Education and Religious Commitment from a Cross-national Perspective: Field of Education and National Curriculum[1]

Mălina Voicu[2] – Adrian-Nicolae Dan[3]
Faculty of Business and Administration, University of Bucharest; Research Institute for Quality of Life, Romanian Academy, Romania
Faculty of Sociology and Social Work, University of Bucharest, Romania

Education and Religious Commitment from a Cross-national Perspective: Field of Education and National Curriculum. This paper focuses on the connection between a field of education and national curricula in secondary education and individual religious commitment. This article builds on the idea that formal education is not only meant to transmit knowledge but also to create competencies that involve a combination of knowledge, skills, and social values. Moreover, institutional factors related to an educational system may shape religious commitment by providing opportunities and constrains promoted by a national curriculum. While the competencies approach sheds light on the connection between individual education and religiosity, the contextual approach helps in understanding the relationship between a national curriculum in secondary education and individual religiosity. This paper employs multilevel regression models and tests the research hypotheses using data from the European Social Survey (ESS), rounds 2, 3, and 4, and Eurydice 2013/2014. The results show that the field of education and the percentage of mathematics and sciences studied in secondary education should be taken into consideration when analyzing the connection between education and individual religious commitment.

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Introduction

The standard assumption regarding the effect of education on religious commitment is that the first erodes the second (Johnson 1997). This assumption is well theoretically documented by secularization theory and has been constantly supported by empirical data. However, recent research proved that this relationship is more complex and cannot be simply reduced to the mechanical association that higher levels of education coincide with the gradual erosion of religious beliefs and practices (Johnson 1997; Sherkat 1998); additional factors, such as national context, should also be considered (Schwadel 2015).

The existing literature pays attention mainly to one's level of education, investigating how an individual's progress through an educational system leads

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[2] Correspondence: Mălina Voicu Faculty of Business and Administration, University of Bucharest; Research Institute for Quality of Life, Romanian Academy, Bdul Regina Elisabeta 3, Bucharest, Romania; E-mail: malina.voicu@unibuc.ro
[3] Corresponding author: Adrian-Nicolae Dan, Faculty of Sociology and Social Work, University of Bucharest, Bdul Schitu Măgureanu 9, Bucharest, Romania; E-mail: adrian.dan@sas.unibuc.ro

to the erosion of religious beliefs and practices. This current paper considers, in addition to time spent in school, the field of education at the micro level and the national curricula at the country level as factors related to religious commitment, questioning whether the level of education alone can explain how education may influence religious commitment.

This paper analyses the nexus between education and religious commitment from the perspective of the competencies and the educational context approach. The purpose of education is to create competencies and to enable individuals to use them, namely, to create individual skills and to provide opportunities to use them (Otto – Ziegler 2006). While competencies involve a combination of knowledge, skills, attitudes, and values (Halasz – Michel 2011), educational context refers, in addition, to institutions and opportunity structure providing a societal framework for using the competencies (Andresen et al. 2010). Exposure to formal education brings knowledge, skills, and values, shaped by the fields of study (Stubager 2008; van der Werfhorts – de Graaf 2004; van der Werfhorst – Kraykaamp 2001), while the ability to make use of them depends on several contextual variables, such as educational institutions, national culture (Andrews 2010), and the political system (Sacerdote – Glaeser 2001). Consequently, one should look behind the simple effect of time spent in school when analyzing the complex relationship between education and individual religiosity and consider the skills and attitudes instilled by national curriculum. In addition, the current analysis focuses on educational institutions as core part of the capabilities provided by the national context.

The opposite causality may be considered when studying the connection between a field of education and religious commitment, with religious commitment being an important individual factor in selecting a field of education. Without denying this line of argumentation, this paper focuses on the connection between religious commitment and a field of education on the one hand and a country's educational curricula on the other, building a theoretical explanation that emphasizes the contribution of education in shaping religious beliefs and behaviors.

Combining survey data provided by the European Social Survey (ESS), rounds 2 (2004), 3 (2006), and 4 (2008), with data about national curriculum in secondary education, this paper shows that field of education is highly significant for both public and private religious practice; those trained in technical fields, the natural sciences, and mathematics are less engaged in religious behaviors than those trained in the social sciences, humanities, and economics. The empirical data point to the connection between national curricula in secondary education and religious practices, which are particularly lower in countries giving priority to mathematics and the natural sciences.

This paper consists of four parts. The first summarizes the theories related to the effect of education on religion and states the research hypotheses. The second part introduces the dataset, variables, and methods employed for testing the hypotheses. The third part presents the results of the empirical data analysis, and the final part discusses the implications of the current findings and makes several concluding remarks.

Theoretical framework

Answering two basic questions, what to teach in school and with what purpose, is crucial for understanding the complex relationship between religious commitment and education (Lozano et al. 2012); the answers bring into discussion the aims and means of education, and their articulation. Education should build capabilities, namely the opportunities and limitations provided by an institutional context (Sen 1999) and resides in the opportunity structure provided by every society that enable individuals to use their competencies in a fruitful way (Andresen et al. 2010). Educational institutions, labor market, political culture or political system built together the opportunity structure enabling the translation of individual competencies into 'successful life' (Lozano et al. 2012).

Competencies reside in a combination of knowledge, skills, attitudes, and values developed by a person through involvement with educational practices (Halasz – Michel 2011; Hutmacher 1997). During formal education, individuals acquire a set of key competencies, meant to "open the door to other competencies with more specific applications" (Hutmacher 1997: 50), and a set of specific competencies related to the field of education with which they are involved. Educational context refers to societal institutions and the way they shape individual values and beliefs (Sen 1999). Curriculum can boost or impede individual achievements, the time spent in studying mathematics in school is crucial for school achievement of a very gifted student in mathematics.

Value orientations are core elements of capabilities and are an intrinsic part of education, being embedded in the educational institutions (Voicu 2013), political culture and political system (Inglehart 1990). Perceptions, values, and knowledge are reflected in an educational curriculum (Orstein – Hunkins 2018), that is, the "overall rationale for any educational program" (Kelly 2004: 4). Stubager (2008) identified three models that explain how formal education impacts values: psychodynamic, cognitive, and socialization.

The *psychodynamic model* considers psychological variables to be moderators between education and values, which can boost or hinder religious commitment. For instance, education can cultivate enhanced feelings of security that, in turn, lowers the level of religiosity (Norris – Inglehart 2004). The second model builds on the *cognitive component* of education, pointing to two

mediators: knowledge and cognitive sophistication. Depending on the content of scientific knowledge, education can erode religious commitment or have the opposite effect. A curriculum rich in religious study and theology can increases the level of religious beliefs and practices among students, while the natural sciences can diminish individual religiosity. On the other hand, cognitive sophistication gained in education can help in combining different points of view—scientific and religious—into a coherent framework. The *socialization model* states that education instills values acquired during formative years that tends to remain unchanged across life cycles. The content of education with respect to value orientation is influenced by cultural context (Andrews 2010) and political system (Sacerdote – Glaeser 2001).

These three models address different components of competencies built by formal education, such as knowledge, skills, and values, and can be employed to explain how exposure to different educational systems or enrollment in various educational programs/fields of study can lead to different outcomes with respect to religion.

Field of education and religious commitment

Religious commitment is multidimensional, and different mechanisms stand for explaining the nexus between sociodemographic factors and each dimension (Azzi – Ehrenberg 1975). Religious commitment can be tapped by three dimensions: beliefs (self-rated religiosity, importance of religion/God), practice (church attendance and private praying), and affiliation (identification with a religion) (Voas 2015). Religious affiliation is a matter of identity and is embedded with dimensions of personal, ethnic, or national identity, being a fluid boundary between "us" and "them" (Barker 2006), and it goes beyond the scope of the current analysis.

The first dimension deals with believing in the supernatural or, in a broader sense, in a "system of meanings which covers the whole life" (Woodhead 2011: 124). Thus, religious beliefs help individuals impose cognitive order in their lives, and they are eroded by competition with alternative systems that serve the same purpose (Berger 1967). Education provides alternative tools for understanding the world and imposes cognitive order by providing individuals with scientific knowledge and tools for rational thinking that compete with religious beliefs.

Religious practice depends not only on how individuals understand the world but also on the social bonds among those belonging to a religious group (Woodhead 2011). Religious rituals keep people together and rely on the in-group social ties and emotional bonds that exist among them. As religious beliefs do not go well with scientific knowledge, a religious practice requires good social and emotional skills to build and maintain social bonds.

The relationship between a field of education and the dimensions of religious commitment is shaped by different mechanisms, as socio-humanistic or technical studies instills different competencies in individuals (Güveli et al. 2007; van de Werfhorst – de Graaf 2004). Socio-humanistic education teaches students how to deal with people in their jobs by instilling socio-psychological knowledge and social skills (van de Werfhorst – Kraaykamp 2001). This is the case for teachers, psychologists, medical doctors, nurses, social workers, or managers who interact with people and need good communication skills. Because they are trained to understand other people and their problems, they can be more tolerant (Güveli et al. 2007; van de Werfhorst – de Graaf 2004). This constellation of knowledge, skills, and values helps them develop broader social networks and get involved in civic associations, including church associations (van de Werfhorst – Kraaykamp 2001). These are essential ingredients of religious involvement; consequently, one should expect that education in socio-humanistic fields is positively associated with religious practice requiring social skills, such as attending church.

Those trained in technical subjects learn mathematics and knowledge of the industrial production process, and they develop rational thinking skills (van de Werfhorst – Kraaykamp 2001). Because social interaction is not at the core of their job, they do not have the same strong social and communication skills as those with socio-humanistic education (Güveli et al. 2007) and they do not have the same level of interpersonal trust (Borgonovi – Burns 2015). Those with technical education usually have a secure position in the labor market (van de Werfhorst – Kraaykamp 2001), which makes them less exposed to economic and existential insecurity and leads to lower levels of religious beliefs and values (Immerzeel – van Tubergen 2011; Norris – Inglehart 2004). The constellation of skills acquired by those with technical education is likely to erode religious commitment, as rational thinking undermines religious beliefs, and narrow social and communication skills undermine church attendance.

Educational context and individual religious commitment

Although individual competencies can explain how a field of education impacts religious commitment, the influence of educational institutions on religiosity goes beyond individual competencies. Educational context reflects the core values of a national educational system, its goals and ultimate purpose of education (Lozano et al. 2012). Thus, no matter an individual's field of education, the national institutional framework places an imprint on his or her beliefs, values, and behavior, providing the context to translate individual knowledge into actual competencies. Curriculum as the 'course of learning' states what should be taught, how it should be taught, and the expected outcomes (van den Akker 2003). In other words, a curriculum expresses the norms

and values of those who designed it, the tools used in the learning process, and the aims of education (Orstein – Hunkins 2018). A national curriculum can provide a hint regarding how capabilities are built in a country.

Due to the process of massification in education, primary education curricula do not differ significantly worldwide, with the same subjects being taught in similar ways worldwide (Benavot et al. 1991), but there are many cross-national variations in the curriculum for secondary education rooted in local history and cultural contexts (Halasz – Michel 2011). Although each secondary education curriculum has at least two key elements, namely, scriptural thought (writing) and rational thought (Hutmacher 1997), the mix between them differs from one national curriculum to another, being the outcome of social activity (Orstein – Hunkins 2018). The national context reflects upon the capabilities of each education system, affecting the goals and means of education and the roles and interconnections among actors involved in education (e.g., students, teachers, family, schools, media, and churches) and is translated into the national curriculum. For instance, in highly religious countries, the national curriculum for secondary education is built on the grounds of pious values, and it promotes norms, principles, and actions fitting with religious beliefs and values. This translates into a curriculum that encourages individual competencies that do not contradict religious teachings.

Although a similar process of massification is expected for secondary education, empirical studies have proved that secondary education curricula differ significantly among countries. Countries cluster depending on the region (Benavot 2006) and political and educational history into four types of educational systems: classical curricula; humanist and arts curricula; mathematics and science curricula; and comprehensive curricula (Kamens et al. 1996). While the first two curricula place a strong emphasis on scriptural thinking and aim at developing competencies related to reading, writing, and general communication, the third system gives priority to mathematics and science subjects. The last system is a combination of the other categories, trying to combine scriptural and rational thought in a balanced way.

Thus, broadly speaking, one can oppose educational systems aiming to build reading and writing competencies in secondary education to those focused on creating rational competencies. The first ones are associated with psychological variables, such as personal skills and values, which can be considered mediators between education and religiosity. Reading and writing are related to empathy, as a psychological trait, because they help individuals put themselves "in other peoples' shoes" (Borgonovi – Burns 2015: 33). By reading and writing, students practice their communication skills and develop interpersonal trust (Borgonovi – Burns 2015). This combination of psychological traits, social skills, and interpersonal trust helps individuals develop and maintain

broader social networks that increase religious participation, namely, engagement in religious organizations and church attendance (Sacerdote – Glaeser 2001; Schwadel 2011). Therefore, one should expect a positive association between church attendance and curricula emphasizing reading and writing competencies in secondary education.

Curricula in secondary education that stress mathematics and science lead to the development of specific competencies related to mathematics and scientific knowledge. Mathematics and the natural sciences bring such knowledge into the educational process, which erodes religious beliefs because their logic contradicts that of religious teachings (Johnson 1997; Schwadel 2011). Thus, exposure to and acquisition of scientific knowledge reduces religious commitment. Developing cognitive skills associated with mathematics and the natural sciences, such as finding general principles and turning them into abstract generalizable statements and rejecting contradictory statements (Swadener – Soedjadi 1988), leads to erosion of religious beliefs because religious knowledge contradicts scientific knowledge and cannot be generalizable in all circumstances. Also, mathematics, chemistry, and physics instill in students values such as rationalism, objectivism, control, and openness (Dede 2006), all hindering rather than boosting religiosity. Therefore, one should expect a negative association between an individual's religious beliefs and practices and curricula emphasizing mathematics and sciences.

Hypotheses

Summing up the theoretical considerations exposed in this section, we can assume that learning socio-humanistic subjects develops empathy, trust and cooperation rising the likelihood to belong to religious organizations and to attend church more often due to the rich social network that the person has. Studying sciences and technical subjects instills in students rationalism, objectivism and critical thinking, making them more sensitive to the logic of science than to religious thinking. While socio-humanistic education increases the likelihood of religious practice, the technical subjects make students less open to religious beliefs and, consequently to the religious practice, too. Moreover, the national educational curriculum emphasizing scriptural competencies provides enhanced opportunities to develop social skills and social capital, leading to higher religious practice, while the curriculum rich in rational competencies develops rational thinking, reducing the religious commitment among students.

Based on the theoretical approaches above, the following hypotheses were formulated:

- (H1) Socio-humanistic education is positively associated with religious practice.

- (H2) Technical education is negatively associated with religious beliefs and practices.
- (H3) National curricula emphasizing reading and writing competencies in secondary education are positively associated with religious practices.
- (H4) National curricula emphasizing rational competencies (e.g., mathematics, and natural sciences) in secondary education are negatively associated with religious beliefs and practices.

Data, measurement, and methods

Data and methods

This paper uses data from the ESS, rounds 2, 3, and 4 carried out in 2004, 2006, and 2008. The questionnaire used provides information about religiosity and religious practices, as well as about education level and field of education; it includes other relevant control variables, such as religious affiliation and sociodemographic variables. The choice of survey and survey years deals with the availability of the variables regarding religiosity together with the ones taping field of education in a cross-sectional comparative dataset. Data about a country's level of human development in 2003, 2005, and 2007 were retrieved from the Human Development Reports (UNDP 2005, 2007, 2009).

Data regarding the national educational system in secondary education were gathered from Eurydice 2013/2014 (p. 11). The report provides information regarding the percentage of recommended minimum instruction time allocated to reading, writing, literature, mathematics, and science as compulsory subjects in the entire cycle of secondary education. Data about the national workload for students, according to national and regional regulations, point to the annual instruction time in educational hours of 60 minutes, excluding breaks between classes, time for homework, individual tutoring, and days spent outside school (Eurydice, 2013/2014). Information is available only for the EU and associated countries; the Netherlands and the United Kingdom have compulsory subjects with flexible timetables, and a general pattern cannot be inferred from the existing data. Thus, due to missing data for non-EU countries and the flexibility of timetables in some countries, this current analysis is based on only 25 countries and 60 country-years. The list of countries and samples used is provided in Table 1.

Table 1: **Sample size and average values of the dependent variables by country**

Country	2004	2006	2008	Sample size	Self rated religiosity	Church attendance
Austria	X	X		4661	5.09	2.77
Belgium	X	X	X	5336	4.83	2.07
Bulgaria		X	X	3630	4.28	2.61
Cyprus		X	X	2210	6.79	3.66
Czech Republic	X		X	5044	2.57	1.87
Germany	X	X	X	8537	3.91	2.23
Denmark	X	X	X	4602	4.23	2.16
Estonia	X	X	X	5167	3.60	2.18
Spain	X	X	X	6115	4.51	2.54
Finland	X	X	X	6113	5.28	2.30
France	X	X	X	5865	3.69	2.01
Greece	X		X	4478	6.83	3.51
Hungary	X	X	X	1484	6.14	3.43
Croatia			X	4560	4.35	2.30
Ireland	X	X	X	5850	5.69	3.95
Iceland	X			579	6.06	2.15
Italy	X			1529	6.04	3.33
Luxembourg	X			1635	4.34	2.56
Norway	X	X	X	5059	3.85	2.14
Poland	X	X	X	5056	6.47	4.21
Portugal	X	X	X	6641	5.71	3.20
Sweden	X	X	X	5705	3.51	2.03
Slovenia	X	X	X	4204	4.75	2.83
Slovakia	X	X	X	5088	5.93	3.26
Turkey	X		X	4272	7.06	3.36
Total	22	18	20	113 420	5.02	2.75

Dependent variables

The analysis used two dependent variables, each capturing a different dimension of an individual's religious orientation. The first variable tapped self-rating of religiosity, that is not a direct measure of religious beliefs, but a proxy of how close the person considers to be to religion, and was measured as individual answers to the question, "Regardless of whether you belong to a

particular religion, how religious would you say you are?" The answers ranged on a scale from 0 to 10, where 0 meant 'no religious at all' and 10 meant 'very religious.' The second dependent variable measured church attendance on a 7-point scale, ranging from 1 – 'every day' to 7 – 'never', the scale being recoded in the reverse order. While the first variable is a subjective measure of religiosity, the second is an objective measure, according to the typology proposed by Tížik (2023).

Independent variables – individual level

Several variables measure field of education, being computed as dummy variables by recoding the answers to the questions "In which one of these fields or subjects is your highest qualification?". The variable does not distinguish between secondary and tertiary education. The question was asked only for the respondents with secondary and tertiary education, as primary education gives only basic training. A dummy variable indicated whether the respondents achieved a formal qualification in a socio-humanist field of education, such as fine/applied arts, humanities, teacher training, education, medical/health services, nursing, social studies, administration, media, culture, or personal-care service. The second dummy variable showed whether the respondent had a formal qualification in a technical field of education, such as natural sciences, engineering, agriculture, forestry, science, mathematics, computing, transport, or telecommunications. General education, as defined in the questionnaire "general/no specific field of education" was the reference category, refers to the highest level of education attained by the respondent and encompasses 49% of those having secondary and tertiary education.

The highest level of education achieved by individuals was measured by the answers to the question, "What is the highest level of education you have achieved?" The responses were coded into five educational categories according to the International Standard Classification of Education (ISCED). This current analysis made use of four dummy variables, each standing for one level of education ranging from lower secondary to tertiary education, while 'less than lower secondary' was left out as a reference category. The reference category 'less than lower secondary' encompasses 16% of the sample.

At the individual level, age plays an important role, with older people being more religious than younger ones (Argue et al. 1999; Gautier 1997). Gender has been listed among the associates of religiosity, and women display a higher level of religious participation (Nelsen 1981). Also, it has been documented that one's position in the labor market (De Vaus – McAllister 1987) affects religious beliefs and practices, with people active in the labor market being less religious. Several other dummy variables provided information about the effects of the relevant sociodemographic factors. One dummy variable stands for

the effect of gender (1 for female respondents) and another for employment (1 for full-time or part-time employees). The age of the respondents was measured in years.

Independent variables – country level

Two variables captured the effects of national educational curricula. Both were computed based on the data provided by the Eurydice report, one of which indicated the percentage of writing, reading, and literature in secondary education and pointed to a national curriculum oriented toward humanistic and classical studies, while the second variable indicated the time spent on mathematics and natural sciences in secondary education. Eurydice report presents the number of hours dedicated yearly to writing, reading and literature, as well as those dedicated to mathematics and natural sciences. The share of language and literature in secondary education was computed by the authors based on the average number of hours dedicated to the respective subjects during the entire secondary education. Same computation method was employed for mathematics and sciences.

The data used provided information regarding the national curriculum for the year 2012/2013, and we assumed these results can stand for the general orientation of the national educational curricula; this is because longitudinal studies have proved that educational curricula are stable over time, rooted in the long-term history of the educational system, with no major changes being reported over significant periods (Kamens et al. 1996).

Table 2: **Descriptive statistics for dependent and independent variables**

Variable	Min	Max	Mean	Std. dev
Individual level				
Self-rated religiosity	0	10	4.8	3.0
Church attendance	1	7	2.7	1.6
Humanistic education	0	1	0.25	
Technical education	0	1	0.26	
Lower secondary education	0	1	0.19	
Upper secondary education	0	1	0.41	
Post-secondary education	0	1	0.02	
Tertiary education	0	1	0.22	
Age	15	105	47	18
Gender (female=1)	0	1	0.53	
Employed	0	1	0.51	
Country level				
Language in curriculum	9	26	15	4
Mathematics and sciences in curriculum	9	35	24	6
Human Development Index	0.784	0.967	0.92	0.05

Studies have documented the effects of some macro-level variables on religiosity. Secularization theory points out the association between socioeconomic development and level of religiosity, as proved by empirical studies documenting a negative association between the two (Halman – Draulans 2004; Norris – Inglehart 2004). The models included one additional control variable, the Human Development Index, which stands for the effect of a country's socioeconomic development on religious orientation. Descriptive statistics for the dependent and independent variables are available in Table 2.

Methods

Because the research hypotheses refer to the effect of individual- and country-level characteristics on an individual's religiosity and religious practice, this research employed three-level multilevel regression models, with individuals nested within country-years within countries, employing random slopes for the year of data collection (Fairbrother 2014; Schmidt-Catran – Fairbrother 2016).

The multilevel models were estimated in *STATA 14* using a *mixed* command. The analyses employed three sets of models carried out for two dependent variables: self-rated religiosity, which stands for religious beliefs, and church attendance (tapping religious practice). For each dependent variable, four regression models were run. The first model was an empty model without explanatory variables, which indicated the amount of variance due to individual characteristics and the variance existing among country-years and among at the country level. The second model included the variables measuring the level of education and other individual-level control variables, while the third model added variables measuring the field of education. The last model tested the cumulative effects of individual- and country-independent variables. The list-wise deletion of missing values was used for all models.

Results

The results of the empty model show a significant variance of the dependent variables among countries and country-years, providing strong reasons for using three-level hierarchical regression models for testing the research hypotheses. According to the empty model (results available on request), there was significant intercountry variance for all dependent variables. The interclass correlation coefficient indicates that 15% of the variance was among countries and 16% among country-years if self-rated religiosity occurred, and 18% among countries and country-years for church attendance.

Table 3: **Multilevel linear regression models: dependent variables Self rated religiosity and church attendance**

	Self-rated religiosity						**Church attendance**					
	Model 1		**Model 2**		**Model 3**		**Model 4**		**Model 5**		**Model 6**	
Constant	4.014	***	3.896	***	15.772	**	2.305	***	2.306	***	12.761	***
Individual level												
Field of education (ref. general education)												
Humanistic education			0.115	***	0.115	***			0.081	***	0.081	***
Technical education			-0.093	***	-0.093	***			-0.032	**	-0.032	***
Level of education (ref. less than lower secondary)												
Lower secondary education	-0.389	***	-0.392	***	-0.392	***	-0.181	***	-0.239	***	-0.239	***
Upper secondary education	-0.646	***	-0.606	***	-0.606	***	-0.257	***	-0.290	***	-0.290	***
Post-secondary education	-0.553	***	-0.531	***	-0.531	***	-0.262	***	-0.309	***	-0.308	***
Tertiary education	-0.651	***	-0.649	***	-0.648	***	-0.250	***	-0.305	***	-0.304	***
Age	0.026	***	0.026	***	0.026	***	0.012	***	0.012	***	0.012	***
Gender (ref. male)	0.911	***	0.843	***	0.843	***	0.262	***	0.228	***	0.228	***
Employed (ref. outside labor market)	-0.139	***	-0.124	***	-0.124	***	-0.073	***	-0.066	***	-0.066	***
Country-year level												
Year	-0.051	+	-0.058	*	-0.055	+	-0.018		-0.027	+	-0.026	+
Country level												
Mathematics& sciences					-0.101	**					-0.048	*
Language					-0.261						-0.438	*
Language^2					0.010						0.013	*
HDI					-8.480	+					-6.193	**
Variance components												
Year	0.011		0.011		0.011		0.004		0.003		0.002	
Country	1.508		1.368		0.956		0.473		0.432		0.246	
Country year	0.005		0.023		0.007		0.002		0.006		0.003	
Individual	6.923		6.930		6.930		1.879		1.810		1.810	
-2 Log Likelihood	-265632		-232008		-231999		-193708		-167316		-167305	

Note: *** p <.001; ** p<.01; * p<.05; + p<.10

Self rated religiosity Empty model ICC country=0.15; ICC country_years=0.16; -2 Log Likelihood = -273255; BIC= 546557; Npersons = 97 154; Ncountry-years = 60; Ncountries = 25; Church attendance Empty model ICC country=0.18; ICC country_years=0.18; -2 Log Likelihood = -198830; BIC=397708; Npersons = 97 453; Ncountry-years = 60; Ncountries= 25

The results of the multilevel regression models are shown in Table 3. For each dependent variable, three models were estimated, including the empty one. The first included variables tapping the highest educational level achieved by respondents, controlling for the other relevant independent variables. The second set of models added the variables tapping individual the field of education, while the third included country and country-years variables testing for the combined effect of individual- and country-level variables. For both dependent variables, the -2 log-likelihood had the lowest value in the third model, indicating a better fit of the data when controlling for country and country-years. It should be noted that including the field of education in the regression model led to an important reduction of -2 log-likelihood for both dependent variables, indicating that the field of education rendered an improvement in the fit of the models, as compared with the models controlling only for the level of education.

The first hypothesis assumes a positive relationship between socio-humanistic education and church attendance. The empirical results support this hypothesis, with the regression coefficient being positive and highly significant across all the models, illustrating that socio-humanistic education is positively associated with an individual's religious commitment.

The research results provide support for the second research hypothesis; across all models, technical education was negatively associated with both religious beliefs and church attendance. The effect of an individual's level of education on self-rated religiosity and church attendance is highly significant and negative, as expected, based on the results of previous research. However, as indicated by the regression coefficients of the dummy variables tapping the individual level of education, the connection between education and religious practices and beliefs is not uniform across educational levels, and religiosity does not decrease at the same pace as one moves from one educational level to another.

The data in Table 1 indicate very high variability among European countries regarding religious beliefs and church attendance. The Czech Republic, Estonia, Sweden, and France displayed very low levels on both dimensions, with most respondents declaring as non-religious persons. Turkey, Poland, Cyprus, and Greece, where most of the population declares to be highly religious and have a very high level of religious observance, were at the opposite end.

Figure 1: **Religiosity by percentage of mathematics and sciences in national curriculum**

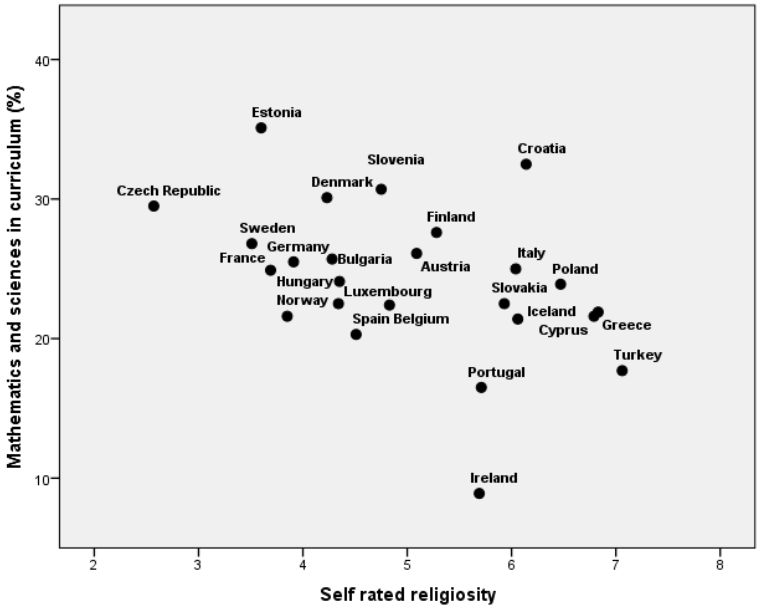


Figure 2: **Religiosity by percentage of literature and language in national curriculum**

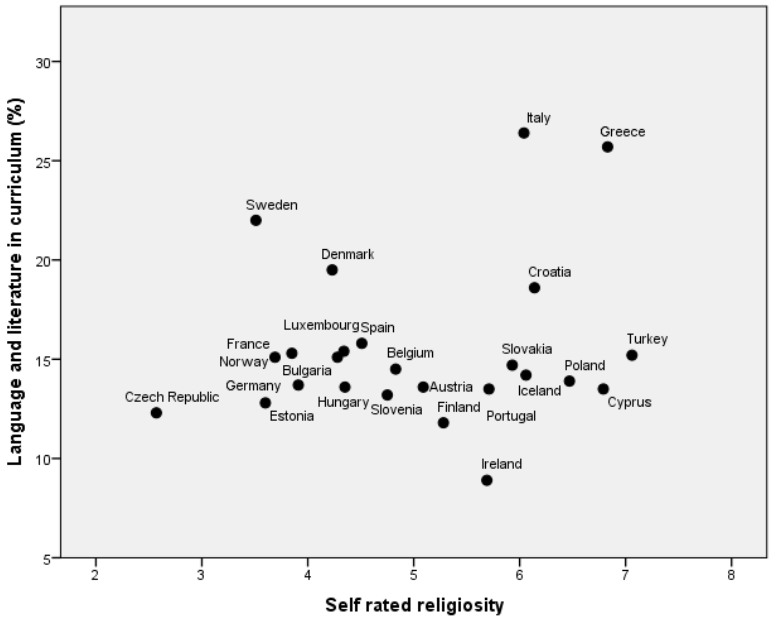


Figure 3: **Religious service attendance by percentage of mathematics and sciences in national curriculum**

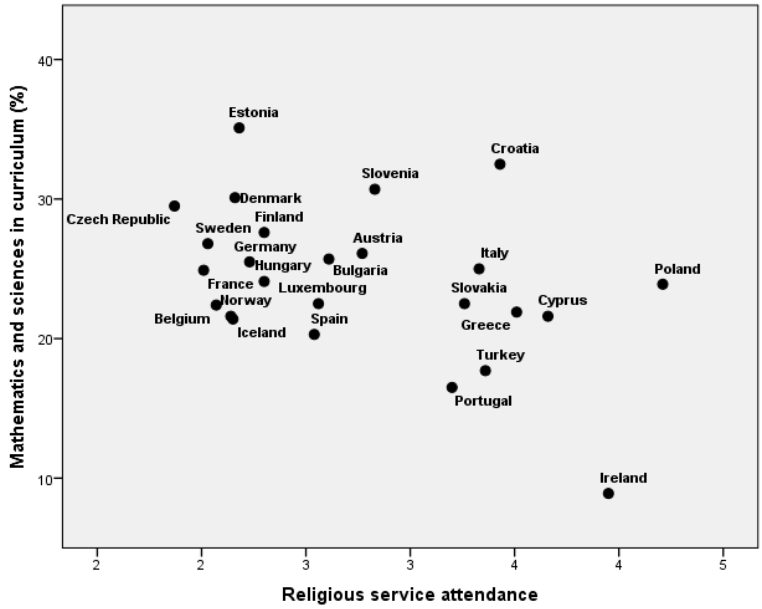
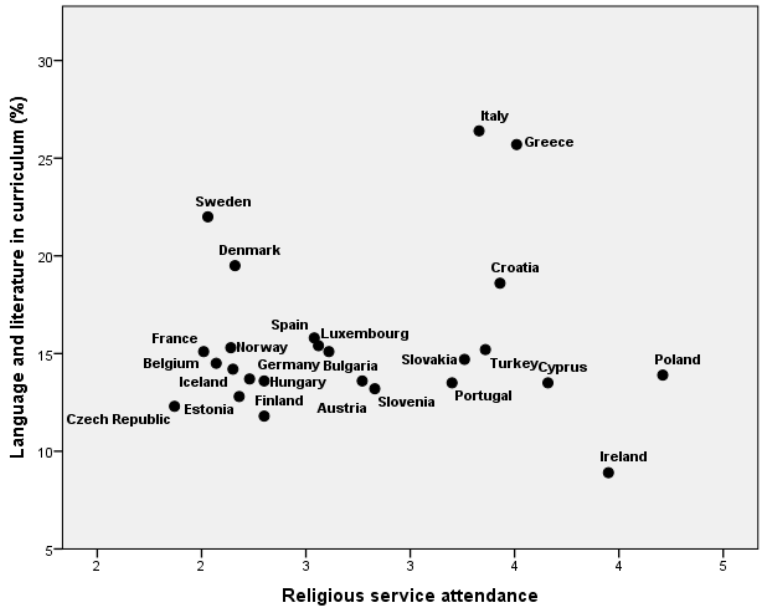


Figure 4: **Religious service attendance by percentage of literature and language in national curriculum**



The scatterplots displaying the bivariate relations between national curricula and the two indicators of religious commitment (self-rated religiosity and church attendance), shown in Figures 1–4, indicate a linear inverse association between the percentage of mathematics and sciences in curricula and religiosity, with a higher percentage of exact sciences being associated with lower levels of religious beliefs and practices. However, the scatterplots indicate a quadratic relationship between the two indicators of religious commitment and time allotted to studying language and literature in national curricula, with countries with both higher and lower percentages of humanistic education during secondary education being more religious. Thus, at first glance, the empirical data support the fourth hypothesis, but not the third one.

The third hypothesis asserts a positive relationship between educational curricula emphasizing reading and writing competencies and religious practices. The results of the empirical data do not support this hypothesis; the relationship between the percentage of reading and writing in the national curricula and indicators of religiosity is quadratic. As indicated by the scatterplots, religious practices and beliefs are higher in countries with very high or very low load of humanistic education in secondary level. According to the results of the multilevel regression models, the relationship is significant only in the case of church attendance, which supports the theoretical assumption that humanistic education goes hand in hand with religious behavior.

The data fully support the fourth hypothesis. The results show a significant connection between religious commitment and the percentage of mathematics and sciences in the national curriculum. For both dependent variables, the relationship is significant, but the coefficient is quite low in the case of church attendance.

In the case of the control variables, the results are like those reported by previous research. Age had a significant positive effect on all dependent variables while being employed had a negative and highly significant impact. As expected, women are significantly more religious than men and display significantly higher levels of religious practice than men. The Human Development Index, which stands for the effect of socioeconomic development, had a negative effect on all models, but the coefficient was not significant. The effect of year on both target variables was negative and significant, while the effects of country-level variables confirm secularization theory, showing that socioeconomic development decreases religious practices and religious beliefs, and this is an ongoing process.

Conclusion

This paper focuses on the connection between a field of education and national curricula in secondary education and religious commitment. This article builds on the idea that education generates individual competencies, which involve a combination of knowledge, skills, and values that mediate education and religiosity and shape the nexus between education and religious commitment.

Different fields of education lead to different competencies and are consequently connected with religious commitment in different ways, while educational context refers to the match between national curriculum for secondary education and national context factors. Thus, national curricula differ from one country to another and produce different competencies that can boost or lower an individual's religious beliefs and practices.

This paper employed multilevel regression models and tested the research hypotheses using data from the ESS (2004, 2006, 2008) and Eurydice (2013/2014). The results partially confirm the research hypotheses. The first two hypotheses found support on the empirical data, revealing that education in the social sciences and humanities is associated individual religious beliefs and practices. The empirical data show that this combination of knowledge and skills provided by technical education is negatively associated with religious commitment. Thus, the analyses point out to the connection between a field of education and religious beliefs and practices. As expected, women are more religious than men, while youth is less then elderly, and employed people less than those outside the labor market.

The hypotheses regarding the national curriculum are only partially supported by the data. The analysis did not provide empirical support for the third hypothesis. The relationship between the percentage of reading and writing in secondary education and indicators of religious commitment is not linear but quadratic, with higher religiosity occurring in the case of both high and low percentages of humanistic education. However, the relationship is significant only in the case of church attendance, which confirms the theoretical expectation that reading and writing are connected to communication skills and with social skills.

The fourth hypothesis is supported by the data. Countries with a higher percentage of mathematics and sciences taught in secondary education have low levels of religious commitment. The results confirm the expectation that the skills and knowledge acquired when learning these subjects do not go hand in hand with religious beliefs and practices. National curricula reflect a country's history and social contexts, which are highly influenced by the level of economic development and, consequently, secularization. Thus, when looking

at the connection between educational curricula and religiosity in a country, one should also consider the opposite causality as well from religiosity to education. Thus, one potential explanation for the current findings may be that highly religious societies allocate a reduced amount of time to mathematics and sciences during compulsory education and give priority to subjects that do not directly contradict religious teachings. Future research should look closer at this connection and consider it from a longitudinal perspective, focusing on how the two phenomena vary over time.

The results of this current analysis show that the relationship between education and religiosity does not refrain only to the level of education. Field of education seems to be also connected to religious beliefs and practices, even when the level of education is controlled for. Thus, the field of education should be taken into consideration when accounting for the nexus between education and religious commitment. However, this current study was only a snapshot carried out at one point in time. When studying the connection between a field of education and religious values and behaviors, one should also consider the reverse causality from religion to the field of education. To fully disentangle this relationship, further research should use panel data to determine what came first, the choice of a certain field of education, or whether the educational choice was made based on preexisting religious values and behaviors. Since field of education is chosen early in life, and parents may have a strong say in the decision regarding one's field of education, further research should also consider the parents' religious orientation. In this case, the mechanism in place is selection of the educational field and both, panel studies and qualitative research may help explaining the full mechanism.

In addition, data used for conducting the analysis reported by this paper were collected between 2004 and 2008, so they may not reflect the trends in religious commitment and education observed in the past years. Although the paper focuses on the mechanisms connecting field of education and religious commitment, not on the trends and levels of the main variables employed by the models, further research on fresh data is needed to investigate how the nexus between field of education and religious commitment changes over time.

This paper proved that both, individual competences, and education institutions associates with individual religious commitment, as the first refers to individual skills and knowledge, while the second provides the context to develop them. Thus, field of education is embedded in the national curriculum, and they should be analyzed together to understand the multiple relationships between education and religious commitment. Furthermore, individual competencies are not only embedded in educational institutions, but also on local religious con-

text and future studies should investigate how individual education competencies interfere with contextual religious descriptors (such as general religiosity and religious diversity) in shaping individual religious commitment.

The results of this research also show that the country matters to some extent when the connection between education and religion and the educational system plays an important role. However, this paper only looked at curricula in 27 European countries. Research in the sociology of education has proved that there is a strong regional component regarding curricula for secondary education; countries outside of Europe are also influenced by other educational systems, not only by the European system (Benavot 2006; Cummings 1999). Thus, further research should look beyond European borders to see if the same result holds true from a global perspective.

Other factors related to a national educational system may also play a role in shaping general competencies that can affect religious behavior and beliefs. For instance, some countries divide students into educational tracks very early and build strong field-related competencies early in life, while others provide comprehensive education by the end of secondary education. Further studies may consider how the educational track versus comprehensive education connects with individual religiosity and consider other factors related to educational outcomes when investigating the relationship between a national educational system and religious beliefs and practices in a country.

Mălina Voicu *holds a Ph.D. in Sociology (2004), MA in Sociology (1997) and BA in Psychology (1996) (University of Bucharest) and currently is professor at Faculty of Administration and Business, University of Bucharest and Senior Researcher in the Research Institute for the Quality of Life at the Romanian Academy.*

Adrian-Nicolae Dan *holds a Ph.D. in Sociology (2003), an MA in Social Policy (1996) and BA in Social Work (1995) (University of Bucharest). He currently is professor at Department of Social Work, Faculty of Sociology and Social Work, University of Bucharest.*

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