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# Bridges or buffers? Motives behind Immigrants' Religiosity

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## Abstract

This study reviews and evaluates the motives and incentives behind immigrants' religiosity, focusing on the two sides of the Atlantic – Europe and the United States. The contribution of the study is mainly empirical, trying to identify indicators for the type of incentive – whether immigrants' religiosity serves as a 'bridge' or a 'buffer' in the process of adaptation to the receiving country. The statistical analysis draws on data from several waves of the European Social Survey (ESS), the American General Social Survey (GSS), and the International Social Survey Program (ISSP). Estimation of extended 'mass participation equations' and 'prayer equations' leads to the following findings: (a) immigrants are indeed more religious than the populations in the receiving countries, both in Europe and in the United States; and (b) while in the United States the religiosity of immigrants serves as a bridge between the immigrants and the local population, in Europe it has mainly the function of a buffer and of a "balm for the soul". There is an extensive literature on the 'bridge versus buffer' (or 'bridge versus boundary') theories and their different implications in the United States and in Europe. However, to the best of our knowledge, our paper presents an innovative attempt to disentangle the two types of motives and to show that while the former is more relevant in the United States, the latter dominates in Europe.

**JEL codes:** J11; J15; Z12; Z13

**Keywords:** Immigration; Religion; Integration; Europe; The United States; Bridge; Buffer

## 1. Introduction and motivation

The religiosity of immigrants has received the increasing attention of social scientists. The Religiosity of immigrants is important from a social perspective as well due to the massive inflow of immigrants into Western countries, who now constitute a significant share of the population in many countries and substantially affect the economy and society in their countries of residence. Religiosity is an important factor in the adaptation process and reflects on social and economic outcomes. Because religiosity has behavioral aspects (e.g., marriage and fertility), it also has long-term consequences and will affect future demographic and cultural transitions. A better understanding of the various facets of immigrant religiosity can lead to improved forecasting of these future transitions and a better preparation for the outcomes. Comprehensive databases, including cross-national and longitudinal surveys, are now accessible, thus facilitating careful statistical analyses.

However, many questions concerning the immigration-religiosity intersection still remain unanswered. While it is believed that immigrants tend to be more religious than the native population, the incentives behind the intensified religiosity of immigrants are less clear. In particular: is immigrants' religious performance driven by socio-economic motives relating to the establishment of networks and bridges that connect them to the local population, or does it stem from psychological bonding and comforting motives, serving as a "balm for the soul" and as a buffer against the hardships of integration? These two types of motives have been discussed in the literature (e.g., Casanova 2007; Foner and Alba 2008; Connor and Koenig 2013; see the more detailed review below) but have not been tested empirically. To the best of our knowledge, this is the first innovative attempt to disentangle the two types of motives and show which of the two is dominant.

We claim that the dominance of one type of incentive over the other is country specific. While in the United States the religiosity of immigrants serves as a bridge that leads to the integration of immigrants in the host population, in Europe the bonding motives are more powerful. The question of the principal incentive is important and has long-term consequences: a dominant bridging motive leads to the better integration of immigrants, while a buffering/bonding motive could lead to alienation and hostility against immigrants. The constant inflow of immigrants into Europe and the United States, and in particular the growing share of the Moslem immigrant community, intensifies the social perspectives of the immigration-religiosity intersection.

Based on the existing literature and on statistical analyses of several datasets (the International Social Survey Program – ISSP: Module Religion, 2008; the European Social Survey – ESS, waves 2002-2010; and the American General Social Survey – GSS, waves 2002-2010), we aim to offer quantitative contributions to the literature on the motives behind the immigration-religiosity interaction on the two sides of the Atlantic - Europe and the United States. We first start with descriptive statistics on foreign-born populations and the religious landscape of the native and immigrant populations in European countries and in the United States. In particular, we examine the religion and religiosity of immigrants, compared with the religion/religiosity of natives in the receiving countries. These immigrant-native differences, coupled with differences in fertility, will obviously shape future changes in the religious landscapes of European countries. Second, following background information, we explore a core issue that relates to motives and incentives behind immigrants' religiosity. The bridging versus the bonding theories is tested and cases of European countries versus the United States are contrasted.

The historical differences in the state-religion relationship, immigration policies and concepts lead to the expectation of different motives. It is likely that immigrants' religiosity has a bridging motive in the United States, given that the country was founded on the immigration of people from different religious backgrounds, while Europe has instead strong national religious connotations. In Europe, the religiosity of immigrants will therefore stem from bonding motives and serve as a buffer against the adversities of adaptation. Regression analysis indeed unravels a pronounced 'bridging' motive in the United States versus a noticeable 'bonding-buffer' component in Europe. It should be noted that our empirical analysis tries to disentangle and identify *indicators of motives/incentives for the religious performance of immigrants and sort them out*

*between 'bridging' versus 'bonding' motives.* We do not look into the relationship between the religiosity of immigrants and consecutive economic and social integration outcomes, such as educational attainments, employment, earnings or occupational attainments<sup>1</sup>.

The article is structured as follows: the next section presents background information and a literature overview on immigration and religiosity in the United States and Europe, focusing on the 'bridging' versus the 'buffer-bonding' elements. An empirical analysis aiming at unraveling the motives behind immigrants' religiosity follows in the third section, while the last section summarizes and concludes.

## **2. Immigration, religiosity, and the religious landscape – background information and a literature overview**

### **2.1 Background figures and information**

The United Nations report that, in 2010, 213.9 million people, constituting 3.1 percent of the world population, were migrants who lived and worked in a country in which they were not born. Europe had a share of 32.6 percent of the world migrants' stock, while the United States hosted 20 percent of world migrants. Moreover, the flow of immigrants has constantly increased over the last two decades. According to estimates by the United Nations, there were 155.5 million migrants in 1990. It therefore follows that the number of migrants increased by 37.5 percent between 1990 and 2010. This increase is even more striking in Europe (41.3 percent) and soars to 84.1 percent in the United States (United Nations Population Division 2009). Indeed, in the last several decades, the United States and Western Europe have become the main destinations of immigration, and they will be the focus of this study<sup>2</sup>.

The United States has a long tradition of immigration. In the 19<sup>th</sup> century and the early 20<sup>th</sup> century, immigrants arrived mainly from Europe, with more recent immigrants arriving mostly from Asia and the Americas. The top five sending countries in 2010 were Mexico, China, India, the Philippines, and the Dominican Republic (Monger and Yankay 2011).

For Europe, the new immigration trend means a drastic reversal of a long history of emigration to the rest of the world, and in particular to the United States<sup>3</sup>. Indeed, Western Europe has changed its immigration status from a 'sending' to a 'receiving' society.

Immigration flows into Western Europe came from several countries. Immigrants from the former colonies of European countries (in North and West Africa, and South and Southeast Asia) arrived in France, England and the Netherlands; migrant labor from the less developed Southern European countries (Italy, Spain, Portugal, Greece, Yugoslavia, and Turkey) were attracted by "guest-workers" programs<sup>4</sup>; refugees, asylum seekers and illegal migrants fled (and are still fleeing) from less privileged regions that suffer from famines, wars and political violence; and immigrants from the Former Soviet Union and Eastern Europe left their native countries when the gates opened after the collapse of communism in 1989<sup>5</sup>.

Country-specific information can be gained from Table 1, which presents the sizes (in 1000 s) and shares of foreign-born populations in Europe for the year 2010. As the table indicates, immigrants comprise more than 10 percent of the local population in a large number of European countries. In the top ranks we find Luxembourg (32.5

**Table 1 Foreign-born populations in Europe by country, 2010**

Country	Number of foreign born (1000 s)	Share of foreign born in total population (%)	Born in non-European countries (% in total population)
Austria	1,276.0	15.2	9.1
Belgium	1,503.8	13.9	7.0
Cyprus	150.7	18.8	13.5
The Czech Rep.	398.5	3.8	2.6
Denmark	500.8	9.0	6.3
Estonia	217.9	16.3	15.0
Finland	228.5	4.3	2.8
France	7,196.5	11.1	7.8
Germany	9,812.3	12.0	7.8
Greece	125.6	11.1	8.3
Hungary	436.6	4.4	1.4
Iceland	35.1	11.0	3.7
Ireland	565.6	12.7	2.9
Italy	4,798.7	8.0	5.3
Latvia	343.3	15.3	13.6
Luxembourg	163.1	32.5	5.6
The Netherlands	1,832.5	11.1	8.5
Norway	524.6	10.8	6.5
Poland	456.4	1.2	0.7
Portugal	793.1	7.5	5.7
Slovakia	50.4	0.9	0.4
Slovenia	253.8	12.4	11.0
Spain	6,442.8	14.0	8.9
Sweden	1,337.2	14.3	9.2
UK	7,012.4	11.3	7.7

Source: Eurostat (online data access: tps00178, migr\_pop3ctb).

Notes: Data are not available for Bulgaria, Croatia, Switzerland and Ukraine. The Slovakian data are for the year 2009. The Belgian data are provisional.

percent of the population are immigrants), Cyprus (18.8 percent) and Estonia (16.3 percent). The share of immigrants is below 5 percent in only a few countries (Slovakia ranks last with immigrants comprising only 0.9 percent of the total population). The majority of immigrants were born in non-European countries.

One of the most pronounced consequences of the intensified immigration to the United States and to Europe has been the growth in religious diversity. The United States already had a religiously diverse population and religious pluralism, while Europe had limited religious pluralism and therefore the change due to immigration was much more significant.

Table 2 displays information on the two major religions – both within the native population and within first-generation immigrant populations<sup>6</sup>.

As indicated in Table 2, immigration has changed the religious landscape of many European countries, the most significant change being the increasing share of Moslems. When we examine the native populations, Islam is the second largest religion in only three countries (Bulgaria, Greece and Russia). Within first-generation immigrant populations, the distribution of religions is very different: Islam is the first largest religion in

**Table 2 Major religions among natives and first-generation immigrants in European countries and the United States, 2002-2010**

Country	Natives		First-generation immigrants	
	First largest religion	Second largest religion	First largest religion	Second largest religion
Austria	Catholic	Protestant	Catholic	Islam
Belgium	Catholic	Other-Christian	Catholic	Islam
Bulgaria	Orthodox	Islam	Orthodox	Islam
Croatia	Catholic	Orthodox	Catholic	Orthodox
Cyprus	Orthodox	Catholic	Orthodox	Catholic
The Czech Rep.	Catholic	Protestant	Catholic	Other-Christian
Denmark	Protestant	Other-Christian	Islam	Protestant
Estonia	Protestant	Orthodox	Orthodox	Catholic
Finland	Protestant	Other-Christian	Protestant	Orthodox
France	Catholic	Protestant	Catholic	Islam
Germany	Protestant	Catholic	Catholic	Islam
Greece	Orthodox	Islam	Orthodox	Islam
Hungary	Catholic	Protestant	Catholic	Protestant
Ireland	Catholic	Protestant	Catholic	Protestant
Italy	Catholic	Protestant	Catholic	Islam
Latvia	Catholic	Protestant	Orthodox	Catholic
Luxembourg	Catholic	Other-Christian	Catholic	Other-Christian
The Netherlands	Catholic	Protestant	Islam	Catholic
Norway	Protestant	Other Christian	Islam	Protestant
Poland	Catholic	Orthodox	Catholic	Islam
Portugal	Catholic	Other-Christian	Catholic	Other-Christian
Russia	Orthodox	Islam	Orthodox	Islam
Slovakia	Catholic	Protestant	Catholic	Protestant
Slovenia	Catholic	Protestant	Catholic	Orthodox
Spain	Catholic	Other-Christian	Catholic	Islam
Sweden	Protestant	Other-Christian	Islam	Protestant
Switzerland	Protestant	Catholic	Catholic	Protestant
Ukraine	Orthodox	Catholic	Orthodox	Islam
United Kingdom	Protestant	Catholic	Catholic	Islam
United States	Evangelical- Protestant	Catholic	Catholic	Evangelical-Protestant

Source: ESS and GSS, waves 2002-2010.

Note: Catholic refers to 'Roman Catholic'. 'Other-Christian' is a Christian denomination other than Catholic, Protestant or Orthodox.

four countries (in the Scandinavian countries of Denmark, Norway and Sweden, and also in the Netherlands). In another 12 countries, Islam is the second largest religion.

Numerous studies have tried to explore whether the traumatic act of immigration is leading to changes in the religious behavior of the immigrating individuals. In particular, researchers asked if an intensified religious performance of the incoming immigrants is observed. Smith (1978) argued that immigration is a "theologizing experience" leading to intensified religiosity. Williams (1988) stated that (in the United States) "immigrants are religious – by all counts more religious than they were before they left home" (page 29). In the same vein, Warner (2000) argued that "many of these immigrants (to the US) are deeply involved in their religions" (page 269), and therefore "religion is more salient for immigrants" (page 273). Sociologists undertook a series of case

studies of immigrant congregations and religious organizations and their investigations generally confirmed the hypothesis of the intensified religiosity of immigrants (e.g., Warner and Wittner 1998; Ebaugh et al. 2000; Min and Kim 2002). Using the European Social Survey, Aleksynska and Chiswick (2013) show that, on average, the religiosity of immigrants is greater than that of the native born and is also greater than the religiosity of stayers in the European countries of origin. The regression analysis performed by the authors and reported in the next section also shows that immigrants (both in Europe and in the United States) are more religious than natives.

There are also, however, other voices and studies that have claimed the opposite. Wuthnow and Christiano (1979) argued that migration is inherently disruptive and leads to reduced participation in religious services after the move. One could argue that new immigrants lack time and also infrastructural opportunities for religious performance, especially if they belong to a religious minority. Some recent studies have indicated a drop in participation *shortly after* immigration (e.g., Connor 2008 - in a study of immigrants to Quebec; Connor 2009 - in a study for immigrants to Canada; Massey and Higgins, 2011 - who examine immigrants to the US; Breton 2012 - for a recent review; and Diehl et al. 2013 - who look at Turkish and Polish immigrants in Germany). It could well be the case that these two pieces of evidence are complementary rather than contradictory: they simply look at different points in time since migration.

Evidence shows that, shortly after migration, religious performance decreases to later recover and even intensify. In order to test such a time-dependent hypothesis, longitudinal data are helpful. Indeed, Connor (2008) used a completed longitudinal immigrant data source for immigrants to Quebec (in the 1990s), Massey and Higgins (2011) used the first wave of a survey that examined newly arrived legal immigrants to the United States (in 2003), and Diehl et al. (2013) employed the uncompleted Norface longitudinal survey, which comprises a survey of recent arrivals in Germany, the Netherlands, the UK and Ireland<sup>7</sup>. The three studies arrived at similar results regarding a decrease in religious participation shortly after migration. Cross-section data sometimes include a question about time since migration (e.g., the ESS) that can be used to examine the evolution of religiosity of immigrants over time. As we report later (Table 3), the ESS data demonstrate that in the first year after arrival in the receiving country, immigrants in Europe are not statistically different from the native populations in terms of attendance at church services. Stratification by religious denomination demonstrates different patterns of the magnitude of decline. Connor (2008) found that the decrease is larger for immigrants adhering to a minority religion, probably because they have less access to information about places of worship. Similarly, Diehl et al. (2013) documented a more pronounced decline among Moslem Turks than among Catholic Poles who immigrated to Germany.

In the United States, the pattern seems to be different. Massey and Higgins (2011) showed that the largest decline is evidenced among Christians and in particular among Catholics (56 percent attended church services at least once a week before immigration, compared to only 26 percent shortly afterwards). The changes are less pronounced within the minority religions. After the busy and hectic period of settling in the host country, religious performance seems to increase. For instance, Diehl et al. (2013) found that the decline in religious participation shortly after migration is temporary, in particular in the case of the Turkish Moslems who resume (high) pre-migration levels

**Table 3 Attendance at religious services and prayer in Europe, 2002-2010 (adding 'time since migration' variables)**

Variables	Attendance at religious services	Frequency of prayer
	EUROPE	EUROPE
<i>Immigrant var.</i>		
First-generation immigrants - immigrated		
In last year	0.344	0.950**
1 to 5 years ago	0.387***	1.228***
6 to 10 years ago	0.336***	0.838***
11 to 20 years ago	0.311***	0.653***
More than 20 years ago	0.189	0.373*
Second-generation immigrants	0.167*	0.355**
Socio-economic vars.	Yes	Yes
Religion denomination variables	Yes	Yes
Country dummies	Yes	Yes
Wave dummies	Yes	Yes
Sample size	107,361	107,361
R-squared	0.183	0.191

\*p-value < 0.10; \*\*p-value < 0.05; \*\*\*p-value < 0.01.

Notes: Data on 'time since migration' is not available for the US.  
 Reference group = Native residents.

of religious participation. The ESS data also indicate that immigrants significantly intensify attendance at church services after the first year in the host country, so that immigrants who reside in the country from 1 to 20 years are significantly more active in terms of church attendance compared to the native populations (Table 3).

The core questions that this study tries to unravel are: are immigrants indeed more religious than the native populations, and if the answer is positive - what are the motives behind immigrants' intensified religiosity, and are they country specific? In particular, are the motives different in European countries and in the United States?

## 2.2 Is religiosity of immigrants a 'bridge' or a 'buffer'?

Two competing theories offer explanations for the possible motives and consequences of immigrants' intensive religiosity. The two explanations lead to different predictions about the interrelationship between immigrant religiosity and integration into the local community: (a) the first one sees religiosity and religious organizations as a 'bridge' that facilitates immigrant integration and mobility; while (b) the second one claims that religiosity and religious institutions are a 'buffer' against the hardships in the receiving country, in particular for weaker and more vulnerable immigrants.

- a) The *bridging role* of religion in the process of assimilation: Herberg (1960) was probably the first to emphasize the role of religion in the process of assimilation (in the United States), arguing that the immigrant's religiosity is often the sole self-identifier that American society does not challenge in the immigrant's assimilation into the new society. It therefore has the potential of replacing ethnic and national identities, and thus helps immigrants to craft an American identity. In a very similar vein, Smith (1978) argued that immigrants use religion to ease assimilation into the

American mainstream. When immigrants define themselves in religious terms, their ethnic/national/racial differences become less pronounced, and diverse communities are brought together with the native local community through shared worship. Religious identification could therefore be a factor that enables newcomers to overcome social isolation, because religion is universal and not bound to a particular place or country of origin. Moreover, religious institutions can help immigrants to acquire the social and civic skills that will soften the assimilation process. Many religious communities offer a host of resources: advice on adapting to the new environment and information regarding economic opportunities in the receiving society; help in obtaining jobs, housing, or loans; schools and language classes; and social services (e.g., Ebaugh et al. 2000; Munshi 2003; Hirschman 2004; Voas and Fleischmann 2012). Activity in religious organizations creates further opportunities for civic and community engagement (Ramakrishnan et al. 2006).

- b) *Religiosity as a 'buffer'*: it is claimed that immigrants use religiosity as a 'buffer' against hardships in the new receiving country. The migratory event amounts to a traumatic experience, and like other experiences of anomaly and existential insecurity, it increases receptivity to religious belief. Such religious beliefs and identities may translate into active participation in religious institutions. Religion therefore serves as "balm for the soul" (Connor 2012), providing comfort and mitigating loneliness (Chiswick 2003; Waite and Lehrer 2003). The basic mechanism implied in this argument is psychological and could lead to a slowdown in the process of assimilation, serve as a 'mobility trap' (Cadge and Ecklund 2006), and religiosity will consequently become a 'barrier' (rather than a 'bridge') in the process of adaptation. Several studies have documented indirect indications for the 'buffer' option. For example, using pilot data from the American New Immigrant Survey (NIS), Cadge and Ecklund (2006) found that the immigrants who are less integrated into American society (older, unemployed, speaking a non-English language at home) are more likely to regularly attend religious services; in a cross-national study that covers European countries, van Tubergen and Sindradóttir (2011) found that religiosity is higher among immigrants who are unemployed and less educated, while Ramakrishnan et al. (2006) claimed that religiosity might be particularly limiting for immigrant women since religious attitudes and beliefs regarding gender roles (as mothers and care givers at home) prevent them from engaging in activities in the labor market and the public sphere. The study of Constant et al. (2006) looked at ethnic minority groups in Germany and reported that non-religious individuals perform better than religious ones. Obviously, causality could run in the opposite direction: from failure to integrate in the host country to participation in church activities, rather than the proposed causality that goes from church attendance to lower integration. Religious activities can serve as a "balm for the soul" (Connor 2012) for those who failed to integrate into the local society and labor market.

Putnam (2000) presented related ideas and described two types of social capital that can serve as measures of the prospects of immigrants' assimilation: (a) *'bridging capital'*, which relates to the links *between* communities and bridges between immigrants and

native communities and where more bridging capital leads to the better assimilation of the immigrant community; and (b) *'bonding capital'*, which helps to establish close links with members *within* a community. As religiosity is a key component of human/social capital, we can apply his concepts of 'bridging capital' versus 'bonding capital' to the religious arena, and connect it to the previously mentioned theories of religiosity as a 'bridge' versus a 'buffer'. Those who refer to religiosity as a 'bridge' believe that religiosity should be characterized as 'bridging capital'. Researchers who claim that religion, religiosity and religious organizations are a 'buffer' and shock-absorber for immigrants would argue that it is basically 'bonding capital' that helps individuals within their community.

The religious practices of immigrants most likely combine components of the two types of social capital. Church services, prayers and religious rituals provide worshipers with a familiar, cyclical rhythm and represent continuity between life in the home country and life in the host country (Tiilikainen 2003), while *also* helping them establish new ties with the native population and adapt to the new country of residence. Ebaugh and Chafetz (1999) concluded that "Religious institutions are the physical and social spaces where the changes required by the new social milieu and the continuities desired by immigrant members can be achieved".

The interrelationship between immigrants' religiosity and their integration into the local native population is also central for long-term considerations. In particular: will the growing numbers of Moslem immigrants increase or attenuate prejudice/distaste against the Moslem immigrant community? The literature offers two opposing theories that are closely related to the motives of immigrants' religiosity described above: (a) The *'intergroup contact theory'* predicts that an increase in the relative size of the immigrant religious group (or any other minority) provides contact opportunities for the local population and the minority religious group, which in turn diminishes tension and prejudice against that group (Adida et al. 2011). If the 'bridging' factor of religiosity dominates, thus facilitating more contact between the native and immigrant populations, less distaste against religious minorities is expected; (b) the *'group threat theory'*, on the other hand, predicts that an increase in the size of the minority gives rise to hostile attitudes by the dominant native group toward the minority, either because of competition over scarce resources, or because of the perception that the minority is a symbolic threat to the cultural integrity (Blalock 1967; Adida et al. 2011). If the religiosity of immigrants is a 'buffer' against the local population leading to less integration and contact with the native population, the 'group threat theory' will govern and more hostility against religious minorities is expected.

Which component ('bridge' or 'buffer') dominates? The answer is most probably *country specific*. Sociologists often discuss the 'bridge versus buffer' metaphor by relating to "two context-dependent casual mechanisms" (e.g., Connor and Koenig 2013, page 5), or "contextual effects" (e.g., van Tubergen and Sindradóttir 2011, page 273) through which religion impinges upon structural integration. The first mechanism would be triggered in deregulated and pluralistic contexts where religiosity serves as a bridge to the local population. The second mechanism is assumed to be triggered in contexts where religion constitutes a "bright" symbolic boundary (Alba 2005); here religion is a barrier to integration and the religiosity of immigrants serves as a buffer against the hardships of integration.

### 2.3 Religious disparities between Europe and the United States

Given that in this study we examine the United States versus Europe, it is helpful to first present the fundamental differences between the two countries. Two primary disparities between the United States and Europe are evident: (a) the different religious setting and the role of religion and religious group identities in public life; and (b) the religious composition of the immigration flow.

- a) Americans in general tend to be religious and are probably more religious than most people in other modern societies. In stark contrast with the United States, secularization has become almost an ideology in Europe. As Casanova puts it, “Americans think that they are supposed to be religious, while Europeans think that they are supposed to be irreligious” (Casanova 2003, page 19). Using the ISSP (International Social Survey Program): Module Religion (2008)<sup>8</sup>, García-Muñoz and Neuman (2012) present frequency distributions of church attendance and prayer of European and American respondents. They clearly demonstrate that the two types of religious activity are more intensive within the American sample. In the United States, religious diversity was endorsed right from the beginning. Herberg (1960) thesis implies that collective religious identities have been one of the primary ways of structuring social pluralism in American history. In his words, “almost from the beginning, the structure of American society pre-supposed diversity and substantial equality of religious associations” (page 27). In the United States, religion, religious institutions and religious identities played a central role in the process of incorporating the old European immigrants into American society. As a result, religious identities tended to gain salience in the context of immigration to America rather than losing their influence and continue to have the same function today (Smith 1978; Warner 2000; Casanova 2006; García-Muñoz and Neuman 2013). Moreover, immigrants in America try to conform to American standards of religiosity and sometimes become more religious in their new country (the United States) than they were in their homeland (Williams 1988). On the other side of the Atlantic, the Western European countries are secular societies (Swatos and Christiano 1999)<sup>9</sup>. In light of the limited religious pluralism and secularization, immigrants’ religions (in particular Islam) and religiosity are treated with much suspicion by European elites and ordinary people alike<sup>10</sup>.
- b) The composition of the immigration flow is different in Europe and in the United States: the majority of Western European Moslems are immigrants<sup>11</sup> and a large share of immigrants is Moslem. Out of about 69.8 million immigrants in Europe (in 2010, estimate of the United Nations), 18.3 million belong to the Moslem faith (Pew Research Center Report 2011). The overlap between immigrant status and the religion of Islam is even more pronounced in those countries where Moslem immigrants come predominantly from a single region of origin. Examples are immigrants from Turkey in the case of Germany, and immigrants from North Africa in the case of France. In this case, there is an overlap between immigration status, religion, and racial and socio-demographic background. This overlap magnifies the extent of ‘otherness’. Moslem-organized collective identities and their public representations became a source of anxiety, not only because of their religious ‘otherness’ as non-Christians

practicing a non-European religion, but more importantly because of their religiousness in contrast to European secularity. Moreover, there is some evidence that the religiosity of Moslem immigrants does not change as the time since migration goes by (Bisin et al. 2008). In the United States, by contrast, Moslems comprise less than 10 percent of all immigrants (3.5 million Moslem immigrants out of a total of 42.8 million immigrants; United Nations Population Division 2009 and Pew Research Center Report 2011). Moreover, it is estimated that 30 percent-42 percent of all Moslems in the United States are African-American converts to Islam, complicating the definition of Islam as a foreign/non-American religion. Also, the Moslem immigrant communities in the United States are from diverse geographical regions of origin, as well as from varied socio-demographic backgrounds. All of the above lead to faster assimilation into the native population (Casanova 2006)<sup>12</sup>.

These differences between Europe and the United States lead to our core **Hypothesis**: *the religiosity of immigrants in the United States is of a more pronounced 'bridging' nature, while the religiosity of immigrants in Europe functions mainly as a 'buffer' against conflict with the native population and serves as 'bonding capital' that helps immigrants within their immigrant community. Therefore, the 'group threat theory' is expected to dominate in Europe in contrast to the more dominant 'intergroup contact theory' in the United States.*

### **3. Empirical analysis – data, descriptive figures and religiosity equations**

We use the European Social Survey (ESS, waves 2002-2010) and the American General Social Survey (GSS, waves 2002-2010) datasets to test the following two hypotheses:

(i) **Hypothesis 1:** *Immigrants (in particular first-generation immigrants) are more religious than the native population, in both the United States and Europe.*

(ii) **Hypothesis 2:** *The religiosity of immigrants in the United States is of a more pronounced 'bridging' nature, while the religiosity of immigrants in Europe functions mainly as a 'buffer' and 'bonding' element.*

The GSS and the ESS are social surveys designed in the United States and in Europe, respectively, to obtain the demographic, behavioral and cultural characteristics of their residents. The GSS is being conducted annually since 1972, and the last available wave is 2012. The ESS has five waves since 2002 (the first in 2002/2003 and the fifth in 2010/2011). The two surveys include questions on individuals' religious denomination and on other various measures of religiosity, and allow the distinction between natives and first- and second-generation immigrants.

The two samples used for the statistical analyses include pooled waves for the period 2002-2010. We restricted our analysis to samples that include individuals in the 20-90 age interval, who belong to the following religious denominations: Catholic, Protestant, Orthodox, other Christian religions, Jewish and Moslem. The GSS allows distinguishing between different sub-categories of Protestants. Using the classification system developed by Steensland et al. (2000), we distinguish between black Protestants, evangelical Protestants, and mainline Protestants. This distinction is not available in the ESS. Respondents belonging to other religions have been omitted from the analysis due to the small sample sizes of these groups. Individuals who claim to have 'no religion' have also been excluded from the statistical analysis<sup>13</sup>.

The European sample includes individuals who were sampled within the following countries: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Slovakia, Slovenia, Switzerland, Ukraine and the United Kingdom. Descriptive statistics for both samples (ESS-Europe and GSS-US) can be found in the Additional file 1.

Regression analysis is now used (with the same data from the 2002-2010 waves of the European ESS and the American GSS) to test Hypothesis 1, that is, immigrants (first- and second-generation) are more religious than the native respective populations in Europe and the United States.

Table 4 presents regression equations for two elements of religiosity: (i) *Attendance at religious services at the place of worship* ('church attendance' based on the question "How often do you attend religious services?", ranging from 'never' to 'every day' on a scale of 1-7 in the ESS and on a scale of 0-8 in the GSS); and (ii) *prayer habits* ('prayer' based on the question "How often do you pray?", ranging from 'never' to 'every day' on a scale of 1-7 in the ESS and 1-6 in the GSS). Church attendance is a public religious activity that also includes elements of networking. Prayer has a private/intimate nature.

The equations for the two sides of the Atlantic include the same explanatory variables in order to facilitate a comparative analysis of the results. The two core variables are the '*first-generation immigrants*' (a dummy variable if the respondent and his/her parents were not born in the current country of residence) and '*second-generation immigrants*' (a dummy variable if the respondent was born in the current country of residence but both of his/her parents were born in other countries). The battery of other explanatory variables includes categorical variables related to age groups (20-30 - reference; 31-45; 46-59; 60 or older); education groups (less than six years of education - reference; 7-12; 13-16; more than 16 years); marital status (single - reference; married or cohabiting; divorced or separated; widowed); employment status (retired, at school or home-keeper - reference; employee; self-employed; unemployed); a low income dummy variable if the total family annual income is less than 6000 euros; the number of people in household<sup>14</sup>; a female dummy; and the religious denominations (Catholic - reference; Protestant; Orthodox; other Christian denominations; Jewish; Moslem). The European regressions also include country dummies, and all regressions include controls for the waves.

Linear Ordinary Least Squares regressions were used and standard errors were adjusted for clustering at the country level (in European regressions). Switching to Ordered Logit/Probit regressions did not lead to substantial changes. Population and survey design weights were also taken into account.

**Hypothesis 1**, which states that *Immigrants are more religious than the native population*, is clearly supported by the European data: the coefficients of first-generation European immigrants are positive and significant for the two dimensions of religiosity, indicating that first-generation immigrants in Europe are indeed more religious than the native population (the reference group)<sup>15</sup>. The size of the coefficients in "attendance" and the "prayer" equations drop when second-generation immigrants are considered, but the coefficients are still significant. In the United States the results are weaker: first-generation immigrants seem to be more religious in terms of church attendance, but less religious in terms of prayer (indicating a 'bridging' factor of religiosity – see below).

**Table 4 Attendance at religious services and prayer in Europe and the US (2002-2010)**

Variables	Attendance at religious services	Attendance at religious services	Frequency of prayer	Frequency of prayer
	EUROPE	US	EUROPE	US
<i>Immigrant var.</i>				
First generation	0.272***	0.342***	0.646***	-0.133**
Second generation	0.166*	-0.072	0.353**	-0.109
<i>Socio-economic vars.</i>				
Age (years)				
30 and under	ref.	ref.	ref.	ref.
31 to 45	0.110***	0.037	0.225***	0.198***
46 to 59	0.220***	0.144	0.471***	0.364***
60 and over	0.501***	0.605***	1.033***	0.360***
Education (years completed)				
Less than 6	ref.	ref.	ref.	ref.
7 to 12	-0.141**	-0.236	-0.253***	-0.186*
13 to 16	-0.088	0.209	-0.259***	-0.069
17 and over	0.027	0.703***	-0.095	-0.027
Female	0.302***	0.559***	0.971***	0.704***
Members in household	0.070***	0.061**	0.086***	0.012
Marital status				
Single	ref.	ref.	ref.	ref.
Married	0.126***	0.663***	0.175***	0.210***
Divorced	-0.127***	-0.133	0.083*	0.082
Widowed	0.143***	0.620***	0.533***	0.256***
Low income	-0.006	-0.220	0.200***	0.150**
Employment status				
Retired/student/home	ref.	ref.	ref.	ref.
Employee	-0.251***	0.049	-0.237***	-0.146***
Self-employed	-0.177**	-0.085	-0.135*	-0.099
Unemployed	-0.115***	-0.246	-0.125**	-0.107
<i>Religion var.</i>				
Catholic	ref.	ref.	ref.	ref.
Protestant:	-0.321**		-0.425	
Black		-0.173*		0.074
Evangelical		0.705***		0.358***
Mainline		-0.461***		-0.311***
Orthodox	-0.431*	-0.850*	-0.407	-0.556*
Other Christian	0.725***	0.070	0.986***	0.346***
Jewish	-0.400**	-1.594***	-0.292	-1.313***
Moslem	-0.162	0.556	0.333	0.771**
Country dummies	Yes	-	Yes	-
Wave dummies	Yes	Yes	Yes	Yes
Sample size	107,361	6,547	107,361	6,547
R-squared	0.183	0.079	0.190	0.124

\*p-value < 0.10; \*\*p-value < 0.05; \*\*\*p-value < 0.01.

The European ESS (but not the American GSS) has a question on time since migration. Decomposing the 'first-generation' variable into five time-since-migration intervals (immigrated last year; 1-5 years; 6-10 years; 11-20 years; more than 20 years; the reference group is natives) demonstrates an inverse-U pattern. Table 3 shows that immigrants at the first year since migration and immigrants who live in the receiving country more than 20 years are not significantly different from the natives in terms of church attendance. Those who arrived recently are most probably preoccupied with urgent settling problems, which temporarily prevent them from spending time on religious performance - a finding in line with other studies related to immigrants in Europe (e.g., a recent study by Diehl et al. 2013, who used the SCIP longitudinal data set). Immigrants who live in the host country for over 20 years adapted to the local patterns and are not different from natives. Those who live in the host country 1-20 years are more religious than the native population, with some tendency for a decrease in religiosity as time passes by. Prayer, which has a more intimate/private nature, is higher among immigrants in all time-since-migration intervals, increases after the first year in the receiving country, and constantly decreases thereafter.

The socio-economic and religious denomination variables (in regressions Tables 4 and 3, but only presented in Table 4) serve as control variables<sup>16</sup>. Most coefficient estimates are quite similar in Europe and in the United States and are in line with the findings of many other studies: women are more religious than men; single individuals tend to be less religious compared to married and widowed individuals; the number of people in the household has a positive significant effect on religiosity; low income increases prayer; unemployed individuals attend church services less frequently; advanced age leads to more intensive religiosity (in particular above the age of 60); and there is some tendency toward decreased religiosity when the individual is more educated. One interesting exception is the increase in church attendance of US respondents with more than 13 years of education. These respondents attend church activities more frequently than individuals with a less than academic education, probably because they benefit more from networking and the contact effects.

We now turn to the second hypothesis.

**Hypothesis 2:** In European countries the 'buffer-bonding motive' is dominant, whereas in the United States the 'bridging motive' is more powerful.

Obviously, it is impossible to explicitly sort out the two types of motives and offer an estimate of their sizes. However, the results in Table 4 provide *several clear indications in support of this hypothesis* on the dominant motives on the two sides of the Atlantic.

1. *In the United States, first-generation immigrants attend church religious services more frequently than the native population. However, first-generation immigrants pray less compared to natives.* Attendance at church services has a clearly dominant networking and bridging element. Prayer has no bridging component and can only serve as a 'buffer' and "balm for the soul". More frequent attendance at church services (compared to natives), coupled with less prayer habits, therefore points toward the dominance of the bridging component. In sharp contrast, *immigrants in European countries are more active than natives in terms of prayer.*
2. The coefficients that present the most intensive religiosity of immigrants in Europe are *much larger in the 'prayer equation' than in the 'church attendance equation'*

(both use the same 1-7 scale). Prayer has the intimate/private nature of comforting and providing a “balm for the soul”. It can serve as a 'buffer' and shield against the harsh conditions faced by new immigrants. The larger magnitude of the prayer coefficients in Europe can therefore serve as another indication of the superiority of the ‘bonding-buffer’ motive<sup>17</sup>.

3. An interesting finding relates to second-generation immigrants (Table 4). In the United States, there is evidence of ‘religious assimilation’ and the second-generation immigrants are not significantly different from natives (in terms of church attendance and in terms of prayer). On the other hand, second-generation immigrants in Europe are still more active religiously than natives, particularly in terms of praying. *The intensity drops in the second generation, but is still significantly higher compared to natives.* These results can be explained by the need for comfort and a “balm for the soul” that does not fade away in the second generation. This finding is in line with the sociological “religious vitality theory” which highlights the role of religious socialization *within* immigrant families and communities (against the “secularization theory” which predicts an inverse relationship between religiosity and structural integration in the receiving country, see Fleischmann and Phalet 2012). Obviously, religious socialization within families and communities has dominant bonding effects. The theory predicts the maintenance of intensified religiosity (compared to natives) and even the revival of religious performance among second-generation immigrants. Compatible with this prediction, we see that second-generation immigrants in Europe indeed seem to be more religious than their first-generation counterparts who have lived in the host countries for more than 20 years. As Table 3 shows, while the latter behave like the native populations (in terms of church attendance, their prayer practices are more intense only at a 10 percent significance level), there is a revival of the two dimensions of religious performance among second-generation immigrants. The ‘religious vitality theory’ also claims that the trends mentioned above are more pronounced among immigrants who belong to minority religions where there is more need for the comfort and ease that is provided within families. In line with this prediction, recent studies have documented an emerging trend toward religious revival among second-generation Moslems in Europe: for instance, in the Netherlands (Maliepaard et al. 2010) and in four European capital cities (Amsterdam, Berlin, Brussels and Stockholm - Fleischmann and Phalet 2012, using recent cross-national surveys from The Integration of European Second Generation – TIES – project). The ESS data also indicate that in European countries, second-generation immigrants who do not belong to the country’s main religion maintain the high levels of religiosity of the first-generation (see next point and Table 5).
4. Immigrants might find a shield and buffer in religiosity, particularly in response to social exclusion and experiences of discrimination. It follows that *immigrants who have a religious denomination that is different from the main country’s denomination and who may be subject to religious unease or discrimination if they reside in European countries that do not have a culture of religious diversity and tolerance will then turn to intensive religiosity to find comfort.* In fact, this could be the case also for European natives in Europe who belong to a denomination that is different from the country’s main denomination. On the other side of the Atlantic, in the United States, which enjoys a “religious supermarket” and tolerates a

**Table 5 Attendance at religious services and prayer in Europe and the US, 2002-2010 (adding “does/doesn’t share the country’s main religion” variables)**

Variables	Attendance at religious services	Attendance at religious services	Frequency of prayer	Frequency of prayer
	EUROPE	US	EUROPE	US
<i>Immigrant var.</i>				
First-generation				
Not main rel.	0.365***	0.308**	0.662***	-0.147**
Main rel.	-0.373*	1.676***	-0.616	0.588***
Second-generation				
Not main rel.	0.429***	0.026	0.354	-0.103
Main rel.	-0.576***	0.221	-0.841***	0.376
Natives - Main religion	-0.525***	0.739***	-1.076***	0.478***
Socio-economic vars.	Yes	Yes	Yes	Yes
Religious denomination variables	Yes	No <sup>22</sup>	Yes	No
Country dummies	Yes	-	Yes	-
Wave dummies	Yes	Yes	Yes	Yes
Sample size	107,361	6,547	107,361	6,547
R-squared	0.190	0.068	0.200	0.100

\*p-value < 0.10; \*\*p-value < 0.05; \*\*\*p-value < 0.01.

Note: Reference group = Natives who do not belong to the country’s main religion.

diversity of religions, belonging to a religion that is different from the country’s major religion does not lead to discriminatory feelings or the need to find comfort in religious activity. Moreover, as churches in the United States have the social functions of bridges and networks, belonging to a church other than the main country’s church could lead to a *diminished benefit from the networking/bridging element* and consequently to less religiosity of immigrants and natives alike. To test this conjecture, we split first- and second-generation immigrants and also natives each into two sub-groups: those who share the country’s main religion and those who do not<sup>18</sup>. The regressions in Table 4 are then repeated and extended. The regression results are presented in Table 5. As we hypothesized above, ‘not belonging to the country’s main religion’ has different effects (on both natives and on immigrants) in Europe and the United States. In Europe, native individuals who do not belong to the country’s main religion tend to participate significantly more in church services and also pray significantly more compared to natives who share the country’s main religion (coefficients of 0.525 and 1.076 respectively; significant at the 0.01 significance level). This finding could indicate that native individuals who do not belong to the country’s main religion feel discriminated and find comfort in religious performance. Moreover, the difference in intensity of prayer is larger compared to that of church attendance (a double-sized coefficient for variables that have the same range of 1-7). This further indicates the dominance of the ‘buffer-bonding’ element of religious activity, which is more pronounced in the intimate act of prayer. In the United States, the opposite is found, where ‘belonging to the country’s main religion’ leads to significantly more religious activity, most probably because native individuals who belong to the country’s main religion can use the bridging elements of religious activity more effectively (coefficient of 0.739 for church attendance; significant at 0.01)<sup>19</sup>. Moreover, first-generation immigrants in Europe who do not share the country’s main religion

(and who are more vulnerable than natives) intensify prayer by an extra level of 0.662 compared to natives who do not belong to the country's main religion, whereas in the United States they decrease prayer by 0.147. This further suggests that prayer serves as "balm for the soul" for those Europeans who feel alienated.

5. Another indirect indicator of the dominance of the 'bridging' effect versus the 'bonding-buffer' effect could be gained from an insightful reading of the results of an experimental test of the 'intergroup contact theory' versus the 'group threat theory'. As mentioned above, the 'intergroup contact theory' predicts that an increase in the relative size of a (religious) minority provides contact opportunities with the minority and leads to less discrimination. *This is the case if religiosity serves as a bridging element.* The 'group threat theory' predicts that an increase in the relative size of a minority leads to a rise in the threat to the native population and hence to intensified hostility. *This could be the case if religiosity serves as a bonding element within the minority/immigrant community and a buffer against the native community.* If we relate this to Adida et al. (2011), who found support for the threat theory (toward the Moslem religious minority), it can be claimed that their findings also lend support to *the dominance of the 'buffer-bonding' motive rather than the 'bridging' motive.* The experiment was conducted in France only and there is no comparable experiment for the United States. However, it offers some additional evidence in the same vein.

#### 4. Concluding remarks

Immigration and the religiosity of immigrants are key factors in shaping the religious and demographic landscape of Europe and the United States. Given that, particularly in Europe, immigrants are more religious than the native populations and due to the demographic advantage of religious immigrant populations caused by (i) the dramatic decrease in fertility rates within secular native European populations<sup>20</sup>; which is (ii) combined with high fertility rates among the religious immigrant populations<sup>21</sup>; and (iii) coupled with the immigration of more religious groups into secular countries, the long-term consequences will be: 1) a constant and drastic change in the religious makeup, with a growing share of more religious residents in general and of members of the Islam faith in particular; and 2) de-secularization and growing religious intensity.

The evolution and the motives of the immigration-religiosity intersections are fundamentally different on the two sides of the Atlantic. In the United States, religiosity seems to serve as a 'bridge' that helps immigrants in the integration process. In Europe, the intensified religiosity of immigrants seems to serve more as a 'buffer' and shock-absorber, offering comfort and a shield against the hardships that newcomers face. These fundamental differences are the results of the different religious cultures and religious landscapes of the two regions, and also of the different mix of immigration flows. In particular, American religious pluralism allows immigrants to choose between creating their own religious communities and joining local religious organizations. In both cases, religious activity provides refuge, security, and various services and resources (employment, housing, education), and connects the immigrants and the native population, thus smoothening the integration process.

The situation in Europe is totally different: religious pluralism in Europe is limited. European society has difficulty in recognizing collective group religiosity and the legitimate

role of religion in public life. Combined with the restricted religious pluralism, and European relative secularization, immigrants' religions (in particular Islam) and religiosity are treated with much suspicion by European elites and ordinary people alike. In Europe, the 'group threat theory' seems to govern, and the increase in the size of religious minorities gives rise to hostile attitudes by the dominant native population toward the religious minority. The predicted growing share of Moslem immigrants in European countries will potentially become a source of deep social and religious tensions. Solutions to the discrimination against Moslems are therefore of urgent concern. However, as Paluck and Green (2009) show, evidence on prejudice-reducing policies is at best inconclusive.

Prejudice against Moslems in the West (termed Islamophobia), has become a topic of growing research interest (e.g., Strabac and Listhaug 2008; Helbling 2012). One of the major questions raised in the literature relates to feedback effects: what are the consequences of public hostility for the religiosity of Moslems (and other religious minorities confronted with prejudice and discrimination)? Voas and Fleischmann (2012) presented three possible consequences: (a) Moslems might become more religious in response to external negative valuations of Islam; (b) they might be motivated to scale back their religious identity, belief and practice; or (c) prejudice and discrimination might have no effect on religious commitment. The empirical results tend to support the first option, but are inconclusive (see a review in Voas and Fleischmann 2012, pp. 536-537). The results of our regression equation for Europe (but not for the United States) are in line with the first option of "reactive religiosity". The fact that second-generation immigrants in Europe who do not share the country's main religion are as religious as first-generation immigrants, could indicate that religiosity is used as a buffer against the religious discrimination of minority religions and does not change even in a second-generation composed of individuals who were already born in the receiving countries. Such an outcome is also backed by social psychologists who provide ample evidence, mainly based on experiments, for a rejection-identification mechanism: in response to discriminatory treatment, individuals identify with their group more strongly to buffer negative consequences for their self-esteem (e.g., Branscombe et al. 1999).

## Endnotes

<sup>1</sup>Numerous articles refer to the relationship between religiosity of immigrants and labor market integration, e.g., Lindley 2002; Aleksynska and Algan 2010; Bisin et al. 2011; Connor 2011; Connor and Koenig 2013.

<sup>2</sup>In the last decade – between 2000 and 2013 – West- and South-East Asia also evidenced a major influx of migrants, in particular into the oil-producing countries in West Asia and the fast-growing countries in South-East Asia (e.g., Singapore, Malaysia, Thailand). During 13 years (2000-2013), 20 million new immigrants arrived in these countries (data published by the United Nations, The Department of Economic and Social Affairs 2013, on 11<sup>th</sup> of September). This newly published report also states that the total estimated number of migrants rose to 232 million, constituting 3.2 percent of the world's population.

<sup>3</sup>It is estimated that about 85 million Europeans immigrated to the New World and the Southern Hemisphere during the period of 'industrialization' (from the 1800 s to the 1920s), 60% of them to the United States (Casanova 2006).

<sup>4</sup>Germany's postwar guest worker program began in 1955 when the country signed a labor recruitment agreement with Italy that permitted German farmers to hire Italian guest workers. Shortly afterwards, bilateral agreements were signed with another seven recruitment countries: Greece, Portugal, Spain, Yugoslavia and also three countries outside of Europe, specifically Morocco, Tunisia and Turkey. Guest worker programs still play an important role in the admission of migrant workers from low-income countries to fill jobs in high-income countries. See Ruhn and Martin (2008) for a review and discussion.

<sup>5</sup>The heterogeneity of the countries of origin led to large variations in the educational attainments and wages of immigrants in Europe: immigrants from non-OECD countries have lower educational levels and wages, particularly when compared to natives and immigrants from the EU15 countries (Dustmann and Frattini 2011).

<sup>6</sup>The term 'first-generation immigrants' refers to individuals who were not born in the current country of residence and also their parents were born outside the current country of residence. 'Second-generation immigrants' were born in their current country of residence but their two parents were born in other countries.

<sup>7</sup>Connor (2008) used the "Enquete sur L'establissement des Nouveaux Immigrants" (ENI) sponsored by the Quebec government during the 1990s. Massey and Higgins (2011) used the first wave of the New Immigrant Survey (NIS), and Diehl et al. (2013) employed the first wave of "Socio-Cultural Integration Processes of New Immigrants in Europe" (SCIP).

<sup>8</sup>For more on the ISSP, see Brañas-Garza and Neuman (2004) and Bar-El et al. (2013).

<sup>9</sup>Obviously, there are differences between countries within Europe in terms of shares of the secular populations. Cyprus and Poland are the most religious countries in Europe (in 2008), while at the other end the Scandinavian countries, the Czech Republic and Estonia are the most secular countries (ISSP 2008 databased on frequencies of church attendance and prayer, not reported here, but can be provided upon request).

<sup>10</sup>There are obviously differences between European countries in terms of the regulation of religious minorities (Casanova 2006): France's 'etatist' secularist model requires the strict privatization of religion, eliminating religion from any public forum. Great Britain allows greater freedom of religious associations and their contacts with local authorities. The Netherlands encouraged the establishment of a state-regulated but self-organized separate Moslem pillar. Germany has tried to organize a quasi-official Islamic institution (the Turkish-Islamic Union for Religious Affairs – DITIB) in conjunction with Turkey's Directorate of Religious Affairs (DRA). There are, however, other Moslem organizations who claim to represent the German Moslem population (Ogelman 2003).

<sup>11</sup>Moslem populations have lived in the Balkans and Eastern Europe for centuries. There has also been a Moslem presence in Western Europe. However, the large Moslem populations that today live in Western Europe arrived after World War II (Fetzer and Soper 2005). As descriptive statistics in the Additional file 1 (based on ESS data) shows, in the samples used in our statistical analysis, only about one percent of European native populations are Moslem compared to 17 percent within first-generation immigrants and 14 percent within second-generation immigrants.

<sup>12</sup>This, however, did not prevent expressions of hostility and discrimination against Moslems after the 9/11 attacks. For instance, Davila and Mora (2005) found that subsequent to the attacks, middle-Eastern Arabs have experienced a significant decline in earnings.

<sup>13</sup>Individuals with 'no religion' comprise a significant share of the samples: 39.1 percent in the European EES survey and 16.1 percent in the American GSS survey. A recent report published by the Pew Research Center's Forum on Religion & Public Life (on the 18<sup>th</sup> of December, 2012) claims that the third largest 'religion' is the 'no religion' – it is estimated that there are 1.1 billion individuals who claim to have 'no religion' (16 percent of the world population). The majority lives in communist countries (700 million in China). Christianity is the largest religion (2.2 billion individuals comprising 32 percent of the world population) followed by Islam in second place (1.6 billion individuals comprising 23 percent of the world population). After the third 'no religion' denomination, the fourth is Hindu (1 billion individuals) and the fifth is Buddhism (0.5 billion). Only 14 million individuals belong to the faith of Judaism (0.02 percent of world population). Individuals with 'no religion' were included in a previous version of the study and are now excluded based on the comment of one of the referees. Interestingly, even individuals who claim to have 'no religion' report religious activities such as attending church services and praying. The Pew Research Center's Forum on Religion and Public Life (2012) also states that many of those who report a denomination of 'no religion' still believe in some spiritual 'superpower'. This is why they were included in the analysis in several studies of religious performance (e.g., Aleksynska and Chiswick 2013).

<sup>14</sup>We use this variable as a proxy of number of children because the ESS does not include data on the number of children.

<sup>15</sup>Moreover, there also seems to be a time-trend of constant increase in the disparities between religious practices of immigrants versus natives. This time-trend is most probably led by increased religious participation of (Moslem) immigrants in Europe versus a decrease in participation of European natives. Using three waves of the ISSP: Module Religion (1991, 1998, 2008-the last available wave) and looking at percentages of individuals at the lowest end of the religiosity scale - defined as the share of individuals who 'never pray' and individuals who 'never attend church/mosque/synagogue services' reveals a constant and quite dramatic drop in the share of secular Moslems: the percentage of Moslems who 'never pray' was 27.72 in 1991, 25.07 in 1998, and only 7.23 in 2008. The percentage of Moslems who 'never attend church services' dropped from 35.85 in 1991 to 27.35 in 1998, and further decreased to 16.70 in 2008. Parallel figures for native populations show an increase in secularization rates between 1991 and 2008. For a more extensive discussion see Kaufmann 2010; Pew Research Center Report 2011; Toft et al. 2011; and García-Muñoz and Neuman 2012, 2013.

<sup>16</sup>We refer to the socio-economic personal characteristics as *control* variables, with the focus on the variables related to the immigration-religiosity intersections. Sociologists usually treat socio-economic variables as core variables and present general theories that predict the effects of these variables. For a review of theories see, for instance, Smits et al. (2010) and van Tubergen and Sindradóttir (2011). The main three sociological theories are the insecurity theory (which predicts – for instance - that individuals with a permanent job are least likely to participate in religious practices, the unemployed participate the most, and individuals with a temporary job fall in between; however, our results are not in line with this hypothesis, as we find that unemployed individuals have lower frequencies of

church attendance than the employed, see Table 4); the scientific worldview theory (for instance - more educated individuals participate less); the social integration theory (for instance - individuals who live in urban areas are less likely to participate in religious practices).

<sup>17</sup>There could, however, be other explanations as well. For instance, (i) church attendance is more costly (in terms of time and also financial expenditures) and it is therefore cheaper to intensify prayer habits; (ii) in Islam, praying several times a day is more of an indicator of intensive religiosity than in Christianity: As immigrants to Europe, but not to the US, include a large percentage of Moslems, we find a stronger effect of immigration status on prayer in Europe.

<sup>18</sup>Interestingly, while not surprisingly, the shares of both natives and immigrants who do not share the country's main religion are much larger in the United States than in Europe, due to America's religious diversity. The respective figures are: 66 percent of natives in the United States compared to 17 percent of natives in Europe. Over 85 percent of immigrants in the United States versus 45 percent of immigrants in Europe (see the Additional file 1).

<sup>19</sup>Native Americans who do not share the country's main religion also pray less compared to those who belong to the country main religion. This result can probably be explained by inconformity: if an individual is different in terms of her/his religious denomination, she/he is also different in the sense that she/he is less religious compared to the 'average' religious American.

<sup>20</sup>During the last decades, most European countries have faced a dramatic drop in fertility rates. Eurostat data show that, the number of live births in Europe in 1970 was 7.15 million babies, while in 2010 this figure decreased to 5.36 million. The most pronounced changes in the average number of live births per woman are evidenced in the European Catholic countries: Ireland (from 3.8 in the early 1970s to 2.1 in 2010), Spain (from 2.2 in the early 1980s to 1.4 in 2010), Portugal (from 3.0 in the early 1970s to 1.4 in 2010), Italy (from 2.4 in 1970 to 1.4 in 2009), and Poland (from 2.1 in 1990 to 1.4 in 2010). There was a marginal small decrease in fertility in the United States: from 2.2 births per woman in 1970 to 2.1 in 2009 (United Nations Population Division 2009).

<sup>21</sup>Fertility rates are significantly higher within the immigrant populations. An examination of national country measures shows that in the UK in 2010, the Total Fertility Rate (TFR) of UK-born mothers was 1.88 versus 2.45 for non-UK born mothers (Office for National Statistics-ONS, UK); in Sweden in 2010, the TFR for Swedish mothers was 1.8 compared to 2.3 for foreign mothers (Statistics Sweden); and in Switzerland in 2010, TRF measures were 1.4 and 1.9 for Swiss and foreign-born mothers, respectively (Swiss Statistical Office).

<sup>22</sup>In the American equation, the dummies for religious denomination are excluded to avoid multicollinearity with 'does not belong to the main (Evangelical-Protestant) religion'. The results are therefore not fully comparable.

## Additional file

**Additional file 1: Appendix.** Table S1, ESS-Europe: descriptive statistics, 2002-2010. Table S2, GSS-US descriptive statistics, 2002-2010.

### Competing interests

The IZA Journal of Migration is committed to the IZA Guiding Principles of Research Integrity. The authors declare that they have observed these principles.

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