistics, (5) Secretariat of the Pacific Community: Statistics and Demography Programme, and (6) U.S. Census Bureau: International Database. Catalog Sources World Development Indicators.

[12] Source: International Labour Organization, Key Indicators of the Labour Market database. Catalog Sources World Development Indicators.

[13] Source: Barro and Lee (2013), UNESCO Institute for Statistics (2013b) and HDRO estimates based on data on educational attainment from UNESCO Institute for Statistics (2013b) and on methodology from Barro and Lee (2013).

# 5 Methods

The theoretical model presented in Section 3 provides several testable predictions. First, being more radical decreases the willingness to migrate. Second, a higher income in the source country or a higher level of education leads to a lower willingness to migrate. Third, focusing on moderating factors, the effect of radical Islam on the intention to migrate is stronger in countries where this cultural trait is more widespread. Given these predictions, our empirical model can be specified as follows:

$$Emi_{ijt} = \alpha_0 + \alpha_1 S_{ijt} + \alpha_2 X_{ijt} + \sigma_c + \delta_t + \varepsilon_{ijt} \tag{7}$$

with $Emi_{ijt}$ equal to 1 if individual $i$ has the intention to migrate or 0 otherwise, taking into account his country of origin $j$ and the wave $t$ (Kule et al., 2002; Drinkwater, 2003; Hoffman et al., 2015). $S_{ijt}$ is an indicator of radical Islam ranging between 1 and 10. $X_{ijt}$ is a vector of covariates including individual and household characteristics.[14] $\sigma_c$ and $\delta_t$ are country and time fixed effects, respectively, and $\varepsilon_{ijt}$ is the individual-specific error term. The inclusion of country fixed effects allows us to hold constant institutional features such as labor market institutions and macroeconomic conditions.

First, we implement a Probit estimation due to the dichotomous structure of the dependent variable. However, Probit coefficients are likely to be biased since radicalism is potentially endogenous due to unobserved heterogeneity or simultaneity. It is possible, for instance, that when individuals face adverse life events that reduce their well-being, they are more willing to leave their home country and, at the same time, they become more radical in an effort to overcome such events. Therefore, we apply Instrumental Variable estimation (henceforth IV) in order to assess the causal interpretation of our results.

The identification strategy is based on the following two equations:

$$Emi_{ijt} = \alpha_0 + \alpha_1 S_{ijt} + \alpha_2 X_{ijt} + \sigma_c + \delta_t + \varepsilon_{ijt} \tag{8}$$

$$S_{ijt} = \alpha_0 + \alpha_1 Z_{ijt} + \alpha_2 X_{ijt} + \sigma_c + \delta_t + \varepsilon_{ijt} \tag{9}$$

where the outcome equation (8) describes the willingness to migrate $Emi_{ijt}$, as defined in (7), while

[14] See Section 4 for a detailed description of the variables.

equation (9) is the first step in the IV strategy and includes our selected instrumental variables $Z_{ijt}$.

The two instruments included in equation (9) refer to individuals' agreement (from 1 to 4) on the fact that (1) banks charging interest contradict the teachings of Islam, and (2) that difference and variation between Islamic scholars with regard to their interpretation of religious topics is not acceptable. The first instrument deals with the so-called "Islamic finance", a financial system that operates according to Islamic law (*Sharia*). The main principle of Islamic finance is its adherence to interest-free financial transactions. According to *Sharia*, money itself has no intrinsic value but it is simply a medium of exchange. This means that earning interests (*Riba*) is not allowed. We assume that the more radical people are, the more they agree with the principles of Islamic finance. The second instrument regards the very common controversy on religious pluralism in Islam. The *Qur'an* (the main religious text of Islam) and the *Hadiths* (the collections of the reports of the teachings, deeds and sayings of the Islamic prophet Muhammad), offer contradictory positions on religious pluralism. While some verses support religious pluralism, others discourage it. Traditionally, more radical people are less likely to accept religious pluralism. Both instruments are theoretically unrelated and empirically uncorrelated with willingness to migrate.[15] The correlation between the instruments and the endogenous regressor is positive and the instruments are not perfectly collinear.

As suggested in Section 2, the economic literature closer to our work is the one that uses religiosity as a cultural trait determining several economic outcomes. This literature has either ignored the problem of endogeneity, or addressed it by using religious density at the country level (Gruber, 2005) as an instrument for individual religious participation. We do not use this instrument for two reasons. First, the level of radical Islam does not display much variation at country level. Second, for a cultural trait such as radical Islam, the link between the fraction of people adhering to a religion in a country and individual religiosity cannot be taken for granted. In a prominent paper, Durlauf et al. (2012) try to replicate the results of Barro and McCleary (2003) using, as instruments for religiosity, the following three indicators: a dummy variable for the presence of a State Religion in 1970, a dummy variable for the presence of State Regulation of religion in 1970, and a measure of Religious Plurality defined as 1 minus the Herfindahl index constructed from the Religion (adherence) Shares in 1970. Unfortunately,

[15] In order to assess the robustness of our results, we have replicated the Instrumental Variable regression using as an instrument a dummy variable equal to 1 when respondents think that not praying is among the obstacles to accept their son/daughter/sister/brother's marriage. The results, available upon request, are qualitatively unchanged.

we cannot use these instruments, since they are available only for countries of Christian tradition.[16]

As an additional way of addressing the potential endogeneity of radical Islam, we implement Propensity Score (PS) matching estimations (Rosenbaum and Rubin, 1983). These are obtained by using either the Nearest Neighbor method, which selects the comparison units whose propensity scores are closest to the treated unit in question, or the Kernel method, whereby every treated subject is matched with the weighted average of the control subjects, with weights being inversely proportional to the distance between the treated and the control group's propensity scores.[17] In both cases, the computation of the ATT was restricted to the region of common support. Following Bryson et al. (2002), we preferred to estimate a more conservative model with a short list of covariates described in the Appendix. Sample balancing appears satisfactory. Results are reported in table 10 in the Appendix and appear to be in line with Probit estimation results.

# 6 Results

## 6.1 The determinants of the willingness to migrate

Table 4 (column 1-5) reports Probit estimation results[18] considering five different specifications, with progressively larger sets of control variables. The first specification includes only standard socio-demographic characteristics, namely gender and age while the second accounts also for education and employment status. Model (3) includes income while model (4) the intensity of Internet use and and the time spent abroad. Model (5) adds generalized trust, government satisfaction and political interest. In all specifications time and country dummies are included.[19] Consistently with theoretical predictions, radical Islam is negatively and significantly related to the willingness to migrate and the size of the coefficient for radical Islam is virtually unchanged across all five specifications. This result is robust to the use of an alternative indicator of radical Islam as described in Section 4 (see Table 4 column (6)).

[16] As suggested by Barro and McCleary (2003) we could exploit the Religion and State (RAS) project dataset to use "Having an official Religion in 1990 or before" as an instrument for Religiosity. However, we would not have enough variability in our sample.

[17] See Caliendo and Kopeinig (2008) for a discussion of trade-off among different matching algorithms

[18] Marginal effects multiplied by 100.

[19] The use of larger sets of control variables reduces the sample size. However, it allows us to obtain a more complete characterization of the determinants of the willingness to migrate.

Males are more willing to migrate compared to females confirming that migration from the Arab world is male-dominated (Bommes et al., 2014). As we may expect, being employed is negatively related to the willingness to migrate (Fargues, 2004) whereas a positive relationship is found for the intensity of Internet use and the time spent abroad (Hiller and Franz, 2004). The coefficients for political and institutional outcomes are negative and significant, suggesting that the more satisfied people with the government or the more interested in politics, are the less willing to migrate (Stinner and Van Loon, 1992). Generalized trust is negatively and significantly related to the willingness to migrate. Interestingly, the level of education does not seem to have a clear effect on the willingness to migrate. This result seems to confirm the striking pattern underlined in Fargues (2013). According to this paper, current would-be migrants from the Arab world choose their destination according to their educational level. In particular, students and high-skilled workers consider predominantly as destinations French-speaking Canada and the United States while the less skilled, headed for Arab oil states in the Gulf. In fact, anticipating here the results in Table 6, the effect of tertiary education on the willingness to migrate is negative and significant only in countries where actual migration outflows are directed towards the Gulf.

Table 4 column (7) reports results of equation (7), while also adding an interaction term between radical Islam and its diffusion in the source country. In contrast with the theoretical model, the estimated coefficient is negative and not statistically significant.

[Table 4 about here]

#### 6.1.1 Heterogeneous effects

Table 5 reports Probit estimation results[20] by sub-samples. The data-set is split according to respondents' gender (columns 1 and 2) and according to their educational level (columns 3-6).

Analyzing the results by gender, the effect of radical Islam on the willingness to migrate is lower for women than for men. Employment status and monthly income are significant determinants of the willingness to migrate only for men. Intuitively, this result can be explained by the fact that Arab women are less active in the labor market with respect to their male counterparts.[21] Women

[20] Marginal effects multiplied by 100.

[21] In our sample, only 23% of females declare to be employed (compared to 67% of men).

willingness to migrate is therefore likely to be driven by factors other then employment status. *Log income* can be interpreted as women empowerment suggesting therefore that richest women tend to think about migration as a possible way to further improve their social status. When considering the heterogeneous effect of radical Islam across educational levels a U-shape relationship between radical Islam and willingness to migrate is found.

[Table 5 about here]

As suggested by our theoretical model, radical Islam may be a pull factor, rather than a push factor, when migration is directed to countries where this value is more widespread than in the home country.[22] Even though in our data there is no indication of the actual migration status of respondents and of their country of destination, we know that the individual willingness to migrate represents the first step in the migration process and, therefore, we can assume that the destinations of would-be migrants are the same as those of actual migrants. We expect a positive or negligible effect of radical Islam on the willingness to migrate when the destination country is more or equally radical than the home country and *vice versa*. Thus, by gathering information from the United Nations data on actual migration, we can see whether there are heterogeneous effects of radical Islam on the willingness to migrate according to the destination countries. In particular, we split the sample into two groups: the first includes countries for which a consistent actual migration outflow is directed towards the Gulf Cooperation Council countries (GCC)[23] which historically has been characterized by high levels of radicalism (Dekmejian, 1994), while the second includes countries for which a consistent actual migration outflow is directed towards Western Countries.[24]

Table 6 reports the results of the analysis described above. As predicted by our theoretical model, radical Islam has a significant negative effect on willingness to migrate. This effect is higher when the destination country is less radical than the source country with respect to the case where the destination country is more or equally radical than the source country.

[22] Radical Islam becomes a pull factor also when it is used as transnational tie to connect people sharing the same ideology while residing in different countries (Gul, 2010). Given the nature of our data, we are not able to identify the latter effect. However, with the following exercise, we can empirically disentangle the former by looking at the historical patterns of migration in the area under consideration.

[23] The Gulf Cooperation Council is composed by: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (UAE).

[24] This classification is consistent with Fargues (2013). According to UN data, in 2013 14% of the total outflow from Egypt, 13% from Jordan and 15% from Yemen was directed to GCC countries.

[Table 6 about here]

## 6.2 Addressing causality

Table 7 reports the IV estimation results. The instrumental variables are both jointly and individually significantly related to radical Islam. As expected, the first instrument (*Financial Islam*) is positively related to radical Islam, while the second (*Religious pluralism*) is negatively related to the dependent variable. In addition, the validity of the instruments is not rejected by a Sargan test of over-identifying restrictions. Column (1) reports first-stage estimation results. We are able to reject the null hypothesis of the Wald test of excluded instruments. Moreover, we can exclude that our instruments are weak.[25]

[Table 7 about here]

The results of IV estimation are statistically significant and in line with our theoretical prediction: more radical values reduce the willingness to migrate by almost 2% and the effect can be comparable with other works related to the use of cultural values to explain economic outcomes.[26] Indeed, the size of the estimated effect is reduced when using IV. Estimates for the control variables are qualitatively consistent with Probit estimation results.

## 6.3 Radical Islam and actual migration outflows

Table 8 reports the results of the analysis conducted at the aggregate level, as described in Section 5. Controlling for a similar set of variables as in the analysis at the individual-level, we find a negative and significant relationship between radical Islam and actual migration outflows. Countries with higher radical Islam have, on average, a lower migration outflow. This relationship is significant also when controlling for human capital, as measured by the average schooling years in the total population over age 15.[27] Although the cross-sectional correlations leave open the possibility that other omitted variables explain both radical Islam and differences in migration outflows, this result corroborates the findings of the micro-level analysis.

[Table 8 about here]

[25] F-test for the first stage regression: F(2,10233) = 177.21.

[26] See, among others, Tabellini (2010) and Lee and Guven (2013).

[27] Note that by adding this variable, we might be overestimating the effect of educational choices, since they might be themselves an outcome of radical Islam.

# 7 Conclusions

In this paper, we analyzed theoretically and empirically the effects of radical Islam on the willingness to migrate from the Arab world. Although such relationship is central in the contemporary political debate, as far as we know, there are no empirical studies addressing this issue.

We adopted a definition of radical Islam as a set of ideologies holding that Islam should guide social and political life as well as personal life (Berman, 2003) and we considered radical Islam as a push factor affecting migration behavior in the Arab world. As predicted by the theory, we found that more radical individuals are less willing to migrate. This relationship can be given a causal interpretation, as indicated by IV estimation results and confirmed by Propensity Score matching estimations. Being aware of the fact that the willingness to migrate does not imply actual migration, we provided a further analysis at the macro-level through UN data on actual migration outflows. A negative and significant correlation between radical Islam and actual migration outflows is found, supporting our micro-level empirical results.

Despite the relevance of this topic, some methodological issues limit the implementation of empirical researches. Certainly, data availability is the first main problem concerning the study of radical Islam and its effects. Even if data on actual migration outflows are readily available, they can not be easily matched with data on cultural values since surveys do not often contain such questions. Moreover, the measurement of radicalism is challenging and the use of alternative definitions is not an easy task.

This paper is a first step in the study of cultural traits, an in particular, radical Islam, as determinants of the willingness to migrate. Several other aspects regarding the interconnections between culture and economics have still to be analyzed. WIith this work we leave the door open for further applications.

# Appendix

Table 1: Summary statistics, individual level

| Variable | Mean | Std. Dev. | Min. | Max. | N |
|---|---|---|---|---|---|
| Willingness to migrate | 0.335 | 0.472 | 0 | 1 | 20971 |
| Radical Islam | 7.587 | 2.564 | 1 | 10 | 20133 |
| Male | 0.502 | 0.5 | 0 | 1 | 21614 |
| Age | 36.026 | 12.005 | 18 | 64 | 21614 |
| Primary Education | 0.303 | 0.46 | 0 | 1 | 21614 |
| Secondary Education | 0.479 | 0.5 | 0 | 1 | 21614 |
| Tertiary Education | 0.126 | 0.332 | 0 | 1 | 21614 |
| Employed | 0.474 | 0.499 | 0 | 1 | 21553 |
| Log income US dollars | 5.651 | 1.686 | -2.289 | 14.33 | 18596 |
| Internet Use | 1.373 | 1.706 | 0 | 4 | 21331 |
| Time West 1 | 0.032 | 0.175 | 0 | 1 | 21188 |
| Time West 2 | 0.027 | 0.162 | 0 | 1 | 21188 |
| Time West 3 | 0.017 | 0.131 | 0 | 1 | 21188 |
| Time West 4 | 0.027 | 0.161 | 0 | 1 | 21188 |
| General Trust | 0.27 | 0.444 | 0 | 1 | 20889 |
| Government Satisfaction | 3.883 | 2.39 | 1 | 10 | 15584 |
| Political interest | 2.728 | 0.978 | 1 | 4 | 21425 |
| Islamic Finance | 3.104 | 0.913 | 1 | 4 | 19275 |
| Religious Plurality | 2.451 | 1.827 | 0 | 8 | 21614 |

Source: Author's elaboration on Arab Barometer. See Section 4 for a description of the variables.

Table 2: Average willingness to migrate, by sub-sample

| | Willingness to migrate |
|---|---|
| *By Country* | |
| Algeria | 0.36 |
| Egypt | 0.16 |
| Iraq | 0.22 |
| Jordan | 0.30 |
| Lebanon | 0.42 |
| Palestine | 0.26 |
| Sudan | 0.54 |
| Tunisia | 0.21 |
| Yemen | 0.41 |
| Total | 0.32 |
| *By Gender* | |
| Female | 0.25 |
| Male | 0.39 |
| Total | 0.32 |
| *By Educational Level* | |
| No Education | 0.18 |
| Primary | 0.29 |
| Secondary | 0.38 |
| Tertiary | 0.31 |
| Total | 0.32 |

Source: Author's elaboration on Arab Barometer.

Table 3: Summary statistics, aggregate level

| Variable | Mean | Std. Dev. | Min. | Max. | N |
|---|---|---|---|---|---|
| Outflow | 0.359 | 0.197 | 0.12 | 0.76 | 16 |
| AVG Radical Islam | 7.461 | 1.686 | 3.472 | 8.952 | 16 |
| Log GDP per capita (current US$) | 7.949 | 0.703 | 6.61 | 9.077 | 16 |
| Life Expectancy | 71.049 | 5.231 | 62.04 | 80.13 | 16 |
| Unemployment | 13.181 | 4.467 | 6.2 | 23.7 | 16 |
| Mean years of schooling | 6.188 | 2.376 | 2.5 | 9.9 | 16 |
| Fractionalization | 0.407 | 0.229 | 0.012 | 0.666 | 15 |
| Democracy Index | 3.775 | 1.073 | 2.38 | 5.82 | 16 |

Source: Author's elaboration using different dataset.

Table 4: Determinants of the willingness to migrate

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| Radical Islam | -2.803*** | -2.834*** | -2.971*** | -2.561*** | -2.974*** | | -0.960 |
| | (0.5) | (0.5) | (0.5) | (0.5) | (0.6) | | (0.7) |
| Radical Islam (2) | | | | | | -4.961*** | |
| | | | | | | (1.1) | |
| Rad. Islam*Diffusion | | | | | | | 0.006 |
| | | | | | | | (0.1) |
| Male (d) | 46.902*** | 49.461*** | 49.545*** | 46.747*** | 49.129*** | 49.143*** | 15.843*** |
| | (1.9) | (2.2) | (2.5) | (2.5) | (3.1) | (3.1) | (1.0) |
| Age | -0.637 | -0.146 | -0.548 | -0.246 | -0.403 | -0.403 | -0.250 |
| | (0.5) | (0.6) | (0.6) | (0.6) | (0.8) | (0.8) | (0.2) |
| Age square | -0.020*** | -0.024*** | -0.018** | -0.019** | -0.017* | -0.017* | -0.003 |
| | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) |
| Primary education (d) | | 1.169 | 1.583 | 1.926 | -5.018 | -5.002 | -3.566** |
| | | (4.3) | (4.9) | (5.0) | (6.1) | (6.1) | (1.7) |
| Secondary education (d) | | 19.560*** | 20.907*** | 13.285*** | 0.011 | 0.021 | -1.974 |
| | | (4.2) | (4.8) | (4.9) | (6.2) | (6.2) | (1.8) |
| Tertiary education (d) | | 11.052** | 20.545*** | 9.911 | -6.141 | -6.127 | -4.376* |
| | | (5.4) | (6.2) | (6.4) | (8.3) | (8.3) | (2.6) |
| Employed (d) | | -7.357*** | -7.594*** | -10.164*** | -10.850*** | -10.841*** | -4.014*** |
| | | (2.4) | (2.6) | (2.7) | (3.2) | (3.2) | (1.0) |
| Log income US dollars | | | -1.611** | -1.737** | -1.532 | -1.546 | -0.424 |
| | | | (0.8) | (0.8) | (1.0) | (1.0) | (0.3) |
| Internet Use | | | | 7.668*** | 7.257*** | 7.264*** | 2.516*** |
| | | | | (0.7) | (0.9) | (0.9) | (0.3) |
| Time west 1 (d) | | | | 13.130** | 16.687** | 16.683** | 6.547*** |
| | | | | (6.5) | (7.8) | (7.8) | (2.5) |
| Time west 2 (d) | | | | 13.957** | 14.185 | 14.171 | 5.234* |
| | | | | (7.1) | (8.8) | (8.8) | (2.8) |
| Time west 3 (d) | | | | 47.365*** | 45.900*** | 45.865*** | 16.298*** |
| | | | | (8.6) | (10.4) | (10.4) | (3.4) |
| Time west 4 (d) | | | | 35.330*** | 35.606*** | 35.577*** | 12.779*** |
| | | | | (6.6) | (7.9) | (7.9) | (2.6) |
| General Trust (d) | | | | | -32.122*** | -32.127*** | -9.399*** |
| | | | | | (3.1) | (3.1) | (0.9) |
| Government Satisfaction | | | | | -5.233*** | -5.235*** | -1.698*** |
| | | | | | (0.6) | (0.6) | (0.2) |
| Political interest | | | | | -5.615*** | -5.617*** | -1.702*** |
| | | | | | (1.5) | (1.5) | (0.5) |
| Obs. | 19581 | 19533 | 16147 | 15824 | 11094 | 11094 | 11094 |

*Note:* Probit estimates (marginal effects multiplied by 100) from column 1 to 6. OLS estimate in column 7. Dependent variable: Willingness to Migrate. Standard errors in parentheses. (d) for discrete change of dummy variable from 0 to 1. * denotes significance at 0.10 level (** at 0.05, *** at 0.01). All specifications include time and country FE.

Table 5: Determinants of the willingness to migrate

| | Gender | | Educational Levels | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Female | Male | No Education | Primary | Secondary | Tertiary |
| Radical Islam | -1.274*** | -0.811** | -1.650*** | -1.120*** | -0.862*** | -2.013** |
| | (0.3) | (0.3) | (0.6) | (0.4) | (0.3) | (1.0) |
| Male (d) | | | 15.606*** | 17.850*** | 13.873*** | 35.167*** |
| | | | (3.5) | (1.9) | (1.4) | (3.4) |
| Age | -0.239 | 0.150 | 0.802 | 0.044 | -0.027 | -1.016 |
| | (0.3) | (0.4) | (0.7) | (0.4) | (0.4) | (1.0) |
| Age square | -0.000 | -0.012** | -0.013 | -0.006 | -0.009 | -0.000 |
| | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) |
| Primary Education (d) | 1.703 | -5.260 | | | | |
| | (2.7) | (3.2) | | | | |
| Secondary Education (d) | 6.002** | -6.011* | | | | |
| | (2.7) | (3.3) | | | | |
| Tertiary Education (d) | -1.627 | -3.405 | | | | |
| | (3.5) | (4.2) | | | | |
| Employed (d) | -0.165 | -8.886*** | 1.481 | -4.871** | -4.816*** | 0.310 |
| | (1.4) | (1.7) | (3.2) | (2.0) | (1.6) | (4.2) |
| Log income US dollars | 0.177 | -1.337*** | 0.804 | -0.564 | 0.443 | -1.724 |
| | (0.4) | (0.5) | (0.9) | (0.5) | (0.5) | (1.7) |
| Internet Use | 2.472*** | 2.232*** | 1.357 | 2.107*** | 2.273*** | 4.020*** |
| | (0.4) | (0.4) | (1.2) | (0.6) | (0.4) | (1.2) |
| Time west 1 (d) | 5.242 | 6.145 | 8.556 | -0.512 | 7.766* | 2.853 |
| | (4.1) | (4.0) | (10.2) | (5.5) | (4.0) | (8.5) |
| Time west 2 (d) | 2.573 | 6.505 | 25.295 | -1.260 | 5.546 | 10.774 |
| | (4.3) | (4.5) | (20.0) | (5.2) | (4.6) | (9.9) |
| Time west 3 (d) | 17.415*** | 14.361** | 3.228 | 22.868*** | 11.450** | 30.624*** |
| | (5.9) | (5.6) | (11.8) | (7.9) | (5.8) | (10.0) |
| Time west 4 (d) | 9.556** | 14.696*** | -0.954 | 19.163*** | 12.499*** | 0.906 |
| | (4.7) | (3.9) | (9.9) | (5.5) | (4.5) | (8.0) |
| General Trust (d) | -9.489*** | -11.528*** | -14.168*** | -9.016*** | -10.739*** | -15.735*** |
| | (1.2) | (1.5) | (2.6) | (1.6) | (1.5) | (3.4) |
| Government Satisfaction | -1.532*** | -1.995*** | -1.409** | -1.889*** | -1.991*** | -0.782 |
| | (0.3) | (0.3) | (0.6) | (0.4) | (0.3) | (0.9) |
| Political interest | -3.633*** | -0.278 | -3.315** | -1.587* | -1.714** | -1.288 |
| | (0.7) | (0.7) | (1.4) | (0.9) | (0.7) | (1.8) |
| Obs. | 5333 | 5761 | 847 | 3669 | 5628 | 940 |

*Note:* Probit estimates (marginal effects multiplied by 100). Dependent variable: Willingness to Migrate. Standard errors in parentheses. (d) for discrete change of dummy variable from 0 to 1. * denotes significance at 0.10 level (** at 0.05, *** at 0.01). All specifications include time and country FE.

Table 6: Determinants of the willingness to migrate by destinations

| | (1)<br>Not to Gulf Countries | (2)<br>To Gulf Countries |
|---|---|---|
| Radical Islam | -1.557*** | -0.839*** |
| | (0.4) | (0.3) |
| Male (d) | 16.550*** | 17.046*** |
| | (2.0) | (1.3) |
| Age | -0.067 | 0.271 |
| | (0.4) | (0.3) |
| Age square | -0.011** | -0.010*** |
| | (0.0) | (0.0) |
| Primary Education (d) | 1.299 | -2.823 |
| | (4.0) | (2.5) |
| Secondary Education (d) | 2.820 | -0.727 |
| | (4.2) | (2.5) |
| Tertiary Education (d) | 8.005 | -6.299** |
| | (6.4) | (3.0) |
| Employed (d) | -9.812*** | -1.115 |
| | (2.2) | (1.4) |
| Log income US dollars | -3.382*** | -1.263 |
| | (0.6) | (0.8) |
| Internet Use | 0.859 | 3.205*** |
| | (0.6) | (0.4) |
| Time west 1 (d) | 1.716 | 9.569** |
| | (4.5) | (4.4) |
| Time west 2 (d) | -1.155 | 7.843 |
| | (5.5) | (4.9) |
| Time west 3 (d) | 12.314* | 25.691*** |
| | (6.4) | (5.9) |
| Time west 4 (d) | 17.129*** | 10.271** |
| | (4.7) | (4.3) |
| General Trust (d) | -8.200*** | -11.522*** |
| | (2.3) | (1.2) |
| Government Satisfaction | 0.371 | -2.360*** |
| | (0.5) | (0.3) |
| Political interest | 0.927 | -3.432*** |
| | (1.0) | (0.6) |
| Obs. | 2856 | 6960 |

*Note:* Probit estimates (marginal effects multiplied by 100). Dependent variable: Willingness to Migrate. Standard errors in parentheses. (d) for discrete change of dummy variable from 0 to 1. * denotes significance at 0.10 level (** at 0.05, *** at 0.01). All specifications include time and country FE.

Table 7: Determinants of the willingness to migrate: Instrumental Variable Estimation

| | (1) First Stage | (2) IV |
|---|---|---|
| Radical Islam | | -2.345** |
| | | (1.0) |
| Islamic Finance | 46.229*** | |
| | (2.3) | |
| Religious Plurality | -9.745*** | |
| | (1.4) | |
| Male (d) | -6.557 | 16.055*** |
| | (4.5) | (1.1) |
| Age | 1.186 | -0.137 |
| | (1.1) | (0.2) |
| Age square | -0.023 | -0.005* |
| | (0.0) | (0.0) |
| Primary education (d) | -13.182 | -2.978* |
| | (8.4) | (1.6) |
| Secondary education (d) | -8.187 | -1.700 |
| | (8.4) | (1.6) |
| Tertiary education (d) | -1.400 | -4.164 |
| | (12.0) | (2.6) |
| Employed (d) | 1.238 | -4.421*** |
| | (4.8) | (1.1) |
| Log income US dollars | -9.779*** | -0.624* |
| | (1.5) | (0.4) |
| Internet Use | 0.666 | 2.606*** |
| | (1.3) | (0.3) |
| Time west 1 (d) | -57.405*** | 7.527*** |
| | (11.4) | (2.7) |
| Time west 2 (d) | -30.794** | 5.110* |
| | (13.0) | (3.0) |
| Time west 3 (d) | -74.620*** | 13.906*** |
| | (15.8) | (4.0) |
| Time west 4 (d) | -41.851*** | 12.059*** |
| | (12.1) | (3.0) |
| General Trust (d) | 1.892 | -9.773*** |
| | (4.5) | (1.0) |
| Government Satisfaction | 0.737 | -1.682*** |
| | (0.9) | (0.2) |
| Political interest | 5.788*** | -1.485*** |
| | (2.1) | (0.5) |
| $R^2$ | 0.328 | 0.147 |
| Obs. | 10515 | 10261 |

*Note:* OLS estimates (coefficients multiplied by 100). Dependent variable: Willingness to Migrate. Standard errors in parentheses. (d) for discrete change of dummy variable from 0 to 1. * denotes significance at 0.10 level (** at 0.05, *** at 0.01). All specifications include time and country FE.

Table 8: Determinants of the willingness to migrate: aggregate analysis

| | Outflow (%) | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Radical Islam (mean) | -7.2** | -13.4*** | -7.1* | -11.7*** |
| | (2.4) | (1.5) | (3.2) | (1.7) |
| Log GDP per capita (current US$) | 6.6 | -4.9 | 6.3 | -13.3 |
| | (14.4) | (8.2) | (15.5) | (8.3) |
| Life Expectancy | -1.2 | 0.3 | -1.1 | 1.1 |
| | (1.6) | (0.9) | (1.7) | (0.9) |
| Unemployment rate | -0.2 | 0.6 | -0.2 | 0.5 |
| | (1.1) | (0.7) | (1.2) | (0.7) |
| Years of schooling (mean) | 3.7* | 5.5*** | 3.7 | 5.2*** |
| | (1.8) | (0.9) | (2.2) | (0.8) |
| Fractionalization | | 71.2*** | | 72.7*** |
| | | (16.0) | | (14.1) |
| Democracy Index | | | 0.3 | 5.3* |
| | | | (7.0) | (2.3) |
| Constant | 95.7 | 85.4 | 95.2 | 79.6 |
| | (87.7) | (59.3) | (96.2) | (60.3) |
| $R^2$ | 0.692 | 0.935 | 0.692 | 0.949 |
| Obs. | 16 | 15 | 16 | 15 |

*Note:* OLS estimates. All coefficients are multiplied by 100. Standard errors in parentheses. Dependent variable: Willingness to Migrate. * denotes significance at 0.10 level (** at 0.05, *** at 0.01). All specifications include time FE.

Table 9: Determinants of the willingness to migrate by country of origin

| | (1) Algeria | (2) Lebanon | (3) Tunisia | (4) Egypt | (5) Iraq | (6) Jordan | (7) Sudan | (8) Yemen | (9) Palestine |
|---|---|---|---|---|---|---|---|---|---|
| Radical Islam | -3.588*** | -1.350*** | -0.744 | -0.365 | 0.358 | -0.683 | -3.266*** | -1.859** | -0.480 |
| | (1.2) | (0.4) | (0.9) | (0.4) | (0.6) | (0.6) | (1.0) | (0.9) | (0.6) |
| Male (d) | 23.791*** | 10.524*** | 18.871*** | 9.229*** | 11.497*** | 18.177*** | 10.181*** | 33.813*** | 12.472*** |
| | (4.7) | (3.0) | (3.3) | (2.3) | (2.4) | (2.5) | (3.8) | (3.0) | (2.9) |
| Age | -3.086** | 0.148 | -1.190 | -0.469 | 0.511 | 0.338 | -0.586 | -0.587 | -0.456 |
| | (1.3) | (0.8) | (0.9) | (0.5) | (0.6) | (0.6) | (1.1) | (0.9) | (0.7) |
| Age square | 0.017 | -0.011 | 0.008 | 0.001 | -0.007 | -0.013 | 0.001 | -0.002 | -0.003 |
| | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) |
| Primary education (d) | -8.817 | -12.507* | 8.093 | 5.367 | -7.637* | 0.513 | -4.298 | 5.599 | -3.771 |
| | (9.2) | (7.3) | (5.8) | (3.8) | (4.5) | (7.8) | (6.0) | (10.3) | (8.7) |
| Secondary education (d) | -16.335 | -6.980 | 8.754 | 2.877 | -4.611 | 4.185 | -6.229 | 6.227 | -3.295 |
| | (10.1) | (7.6) | (6.4) | (2.4) | (4.4) | (7.5) | (6.2) | (9.0) | (9.2) |
| Tertiary education (d) | -23.032* | -10.236 | 30.734*** | | -14.515** | 18.152 | -13.901 | -2.547 | -0.811 |
| | (12.4) | (9.4) | (11.8) | | (6.4) | (12.9) | (11.7) | (13.7) | (12.2) |
| Employed (d) | -10.924** | -4.446 | -7.935** | -0.758 | -2.502 | -3.317 | 4.212 | -1.313 | -2.445 |
| | (5.3) | (3.3) | (3.7) | (2.3) | (2.6) | (2.7) | (4.6) | (3.7) | (3.1) |
| Log income US dollars | -1.362 | -10.401*** | -5.072** | -1.491 | -1.893 | 1.849 | -0.671 | -1.673 | -6.236*** |
| | (3.9) | (2.4) | (2.3) | (1.2) | (1.2) | (1.9) | (1.9) | (2.3) | (1.7) |
| Internet Use | 0.485 | 0.546 | 1.986* | 0.338 | 1.320* | 3.591*** | 6.549*** | 3.375*** | 2.595*** |
| | (1.7) | (0.9) | (1.2) | (0.6) | (0.8) | (0.7) | (1.2) | (1.1) | (0.8) |
| Time west 1 (d) | -4.809 | 3.343 | 18.681 | -1.060 | 18.324 | -4.838 | 33.332*** | 20.083** | 12.081 |
| | (8.1) | (6.9) | (12.7) | (6.1) | (12.1) | (6.4) | (9.0) | (10.0) | (7.6) |
| Time west 2 (d) | -7.474 | 10.639 | 6.158 | | -10.474 | 20.973** | 1.276 | 16.504 | 13.007* |
| | (9.0) | (9.3) | (18.1) | | (8.0) | (9.2) | (12.8) | (10.4) | (7.4) |
| Time west 3 (d) | 4.902 | 20.579** | | | 21.817 | 16.523 | 34.579*** | 30.051*** | 25.141** |
| | (10.8) | (9.1) | | | (21.3) | (10.9) | (6.9) | (10.2) | (12.3) |
| Time west 4 (d) | 15.918 | 18.124*** | 13.775 | | 22.773* | 2.688 | 8.717 | 16.369 | 22.696** |
| | (10.3) | (6.1) | (10.8) | | (12.3) | (6.1) | (10.0) | (11.2) | (10.6) |
| General Trust (d) | -10.911* | -5.011 | -7.702** | -6.281*** | -13.670*** | -5.817** | -21.492*** | -14.044*** | -10.458*** |
| | (5.8) | (3.8) | (3.2) | (1.9) | (2.0) | (2.5) | (4.0) | (3.0) | (2.4) |
| Government Satisfaction | -4.650*** | 1.637** | 0.475 | 0.217 | -3.330*** | -2.605*** | -1.976*** | -2.260*** | -1.783*** |
| | (1.4) | (0.7) | (1.2) | (0.5) | (0.5) | (0.5) | (0.7) | (0.7) | (0.5) |
| Political interest | 4.610 | -0.393 | 0.198 | -0.694 | -7.227*** | -2.111* | 0.229 | -4.977*** | -1.409 |
| | (3.2) | (1.4) | (1.9) | (1.1) | (1.3) | (1.2) | (2.0) | (1.6) | (1.2) |
| Obs. | 682 | 1361 | 680 | 935 | 1684 | 1967 | 908 | 1264 | 1570 |

*Note:* Probit estimates (marginal effects multiplied by 100). Dependent variable: Willingness to Migrate. * denotes significance at 0.10 level (** at 0.05, *** at 0.01). All specifications include time FE.

Table 10: Propensity Score Matching Estimation

| | Nearest Neighbor | Kernel |
|---|---|---|
| Willingness to migrate | | |
| PS1 | -2.3*** | -2.3*** |
| | (0.6) | (0.6) |
| PS2 | -1.8*** | -2.3*** |
| | (0.7) | (0.7) |

*Note:* All coefficients are multiplied by 100. Standard errors in parenthesis. The first estimated Propensity Score includes indicators of gender, age and employment status (PS1) while the second adds the use of internet. Radical Islam is equal to 1 when individual radical Islam is greater than the median of the sample. ATT regressions include the set of controls as described in Section 4. * denotes significance at 0.10 level (** at 0.05, *** at 0.01).

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