National Aggregates and Individual Disaffiliation:

An International Study

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Abstract

Using a dataset of 15,000 subjects from 32 western countries, the current study examines individuals who were raised in a certain religion and at some stage of their lives left it. Currently, they define their religious affiliation as 'no religion'. A battery of explanatory variables (country-specific, personal attributes and marriage variables) was employed to test for determinants of this decision. It was found that the tendency of individuals to leave their religion is strongly correlated with the degree of religious diversity of their country and with their spouse's religious characteristics. Moreover, personal socio-demographic features seem to be less relevant.

Keywords: religion, national aggregates, disaffiliation.

1 Motivation

Religion and economics are inter-related via various channels. With religion viewed as a dependent variable, it was claimed that religious participation and beliefs are affected by economic development and political institutions (McCleary and Barro, 2006); by country religious pluralism and government restrictions on religious conversion (Barro and Hwang, 2007); and by socio-economic personal attributes, such as education (Brañas-Garza and Neuman, 2004; McCleary, 2006 and Barro and Hwang, 2007). In a study of 40 countries, Barro and Hwang (2007) did however not find significant effects of per-capita GDP, the presence of a state religion and the extent of religiosity on conversion rates.

With religion viewed as an independent variable, it was claimed that religion (like other cultural traits) matters to important economic phenomena such as educational attainments (Mulligan, 1999; Landes, 2000; Black et al., 2005; Fan, 2008); labor force

participation (Fernandez and Fogli, 2005a); occupation (Long and Ferrie, 2005); income (Solon, 1992; Mulligan, 1997); marriage and inter-faith marriage (Bisin at al., 2004); fertility (Neuman and Ziderman, 1986; Blau, 1992; Fernandez and Fogli, 2005a, 2005b; Neuman, 2007; Brañas-Garza and Neuman, 2007); economic growth (Mccleary, 2006); as well as attitudes which affect the labor market and other economic and social performance, such as attitudes of trust and risk (Dohmen et al., 2006), attitudes of cooperation (Cipriani et al., 2007), and work ethics, honesty and thrift (McCleary and Barro, 2006) and trust (Brañas et al. 2009). Guiso et al. (2003) provides a general overview of the effect of religiosity on economic attitudes.

Hence, we observe an endogenous process: on the one hand, some studies state that secularization might be due to economic reasons but, on parallel, another set of papers concludes that secularization (decreasing religious activity) might also be the origin of economic phenomena. Our study explores the effect of national aggregates on secularization.

The paper provides evidence about a relatively unexplored aspect of secularization: *disaffiliation (converting out).* We examine why individuals who were raised in a religion, left it at some stage in life and currently define their religious affiliation as 'no religion'.[2] We will focus on the role of national aggregates (per-capita GDP; state-religion; churchgoing and prayer averages; religious pluralism; and residence in a European country) on individual religious decision making. In order to arrive at net effects of national aggregates, personal attributes of the respondent, his family of origin and his spouse will be controlled for.

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[2] The terms 'converting out' and 'disaffiliation' will be used (interchangeably) for individuals who were raised in a religion and now define their denomination as 'no religion'. It is obviously an extreme act of secularization.

The literature on 'secularization' and disaffiliation is large and extensive.[3] It covers diverse aspects such as: (i) differentiation of society's major institutions (law, politics, economy, education, etc.) from religious influence; (ii) rationalization (Wilson, 1966; Martin, 1978); (iii) demystification of all spheres of life; and (iv) less adherence to religious acts such as attendance of religious services and prayer. See Tschannen (1991) for an inventory of the elements of classic theories of secularization.[4]

Sommerville (1998) sorted out the different aspects of secularization and divided them into two categories: those presented (i) in terms of processes (like decline, differentiation, disengagement, rationalization); or (ii) in terms of aspects of life or levels of analyses (structural, cultural, organizational, individual). We refer to 'secularization' as a decline in individual religious practice. More specifically, we focus on disaffiliation.

In order to identify the individuals who stepped out of their religious affiliation and to find out what are the factors that significantly affected this drastic move, a battery of explanatory variables was employed. The set included: (*i*) *country* specific variables: pluralism index; existence of state-religion; national average level of mass attendance and of prayer; and finally, per-capita GDP; (*ii*) *personal* attributes that include: childhood and parental religious background; socio-economic and demographic personal determinants; and beliefs; and (*iii*) *marriage* effects: marital status and spouse's religion (for married individuals).

The data used for the empirical analysis were drawn from the module on National Identity of the 1998 International Social Survey Program (ISSP): Religion II. The ISSP

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[3] Weber (1930), Bruce (1992), Chaves (1994), Yamane (1997), and Sommerville (1998) are some basic references.

[4] Williams and Lawler (2001) developed the Religious Behaviors Scale. It was constructed based on ten items related to religious commitment and was then decomposed into two sub-scales: The Church Involvement Subscale and the Personal Faith Subscale.

is an ongoing effort devoted to cross-country research on national attitudes. It includes questions on attitudes, beliefs and opinions on various issues, as well as numerous questions regarding the individual's socio-economic background, together with information on parents and spouses. 15,000 individuals were sampled all around the world.[5]

Most of these countries are predominantly Christian (Catholic, Protestant, Orthodox, and other Christian faiths); a small share of respondents grew up as Jews or as Moslems; and about 1% were raised in other no Christian religions (see Table 1 for details). The data cover the European and Australian continents as well North America.[6] The African continent is excluded and South America and Asia are represented by a small number of countries (Chile, Japan, Israel and the Philippines). The research is therefore pertaining to Europe, North-America and Australia, and a few other countries. In addition, the more homogenous European sample is analyzed separately and results for the larger sample are compared with the results for the European sample.

To conclude, this paper offers a new perspective of the growing body of literature on the phenomenon of secularization.

2 Dataset, variables and methodology

2.1. Sample and dataset

The International Social Survey Program is an ongoing effort devoted to cross-country research on national attitudes. It includes questions on attitudes, beliefs and opinions on

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[5] The sample includes: Australia, Austria, Bulgaria, Canada, Chile, Cyprus, Denmark, France, West Germany, East Germany, Great Britain, Hungary, Japan, Israel, Italy, Ireland, Latvia, New Zealand, Northern Ireland, Norway, Poland, Portugal, Russia, Sweden, Slovenia, Spain, Switzerland, The Czech Republic, The Netherlands, The Philippines, The Slovak Republic, and The United States. It appears that the samples of Australia, Cyprus and Israel do not include any respondent who disaffiliated.

[6] An interesting point relating to this is that historically, secularization finds its roots in the enlightenment movement of the 17th and 18th century in Europe and America, who were predominantly Christian.

various issues, as well as numerous questions regarding the individual's socio-economic background, together with information on parents and spouses.

The sample is composed of Christians: Catholics – 48.7%; Protestants – 23.7%; Orthodox – 7.2%; a small share of respondents are Jewish (4.3%) or Moslem (1.1%); about 1.8% have other Christian religions and about 1.2% have other religions (e.g. Sikh, Buddhist, Hindu, Shinto); and 11.3% identify themselves as having 'no religion'.

Regressions were estimated using pooled country data, under the assumption that the effects of the independent variables are not different in the various countries included in the sample. The pooling of the data led to a very large sample (sample sizes within each of the countries were too small to allow a separate analysis for each country). Country specific variables were used to identify and control for country effects.[7]

The analysis is replicated for a reduced and more compact set of the European countries.

2.2. Variables

The dependent variable was defined using information derived from two questions: "What was your religion when you were a child?" and "What is your current religion?" It relates to disaffiliation and takes the value of 1 for respondents who were raised in a religion and currently claim to have 'no religion' and 0 otherwise (were raised in a religion and currently have the same religion or a different religion. Those who were raised in 'no religion' were excluded from the analysis).

Several sets of variables were introduced in order to identify and explore the determinants of disaffiliation.

Country-specific variables

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[7] Another option was to use fixed-effects regression models. The basic results for the core variables did not change when fixed-effects were used.

First, in order to capture possible differences in disaffiliation in European countries versus other countries due to different cultures (Japan, Israel, The Philippines, Chile, New-Zealand, Australia, Canada and the United States) we define a dummy variable for respondents residing in European countries:

- European country dummy

Second, we focus on religious competition (pluralism) and the existence of a state-religion (see Chaves and Gorski, 2001):

- The *P index represents religious pluralism (diversity)* and is defined as *P=1-HHI*, where HHI is the Herfindahl-Hirschman index of concentration.[8] The larger *P* is, the more religiously diverse the country is said to be.

- The existence of a *state-religion.*[9]

Additionally, we add two variables which reflect country religious adherence:

- The country *average level of church (religious services) attendance* (on a scale of 1-to-6, ranging from not attending at all to attending at least once a week).[10]

- The country *average level of private prayer* (on a scale of 1-to-11, ranging from never to several times a day).

Finally, to control the country's level development (see Weber, 1930; Chaves and Cann, 1992) we add:

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[8] Defined as $\mathrm{HHI} = \sum_{i=1}^{n} s_i^2$, the sum of squares of the shares of the country's religious denominations. It follows that P ranges between 0 (if everyone belongs to the same religion) and (almost) 1 (if there are a large number of religions, each of which covers a negligible fraction of the population). See also Lieberson (1969) and Voas et al. (2002) who refer to the same diversity/pluralism index.

[9] Barro and McCleary (2005) provide a comprehensive country-by-country study on the adoption and abandonment of state-religions over time.

[10] The term 'church' is used as a generic term that relates to the relevant religious place of worship (e.g. also synagogue for Jews, mosque for Moslems, etc.). The religious rules of congregation vary between religions (e.g. many orthodox Jews congregate once or even twice a day while Christians congregate once a week).

- per-capita GDP.

Personal attributes

The ISSP-98 contains some basic socio-demographic questions for each responder:

- *Present age*: Obviously, the more relevant variable is the age of disaffiliation and not the current age. Unfortunately, respondents were not asked when they converted out.[11] We use 4 categories for age: under 31 (reference group); 31-to-45; 46-to-59; and 60 and above.

- *Education*: last school attended: elementary (reference category); high school; and academic education institution.

Interestingly the ISSP includes two questions about norms of behaviour:

- One is related to extra-marital sexual relations [the question's phrasing was: *For a married person to have sexual relations with someone other than her/his husband or wife is*: (1) always wrong; (2) almost always wrong; (3) wrong only sometimes; or (4) not wrong at all]. Those who chose the third or fourth options were defined as having a liberal view on this issue.

- The other question refers to homosexual relations [*Sexual relations between two adults of the same sex* is*:* same four options as above]. Those who chose the third or fourth options were defined as having a liberal view on that issue.

The basic idea is that individuals who are more liberal are more prone to convert-out and become non-religious. Additionally, churches condemn extra-marital and homosexual relations and therefore individuals who hold liberal views on these

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[11] Nevertheless, current age embodies cohort effects: Secularization was not common decades ago and has increased in recent years. Assuming that most individuals convert-out at their 20s or 30s, because young people are more revolutionary, it follows that older people (e.g. above the age of 60) belong to a cohort of a period when secularization was less common and therefore have a lower tendency to disaffiliate.

'unmoral' issues may feel 'rejected' by the church and consequently have a higher tendency to disaffiliate.

Finally, the most important feature of the ISSP-98 is the battery of individual questions regarding religious performance:

- *Religious denomination in which the subject was educated.*

- Using information regarding the religious affiliation of the father and mother, we defined the variable: *raised in a religious homogamous household*, that equals 1 if the father and mother had the same religion (when the respondent was a child).

- Information on exposure to church (religious) services during childhood, that includes 9 alternative levels,[12] was used to define the dummy variable: *intensive religious practice* = 1, for original values of: 7 (attended almost every week), 8 (every week), and 9 (several times a week).

The ISSP also includes a number of questions about beliefs in some basic religious doctrines:

- Belief in heaven.

- Belief in hell.

- Belief in miracles.

The question: "Do you believe in heaven/hell/miracles" had four alternative answers: (1) yes, definitely; (2) yes, probably; (3) no, probably not; and (4) no, definitely not. Those who chose option four were defined as non-believers. It is assumed that non-believers have a higher tendency to leave their religion.

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[12] The ISSP question is: "When you were 12 years old, how often did you attend religious services?" The options are: Never (1); once a year (2); one or two times a year (3); a few times a year (4); once a month (5); two or three times a month (6), almost every week (7); every week (8); several times a week (9).

Marriage effects

For this variable we have three key measures:

- Marital status (*married=1; 0 otherwise*).

- *Spouse has the same denomination as the respondent was raised in.*

- *Spouse has 'no religion'.*

2.3. Method

The dependent variable was a dichotomous variable that equals 1 if the respondent was raised in a religion and currently has 'no religion' and 0 otherwise. The independent variables were those variables described in the previous section.

We estimated Logit 'Converting-Out' regressions for women and men. Given that the European dummy variable had a significant coefficient, expressing differences in disaffiliation between European and non-European countries, we ran separated regressions for the European sub-sample.[13]

3 Findings

3.1. Descriptive statistics: Sample characteristics

Before proceeding to report the results, the characteristics of the samples used for the regression analysis are described. Table 1 presents means of the variables used for the econometric analysis. They are presented for the female and male samples and a distinction is also made between the larger sample and the European sub-sample.

The means are similar for the general sample and the European sub-sample. Gender differences are also small. Approximately 9% of the women and 14% of the men converted-out: they were raised within a religion and currently claim to have 'no religion'. The figures are slightly larger within the European countries (10.4% of the

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[13] The non-European sub-sample was too small for a separate regression.

women and 15.7% of the men). The somewhat lower percentage of women who converted-out is in line with theories and findings of other studies showing that women are generally more religious (Kelley, 1977; Roof, 1989; Sandomirsky and Wilson, 1990; Sherkat, 1991; Loveland, 2003; Brañas-Garza and Neuman, 2004, 2007).

Interestingly, Shy (2007), who processed data from the World Christian Encyclopedia (Barrett et al., 2001) and calculated the percentage of secular people (non-religious and atheists combined) in Europe in the year 2000, arrived at a similar percentage around 15% (Table 1, page 1130).

The majority of respondents were raised in Christian denominations[14]: About 56.1% of respondents were raised as Catholics, around 28.2% grew up as Protestants, and around 7.6% as Orthodox. About 1.2% were Moslem, 4.3% Jewish (0.1% in Europe) and 2.7% had other religions.

Focusing on those who converted-out, the distribution of their original denominations is the following: Catholic – 53.7%; Protestant – 39.9%; Orthodox – 2.9%; Jewish – 0.3%; Moslem - 0.3%; and 3% had other religions.

The countries are not very diverse in terms of existing religions: A pluralism index of 0.37 (0.33 in Europe) indicates limited diversity. Around one third of the countries have a state-religion. The average per-capita GDP in the sampled countries is 15-16 thousand US$.

An examination of the average levels of religious practice shows that despite rapid secularization, the populations are still adhering to both mass services and even more so to prayer habits. The mass attendance average is above 2.1 on a scale of 1-to-6. The average prayer level is above 5.6 on a scale of 1-to-11.

.... Insert Table 1 about here.................

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[14] Data reported on page 3 refers to current religion (not the one raised in).

Women seem to be more religious in terms of belief in the religious doctrines of life after death, heaven, hell and miracles. However, a considerable percentage of the two genders do not believe in these doctrines: about 32% (29% of the women and 36% of the men) do not believe in hell. Around 19% of the women and over 28% of the men do not believe in each of the other three doctrines. One can observe a kind of wishful believing: The percentage of non-believers in hell is much larger compared to non-believers in the three 'positive' doctrines. Brañas-Garza, García-Munoz and Neuman (forthcoming) find that afterlife beliefs have a crucial role in religious performance for both females and males.

An examination of childhood religious background shows that close to 90% of the participants grew up in households where the two parents belonged to the same denomination. Over 51% of respondents were exposed to intensive religious practice when they were aged 12 and attended church services on a regular basis (at least once a week).

Focusing on individuals currently married, we observe that over 80% have a spouse with the same religious denomination that the respondent was raised in, and around 7% have a spouse that declares having 'no religion'.

The socio-demographic characteristics of our sample are as follows: About a quarter of the sample are above the age of 60. Over 36% have an academic education (at least partial).

'Married' is still the most common marital status: about 87% of respondents are married. Over 35% have liberal views regarding homosexual relations, but only about 15% think that extramarital sexual relations are acceptable. Interestingly, women are more liberal when it comes to homosexual relations and have a less liberal attitude towards extramarital sex relations.

3.2. Regression results

Table 2 below presents Logit 'Converting-Out' regressions for women and men for both the whole sample and the European sub-sample. Recall that the dependent variable is dichotomous (taking the value 1 if the respondent was raised in a religion and currently has 'no religion' and 0 otherwise). The reported coefficients are the odd-ratios of the various variables. Table 3 summarizes the relevant regression results.

We have found a positive significant coefficient of the *'European residence'* dummy variable: European women have a higher tendency of 41% to convert out, compared to their non-European counterparts. The positive differential is even larger for European men (65%).

Our data indicates that there is a *clear and strong correlation between the religious pluralism of a country and the tendency of its population to convert-out and abandon any religious affiliation: More religiously diverse countries have much higher rates of disaffiliation*.

The effect of religious pluralism is much more pronounced in the European countries and for women, indicating differences between European countries and non-continental countries, as well as gender differences. We can therefore conclude that our findings do not support supply-side theories. Quite the contrary, we find clear evidence in favour of demand-side sociological approaches: A greater diversity does not stimulate greater religious participation but rather secularization.[15] Figure 1 (on the left) jointly plots the national means of converting-out and the pluralism index.

Figure 1 about here

The stronger effects for Europe indicate that there are differences between European and non-European countries. Thus, demand-side theories could be useful to explore religious trends in Europe but less so for the rest of the world. This conjecture is

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[15] The supply-side theory indicates that rreligious diversity would stimulate churches to produce religious services well adapted to the needs of religious consumers, thereby increasing 'consumption' (See Iannaccone, 1991; Fink and Stark 1988, 1992; and Fink and Iannaccone, 1993).

compatible with the US case, which has both the highest levels of religious pluralism and one of the highest rates of church attendance (e.g. Warner, 1993). Although the connection between our study and previous ones is not straightforward: while we study convert-out they explore church attendance.

Interestingly, the existence of a *state-religion* is never significant. Finally, national "religious capital", that is, living in a country with higher *national averages of church attendance* levels, has a negative effect on disaffiliation.

Surprisingly, the *national average of praying* affects conversion-out within the male sample only. Consumption motives (churches are places where people can socialize) and professional motives (churches serve as social networks – see Durkheim, 1995) are still relevant for subjects and therefore, they affect individuals' decisions of whether to convert-out or stay. Indeed, Figure 1 (on the right) shows a clear negative correlation between national church attendance and converting-out.

In contrast to Weberian ideas, we find that national *economic development* (captured by per-capita GDP) is uncorrelated with converting-out (the odds-ratios are equal to 1 and insignificant).

Regarding personal attributes, we see that the *religious denomination the respondent was raised in* (Catholic as the reference) plays an interesting role: all denominations are more prone to "keep" members than Catholics. Additionally, denomination effects are larger for males. Interestingly, individuals raised in the Jewish, Moslem (for males) and Orthodox denominations have the lowest tendency to convert-out (odds ratio <0.30). Subjects raised as Protestants (for males) also have lower prospects of disaffiliation.

Exposure to homogeneous and more intensive religious practice, currently, and more importantly, during childhood, leads to a lower tendency to convert-out and move to the 'no religion' sector: Respondents who grew up with parents who shared the same religious denomination are less prone to convert-out (odds ratios of about 0.6 for

women and 0.4 for men); experiencing intensive church attendance at the age of 12 further reduces the probability of men (but not women) to convert-out (odds ratio of about 0.8). Similar results were found for the European subsample.[16]

The literature reports mixed evidence regarding the effect of exposure to religiosity on secularization. The notion that childhood socialization factors can predict religion-switching is still open to debate.[17] Loveland (2003), who used the 1988 General Social Survey (GSS), found that joining a church while growing up acted to stabilize religious preferences, but greater levels of childhood religious socialization (measured by attendance of a religious school; Sunday school attendance; and saying grace before meals)[18] were not significant deterrents of religious switching (page 152). Sherkat (1991) reached similar conclusions regarding the attendance of Sunday Schools and other formal child religious training – they did not reduce the likelihood of religious switching. Bibby (2000) presented data supporting the positive effect of a heterogeneous household on secularization: the Canadian Census data for 1991, showed (for example) that while only six percent of children to parents who were both Christian had no religious affiliation, the share rose to 31% if the children were raised by parents with mixed Catholic-Jewish affiliations. Our data only support attendance effects for men but not for women.

.................Insert Table 2 about here........................

Personal socio-economic endowments have a minor effect on secularization. Current age (that represents cohort effects) is significant for those older than 46: older

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[16] Brañas-Garza and Neuman (2007) studied the effect of parental attendance (when the responders were 12 years old) on current fertility decisions in Italy and Spain. They found an interesting crossed effect: fathers' churchgoing is relevant for daughters but not for sons.

[17] Bisin and Verdier (2000) and Bisin et al. (2004) are example of economic approaches to cultural (parental) transmission.

[18] Sherkat and Wilson (1995) used the concept 'adaptive preferences' and claimed that socialization through childhood religious practice will create preferences upon which later religious choices will be made. It follows that more exposure to childhood religious socialization will decrease the likelihood of secularization later on in life.

respondents had a lower tendency to convert-out. Education has a negative effect for women only.[19]

Liberal beliefs are significantly correlated with the probability to convert-out: Liberal views over extramarital sex relations and homosexual relations increase the probability of converting-out and it's larger for women. Identical effects were found within the European subsample.

Similar effects are observed regarding the lack of beliefs in the religious doctrines of heaven and miracles. Most of the effects seem to be stronger for men.

There are strong *marriage effects, related to the spouse's religious affiliation*: Individuals who share the same denomination as their spouse's have much lower odds of conversion-out (odds ratios around 0.4), while those married to a spouse with 'no religion' have much higher odds of conversion-out (odd ratios for over 4 for women and over 6 for men)[20]. These results are in line with findings reported in studies on similar topics: Te Grotenhuis and Scheepers (2001), who used an event history analysis (based on retrospective data containing information on events that took place in the lives of the respondents since adolescence), found that in The Netherlands the most significant factor in an attempt to explain disaffiliation was having a partner who does not belong to a religious group. Respondents whose partners were non-members of the church were

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[19] Roof (1989), based on GSS 1988, found that religion switchers tended to be male and well educated. A closely related topic is the relationship between education and religious attendance. It appears that it fluctuates highly among countries: In the United States, church attendance rises with education (Iannaccone, 1998). Sacerdote and Glaeser (2001), who examined 69 countries using the General Social Survey (GSS) 1972-1998, reported that in England and France they found a positive relationship. However, in most countries there was no significant relationship between education and religious attendance, whereas in the former socialist countries the connection was generally strongly negative. Te Grotenhuis and Scheepers (2001) and Brañas-Garza and Neuman (2004) arrived at insignificant coefficients of schooling in mass participation equations for the Netherlands and Spain, respectively.

[20] What we find is a positive relationship between disaffiliation of the respondent and the affiliation of her/his spouse that has 'no religion'. We do not have information on the date of disaffiliation of the respondent (and his spouse if the spouse is also with 'no religion'), whether it was before or after marriage. It is therefore not possible to distinguish between cause and effect: Perhaps the subjects converted-out when single, and then, naturally, married someone with a 'no religion' affiliation. Regarding marriage effects see Lehrer (1998).

12 times more likely to become non-members themselves compared to respondents with a religiously affiliated partner. Voas (2003) found that in Britain, religious affiliation tends to be lost following marriage to someone from a different religion.

4   Concluding Remarks

Using ISSP-1998 data, this paper explored the determinants of religious disaffiliation, that is, determinants of individuals who were raised in a particular religion and currently define their religious affiliation as 'no religion'. Our Logit regressions employed a large array of explanatory variables: country specific variables, personal attributes and marriage characteristics. It was found that the tendency of individuals to leave their religion is:

i)   strongly correlated with the religious features of their country: pluralism and national church attendance;

ii)   strongly correlated with the spouse's religious characteristics;

iii)   highly correlated with beliefs and personal views;

iv)   but, only marginally correlated with personal socio-economic features.

To conclude, our paper largely supports the conjecture that national aggregates of religiosity may affect individual decision making: subjects living in secular and in religiously pluralistic countries are more prone to disaffiliate and therefore, they also increase the probability of other subjects to leave their religion.

Moreover the fact that a spouse with 'no religion' might accelerate the process of disaffiliation further intensifies the process. Given that the probability of finding a spouse with 'no religion' is larger in religiously pluralistic countries, means that the individual and national channels are inter-wined, both leading to an increase in disaffiliation.

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Table 1: Sample Characteristics, 1998

	All countries		Europe	
	Female	Male	Female	Male
DEPENDENT VARIABLE				
Converted-out (%)	9.2	13.5	10.4	15.7
INDEPENDENT VARIABLES				
COUNTRY VARIABLES				
European country (%)	79.6	78.0	-	-
Pluralism index (range of 0-1)	0.37 (0.25)	0.37 (0.25)	0.33 (0.24)	0.34 (0.24)
State-religion (%)	32.4	31.7	35.0	34.8
Country church attendance (levels 1-6)	2.16 (0.78)	2.14 (0.77)	2.11 (0.76)	2.08 (0.76)
Country prayer (levels 1-11)	5.60 (1.58)	5.56 (1.59)	5.41 (1.39)	5.34 (1.38)
Per capita GDP	15494.14 (10319.1)	15942.90 (10486.8)	15361.43 (10250.3)	15761.7 (10381.1)
PERSONAL ATTRIBUTES				
Religious denomination (raised in) Catholic (%)	56.9	55.1	61.4	59.4
Jewish (%)	4.3	4.3	0.1	0.2
Moslem (%)	0.9	1.4	0.6	1.0
Protestant (%)	27.8	28.6	27.4	28.6
Orthodox (%)	7.7	7.4	9.7	9.5
Other Christian (%)	1.3	1.6	0.6	0.9
Other non Christian (%)	1.1	1.6	0.2	0.4
Religiously homogamous household (%)	90.0	90.8	91.7	92.1
Intensive church attendance at 12 (%)	56.8	50.6	56.5	49.9
Age categories $\leq$ 30 (%)	18.0	12.0	17.6	11.8
31-45 (%)	35.8	32.6	35.3	32.5
46-59 (%)	25.4	27.9	25.3	27.5
$\geq$ 60 (%)	20.9	27.5	21.8	28.1
Last school attended Elementary (%)	25.1	24.4	27.5	26.0
High School (%)	39.7	39.5	38.6	39.1
Academic (%)	35.2	36.1	33.9	34.9
"Extramarital sex relations" - liberal view (%)	12.2	17.8	14.1	19.9
"Homosexual relations" - liberal view (%)	37.9	31.4	40.4	33.8
"Does not believe in" Heaven (%)	18.6	28.3	20.9	31.8
Hell (%)	28.7	35.6	31.9	39.7
Miracles (%)	19.9	28.3	21.4	30.7
MARRIAGE ATTRIBUTES				
Married (%)	85.6	89.2	83.9	88.1
Spouse has same religion as respondent was raised in (%)	79.4	81.9	79.5	81.6
Spouse has 'no religion' (%)	7.2	5.8	7.4	6.4
Sample Size	7895	7258	6287	5660

Standard deviations in parentheses

Table 2: Logit Regressions of Disaffiliation (Odds Ratios), 1998

	All countries		Europe	
	Female	Male	Female	Male
COUNTRY SPECIFIC VARIABLES				
a) Religious strictness				
Residence in a European country	**1.41** (0.013)	**1.65** (0.000)	-	-
Pluralism index	**3.49** (0.000)	**2.68** (0.000)	**5.99** (0.000)	**4.22** (0.000)
State-religion	0.86 (0.318)	0.96 (0.782)	1.00 (0.983)	1.09 (0.497)
b)Religious adherence				
Country aver. Mass	**0.39** (0.000)	**0.68** (0.005)	**0.45** (0.000)	**0.74** (0.029)
Country aver. pray	0.95 (0.405)	**0.88** (0.037)	0.91 (0.208)	0.90 (0.091)
c)GDP/1000	0.99 (0.477)	0.99 (0.333)	1.00 (0.955)	1.00 (0.907)
PERSONAL ATTRIBUTES				
a) Religious (raised in)				
Denomination Catholic	Ref.	Ref.	Ref.	Ref.
Jewish	**0.15** (0.010)	**0.08** (0.000)	-	1.95 (0.395)
moslem	0.48 (0.344)	**0.17** (0.006)	0.22 (0.144)	**0.11** (0.004)
Protestant	0.85 (0.154)	**0.52** (0.000)	**0.73** (0.016)	**0.45** (0.000)
Orthodox	**0.25** (0.000)	**0.23** (0.000)	**0.23** (0.000)	**0.22** (0.000)
Other Christian	0.62 (0.235)	0.57 (0.093)	0.93 (0.886)	0.71 (0.379)
Other nonChristian	0.97 (0.939)	0.81 (0.572)	1.51 (0.531)	1.01 (0.989)
Religiously homogamous household	**0.62** (0.000)	**0.44** (0.000)	**0.64** (0.001)	**0.39** (0.000)
Intensive church attendance at 12	0.99 (0.897)	**0.80** (0.020)	1.02 (0.861)	**0.76** (0.008)
b)Socio-demographic attributes				
Age categories ≤30	Ref.	Ref.	Ref.	Ref.
31-45	0.79 (0.063)	0.92 (0.551)	**0.75** (0.039)	0.90 (0.473)
46-59	**0.60** (0.000)	**0.68** (0.009)	**0.61** (0.001)	**0.71** (0.029)
≥60	**0.43** (0.000)	**0.50** (0.000)	**0.43** (0.000)	**0.52** (0.000)
Last school attended Elementary	Ref.	Ref.	Ref.	Ref.
High School	**0.67** (0.006)	0.94 (0.664)	**0.73** (0.034)	1.04 (0.740)
Academic	**0.76** (0.059)	1.03 (0.788)	0.75 (0.058)	1.07 (0.604)
c)Beliefs				
Liberal view over extra-marital sex	**1.69** (0.000)	**1.34** (0.004)	**1.67** (0.000)	**1.41** (0.001)
Liberal view over homosexual relations	**1.95** (0.000)	**1.67** (0.000)	**1.87** (0.000)	**1.64** (0.000)
Does not believe in Heaven	**2.79** (0.000)	**3.12** (0.000)	**2.86** (0.000)	**2.75** (0.000)
Does not believe in Hell	1.00 (0.984)	0.87 (0.423)	0.95 (0.642)	0.93 (0.662)
Does not believe in Miracles	**1.91** (0.000)	**2.41** (0.000)	**1.91** (0.000)	**2.45** (0.000)
MARRIAGE EFFECTS				
Married	**0.60**(0.000)	**0.74**(0.017)	**0.59** (0.000)	0.78 (0.070)
Spouse has same religion as respondent was raised in	**0.39** (0.000)	**0.36** (0.000)	**0.41** (0.000)	**0.37** (0.000)
Spouse has 'no religion'	**4.54** (0.000)	**5.70** (0.000)	**4.51** (0.000)	**5.69** (0.000)
SAMPLE SIZE	7895	7258	6287	5660
Log-likelihood	-1629.58	-1916.16	-1426.48	-1669.72

p-values in parenthesis

Table 3: Summary of Regression Results: Effects of Explanatory Variables on the Probability to Convert-Out

(+) effects	(-) effects
1) Country effects	
Residence in a European country	*National churchgoing*
Pluralism	
2) Personal attributes	
Liberal views	*Religious denominations*
	Homogamous parental households
Religious disbeliefs	*Church attendance at 12 (males)*
	Age>46
	Education (females)
3) Marriage effects	
Spouse has 'no religion'	*Married*
	Spouse same religion

Figure 1: Converting-Out as a Function of Pluralism & Church Attendance
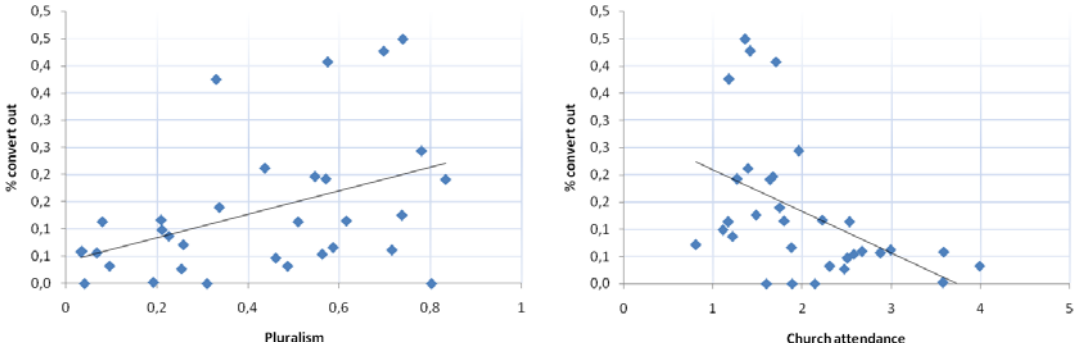
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