

1 *Article*

2 **The Impact of Religiosity on Individual Perception of Wellbeing and Living Standards: A**
3 **Cross-Cultural Study on the Selected Developing Economies**

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12 **Abstract:** Considering the impact of religiosity on the perceptions regarding life quality, in this
13 paper we focus on the effects of the appurtenance to a religion on the standard of living in several
14 economically developing countries (Turkey, Ukraine, Senegal and Morocco). The data have been
15 collected using a survey carried out in 2012 and the empirical analysis was based on non-parametric
16 tests and multinomial logistic regression. The results indicate there are differences between religious
17 persons and atheists regarding gender, marital status, perceptions of daily life and standards of
18 living. Females and officially married people or single people tend to be more religious. A person
19 claiming to belong to a religion has 2-4-fold more chances to achieve a considerable improvement in
20 the standards of living as compared to an atheist. Moreover, religious people from the analyzed
21 countries are more optimistic about their life overall. Taking into account the sample's characteristics
22 and the countries chosen, we can claim that the results obtained are truly cross-cultural in nature.
23 Moreover, most of the conclusions reached would be to some extent relevant to other developing
24 economies of Eastern Europe, North Africa and Middle East.

25 **Keywords:** religion; atheist; standard of living; financial situation

26

27 **1.1. Introduction**

28 Even though participation in religious services and belief in God overall have been on the
29 decline in the last decades in most economically developed countries, religious believes are still
30 rather strong in developing countries. Atheists are mainly concentrated in developed countries with
31 social democracy, while in sub-Saharan Africa atheism is almost inexistent (Barber 2011), less than 1
32 percent of population declares they do not believe in God. Atheism is mostly concentrated in
33 developed countries of Europe: Sweden (64% of population are the so-called non-believers),
34 Denmark (48% of population are atheists), France (44% atheist) and Germany (42% of the German
35 people do not believe in God).

36 Most people see religion as a solution to uncertainties and difficulties in their lives. In the case
37 of social democratic countries, there is less uncertainty and fear about the future, because social
38 welfare programs ensure healthcare and safety. Prosperity of a country translated into better life
39 standards as compared to poor states is one of the main causes for religion regress (Zuckerman
40 2008). The view of this author is not in line with other opinions that consider religious traditions of a
41 country to be more important than economic conditions (Lejon and Agnafors, 2011). Moreover, for
42 people that are not subject to natural disasters chances to believe in God are even lower. In less

43 developed countries, religious institutions often help population with goods and services related to
44 healthcare and education. Social networks inside religious communities could be crucial in the
45 periods of economic crisis.

46 The most religious countries are Thailand (98% of the population is religious) and Nigeria (97%
47 believe in God), being followed by other countries in which 94% of population believe in divinity:
48 India, Papua New Guinea, Kosovo, Ghana and Ivory Coast. China is seen as the least religious
49 country. In this country, almost 7 out of 10 people declare to be atheists. A similar situation is
50 observed in some countries of Europe where 7 out of 10 people are non-religious and/or atheists,
51 including Sweden, the United Kingdom and Czech Republic.

52 Even if for many decades, wealth and religion were not compatible, the necessity to gain money
53 for a better living standard seems to not be correlated religious views (Sansi Roca, 2007).

54 The recent survey of WIN/Gallup International (2017) carried out in 68 countries of the world
55 revealed that 6 out of 10 people are religious, while less of 25% of people think they are non-religious
56 and 9% are atheists. The data from this survey indicated that religiosity is decreasing while
57 education and income levels of the interviewed are increasing. In case of people with low income,
58 66% stated they are religious, while only 50% of people with high income are religious. 83% of the
59 interviewees with low education level strongly believe in God, while only 49% of highly educated
60 people are religious. Empirical evidence showed a positive correlation between economic growth
61 and some religious beliefs, while church attendance negatively influenced economic development
62 (Barro and McCleary 2003). Moreover, Durlauf et al. (2012) showed that religious beliefs are not
63 robust determinants of economic growth.

64 The U.S. is considered an outlier in the religious views of wealthy nations. Around 80% of the
65 American people believe in God and almost 25% of them benefit from religious services once a week.
66 In the U.S., even the market is more open to religion. This particular status of the U.S. might be
67 explained by social and economic inequalities.

68 In a previous study, the effects of religiosity on life quality and standard of living were
69 analyzed for the Jews in Israel (Deutsch and Silber 1999). Using data from the time-budget survey
70 made in 1992 in Israel and methods based on distance function, the authors showed that the
71 standard of living depends on education and age, being lower for the very religious individuals as
72 compared to non-religious ones. However, it seems that very religious people called "haredim" are
73 keener on transforming the resources into quality of life.

74 In the context of globalization, despite their degree of religiosity, people have to adapt to actual
75 market challenges and they have to struggle for a better financial situation (Ruiu 2013; Mukherjee
76 2014; Simionescu et al., 2016; Streimikiene et al., 2016; Rakauskiene and Volodzkiene 2017). Money
77 help people to improve their standard of living by ensuring a better health system (Chmielewska
78 and Horváthová 2016). A better standard of living is also related to better personal income and to
79 protection of human rights (Mishchuk and Grishnova 2015; Chmielewska and Horváthová 2016;
80 Bilan, 2014).

81 Taking into account all of the conclusions reached in the studies mentioned above, we find it
82 reasonable to summarize in one research the empirical data gathered in several, rather diverse,
83 countries. We intentionally grouped together four countries with quite similar socioeconomic and
84 political challenges but different in terms of cultural specificity and religious situation. Using such a
85 cross-cultural study we aim to prove, inter alia, that the impacts of religiosity on humans' attitudes,

86 perceptions and behaviors are not affiliation-specific. Moreover, the cross-cultural approach in this
87 particular case helps to prove that there are much larger differences between being religious and
88 being atheist, rather than between a Muslim and a Christian (both without specifying).

89 1.2. Research aims & questions

90 The main aim of this paper is to evaluate the impact of religion on people's perceptions
91 regarding the quality of their life reflected in daily life, financial situation and overall standard of
92 living. We made the empirical analysis on the sample of 4 developing countries (considered
93 developing ones according to the International Monetary Fund classification): Turkey, Ukraine,
94 Senegal and Morocco. Some demographic variables were considered in the analysis (age, gender
95 and marital status).

96 Since the sample gathered here is very much diverse geographically, culturally and religiously,
97 we find it nearly impossible to pose exact and specific hypotheses that would be equally relevant for
98 all four developing countries in question. However, as the opening remarks to keep in mind while
99 analyzing the data below we suggest the following preliminary research questions:

- 100 - Is there a direct correlation between religiosity (not specifying the confession affiliation)
101 and marital/family status of the respondents?
- 102 - Is there an obvious gender trend between being religious and being atheist?
- 103 - Is there any direct (mutual) dependence between being religious and being satisfied with
104 one's living? And more specifically,
- 105 - Is there a direct link between religiosity and the sense of own financial wellbeing (putting
106 aside the actual financial measurement of this wellbeing)?

107 Further in the text, the paper provides a detailed presentation of the methodology and results.
108 The last part of the paper brings comments about the obtained results comparing them with the
109 previous studies from literature.

110 2. Sample and methodology

111 2.1. Sample description

112 As it has been already mentioned in the Introduction, four countries have been subject to
113 field research – namely, Ukraine, Turkey, Senegal and Morocco. The overall size of the joint sample
114 (all four countries) is 8 000 people. The division inside countries has been as follows: in each of these
115 countries we have chosen four separate, distinctive territories (which differ among themselves in
116 terms of religious preferences, rates of socioeconomic development, (un)employment structure,
117 demographics dynamics and other important social parameters). Number of the respondents on
118 each territory was 500 people, all respondents were citizens of the related countries. The random
119 selection method was used to get the sample of the respondents aged between 18 and 39. We are
120 fully aware of the fact that excluding the respondents of 39+ y.o. might be one of the serious
121 limitations in our study, however, it was our intention to gather the data on the most active social
122 and economic groups within these four developing economies. Moreover, three out of four countries
123 in question are relatively young independent countries, which means their older citizens, most
124 probably, would be the carriers of previous, rather colonial mindset.

125 The quantitative data obtained was further analyzed using SPSS package and also partially
126 NVivo.

127 One of the reasons why our sample can be treated as truly cross-cultural one (and thus, of
128 more interest for the related areas of research) is the fact that inside all four countries in question
129 religious populations are distributed very much unequally. Islam and Christianity are intensively
130 represented in all four countries, however, in dramatically different proportions. Moreover, various
131 subtypes of Islam and Christianity are rather unevenly distributed among 16 territories of four
132 countries under study. For example, in Senegal, more than 95% of the population is Muslim, and
133 only 3% of the citizens are Christians. Morocco is an Islamic country with 98.7% of its population
134 being Muslims. Almost 99% of Turkish population are also Muslims (this is official statistics,
135 however, the Eurobarometer data gives a slightly different percentage of 94%). The Government of
136 Turkey recognizes only three religious minorities: Greek Orthodox Church, Jewish Community and
137 Armenian Church. The rest of the confessions are somehow assimilated by the official version of the
138 Islamic religion (most of the Turks are Sunni), even if they are not Muslims in real, everyday life.
139 Ukraine in this regard present exactly the opposite picture: Muslim population comprise less than
140 1% of its general population, while over 70% are Orthodox Christians (almost equally distributed
141 between Moscow and Kyiv Patriarchies).

142 Therefore, we can most confidently state that the sample used in this study is truly
143 cross-cultural since all most important today religious groups are represented in it, being minority in
144 one country, or majority in another. Moreover, both Islam and Christianity are represented in a
145 variety of schools of thought (to some extent, opposing ones).

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147 2.2. Variables use for questions' posing

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149 The opening questions were formulated so that to identify the religious official affiliation. The
150 respondents had the following options:

- 151 - Muslim Sunni
- 152 - Muslim Alevi
- 153 - Muslim Sji'a
- 154 - Muslim Mouride
- 155 - Muslim Tidjane
- 156 - Muslim Layene
- 157 - Muslim Niassene
- 158 - Muslim, Other
- 159 - Russian Orthodox
- 160 - Ukrainian Orthodox - Kiev Patriarchate
- 161 - Ukrainian Autophalous Orthodox Church
- 162 - Greek Orthodox
- 163 - Armenian Orthodox
- 164 - Other Orthodox
- 165 - Ukrainian Greek Catholic Church
- 166 - Roman Catholic
- 167 - Ukrainian Protestant Churches
- 168 - Protestant

- 169 - Christian, Other
- 170 - Buddhist
- 171 - No Religion (Atheist)
- 172 - Other
- 173 - Muslim, Unspecified.

174

175 The following questions were related to the degree of satisfaction regarding various aspects of
 176 daily life:

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- 178 - life as a whole these days;
- 179 - current financial situation;
- 180 - financial situation of own household as compared to that of other households;
- 181 - improvements in standard of living.

182

183 We also have some demographic questions regarding:

- 184 - age;
- 185 - gender (male/female);
- 186 - marital status (never married/married (monogamous/polygamous)/ living with partner, not
 187 married/ widowed/divorced/separated);
- 188 - environment (rural/urban).

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190 2.3. Methodology used for data analysis

191 The proper methods used in this research refer to tables for summarizing the information,
 192 non-parametric tests to check relationships between variables and multinomial logistic regressions
 193 to assess if religion has any impact on the perceptions on standard of life.

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195 The chi-square test is commonly used to compare observed data with expected data that we would
 196 obtain according to a certain hypothesis. This test always checks the null hypothesis that states there
 197 is no significant difference between the expected value and the observed result.

198 The chi-square statistic is calculated according to the following formula:

$$199 \chi^2 = \sum \frac{(o - e)^2}{e}$$

200 The chi-square statistic is the sum of the squared difference between the observed value (o) and the
 201 expected one (e) (or the squared deviation) over the expected data for all possible categories.

202 Pearson's chi-squared test is applied to sets of categorical data to assess how likely it is that an
 203 observed difference between the data sets arose by chance. It is recommended for unpaired data
 204 from large samples. It is one of the most often used tests of the chi-squared tests.

205 Pearson's chi-squared test is utilized to evaluate two types of comparison: tests of independence and
 206 tests of goodness of fit.

- 207 • As a test of goodness of fit, it establishes if an observed frequency distribution is different
 208 from a theoretical one.
- 209 • As a test of independence, it evaluates if the unpaired observations on two variables are
 210 independent of each other. The null hypothesis states that the differences between unpaired
 211 observations on the two variables are independent.

212 If the asymptotic significance (Asymp. Sig. (2-sided)) corresponding to this statistic is lower than
 213 0.05, the null hypothesis is rejected at the 5% level of significance and, hence, there is a relationship
 214 between the two variables, but the structure of the relationship is not known.

215 Logistic regression is used to assess the impact of more exogenous characteristics that exist
 216 simultaneously for predicting the membership of one category of the two dependent variables. The
 217 dependent characteristic is categorical while the exogenous variables could be categorical or a mix of
 218 categorical and continuous.

219 According to Simionescu (2013), there are several advantages of the binary or multinomial
 220 logistic regressions: there are several assumptions that are not considered (the errors are not serial
 221 correlated; the errors are normally distributed or homoscedasticity of the explanatory variables). In
 222 this case, a different estimation method is used: the maximum likelihood estimation method instead
 223 of the ordinary least squares.

224 The regressand takes values from 0 to 1 while the independent one (denoted by X) takes real
 225 values; p represents the probability for a case to fall in a certain category. The odds ratio associated
 226 to a certain event, which is the likelihood ratio, is computed as $p/(1-p)$. The log of the odds ratio (OR)
 227 has the following formula:

$$228 \quad \ln \frac{p}{1-p} = b_0 + b_1X + \varepsilon$$

229 The objective is to estimate the parameters b_0 and b_1 .

230 ε represents the error.

231 The p is computed as: $p = \frac{e^{b_0+b_1X+\varepsilon}}{1+e^{b_0+b_1X+\varepsilon}}$. The estimators are denoted as: \widehat{b}_0 and \widehat{b}_1 .

232 If the odds ratio (OR) is one, then if X increases by a unit, then the odds remain the same.
 233 This means that X does not affect the dependent variable Y.

234 If OR is higher than 1, then an increase by one unit in the exogenous variable generates an
 235 increase in the value of the dependent variable by $e^{\widehat{b}_1}$. For an OR i lower than 1, we will have a
 236 decrease in the dependent variable value by $e^{-\widehat{b}_1}$.

237 Multinomial logistic regression is useful when the dependent variable is nominal and there
 238 are more than two categories for it.

239 *The multinomial dependent variable Y depends on more explanatory variables (k variables):*
 240 $X=(X_1, X_2, \dots, X_k)$. This *random component* states that the distribution of Y is *Multinomial*(n,π), where π
 241 *represents the vector including the probabilities of "success" for each category. The systematic component* is
 242 *represented by explanatory variables (these could be discrete, continuous, or even both). The*
 243 *linearity is in the parameters: $\beta_0 + \beta x_i + \dots + \beta_0 + \beta x_k$. The transformation of the explanatory variables is*
 244 *allowed, as in the case of the linear regression. The link function is given by the generalized Logit,*
 245 *which represents the logit link corresponding to each pair of non-redundant logits.*

246 The multinomial logit model considers the data as case specific; in other words, each
 247 explanatory variable has a single value for any case. The dependent variable could not be perfectly
 248 predicted from the independent variables in any case. The independent variables should not be
 249 statistically independent from each other. An important assumption is that collinearity should be
 250 relatively low.

251 In case the multinomial logit is utilized for choices modeling, it considers the assumption of
 252 independence of irrelevant alternatives. This hypothesis shows that the odds of preferring one
 253 group over another are independent of the presence or absence of the other "irrelevant" alternatives.

254 $\text{Exp}(B)$ is the exponentiation of the B coefficient. It represents the odds ratio. The value is
 255 given by default. Coefficient is given as log-odds units and odds ratios have an easier interpretation.
 256 If $\text{Exp}(B)$ is higher than 1, an increase by one unit in the exogenous variable generates an increase in
 257 the value of the dependent variable by $\text{Exp}(1)$. For an $\text{Exp}(B)$ lower than 1, we will have a decrease in
 258 the dependent variable value by $\text{Exp}(B)$. If $\text{Exp}(B)$ is 1, then if the exogenous variable increases by
 259 one unit, then the dependent variable remains the same.

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261 3. Results

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263 As expected, most of the people in the sample are Muslim Sunni (28.8% of the people in the
 264 sample). 22.3% of the people in the sample are Orthodox of various types, as we can observe from
 265 Table 2.

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Table 1. The distribution of people in the sample according to religion

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Religion	Frequency	Percent
muslim sunni	2301	28.8
muslim alevi	8	0.1
muslim sji'a	9	0.1
muslim mouride	1042	13
muslim tidjane	744	9.3
muslim layene	13	0.2
muslim niassene	8	0.1
muslim, other	131	1.6
russian orthodox	354	4.4
ukrainian orthodox - kiev patriarchate	1214	15.2
ukrainian autophalous orthodox church	27	0.3
greek orthodox	4	0.1
armenian orthodox	8	0.1
other orthodox	13	0.2
ukrainian greek catholic church	160	2
roman catholic	15	0.2
ukrainian protestant churches	2	0
protestant	7	0.1

christian, other	16	0.2
buddhist	1	0
no religion (atheist)	173	2.2
other	28	0.4
muslim, unspecified	1709	21.4
missing values	13	0.2

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97.2% of the people that have never been married declared to have a certain religion, while 2.8% of these people are atheists. Most of the atheists are among the people that live with a partner without being married. None of the people that are married and polygamous or separated are atheists as Table 3 shows.

Table 2. The people appurtenance to a religion according to the marital status

marital status	religious person	atheist person
never		
married	97.20%	2.80%
married, monogamous	98.60%	1.40%
married, polygamous	100.00%	0.00%
living with partner, not married	88.60%	11.40%
divorced	95.00%	5.00%
widowed	97.20%	2.80%
separated	100.00%	0.00%

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3.1% of the men in the sample declared to be atheists, while only 1.4% of females do not believe in God as Table 4 indicates.

Table 3. The people appurtenance to a religion according to the gender

gender	religious person	atheist person
male	96.90%	3.10%
female	98.60%	1.40%

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As we can observe from Table 5, 99.3% of the very unsatisfied people regarding their daily life are religious persons, while 0.7% of them are atheists. 98% of the very satisfied people are religious and 2% of them do not believe in God.

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288 **Table 4.** The people's satisfaction regarding daily life according to appurtenance to a religion

289

degree of satisfaction	religious person	atheist person
very unsatisfied	99.30%	0.70%
rather unsatisfied	97.10%	2.90%
neither unsatisfied nor satisfied	98.40%	1.60%
rather satisfied	97.40%	2.60%
very satisfied	98.00%	2.00%

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292 As we can observe from Table 6, 97.2% of the very unsatisfied people regarding their actual
 293 financial situation are religious persons, while 2.8% of them are atheists. 98.4% of the very satisfied
 294 people are religious and only 1.6% of them do not believe in God.

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Table 5. The people's satisfaction regarding current financial situation

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degree of satisfaction	religious person	atheist person
very unsatisfied	97.20%	2.80%
rather unsatisfied	97.40%	2.60%
neither unsatisfied nor satisfied	97.80%	2.20%
rather satisfied	98.30%	1.70%
very satisfied	98.40%	1.60%

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299 As we can observe from Table 7, all the people considering that live much worse than other
 300 households are religious persons. 97.4% of the people that think they have a better financial situation
 301 than other households are religious and only 2.6% of them do not believe in God.

302 **Table 6.** The people's satisfaction regarding their financial situation compared to other households
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degree of satisfaction	religious person	atheist person
much worse	100.00%	0.00%
worse	98.10%	1.90%
the same	97.90%	2.10%
better	97.40%	2.60%
much better	99.00%	1.00%

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306 As we can observe from Table 8, all the people considering that live much better than before are
 307 religious persons. 95.4% of the people that think they stay worse are religious persons, while 4.9% of
 308 them are atheists.

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310 **Table 7.** The people's satisfaction regarding their standard of living

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degree of satisfaction	religious person	atheist person
getting much worse	95.40%	4.60%
getting worse	95.10%	4.90%
staying the same	98.00%	2.00%
getting better	99.10%	0.90%
getting much better	100.00%	0.00%

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313 The chi-square was applied to check if there are any significant relationships between religion
 314 and various demographic variables and aspects regarding standard of living. It seems that there are
 315 not differences between people that believe in God and atheists according to age, satisfaction about
 316 current financial situation in general and by comparison with other households. Aspects related to
 317 financial situation are a current issue for both religious persons and atheists.

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Table 8. The relationship between religion and various variables (chi-square tests)

Variable	Value of chi-square statistic	Asymp. Sig. (2-sided)
Age	31.498	0.342
Marital status	50.338	0
Gender	28.765	0
Satisfaction about own life as a whole	14.797	0.005
Satisfaction about current financial situation	6.384	0.172
Satisfaction about current situation compared to other households	4.388	0.356
Satisfaction about improvements in standard of living	92.627	0

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It seems that gender and marital status have a significant impact on people appurtenance to a religion. Females tend to be significantly more attracted by religion compared to males, where we have a significant higher percent of atheists. On the other hand, the most people that do not believe in God are unmarried people like those living with a partner without official marriage and divorced people. The interviewed persons that believe in God tend to be more satisfied of the improvements in their standard of living and their life as a whole compared to atheists.

More multinomial logistic regressions were estimated using the opinions regarding life conditions as dependent variables and religiosity as one of the independent variables. After more estimations, we build only a valid model that explain the improvement in standard of living according the faith in God.

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Table 9. Multinomial logistic regression to explain the improvements in the standard of living based on religion appurtenance

Do you feel your standard of living is...		B	Std. Error	Wald	Sig.	Exp(B)
getting worse	much					
	Intercept	-1.405	0.31	20.618	0	
	[religious_person]	-0.883	0.316	7.809	0.005	0.413
	[atheist]	0				
getting worse	Intercept	0.386	0.178	4.712	0.03	
	[religious_person]	-0.934	0.181	26.649	0	0.393
	[atheist]	0				
getting better	Intercept	-0.603	0.231	6.815	0.009	
	[religious_person]	0.817	0.232	12.35	0	2.263
	[atheist]	0				
getting better	much					
	Intercept	-18.207	0.088	43168.86	0	
	[religious_person]	15.251	0			4.202
	[atheist]	0				

Note: The reference category is: staying the same.

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In case of a person that believes in God, the chances to get much worse in terms of standard of living are by 5.87% lower compared to an atheist while the chances to get worse decrease by 6.07%. A religious person has by more than 2 times more chances to get better and by 4 times more chances to get much better compared to an atheist. So, even if the financial situation might be bad, a person that believes in God tends to be happy with the standard of living compared to an atheist.

348 4. Discussion

349 The strong link between religion and gender, demonstrated in this cross-cultural study, has
350 been confirmed earlier, actually (Lenski 1953; Yinger 1970; Brinkerhoff and MacKie 1985; De Vaus
351 and McAllister 1987). The sociologists overall tend to conclude based on empirical data from various
352 countries that females tend to be more religious than men. Several reasons have been so far
353 presented in literature explaining the females' tendency to be more religious:

- 354 - The females' role in giving birth and in rearing children;
- 355 - Lower participation of females at labour markets worldwide as compared to men;
- 356 - Gender-specific attitude to work in general and also females' being more in connection with
357 traditional family values.

358 However, all these conclusions and explanations today are mostly applicable to developing
359 nations, and least of all – to already developed ones. More cross-cultural research would be needed
360 to explain the correlation between religiosity and gender.

361 In the developing countries, there are also differences between males and females regarding
362 socialization. Women are often supposed to be more passive and obedient in the society which helps
363 them find a support in religion (Miller and Hoffmann 1995). Most of the females in our sample are
364 Muslims from Islamic countries where the women's freedom in the society is limited. This fact finds
365 its manifestation in the obtained results, which were very much identical in all three Islamic
366 countries in the sample, even though for our cross-cultural study we have chosen Islamic countries
367 with quite different history of nation's cultural and political development.

368 The quality of the relationship between people engaged in intimate relationship has been
369 carefully observed by both religious institutions and in empirical research. Previous studies have
370 shown that religion has a strong and direct impact on marital quality in full accordance to the values
371 and norms imposed by the church (Christiano 2000; Wilcox 2004). Our results are in line with this
372 conclusion: religious practice is indeed an important factor for the growth of "marital quality"
373 (Greeley 1991; Call and Heaton 1997; Christiano 2000; Wilcox 2004). Indeed, people who believe in
374 God tend to be engaged in official relationships with their partners and are less prone to divorce and
375 or so-called "open relations". At the same time, most of atheists tend to be not married, even when
376 they have stable partner of life. They are also more fragile to divorce in case of difficulties in
377 marriage. Noteworthy, this general observation does not depend on religious affiliation as such. It is
378 more about being religious vs being atheist. Thus, we can state that this trend in human behavior is
379 also cross-cultural in its nature.

380 The effects of religion on well-being made have been considered by many studies too
381 (Baumeister 2002; Hill and Pargament 2003; Park 2005). Conclusions of these studies suggest that
382 different aspects of religiosity are strongly correlated with psychological and physical well-being in
383 everyday life. People find support in religion, and this support helps them solve their problems and
384 get a more positive attitude to daily life. Our cross-cultural empirical study also confirms this
385 tendency for the people from four rather different countries – Ukraine, Turkey, Senegal and
386 Morocco. Religious people have a much more positive attitude to their daily life and their
387 improvement in standard of living as compared to those who claim to be atheists. Our conclusion is
388 quite similar to the empirical findings by Headey et al. (2010) who showed, using data from the
389 German Socio-Economic Panel Survey, that more religious people register more improvements in
390 life satisfaction in the long run. When it comes to Islamic world, the importance of religion for the
391 perception of life quality was also analyzed by Sandikci et al. (2016) on the case study of Turkey.
392 These authors also proved that religion has its important role in individual well-being.

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395 **5. Conclusion**

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Summarizing our cross-cultural study, we might conclude that most of the people in the
analyzed developing countries believe in God and they are more optimistic in terms of satisfaction
with life and improvements in standards of living as compared to atheists in the same countries.
Moreover, there are differences between people's religiosity on the one hand and their gender and

401 marital status on the other. Females in general, officially married people and also single people tend
402 to be more religious, as our four-country cross-cultural study shows. Same or similar conclusions
403 would be, most probably, relevant for other developing nations, neighbouring to the countries in
404 question. However, more research on the developing countries worldwide would be necessary in
405 this regard.

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413 **References**

- 414
- 415 Barber, Nigel. 2011. A cross-national test of the uncertainty hypothesis of religious belief.
416 *Cross-Cultural Research*, 45(3): 318-333. <http://dx.doi.org/10.1177/1069397111402465>
- 417 Barro, Robert J., and McCleary, Rachel. 2003. *Religion and economic growth* (No. w9682). National
418 Bureau of Economic Research.
- 419 Baumeister, Roy, F. 2002. Religion and psychology: Introduction to the special issue. *Psychological*
420 *Inquiry*, 13(3): 165-167. http://dx.doi.org/10.1207/s15327965pli1303_01
- 421 Bilan, Y. (2014). Migration Aspirations on the Outskirts of Europe: Social and Economic Dimensions.
422 *Transformations in Business & Economics*, 13(2B), 604-614.
- 423 Brinkerhoff, Merlin, B., and MacKie, Marlene. 1985. Religion and gender: A comparison of Canadian
424 and American student attitudes. *Journal of Marriage and the Family*: 415-429.
- 425 Call, Vaughn, R., and Heaton, Tim, B. 1997. Religious influence on marital stability. *Journal for the*
426 *Scientific Study of Religion*: 382-392.
- 427 Chmielewska, Barbara, and Horváthová, Zuzana. 2016. Policy Levelling Economic and Social
428 Inequalities between Rural and Urban Areas. *Journal of International Studies*, 9(2): 103-111. DOI:
429 10.14254/2071-8330.2016/9-2/7
- 430 Christiano, Kevin. 2000. Religion and the family in modern American culture. *Family, religion, and*
431 *social change in diverse societies*, 2000: 43-78.
- 432 De Vaus, David, and McAllister, Ian. 1987. Gender differences in religion: A test of the structural
433 location theory. *American Sociological Review*, 1987: 472-481.
- 434 Deutsch, Joseph, and Silber, Jacques. 1999. Religion, standard of living and the quality of life.
435 *Contemporary Jewry*, 20(1): 119-137.
- 436 Durlauf, Steven, N., Kourtellos, Andros, and Tan, Chih, Ming. 2012. Is God in the details? A
437 reexamination of the role of religion in economic growth. *Journal of Applied Econometrics*, 27(7):
438 1059-1075. <http://dx.doi.org/10.1002/jae.1245>
- 439 Greeley, Andrew, M. 1991. *Faithful attraction: Discovering intimacy, love, and fidelity in American*
440 *marriage*. New York: Tor Books.

- 441 Headey, Bruce, Schupp, Jurgen, Tucci, Ingrid, and Wagner, Gert, G. 2010. Authentic happiness
442 theory supported by impact of religion on life satisfaction: A longitudinal analysis with data for
443 Germany. *The Journal of Positive Psychology*, 5(1): 73-82. <http://dx.doi.org/10.2139/ssrn.1323686>
- 444 Hill, Peter, C., and Pargament, Kenneth, I. 2003. Advances in the conceptualization and
445 measurement of religion and spirituality: Implications for physical and mental health research.
446 *American Psychologist*, 58: 64–74. <http://dx.doi.org/10.1037/0003-066x.58.1.64>.
- 447 Lejon, Kjell, and Agnafors, Marcus. 2011. Less Religion, Better Society? On Religion, Secularity, and
448 Prosperity in Scandinavia. *Dialog*, 50(3): 297-307.
449 <http://dx.doi.org/10.1111/j.1540-6385.2011.00619.x>
- 450 Lenski, Gerhard, E. 1953. Social correlates of religious interest. *American Sociological Review*, 18(5):
451 533-544.
- 452 Miller, Alan, S., and Hoffmann, John, P. 1995. Risk and religion: An explanation of gender
453 differences in religiosity. *Journal for the scientific study of religion*: 63-75.
454 <http://dx.doi.org/10.2307/1386523>
- 455 Mishchuk, Halyna, and Grishnova, Olena. 2015. Empirical study of the comfort of living and
456 working environment–Ukraine and Europe: Comparative assessment. *Journal of International*
457 *Studies*, 8(1): 67-80. <http://dx.doi.org/10.14254/2071-8330.2015/8-1/6>.
- 458 Mukherjee, S., Romi. 2014. Global Halal: meat, money, and religion. *Religions*, 5(1): 22-75.
459 <http://dx.doi.org/10.3390/rel5010022>.
- 460 Park, Crystal, L. 2005. Religion as a meaning-making framework in coping with life stress. *Journal of*
461 *social issues*, 61(4): 707-729. <http://dx.doi.org/10.1111/j.1540-4560.2005.00428.x>
- 462 Rakauskienė, Ona, Gražina, and Volodžkienė, Lena. 2017. The Inequality of Material Living
463 Conditions in EU Countries. *Economics & Sociology*, 10(1): 265. DOI:
464 10.14254/2071-789X.2017/10-1/19
- 465 Ruiu, Gabriele. 2013. The Origin of fatalistic tendencies: an empirical investigation. *Economics &*
466 *Sociology*, 6(2): 103. <http://dx.doi.org/10.14254/2071-789x.2013/6-2/10>
- 467 Sandıkçı, Özlem, Peterson, Mark, Ekici, Ahmet, and Simkins, Travis. 2016. Development and quality
468 of life in turkey: how globalization, religion, and economic growth influence individual
469 well-being. *Journal of Macromarketing*, 36(3): 304-320.
470 <http://dx.doi.org/10.1177/0276146715608919>
- 471 Sansi Roca, Roger. 2007. Dinheiro Vivo' Money and Religion in Brazil. *Critique of Anthropology*, 27(3):
472 319-339. <https://doi.org/10.1177/0308275x07080360>
- 473 Simionescu, Mihaela. 2013. A Profile of Romanian Highly Educated Eco-Consumers Interested in
474 Product Recycling. A Statistical Approach. *Folia Oeconomica Stetinensia*, 13(2): 158-170.
475 <https://doi.org/10.2478/fofi-2013-0013>
- 476 Simionescu, M., Ciuiu, D., Bilan, Y., & Strielkowski, W. (2016). GDP and Net Migration in Some
477 Eastern and South-Eastern Countries of Europe. A Panel Data and Bayesian Approach.
478 *Montenegrin Journal of Economics*, 12(2), 161-175. doi:10.14254/1800-5845.2016/12-1/10
- 479 Streimikiene, D., Bilan, Y., Jasinskas, E., & Griksaitė, R. (2016). Migration Trends in Lithuania and
480 other new EU Member States. *Transformations in Business & Economics*, 15(1), 21-33.
- 481 Wilcox, W. Bradford. 2004. *Soft patriarchy, new men: How Christianity shapes fathers and husbands*.
482 University of Chicago Press. <http://dx.doi.org/10.1177/009430610603500134>
- 483 WIN/Gallup International 2017, Religion data from End of Year Survey 2016.

- 484 Yinger, J. , Milton. 1970. The scientific study of religion. The MacMillan Company, New York,
485 ETATS-UNIS, 593 pages.
- 486 Zuckerman, Phil. 2008. *Society without God: What the least religious nations can tell us about contentment.*
487 NYU Press.
488