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THE INFLUENCE OF THE RELIGIOUS FACTORS ON THE ELECTORAL OPTION- QUANTITATIVE ANALYSIS

In this study there are presented a series of aspects concerning the religious behavior of the Romanian population. By using quantitative analysis we have identified a series of religious key factors which can be used by parties and politicians to obtain votes during election campaigns.

The obtained results highlight the fact that people with a lower level of education are more receptive to the political messages transmitted by religious means. Also, the influence of political actions and messages having a religious character is more powerful at the level of the population with a lower standard of living.

By means of quantitative analysis we have also evaluated the impact of religious and ethnical fractionalization on the political representation in the national parliament.

Introduction

In this article there are presented certain aspects concerning the influence exerted by religion on the Romanian population's electoral option at the local and national elections. We used data series from the national statistics and also data series which were collected at the level of a statistical sample applied on the Romanian population at the end of 2007.

The study aims to identify a series of means by which the political parties can use the religious factors to obtain votes during electoral campaigns. By using quantitative analysis we have also determined the profile of a person whose electoral option can be modified by politicians using messages with religious character.

It should be noted that in the literature available there are empirical studies concerning the relationship between the church and the electoral

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Key Words:

religious factors, electoral option, social satisfaction, political parties, religious fractionalization, ethnical fractionalization, survey, econometric model.

process, which discuss a series of cases in which the church, through messages of their own and through their representatives, tried to influence the political option of the citizens during the election period.

The characteristics of the relation religion-politics in Romania

In Stan and Turcescu¹ there is a presentation of a series of cases in which, during the electoral campaigns, religious means were used to obtain votes. The aspects mentioned in this work cannot be generalized as the extent to which the electoral results can also be influenced by religious beliefs cannot be determined. For this reason, our study, using elements of quantitative analysis, tries to reveal a series of key factors, based on several hypotheses.

Hypothesis 1. All religious institutions have a favorable position in the democratization process of the Romanian society. Thus, according to Alina Mungiu - Pippidi and Sandu Frunză², between the option for a certain religion and the democratic orientation of a person there is no correlation validated from a statistical point of view.

Hypothesis 2. All throughout the transition period, the surveys and the studies that were carried out identified the church as occupying the first place in the Romanians' ranking of the most trustworthy institutions. For example, in 2008, the Romanians, like the Danes, placed their trust primarily in the institutions of the church, the quota being 77%. 68% said they trusted the army, 61% the television and the radio, 53% the print media and only 26%³ placed their trust in the system of justice. The level of the population's confidence in the church is situated at higher rates, over 76%, during the entire period 1996-2008. Under these conditions, the messages transmitted by the church during the electoral campaigns using various means can influence to a great extent the political options of the population.

Hypothesis 3. The means used by the political parties to influence the population's vote have been different. For example, certain clerics were candidates on the lists of certain political parties. During the religious divine services certain recommendations for the election of certain parties or political leaders et cetera⁴ were transmitted. Moreover, they were relatively different from one electoral campaign to another.

Hypothesis 4. The types of political interferences with religious components are different from one religious community to another. In this part of the paper only two features of these interventions are presented. Political parties whose messages are addressed mainly to people of Orthodox religion grant special attention to the Orthodox Church in the speeches given by their representatives during the electoral campaigns, by attracting members of the church on the lists of advisers or deputies et cetera. This feature proves the population's lack of electoral culture and experience during the transition period. Furthermore, certain political

parties have organized their entire electoral platform around the lure of religious worship and the speculation of the emotional factor among the voters, by their insistence on religious and nationalist feelings⁵. For the worships which correspond to a small number of electors, the political structures defined by ethnical criteria, such as the Democratic Union of Hungarians in Romania (UDMR), receive unconditioned support from the church. The Magyar ethnic group, for example, voted with regularity, during the period 1992-2006, at the local and general elections, the representatives of UDMR.

In this study, the dynamics of the relation between religion and politics, related to the majority population and the ethnic minorities, will be evidenced. Also, a number of factors that can be used by politicians on various religious channels to obtain votes in an electoral campaign will be identified. We will determine, on the basis of statistical data, to what extent there is a certain correlation between the degree of social satisfaction of a person and the change of the electoral option on the basis of religious messages.

In the paper, data obtained from the application of a statistical questionnaire at the level of Romanian population, but also a series of statistics related to political domain, ethnicity and religion, published by the state's institutions will be used.

The data used for the estimation of the model's parameters, in order to analyze the religious factor's influence on the electoral option, were obtained at the level of a representative sample at national level, comprising 744 persons. The sample is representative for the adult population allowing for an error of 2.1%, and the results to be presented are obtained based on direct processing of data series obtained from the application of the questionnaire on the persons from the sample.

The analysis of a person's social satisfaction

A series of general characteristics of data obtained from the sample will be presented. Starting from the questions included in the questionnaire a series of statistical characteristics are defined. These will be the basis for the definition of quantitative analysis models and for the identification of certain dependencies between religious phenomena, the electoral domain and certain aspects connected with people's life conditions.

Typically, people with a lower standard of life, those passing through a more difficult period from an economic or social point of view, are more likely to change their electoral options as a result of messages with a religious character transmitted through various ways. For this reason, in the study we will try to estimate to what extent the electoral message transmitted by various religious ways is stronger for people with a lower level of social satisfaction. To achieve this analysis, three concepts that try

to measure the degree of social satisfaction of a person⁶ are defined in the study. Thus, we define the social satisfaction of the person due to the action of local and national factors and to the global action of the two categories of factors, taking into account the economic, political and juridical aspects, corresponding to each case.

In order to quantify the level of the social satisfaction of a person, determined by economic, political and juridical factors at local level, in the questionnaire was included the question: "To what extent are you satisfied with the following aspects (economic, political and juridical) at local level?". In order to quantify the same characteristic but under the influence of the factors which act at national level we included the following question: "To what extent are you satisfied with the following aspects (economic, political and juridical) at national level?".

In order to evaluate the opinion of people interviewed in both cases, for each of the three aspects, economic, juridical and economic, we used a measurement scale containing five integer values from 1 to 5, allocated as follows: 1 if the person is very discontented, 2 if they are discontented, 3 indifferent, if the action of the one of the three factors is neutral, 4 if the person is content and 5 if they are very content.

The proposed alternatives of answers for each of these two questions and the distribution of the answers by the three components are presented in Table 1.

Table 1. The distribution of the answers at the questions which quantify aspects concerning the social satisfaction of a person

	Local Level			National Level		
	Economic	Political	Juridical	Economic	Political	Juridical
Very discontented	77 (10.3)	119 (16.0)	120 (16.1)	83 (11.2)	191 (25.7)	152 (20.4)
Discontented	284 (38.2)	271 (36.4)	289 (38.8)	349 (46.9)	315 (42.3)	319 (42.9)
Indifferent	88 (11.8)	166 (22.3)	131 (17.6)	85 (11.4)	139 (18.7)	129 (17.3)
Content	233 (31.3)	137 (18.4)	150 (20.2)	172 (23.1)	50 (6.7)	98 (13.2)
Very content	25 (3.4)	13 (1.7)	13 (1.7)	18 (2.4)	9 (1.2)	6 (0.8)
Non answers	37 (5.0)	38 (5.1)	41 (5.4)	37 (5.0)	40 (5.4)	40 (5.4)
<i>Average</i>	2.56	2.10	2.27	2.77	2.51	2.50
<i>Standard Deviation</i>	1.1242	1.0437	1.0642	1.0544	0.9202	0.9787

Between parentheses there is the percentage calculated from the total of answers.

Source: Own calculus realized by authors using the results of the survey applied on the Romanian population.

In order to calculate the average and the standard deviation of the characteristics presented in Table 1 we used only 697 questionnaires (93.7% out of the total number of questionnaires) which contained complete answers to all six rubrics which correspond to the past two questions.

The distribution of the answers aggregated on local and national factors are presented in Figure 1.

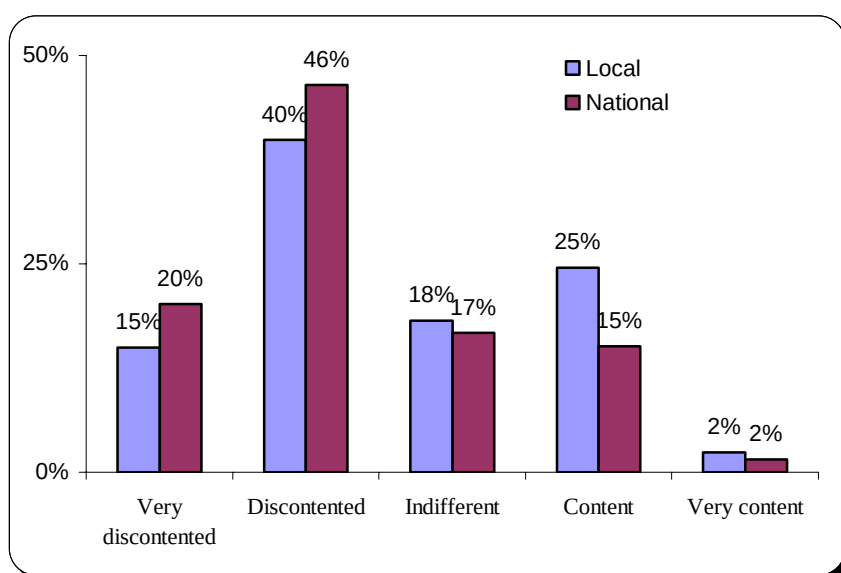


Figure 1. The degree of the population's social satisfaction depending on local and national factors

Source: Own calculus realized by authors using the results of the survey applied on the Romanian population.

The results obtained at the level of the sample lead to certain important observations related to the influence of local and national factors on the social satisfaction of the population.

A first observation is related to the fact that the economic, political and juridical factors, which act at national level, determine a higher level of the population's dissatisfaction with the ones acting at local level. Thus, while 55% from the questioned persons appreciated unfavourably the action of local factors on social satisfaction, 66% have the same opinion concerning the national factors. Only 17% of those questioned have a favourable opinion concerning the influence exercised by the factors

acting at national level on social satisfaction, while 27% of the questioned persons have the same opinion concerning the factors which act at local level. This situation is rather explicable taking into account the fact that, during the transition period, many unpopular economic measures were applied at the central level related to the closure of production capacities, privatization of companies et cetera. Small proportions of population consider that the economic, political and juridical factors, both at local and at national level, have a positive contribution to the level of social satisfaction of a person. The weight of favourable answers, equal to 8.4%, corresponds to economic factors acting at national level, while 6.2% represent favourable answers for juridical factors acting at local level.

The highest level of dissatisfaction is determined by the influence exercised by the actions of the political class at central level (68% from the interviewed persons have an unfavourable opinion, while 7.9% have a favourable opinion). In fact, based on data obtained from the euro barometers⁷ organized in Romania, we see that the population's level of confidence in political parties and government is the lowest.

The average values of the six characteristics point to a marked degree of dissatisfaction with the economic, political and juridical factors, both at local and national level.

For a global appreciation of the population's social satisfaction we define two statistical measures. The first takes into account the economic, political and juridical factors at local and national level and the second also takes into consideration the discrepancy between someone's aspirations and the direction Romania is heading in. In order to measure this component of social satisfaction of a person we introduced in the questionnaire the following question: "To what extent does the direction Romania is heading totally overlaps with your aspirations related to the following three components: the political component, the economic component and the observance of religious rights?". For the evaluation of a person's opinion in this case we defined a measurement scale with five integer values, defined as follows: 1 if the two plans share nothing in common, 2 if the two plans coincide to a lesser extent, 3 if the person's opinion is neutral, 4 if the two plans overlap to a greater extent, and 5 if the coincidence between the two plans is total. In order to appreciate synthetically the degree of peoples' social satisfaction which results from the relationship between someone's aspirations by taking into account the economic, political and religious aspects and the direction Romania is heading in we define a variable which is symbolized CAP (first level aggregate variable). We present the distribution of the answers, the averages and standard deviations for the three variables mentioned above in Table 2.

Table 2. The distribution of the answers related to the relationship between the direction Romania is heading in and personal aspirations

	Political	Economic	The observance of religious rights
It doesn't agree at all	224 (30.1)	133 (17.9)	75 (10.1)
It agrees to a lesser extent	278 (37.4)	354 (47.6)	133 (17.9)
It's unimportant to me	156 (21.0)	80 (10.8)	163 (21.9)
It agrees to a greater extent	46 (6.2)	130 (17.5)	250 (33.6)
It totally agrees	-	7 (0.9)	82 (11.0)
Non answers	40 (5.4)	40 (5.4)	41 (5.5)
<i>Average</i>	2.03	2.33	3.19
<i>Standard Deviation</i>	0.896	1.014	1.183

Between parentheses there is the percentage out of the total number of answers.

Source: Own calculus realized by authors using the results of the survey applied on the Romanian population.

The relations between primary variables, first and second level aggregate variables used to measure the level of social satisfaction of a person are presented in the schema from Figure 2.

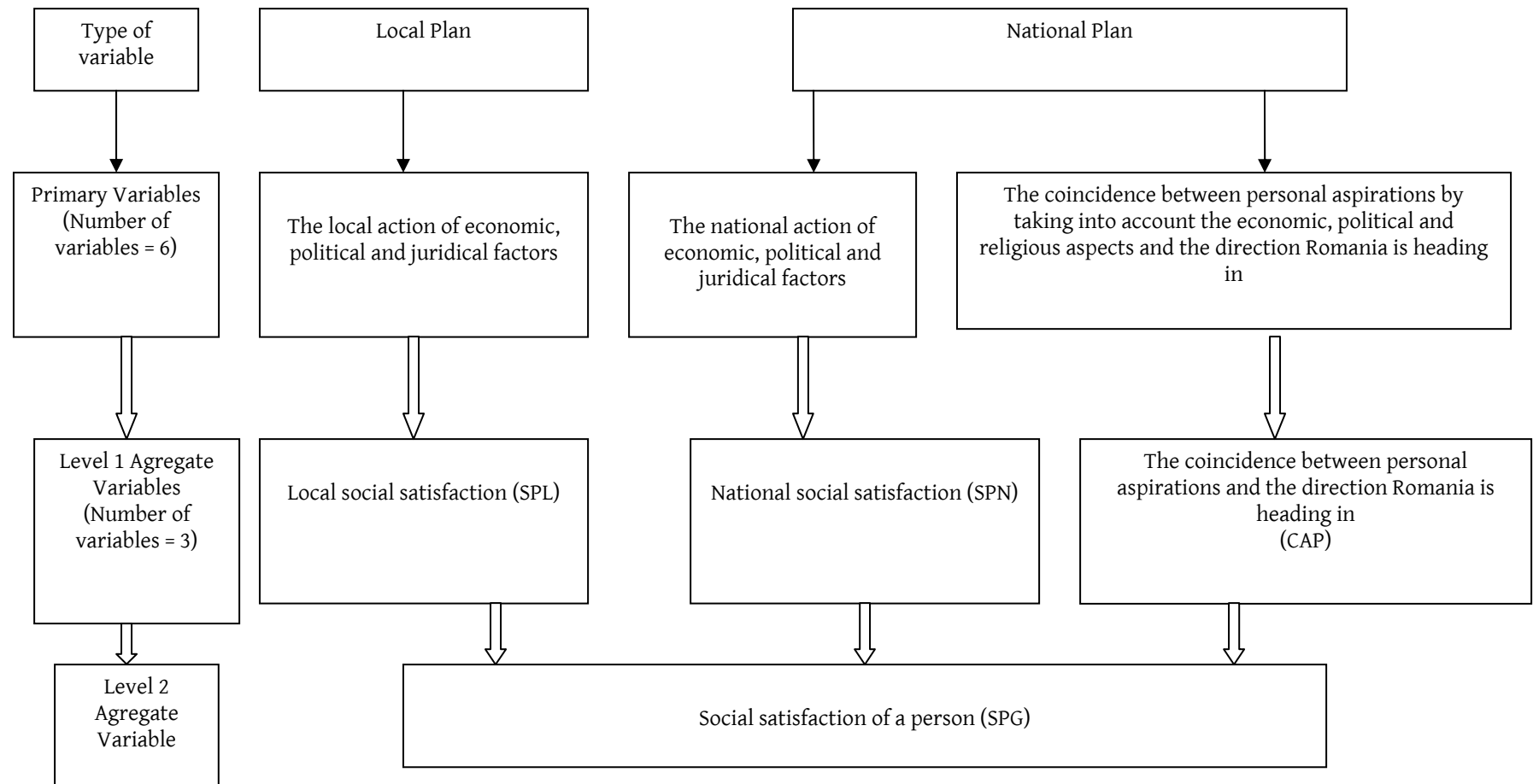


Figure 2. The relations between the characteristics used to define social satisfaction of a person

In order to quantify the degree of social satisfaction related to the factors which act at local and national level we defined the variables SPL, respectively SPN, as an aggregation of the variables used for the measurement of the influence exercised on social satisfaction by the economic, political and juridical factors.

The average value of the aggregate characteristic CAP is 2.52 (the value of standard deviation is 0.7455). This value indicates a negative opinion of the population related to the relationship between the two plans, personal and national.

In the political field, the differences between the positive and negative opinions are more than obvious. Thus, no less than 67.5% of the questioned persons have a negative vision concerning the direction Romania is heading in, compared with personal aspirations, while only 6.2% of the questioned persons said that the two plans overlap to a greater extent.

The economic factor is perceived more favorably at the level of the population as compared to the political one. A relatively significant proportion of the population (18.4%) has a favorable opinion as regards this criterion.

Only in the case of the observance of religious rights there is a positive perception. Thus, in this situation, 44.6% of the respondents have a favorable opinion, while 28% of them have an unfavorable point of view.

In order to evaluate the level of social satisfaction among the population we define a global measure which takes into consideration three aspects: the social satisfaction of a person generated by the action of local and national factors and the relationship between personal aspirations and the direction Romania is heading in (SPG). The linear correlation coefficients, calculated using these three variables, have the following values: 0.552 for the variables SPN and SPL, 0.235 for the variables SPN and CAP and 0.174 for the variables SPL and CAP. All these values are statistically significant at the 1% level of significance. The variable defined for the measurement of social satisfaction, which results from the action of local (SPL) and national factors (SPN), or at global level (SPG), takes values in the interval [1, 5]. The average of the variable SPG is equal to 2.47 (standard deviation is equal to 0.6149) and expresses a lower level of social satisfaction.

In order to analyze the aspects concerning the degree of social satisfaction, the economic behavior of the persons, the persons' donations to the church and the influence exercised by the religious factor on the electoral option of a person we considered certain personal aspects concerning the income per person and per household, the types of income sources, the option of a person or of another household member to go to work abroad, the participation of the questioned person at the religious divine services et cetera.

We present the most important conclusions obtained at the level of the sample:

- the average income per person at the sample level is 769 RON and per household it is 1595 RON;
- 35.6% from the total number of questioned persons have carried out supplementary activities during the last month to augment their personal income;
- 19.6% from the total number of the questioned persons tried, at some point, to start out their own business. Almost a quarter (24.6%) of the persons included in the sample gave a positive answer to the question: „Did you or someone else from your household go to work abroad in the previous two years?”. Only 7% of the questioned persons tried to start out their own business, they or other household members went to work abroad, while 62.2% represent persons who never tried to start out their own business or to go abroad to work, they or other household members;
- 69.3% out of the total number of the persons who said that they or other household members went abroad to work also affirmed that the frequentation of a Romanian church abroad had a positive influence on the person’s behavior;
- The distribution of the persons by religion is the following: 92.3% Orthodox, 2.0% Romano-Catholic, 1.1% Adventist, 2% Muslim, and 2.6% other religions. This distribution differs to a lesser degree from the results obtained at the Romanian population Census from 2002;
- The distribution of the persons by the frequency of the participation at the religious divine services is presented in Table 3. By analyzing these results we observe that only a small part of the population attends the religious divine services at least one time per month, respectively 11.1%, while 51.2% seldom attend the religious divine services. A percentage of almost 10% never attends the religious divine services. The values obtained from the survey are very close to those resulting from the barometers of opinion⁸.

Table 3. The distribution of the persons by the frequency of their participation at the religious divine services

Daily	A few times a week	Weekly	Once a month	Seldom	None at all	Non answer
0.3	1.6	16.4	11.1	51.2	9.5	6.5

Source: Own calculus realized by authors using the results of the survey applied on the Romanian population.

A variable which measures the frequency of the people's participation at the religious divine services (FSR) will be included in the regression model presented in the following section. This variable takes integer values in the interval from 0 (for the case in which the person does not participate at the religious divine services) and 5 (for the situation in which the person participates daily at the religious divine services).

From the variables which define personal characteristics we include in the regression model the following: the gender of a person, which is a binary variable which is taking the value 0 for female and 1 for male; the marital status of a person which is also a binary characteristic which is taking the value 0 for unmarried persons and 1 for married persons; the level of education of a person which is defined using a variable with 10 integer values, from 1 (no graduated school) to 10 (the person is a PhD).

The regression model for the analysis of the influence of religion on the electoral option

The model's variables

Religion can influence to a considerable extent, directly or indirectly, the political option of a person. In these circumstances, political parties or political personalities, who do not enjoy the population's confidence, use religious channels because church benefits from an important capital of trust. Thus, a transfer of positive image from the religious to the political plan can considerably influence the population. This one the more non homogenous it is population from the social point of view, the level of education et cetera. The key factors used in this direction vary greatly. Six major channels that can be used by politicians in election campaigns to gain population's votes were highlighted in the study. For each type we tried to evaluate the efficacy of their use by the politicians in the election campaigns. The religious channels used by politicians to attract the vote of a person are:

- The position of political leaders concerning religion in various public speeches (for example: the auto declaration of candidates as "free thinkers", public messages which refer predominantly to religious elements, the politician is accompanied, as a rule, to organised public manifestations, by representatives of the church et cetera) (IRE1);
- Advice received by the congregation from the priest or from prominent figures of the church to sustain a party, a person or to promote a political tendency et cetera (IRE2);
- Actions of political personalities (retrocession or non retrocession of church buildings or lands, support for religious buildings et cetera) (IRE3);

- The politicians' positions concerning sensitive subjects (homosexuality, abortion, the presence of icons in schools et cetera) (IRE4);
- Political personalities' declarations concerning divine missions et cetera (IRE5);
- The religious affiliation of the candidates at certain religious cults (IRE6).

For each of these six questions (IRE1-IRE6), the interviewed person had to choose between two options:

- the electoral option of a person is not influenced by the religious factor, situation in which the answer is codified with 0;
- the electoral option is influenced by this one, case in which the answer is codified with 1.

The answers' distribution by the six questions at sample's level is presented in Table 4.

Table 4. The influence of the religious factor on the electoral option of a person (%)

	IRE1	IRE2	IRE3	IRE4	IRE5	IRE6
Yes	7.9	8.3	15.5	18.5	5.9	12.5
No	84.4	83.9	76.5	73.7	86.0	79.4
Non answer	7.7	7.8	8.1	7.8	8.1	8.1

Source: Own calculus realized by authors using the results of the survey applied on the Romanian population.

We define the variable symbolized by IRE as a synthesis of these six variables mentioned above in order to appreciate globally the influence exercised by the religion through one of the six channels on the electoral option of a person. This one is calculated on the basis of individual answers to six questions from the questionnaire, used to evaluate each factor's influence on a person's electoral option around national or local elections, as an arithmetic mean of them. The values of this aggregate variable are situated in the interval from 0, which is corresponding to the situation in which religion does not have a significant influence on the electoral option of a person and 1, for the situation in which the influence of the religious factors on the electoral option of a person is very important. A value greater than 0.1 of this variable' average indicates a significant contribution of religious factors in defining the electoral option of a person.

After processing the data series for this variable used to estimate the influence exercised by religion on the electoral option of a person the following results were obtained:

- The average value of the religious factor variable (IRE) is 0.119 (standard deviation is 0.205) and it shows a relatively significant influence of the religious factors on the electoral option of a person. Using the answers' distribution we elaborate the histogram from Figure 3. The value of skewness is 1.894 and of kurtosis is 3.078 for the variable IRE, and indicate the fact that the distribution displays a pronounced right asymmetry;
- From the six factors previously presented, the most efficient for the influence of the citizens' political option is represented by the politicians' public positions concerning sensitive subjects such as: homosexuality, abortion, the presence of icons in schools et cetera. Thus, 18.1% out of the questioned persons appreciated that they can change their electoral option as a result of the addressed message, which contains a series of religious elements. The following factors, as importance, are the actions of political personalities concerning retrocession or non retrocession of church buildings or lands, support for religious buildings et cetera. 15.5% out of the questioned persons appreciated that they will change their electoral option due to this type of electoral message.

Given the fact that the majority of the Romanian population is Orthodox, it is interesting to elaborate an analysis of the influence religious factors have on the electoral option for the population of Orthodox and non Orthodox religion. The characteristics of the two distributions are presented in the following table:

Table 5. The characteristics of the religious factor variable (IRE) for the persons of Orthodox and non Orthodox religion

Religion	Average	Standard Deviation	Kurtosis	Skewness
Orthodox	0.1183	0.2061	1.89	3.08
Non Orthodox	0.1260	0.1950	1.93	3.78

Source: Own calculus realized by authors using the results of the survey applied on the Romanian population.

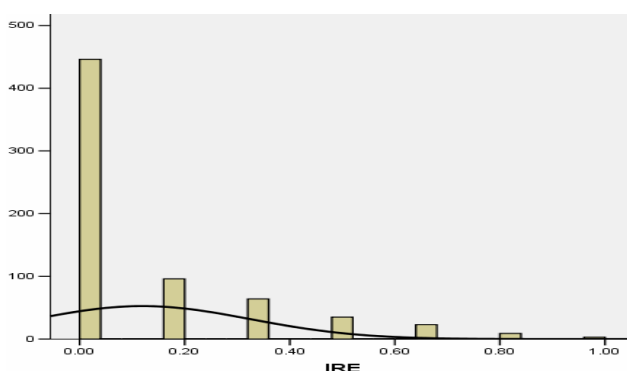


Figure 2: The distribution of the religious factor variable (IRE)

Source: Own calculus realized by authors using the results of the survey applied on the Romanian population.

The obtained results show that people who have a different religion, other than the Orthodox one, are somewhat more receptive to political messages addressed through various channels or religious activities.

The regression model

In order to identify a series of a person's characteristics of whose electoral option is influenced by a number of religious factors we have considered a number of factors related with the level of education of the person, the level of life, social status et cetera. For this reason, in the definition of the model for the analysis of how political options vary as a result of the use of religious key factors we have used four characteristics defined on the basis of questions from the questionnaire.

The first one is represented by the level of education of a person (NPP) and we have verified if the persons with a lower level of training are more vulnerable to the electoral messages sent through various communication channels having a religious tendency. The second one is represented by the level of social satisfaction, defined by one of the three concepts SPL, SPN and SPG. The third one is related to the frequency of a person's participation at the religious divine services (FSR). Last but not least, we will analyze if there are significant differences in the reception of political messages using religious elements at the level of the two categories of persons defined by gender (GP).

Thus, we define the following regression model:

$$IRE = f(NPP, GP, SPL, FSR) + \varepsilon$$

where the error $\varepsilon_i \rightarrow N(0, \sigma_\varepsilon^2)$ is used to quantify the influence of other factors (which were not included in the model) on the change of a

person's electoral option as a result of religious elements used (IRE) by the politicians.

The parameters' estimation was realised using Ordinary Least Squares Method (OLS), and the obtained results are the following:

$$IRE_i = 0,089 - 0,008^{***} NPP_i + 0,037^{**} GP_i + 0,013^{***} SPL_i + 0,020^* FSR_i$$

(0,037) (0,005) (0,017) (0,007) (0,008)

$$F = 4,177$$

$$N = 635, \quad * 0.02, \quad ** 0.03, \quad *** 0.08$$

Under each estimator is presented the value of standard deviation and the significance level, corresponding to the fact that the parameter is statistically significant.

The obtained results highlight the following:

- The persons with a lower level of education are more likely to change their electoral option due to the politicians that use the six religious factors in their messages and public actions during the electoral campaigns;
- The religious messages transmitted by the politicians during the electoral campaigns are more easily picked up by females;
- Those who attend the religious divine services more frequently are more sensitive to these messages, which influence to a greater extent their political option;
- The change of the electoral option under the emotional impulse of religious components found in the political message is more powerful at the level of the population with a lower standard of living and with a more pessimistic vision on the economic, social and political reality, as a consequence of poverty.

From the results presented above we can conclude that the religion of a person can influence their electoral option. We cannot say that the relationship is one of direct dependence, but the elaboration of a political message using religious elements may act indirectly or change the electoral option of a person. Therefore, using a series of statistical data provided by the National Institute of Statistics we estimate the link between the religious fractionalization of Romania's population and their political option to elect representatives of certain political parties.

The relation between the religious fractionalization and the electoral option

In the specialty literature there are a number of studies that underline the importance of electing a system of minority representatives in the national parliament to ensure political stability in a particular region and to develop a democratic system in a country⁹.

In order to realize a quantitative analysis of the impact of the religious and ethnical fractionalization on the political representation in the national parliament in the case of Romania, we used the following statistical data series at the level of counties and development regions: the population's repartition on ethnic groups and religion in conformity with the recordings from the Romanian population Census from 2002 and the repartition of senators and deputies by political parties at the elections from 2004 – data obtained from the Central Electoral Bureau.

In order to characterize the degree of ethnical and religious fractionalization and the deputies and senators' representation in parliament on political parties we calculated in each case Herfindahl index. For example, any of the three data series can be expressed by $(n_{ij})_{i=1,\dots,k, j=1,\dots,p}$, where k represents the number of administrative units (42 for

the counties' analysis and 8 for the one on development regions) and p represents the number of fractionalization' classes (the number of ethnic groups, religions or parliamentary political parties). The Herfindahl index is calculated for each data series using the following relation¹⁰:

$$H = \sum_{i=1}^k \left(\frac{n_{ij}}{\sum_{j=1}^p n_{ij}} \right)^2 \in [0,1]$$

A higher value of the indicator points to a lower level of fractionalization among the population, related to the considered characteristic. The values of this indicator, calculated for ethnic groups, religion and the repartition of senators and deputies by political parties using data series at the level of counties, are presented in Appendix 1. The obtained results at the level of development regions are presented in the following table:

Table 6. The Herfindahl fractionalization Indices at the development regions' level

Region	Religion	Ethnic Groups	Senators	Deputies
North-East	0.862	0.962	0.402	0.441
South-East	0.942	0.927	0.361	0.405
South-Muntenia	0.979	0.941	0.371	0.374
South-West Oltenia	0.985	0.947	0.372	0.369
West	0.727	0.772	0.337	0.347
North-West	0.552	0.607	0.286	0.253
Center	0.506	0.520	0.278	0.301
Bucharest-Ilfov	0.948	0.954	0.416	0.398
Total	0.805	0.813	0.332	0.330

Source: Own calculus realized by authors using data from Recensământul populației și al locuințelor 18 martie 2002 – vol. IV Populație - Structură etnică și confesională, București: Institutul Național de Statistică, 2003, 294-383; <http://www.bec2004.ro/statistici.htm>.

Between the four series of indices, defined at county level, there are correlations of different intensities and signs. Thus, using the data series, we observe that there is a higher level of dependence between the series concerning the repartition of the senators and deputies at county level ($r_{SEN/DEP} = 0,85$), respectively between the population's repartition by ethnic groups and religions at county level ($r_{ETN/REL} = 0,92$). The linear dependence is weaker but significant for a 7% level of significance for the senators' distribution on parties and for the population's repartition on religions ($r_{SEN/REL} = -0,12$), respectively on ethnic groups ($r_{SEN/ETN} = -0,14$). More, a higher level of ethnical and religious fractionalization determines a higher distribution of senators by political parties, excepting the case of Mureș, Covasna and Harghita counties, where to a higher level of ethnic and religious fractionalization corresponds a reduced fractionalization in the repartition of senators and deputies by political parties. Moreover, using the data series for the period 1992-2004 it can be concluded that, at the level of these three counties, we have the lowest level of parliamentary fractionalization on political parties.

Whereas, in most counties, the majority of the population is Orthodox, the values of religious fractionalization Herfindal index are close to one. Exceptions appear in the counties from the Centre and North-East regions, where the values are much lower. The same situation is encountered when computing the ethnic fractionalization index. In exchange, the highest values of this index, based on the distribution of senators and deputies by political parties, are registered in counties that have greater diversification of the population in relation with ethnicity and religion. It is a natural thing if we consider that for the latter the population's electoral option usually revolves around a single party, while for other counties, for the granting of votes, other criteria besides the ethnic one are also envisaged.

Let us look at two other equally interesting situations. The first is related to the fact that the highest values of fractionalization index, calculated for political options, are registered at the level of counties with low economic results, such as Botoșani, Vaslui and Olt. The second situation is noticeable in Bucharest, where the value of fractionalization index for the deputies is very high in comparison with the majority of counties. These results emphasize the fact that, along with religious factors, a number of other factors have an important contribution to the definition of the electoral option of a person. Obviously, among the important aspects that need to be taken into account in the analysis of the

religious message' impact on the electoral option is the level of culture and traditions from a particular social - economic development region.

Conclusions

During electoral campaigns, political parties used various means for the transmission of political messages in order to obtain votes. Many times, the means used by political parties are not allowed by the law. A fairly efficient way to obtain votes, especially for the transition period, during which there was no established culture of free democratic voting, was represented by the use of church institutions or their representatives.

The results obtained after processing the data series recorded at the sample level led to the conclusion that the political environment uses religious factors to obtain votes. Thus, a series of interventions have as main actors political leaders, through the expression of opinions related to certain topical religious issues, public support of church actions, religious affiliation of candidates to certain religious worships, the mention in most public interventions of the divine power to solve society's problems et cetera

Other interventions are made through the direct participation of church representatives in the transmission of political messages. We mention in this regard only a few of them: advices received by the congregation from the priest or from prominent figures of the church to sustain a party, a person or to promote a political trend, the registration of church representatives on the political parties' list of candidates, the participation of church representatives to electoral campaigns et cetera.

The direct and indirect use of religious factors in the election campaign of a party must be judged in the context in which the church enjoys the greatest level of trust among the population.

The efficient use of religious key factors in the electoral message should be judged taking into account the socio-professional characteristics of the population. Thus, people with a low level of social satisfaction, defined according to local and national conditions, change their political option more readily as a result of the intervention of religious elements in the electoral message transmitted by political parties. People who seldom attend the religious divine services are more likely to change their political option after receiving electoral messages containing religious elements from politicians.

Using a series of statistical data provided by the National Institute of Statistics we find that a higher distribution of senators by political parties corresponds to a higher level of ethnic and religious fractionalization. At the national level there are three exceptions at the level of Mureș, Covasna and Harghita counties. In the three cases there is a higher religious and ethnic fractionalization, while the distribution of senators and deputies by political parties is reduced. The explanation is found in the voting system

in Romania before the last elections and in the Hungarian population's preference to vote for UDMR.

Appendix 1. Herfindahl fractionalization indices at county level

	Deputies	Senators	Religion	Ethnic Groups
North-East				
Bacău	0.380	0.360	0.708	0.954
Botoșani	0.429	0.556	0.976	0.978
Iasi	0.389	0.520	0.893	0.966
Neamț	0.406	0.375	0.792	0.975
Suceava	0.420	0.500	0.943	0.936
Vaslui	0.429	0.556	0.965	0.978
South-East				
Braila	0.360	0.500	0.984	0.948
Buzău	0.429	0.556	0.985	0.942
Constanța	0.360	0.375	0.847	0.897
Galati	0.333	0.375	0.982	0.956
Tulcea	0.375	0.500	0.957	0.828
Vrancea	0.389	0.500	0.964	0.964
South-Muntenia				
Argeș	0.358	0.375	0.991	0.970
Călărași	0.360	0.500	0.987	0.890
Dâmbovită	0.406	0.333	0.979	0.939
Giurgiu	0.375	0.500	0.983	0.924
Ialomița	0.375	0.500	0.988	0.916
Prahova	0.375	0.360	0.975	0.957
Teleorman	0.389	0.556	0.957	0.938
South-West Oltenia				
Dolj	0.380	0.360	0.983	0.916
Gorj	0.333	0.500	0.988	0.966
Mehedinți	0.375	0.500	0.973	0.930
Olt	0.429	0.556	0.991	0.963
Valcea	0.389	0.333	0.988	0.978
West				
Arad	0.306	0.333	0.757	0.827
Caras-Severin	0.360	0.500	0.817	0.866
Hunedoara	0.388	0.333	0.708	0.726
Timis	0.333	0.375	0.459	0.539
North-West				
Bihor	0.284	0.250	0.810	0.820
Bistrița-Năsăud	0.360	0.500	0.610	0.665

Cluj	0.260	0.250	0.687	0.687
Maramures	0.306	0.333	0.358	0.473
Satu Mare	0.360	0.500	0.535	0.570
Salaj	0.375	0.500	0.806	0.823
Center				
Alba	0.389	0.500	0.841	0.773
Brasov	0.333	0.375	0.343	0.601
Covasna	0.625	1.000	0.547	0.737
Harghita	0.680	1.000	0.416	0.444
Mures	0.281	0.375	0.868	0.826
Sibiu	0.389	0.556	0.948	0.927
Bucharest-Ilfov				
Ilfov	0.375	0.500	0.948	0.959
Bucharest Municipality	0.441	0.389	0.948	0.954

Source: Own calculus realized by authors using data from Recensământul populației și al locuințelor 18 martie 2002 – vol. IV Populație - Structură etnică și confesională, București: Institutul Național de Statistică, 2003, 294-383; <http://www.bec2004.ro/statistici.htm>

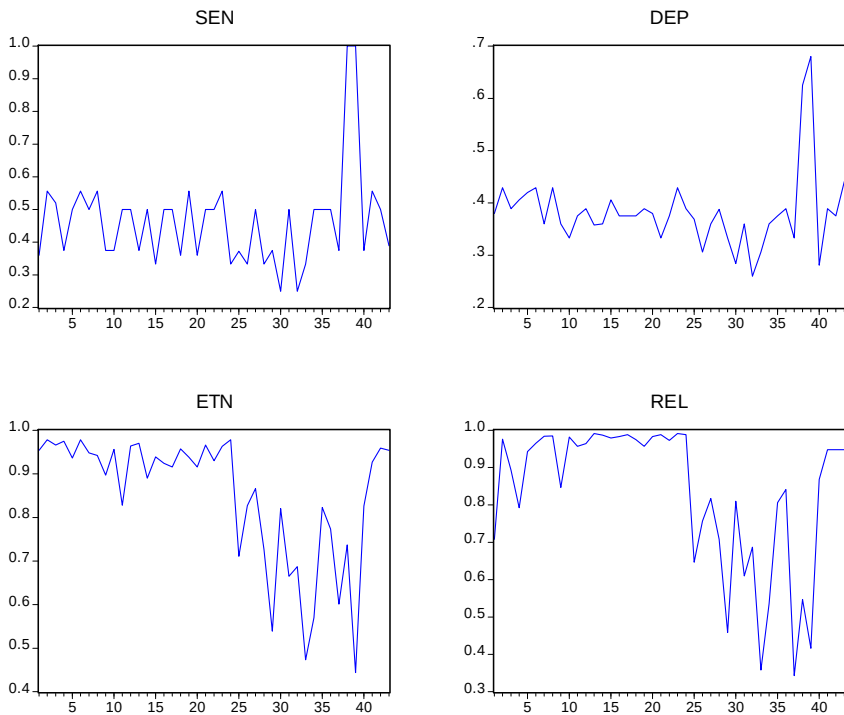


Figure 3. The distribution of senators and deputies on ethnic groups and religion using Herfindahl fractionalization indices

Source: Own calculus realized by authors using data from Recensământul populației și al locuințelor 18 martie 2002 – vol. IV Populație - Structură etnică și confesională, București: Institutul Național de Statistică, 2003, 294-383; <http://www.bec2004.ro/statistici.htm>

Bibliography

Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg. "Fractionalization." *Journal of Economic Growth* 8 (2003):155–194.

Andrei, Tudorel, and Regis Bourbonnais. *Econometrie*, București: Economica, 2008.

Andrei, Tudorel. *Statistică și Econometrie*. București: Economica, 2003.

Andr en, Daniela, and Peter Martinsson. "What Contributes to Life Satisfaction in Transitional Romania?." *Review of Development Economics* 10, 1 (2006):59-70.

Blanchflower, David G. and Andrew G. Oswald. "Well-Being over Time in Britain and the USA." *Journal of Public Economics* 88, 7-8 (July 2004):1359-1386.

Birbir, J hanna Krist n. "Public venture capital and party institutionalization." *Comparative Political Studies* 38, 8 (2005): 915–938.

Birbir, J hanna Krist n. *Ethnicity and Electoral Politics*. Cambridge and New York: Cambridge University Press, 2007.

Bisin, Alberto and Thierry Verdier. "Beyond the Melting Pot: Cultural Transmission, Marriage, and the Evolution of Ethnic and Religious Traits." *Quarterly Journal of Economics* 115, 3 (2000): 955-988.

Cox, Gary W. *Making votes count: Strategic coordination in the world's electoral systems*. Cambridge and New York: Cambridge University Press, 1997.

Dehejia, Rajeev, Thomas DeLeire and Erzo F. P. Luttmer. "Insuring Consumptions and Happiness through Religious Organizations." *Journal of Public Economics* 91 (2007): 259-279.

Frunz , Sandu. "Statul na ional  i Politicile multiculturale" (The Nation-State and Multicultural Policies). *Journal for the Study of Religions and Ideologies*, 5 (2003): 48-72.

Greene, Kenneth V. and Bong Joon Yoon. "Religiosity, Economics and Life Satisfaction." *Review of Social Economy* 62, 2 (2004): 245-261.

Lelkes, Orsolya. "Tasting Freedom: Happiness, Religion and Economic Transition." *Journal of Economic Behavior & Organization* 59 (2006): 173-194.

Lipford, Jody W. and Robert D. Tollison. "Religious Participation and Income." *Journal of Economic Behavior & Organization* 51 (2003): 249-260.

McCollum, James K. *Is Communism Dead Forever?*. New York: University Press of America, 1998.

Ng, Yew-Kwang. "A Case for Happiness, Cardinalism and Interpersonal Comparability." *Economic Journal* 107, 445 (1997): 1848-1858.

Posner, Daniel. "Measuring ethnic fractionalization in Africa." *American Journal of Political Science* 48, 4 (2004-a): 849-863.

Stan, Lavinia, and Lucian Turcescu. *Religion and Politics in Post-Communist Romania*. Oxford: Oxford University Press, 2007.

Notes:

¹ In Lavinia Stan and Lucian Turcescu, *Religion and Politics in Post-Communist Romania* (Oxford: Oxford University Press, 2007) are presented a series of cases in which Romanian churches were involved in electoral campaigns by supporting in various ways certain political parties or persons from the political domain.

² Sandu Frunză, "Statul național și Politicile multiculturale," *Journal for the Study of Religions and Ideologies*, 5 (2003): 48-72,

http://www.jsri.ro/old/html%20version/index/no_5/sandufrunza-articol.htm.

This paper presents the point of view of Alina Mungiu-Pippidi that, in the Orthodox world "there is no significant correlation between ethnicity and religion on the one hand, and democratic orientation on the other." Moreover, in this paper, the author's article underlines that "statistical analysis show that there is not a direct correlation between the option for a particular religion and the option for democracy. As we cannot say that there is a close correlation between ethnicity and religion, on the one hand, and democratic orientation, on the other hand, so we cannot say that religion would be a significant factor for the democratic support ", 57.

³ According to European Commission, "Standard Eurobarometer 68.2, Public Opinion in European Union, National Report – Romania, Autumn 2007," European Commission, 14,

http://ec.europa.eu/public_opinion/archives/eb/eb68/eb68_ro_nat.pdf.

⁴ Lavinia Stan and Lucian Turcescu, *Religion and Politics in Post-Communist Romania*.

⁵ Lavinia Stan and Lucian Turcescu, *Religion and Politics in Post-Communist Romania*.

⁶ Daniela Andr en and Peter Martinsson, in their article "What Contributes to Life Satisfaction in Transitional Romania?," *Review of Development Economics* 10, 1 (2006):59-70 define the concept of life satisfaction which defines the degree of a person's satisfaction as a result of economic and social factors action in the country where they live, but also depending on a number of characteristics related to the health of a person. Taking into account the main objective of the study, which is the analysis of the population's electoral options according to religious factors, the definition of the concept of social satisfaction of a person is more appropriate.

⁷ The Gallup Organization Romania, "Public Opinion Barometer, Perceptions about mass-media, Open Society Foundation, May 2006," The Gallup Organization Romania, http://www.gallup.ro/download/POB_May2006.pdf. According to the obtained results, the confidence in political parties is the lowest among the analyzed institutions. Thus, only 9% of population have expressed their confidence in them. Similar values may be encountered during past periods (See page 59).

⁸ The Gallup Organization Romania, 110, at the question "Apart from weddings, funerals and christenings, how often did you go to church lately?" the following distribution of answers: 2% daily, 4% several times a week, 20% once a week, 32% on Christmas, Easter and other holydays, 10% once a year or rarely, 7% once a month and 5% in fact, never, was obtained.

⁹ An exhaustive approach of this theme in Romania's case is realized in J hanna Krist n Birnir, *Ethnicity and Electoral Politics* (Cambridge and New York: Cambridge University Press, 2007).

¹⁰ For more details concerning the Herfindahl index see Tudorel Andrei, *Statistic   i Econometrie*, (Bucure ti: Economica, 2003), 153-7.