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## **MIXED MARRIAGES – AN ANALYSIS OF INTERETHNIC MARRIAGES IN ROMANIA**

***Abstract.** Several factors have shaped the evolution of ethnic diversity in the Romanian population in the past 100 years. Key among them were the mass emigration of certain ethnic groups, the deportations and the ethnic genocide experienced during World War II, and differences in fertility rates among various ethnic groups. In addition to these key factors, marriages between people of different ethnicities can play an important role in changing the ethnic distribution of the population over time. To understand how interethnic marriages can change the ethnic distribution of a population, it is important to examine in detail the characteristics of these marriages. The propensity to start a mixed marriage is influenced by a series of factors, including ethnic group size at the local level, gender, ethnicity, level of education, and age.*

**Keywords:** *marriage, interethnicity, ethnicity, ethnic diversity, population evolution.*

**JEL Classification:** C40, J11, J12, J15, C01, C18, C26, C36

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## **1. Introduction**

The analysis of the distribution of the population by ethnicity presents challenges because, in most countries, data on ethnicity are available only in decennial censuses. Moreover, since these data are obtained through self-reporting, statistics on ethnicity have been challenged by different ethnic groups (Manuila, 1940). However “in general, those who challenge the accuracy of a census must provide evidence, in accordance with the principle of *cujus affirmatio ejus probatio*” (Trebici, 1996). In Romania, statistical data were collected to characterise the ethnic structure of the population for all the censuses that took place between 1930 and 2011 and the present study captures data for this period. The changes in the Romanian ethnicity profile over the past century, both numerically and as a percentage within the total population, are significant. During the 1930 population census, Romanians represented 71.9% of the country's population, Hungarians 7.9%, Jews (Mosaics) 4.2%, Germans 4.6%, Ruthenians and Ukrainians 3.2%, Bulgarians 2.0%, Russians 2.3%, Turks and Tatars 1.0%, and others from other nations and less numerous (Manuilă, 1940). In the 2011 census, the structure by ethnicity was very different. As “intermarriage scholars” indicate, “mixed unions, particularly mixed marriages, defined as marital unions between individuals of different ethno-racial ancestry, have been subject to extensive empirical research in the United States” and many other countries dealing with similar issues. (Potarca and Bernardi, 2018). Moreover, Potarca and Bernardi emphasise the idea that “the type of ethnic mixing” “is not occurring by chance, but rather corresponding to different trajectories of integration...” Birkelund and Heldal (2003) introduced the concept of marital homogamy which „usually refers to marriage between partners of the same social group” (Birkelund and Heldal, 2003: 2). Based on group affiliation, homogamy could be defined in different ways; “either by social background, by ethnic group, by religious group, by regional, demographic or social dispersion, by educational attainment, by status group or present social class” (Birkelund and Heldal, 2003). Thus, homogamy means that there is no relationship between individuals of different social groups. In this context, intermarriage appears as an “indicator of social and

cultural openness and integration” (Hout and Goldstein, 1994; Blum and Schwartz, 1982).

Although there are multiple explanations for these changes, two factors are key in explaining the changes in the ethnic structure of the population over a long time horizon: differences in fertility rates by ethnicity and differences in the internal and external migration of veracious ethnic groups.

The main goal of this study was to examine the propensity to form interethnic marriages among the various ethnic groups, focusing on the roles played by education, group size, location, and age.

The study uses data from the 2011 National Census. Multivariate analysis is based on binary logistic regression, with a cross-sectional approach for natives.

## **2. Description of Variables for Logistic Model**

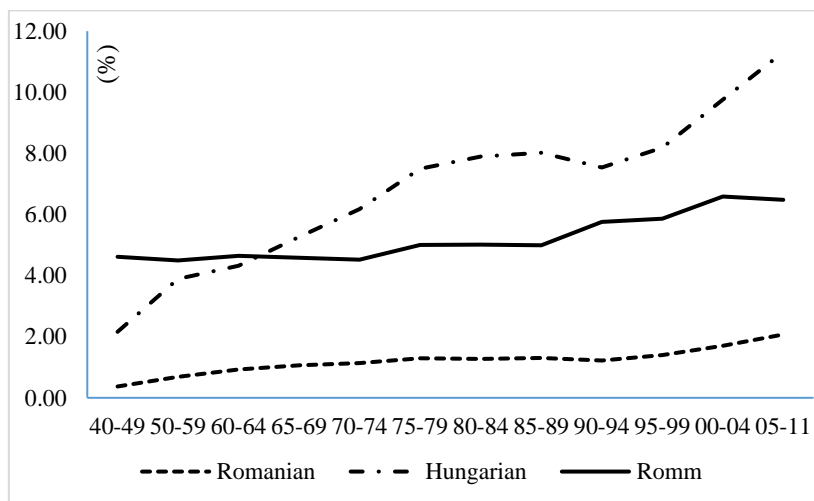
For each legally married couple registered during the 2011 census, a binary variable was defined that takes the value of 1 if the spouses are of different ethnicities and 0 if they belong to the same ethnic group. Using information from the census, the following variables were included in the logit model for the analysis of the factors affecting the propensity of mixed marriages: (1) the type residence for couple is a binary variable and determines whether persons lived in urban or rural areas (1 - urban and 0 - rural) at the time of registration of census data; (2) for each of the eight regions a binary variable was defined (1 - if the persons reside in the region and 0 otherwise); (3) for the evaluation of the level of education of each person within the couple we defined five binary variables corresponding to the highest level of education: without school, primary, secondary, and tertiary (a value 1 of is assigned if the person has the level of education specified by the variable and 0 in other cases);

Based on the data registered at the census, the shares of interethnic marriages for the largest ethnic groups in Romania were calculated. The graph in Figure 2 summarises the results obtained. In assessing the results, it should be noted that they refer only to mixed marriages registered during the 2011 population census and do not include the total of marriages that were formed for each specified period. Over time, there have been changes in the status of people who have been married during a certain period of time (one or both spouses have died, the marriage has not lasted due to divorce, spouses have emigrated, etc.). Thus, the results obtained do not capture all interethnic marriages formalised over a period of time, but only those recorded on the date of registration of census data. This is a limitation since the divorce rate is higher in the case of ethnically mixed marriages (M. van Ham and T. Tammaru, 2011).

Figure 1 indicates that the share of mixed marriages has increased at different rates for the three ethnic groups. In the Romanian population, which constitutes the majority in most localities in Romania, there was a continuous increase in the share of mixed marriages from 0.37% in the period 1940 - 49 to 2.07%

in the period 2005 - 2011. The data also show an increase in the share of mixed marriages among Hungarians during the period 1940 - 1980, which was followed by a relative stagnation during the next 10 years. During the post-communist period, there was a significant increase in the share of mixed marriages in this ethnic group. The share of mixed marriages in the total number of marriages of this ethnic group increased from 2.16% in the period 1940 - 1949 to 11.32% in the period 2005 - 2011.

For the Roma ethnic group, the share of mixed marriages remained relatively constant during the period 1940 - 1970, at approximately 4%. Over a 20-year span (until the 1989 revolution), there was an increase of only one percentage point in the share of mixed marriages for this ethnic group in the total number of marriages. The post-revolution period marked an increase in mixed marriages for this ethnic group, but growth was moderate: from 4.62% in the period 1940 - 1949 to 5.79% in the period 2005 - 2011.



**Figure 1. The evolution of mixed marriages for the three largest ethnic groups**

To better understand the evolution over time of the formation of mixed marriages, Table 16 summarises the censuses following World War II. According to the first census organised after World War II, the three most important ethnic groups were Romanian, Hungarian, and German, representing 85.76%, 9.08%, and 2.20% of the country's resident population. During the period 1956-1992 there were important changes in the ethnic structure of the Romanian population so that at the first conducted after the political changes in December 1989, the three most important ethnic groups were Romanian, Hungarian and Roma.

Among the most important causes of these changes, we mention the following: 1) the significant reduction of the German and Jewish population through the massive departures of the two populations (Kochavi, 1995), (Melman and Raviv,

1990); 2) a significant reduction in the share of the Hungarian population in the resident population; 3) an increase in the share of the Roma population due to a large extent to a high birth rate (Andrei 2018, in the paper coordinated by Ghețău). Since the 1992 census, the increase in the share of Roma ethnicity was also due to the increase in the number of individuals who declared their membership in this ethnic group, and who in previous census would normally declare their membership in another ethnic group.

### 3. Results using Logit Model

Table 1 presents for each of the three ethnic groups the characteristics of married people and those who are married in an ethnically mixed couple. For the Romanian and Hungarian ethnic groups, the share of mixed marriages is much higher in urban areas than in rural areas. For the Roma ethnic group, there is a small difference between the share of mixed marriages in urban and rural areas. However, if we consider that most married people belonging to this ethnic group live in rural areas, we can assume that the urban environment creates more conditions for mixed marriage formation than rural areas. Thirty-five percent of couples in which one spouse is Roma are from rural areas, while 53% of mixed couples in which the husband or wife is Roma live in urban areas.

The highest education level is a positive factor for the formation of mixed marriages, both for women and men, for all three ethnic groups. For Roma women, the chance of forming a mixed marriage is very small if they have no formal education. In more than 20% of marriages, Roma women have no formal education, while only in 5.8% of mixed marriages of Roma women are without school. The situation is relatively similar to Roma men who form a mixed marriage.

The results in Table 16 and Figure 2 reveal a gradual increase in the proportion of mixed marriages in which Romanian and Hungarian ethnicities are involved. The most significant increase in the share of mixed marriages among ethnic Hungarians, of about 3 percentage points, was recorded during the period 1965-1989. This is the period when the industrialisation of the economy was achieved, which led to the creation of large plants that attracted a large number of people from all regions of the country, thus stimulating population mobility at the national level. In contrast, within the Roma population, the share of mixed marriages was relatively constant until 1970, after which there was a moderate and relatively constant increase until 2005, followed by a relative stagnation of approximately 6%.

An important factor in the formation of mixed marriages among ethnic Hungarians and Roma is the distribution of these ethnic groups within each region. For both Romanians and Hungarians, there is an uneven distribution in the number of mixed marriages across regions. The highest shares of mixed marriages for the two ethnic groups are in the North-West, Central and Western regions. These are regions where more than 98% of the Hungarian population lives, and each region

has 18%, 30% and, respectively, 5% as a share of the Hungarian ethnic population. In the remaining regions, the share of the Hungarian ethnic group in the total resident population is relatively low.

The results regarding the ethnic structure at the village and locality levels reveal an interesting pattern in the formation of mixed marriages among Romanian and Hungarian ethnics. Mixed marriages are formed with predilection in places where the share of the majority ethnicity is not overwhelming. In contrast, in the case of Roma, mixed marriages take place where the proportion of this ethnic group is more significant, as can be seen from the comparison of the share of this ethnic group in localities where there are Roma communities with those in mixed marriages in which a partner is Roma (2.3% vs 4.0% in the village, respectively 2.6% vs 3.8% in the locality). Comparing the values of the structure vectors calculated at the village and locality level with those calculated only for the villages, respectively, the localities where mixed marriages are registered, one notes that there is a higher rate of mixed marriages where ethnic diversity is higher (0.900 vs 0.803, respectively, 0.892 vs 0.799).

**Table 1 Share of Mixed Marriages by Demographic Characteristics (%)**

| Variable                  | Romanians' marriages |       | Hungarians' marriages |       | Roma's marriages |       |
|---------------------------|----------------------|-------|-----------------------|-------|------------------|-------|
|                           | total                | mixed | total                 | mixed | total            | mixed |
| Locale Type               |                      |       |                       |       |                  |       |
| Urban                     | 54.0                 | 71.0  | 52.0                  | 72.0  | 35.0             | 53.0  |
| Rural                     | 46.0                 | 29.0  | 48.0                  | 28.0  | 65.0             | 47.0  |
| Wife's Education Level    |                      |       |                       |       |                  |       |
| No studies                | 1.01                 | 1.27  | 0.71                  | 0.54  | 21.15            | 5.83  |
| Primary                   | 8.92                 | 4.85  | 5.77                  | 3.62  | 29.70            | 14.36 |
| Junior High               | 27.85                | 24.43 | 31.97                 | 21.84 | 38.65            | 43.16 |
| High School/ Trade School | 45.17                | 49.50 | 49.62                 | 53.68 | 9.66             | 32.90 |

Mixed Marriages. An Analysis of Interethnic Marriages in Romania

| Variable                    | Romanians' marriages |       | Hungarians' marriages |       | Roma's marriages |       |
|-----------------------------|----------------------|-------|-----------------------|-------|------------------|-------|
|                             | total                | mixed | total                 | mixed | total            | mixed |
| University                  | 17.05                | 19.95 | 11.92                 | 20.32 | 0.84             | 2.74  |
| Husband's Educational Level |                      |       |                       |       |                  |       |
| No studies                  | 0.63                 | 0.51  | 0.56                  | 0.32  | 14.23            | 6.21  |
| Primary                     | 7.42                 | 3.35  | 5.02                  | 3.25  | 28.64            | 18.14 |
| Junior High                 | 20.75                | 16.28 | 23.62                 | 16.29 | 40.25            | 41.38 |
| High School/Trade School    | 54.36                | 58.17 | 59.97                 | 62.74 | 16.01            | 30.55 |
| University                  | 16.85                | 21.7  | 10.83                 | 17.41 | 0.87             | 3.72  |
| Birth cohort for Men        |                      |       |                       |       |                  |       |
| bcm1- after 1990            | 0.08                 | 0.12  | 0.06                  | 0.08  | 1.10             | 1.16  |
| bcm2 1980 – 1989            | 7.54                 | 9.62  | 6.85                  | 8.31  | 19.30            | 20.50 |
| bcm3 1970 – 1979            | 21.77                | 23.64 | 21.64                 | 24.56 | 30.28            | 33.64 |
| bcm4 1960 – 1969            | 21.30                | 20.53 | 20.00                 | 21.04 | 22.30            | 20.82 |
| bcm5 1950 – 1959            | 22.27                | 22.09 | 22.14                 | 24.25 | 17.83            | 15.65 |
| bcm6 Before 1949            | 27.05                | 24.00 | 29.32                 | 21.76 | 9.20             | 8.23  |

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| Variable                                      | Romanians' marriages |       | Hungarians' marriages |       | Roma's marriages |       |
|---|----------------------|-------|-----------------------|-------|------------------|-------|
|   | total                | mixed | total                 | mixed | total            | mixed |
| Birth cohort for Women<br>bcw1-<br>after 1990 | 0.78                 | 0.82  | 0.54                  | 0.61  | 3.87             | 4.39  |
| bcw2 1980<br>– 1989                           | 13.03                | 15.43 | 12.21                 | 14.83 | 25.42            | 28.14 |
| bcw3 1970<br>– 1979                           | 22.96                | 23.06 | 22.81                 | 24.05 | 29.31            | 31.13 |
| bcw4 1960<br>– 1969                           | 21.11                | 20.16 | 20.10                 | 21.43 | 20.00            | 18.37 |
| bcw5 1950<br>– 1959                           | 21.67                | 21.65 | 22.53                 | 22.77 | 14.75            | 12.23 |
| bcw<br>Before<br>1949                         | 19.99                | 18.07 | 21.34                 | 15.58 | 6.31             | 5.38  |
| Region  |                      |       |                       |       |                  |       |
| R1  | 17.86                | 3.57  | 0.40                  | 0.74  | 8.70             | 7.81  |
| R2  | 13.73                | 5.54  | 0.08                  | 0.55  | 11.80            | 10.16 |
| R3  | 17.33                | 3.26  | 0.07                  | 0.49  | 20.88            | 20.14 |
| R4  | 11.78                | 1.82  | 0.06                  | 0.38  | 10.85            | 6.00  |
| R5  | 8.38                 | 24.04 | 7.50                  | 24.82 | 6.85             | 10.79 |
| R6  | 11.18                | 31.38 | 37.54                 | 42.21 | 17.44            | 15.20 |
| R7  | 8.57                 | 23.93 | 54.09                 | 29.22 | 17.13            | 13.39 |
| R8  | 11.16                | 6.46  | 0.27                  | 1.59  | 6.36             | 16.51 |



Mixed Marriages. An Analysis of Interethnic Marriages in Romania

| Variable  | Romanians' marriages |       | Hungarians' marriages |       | Roma's marriages |       |
|---|----------------------|-------|-----------------------|-------|------------------|-------|
|   | total                | mixed | total                 | mixed | total            | mixed |
| Village ethnic composition<br>y_sat_rom<br>anians | 88.3                 | 69.1  | 34.1                  | 65.9  | 63.6             | 74.6  |
| y_sat_hun<br>garians                              | 2.4                  | 17.1  | 57.1                  | 22.5  | 7.1              | 6.4   |
| y_sat_rom<br>a                                    | 2.3                  | 4.0   | 03.9                  | 3.9   | 22.1             | 11.1  |
| County ethnic composition<br>y_uat_rom<br>anians  | 87.6                 | 70.3  | 38.0                  | 67.4  | 71.2             | 78.0  |
| y_uat_hun<br>garians                              | 2.7                  | 16.4  | 52.7                  | 20.8  | 7.9              | 6.5   |
| y_uat_rom<br>a                                    | 2.6                  | 3.8   | 4.3                   | 4.0   | 14.2             | 7.7   |
| Village ethnic concentration<br>E_sat             | 0.900                | 0.803 | 0.815                 | 0.782 | 0.785            | 0.822 |
| County ethnic concentration<br>E_uat              | 0.892                | 0.799 | 0.797                 | 0.778 | 0.800            | 0.832 |

**Table 2 Logistic regression models for estimating the probability of forming an interethnic marriage**

| Variable                          | Model 1<br>(Romanians) | Model 2<br>(Hungarians) | Model 3<br>(Roma) |
|-----------------------------------|------------------------|-------------------------|-------------------|
| Locale Type Urban                 | 0.264*                 | -0.120*                 |                   |
| Wife's Highest Education Level    |                        |                         | 0.220*            |
| Primary                           | -0.974                 | -0.165                  |                   |
| Junior High                       | -0.919*                |                         | 0.563*            |
| High School/Trade School          | -1.034*                | 0.136*                  | 1.133*            |
| University                        | -1.212*                |                         | 1.156*            |
| Husband's Highest Education Level |                        |                         |                   |
| Primary                           | -0.024*                |                         |                   |
| Junior High                       | 0.297*                 | -0.397*                 |                   |
| High School                       | 0.474*                 | -0.269*                 | 0.079*            |
| University                        | 0.548*                 | 0.415*                  | 0.336*            |
| Birth cohort for Men              |                        |                         |                   |
| bcm1- after 1990                  | 0.590*                 | 0.771*                  | -0.231*           |
| bcm2 1980 – 1989                  | 0.321*                 | 0.543*                  | -0.158*           |
| bcm3 1970 – 1979                  | 0.295*                 | 0.485*                  | -0.098*           |
| bcm4 1960 – 1969                  | 0.183*                 | 0.377*                  | -0.159*           |
| bcm5 1950 – 1959                  | 0.077*                 | 0.212*                  | -0.086*           |
| Birth cohort for Women            |                        |                         |                   |
| bcw1- after 1990                  | -0.276*                | 0.438*                  | 0.253*            |
| bcw2 1980 – 1989                  | -0.278*                | 0.127*                  | 0.010*            |
| bcw3 1970 – 1979                  | -0.415*                | -0.064**                |                   |
| bcw4 1960 – 1969                  | -0.403*                | -0.087*                 | -0.087*           |
| bcw5 1950 – 1959                  | -0.241*                |                         | -0.101*           |
| Region                            |                        |                         |                   |
| R1                                | -0.547*                | -1.084*                 | -0.335*           |
| R2                                | -0.189*                | 0.803*                  | -0.262*           |
| R3                                | -0.608*                | 0.713*                  | -0.256*           |
| R4                                | -0.788*                |                         | -0.540*           |
| R5                                | 1.458*                 | -0.956*                 | -0.090*           |
| R6                                | 1.058*                 | -1.490*                 | -0.295*           |
| R7                                | 1.032*                 | -1.451*                 | -0.313*           |

Mixed Marriages. An Analysis of Interethnic Marriages in Romania

| Variable  | Model 1<br>(Romanians) | Model 2<br>(Hungarians) | Model 3<br>(Roma) |
|---|------------------------|-------------------------|-------------------|
| Sector Ethnic<br>Composition<br>y_sat_romanians   | -5.463*                | -1.385*                 |                   |
| y_sat_hungarians                                  | -0.951*                | -4.766*                 |                   |
| y_sat_roma  | -3.108*                | -2.354*                 | -0.819*           |
| Locality Ethnic<br>Composition<br>y_uat_romanians | -1.086*                | -0.546**                |                   |
| y_uat_hungarians                                  | -1.260*                | -0.713*                 |                   |
| y_uat_roma  | -0.747*                | 0.818                   | -0.525*           |
| Village Ethnic<br>Composition<br>E_sat            | -1.350*                | 0.620*                  | 0.512*            |
| County Ethnic<br>Composition<br>Euat              | -0.636*                |                         | -0.332**          |
| Intercept   | 2.984*                 | 1.936*                  | 1.63*             |
| McFadden R-<br>squared                            | 0.19                   | 0.20                    | 0.13              |
| LR statistic                                      | 96,437.4               | 39,363.5                | 5,133.1           |
| Total obs.  | 3,777,266              | 264,995                 | 83,396            |
| 0 (monoethnic marriages)                          | 3,730,713              | 233,684                 | 78,226            |
| 1 (mixed marriages)                               | 46,553                 | 31,311                  | 5,170             |

Data Source: authors' calculations based on the microdata from the 2011 census; \* p < .05; \*\* p < .01 list reference values

Table 2 presents the estimates of the parameters for a logit model using the maximum likelihood method. Results include important factors and their contribution to the estimation of the probability of a person to form a mixed marriage for each of the three largest ethnic groups. For people of Romanian ethnicity, the urban residence environment is a significant factor for the formation of a mixed marriage, while for the Hungarians, this factor does not have an effect. Simlatly, the residence type does not have a significant effect on interethnic marraiges for Roma.

For Romanian women, the probability of forming a mixed union through marriage decreases with level of education. The situation is completely reversed for Romanian men, for whom there is an increase in the probability of forming a mixed marriage as the education level increases above primary education. Moreover, for ethnic Romanian men with no formal schooling, the probability of forming a mixed union is lower than of those who completed primary or higher levels of education.

For Roma women, the chance of forming a mixed union increases with the improvement in level of education. For men belonging to the Roma ethnic group, education has a positive impact only insofar as they have completed high school/vocational or university studies.

For all birth cohorts of Romanian and Hungarian men, the probability of forming a mixed marriage increases over time, while for Roma men the chance of forming a mixed marriage decreases over time. That is, younger generations of Romanian men are more likely to form interethnic marriages than older generations, while the reverse is true for Roma men. For the five time periods considered, the marginal rates calculated for men of Romanian and Hungarian ethnicity are positive. Across all five cohorts, the chance of forming a mixed marriage is lower for women of Romanian ethnicity than for men of the same ethnic group. The marginal rates calculated for Romanian women are negative, but they start to decrease after 1980. On the other hand, the chance of forming a mixed marriage increases for Roma women born after 1980, since the marginal rates calculated for the two periods of time that followed this year were positive and significantly different from zero.

The high degree of concentration of the Romanian majority in most villages and localities is an important factor that negatively affects the share of mixed marriages for this ethnic group. In contrast, the relatively low degree of concentration of the Hungarian ethnic group in most villages determines the formation of mixed marriages at a higher rate for this group. However, the degree of concentration of the Roma ethnicity at the village level is a positive factor for the formation of mixed marriages (the marginal rate in this case is 0.512), while the degree of concentration at the locality level is a factor with a negative influence on the formation of mixed marriages (the marginal rate is -0.332).

#### **4. Conclusions**

An analysis of the interethnic marriages can provide important insights about changes in the ethnic composition of a population over time. Using the 2011 Romanian Census Data, we found significant differences between ethnic groups in the likelihood of marrying outside their own groups, even after controlling for education, age, gender, location type (urban vs. rural), and region.

In general, there is a higher rate of mixed marriages in those locations where ethnic diversity is higher. The results reveal an interesting pattern in the formation of mixed marriages among Romanian and Hungarian ethnics. Mixed marriages are formed with predilection in places where the share of the majority ethnicity is not overwhelming. In contrast, in the case of Roma, mixed marriages are more likely to take place where there is a significant proportion of this ethnic group.

We found that age is significantly related to the propensity to start mixed marriages. However, its effect is not uniform across ethnic groups. Younger generations of Romanian men are more likely to start mixed marriages than older generations, while the reverse is true for Roma men. Our results also indicate that,

in general, the share of mixed marriages increases with the the level of education, not only for the entire population, but also for each of the three major ethnic groups. This relationship is much more evident for the Hungarian and Roma ethnic groups, which are incomparably smaller than the Romanian ethnic group.

Interestingly, for Romanian women, the probability of forming a mixed marriage decreases with the level of education. The situation is completely reversed for Romanian men, for whom there is an increase in the probability of forming a mixed marriage as the education level improves. For Roma women, the chance of forming a mixed marriage increases with the improvement in the level of education. For men belonging to the Roma ethnic group, education has a positive impact insofar as they have completed high school/vocational or university studies. Urban versus rural residence was found to have a differential impact on the propensity for interethnic marriage. For people of Romanian ethnicity, the urban residence environment is a positive factor for the formation of a mixed marriage, while for the Hungarians, this factor does not create an advantage. Similarly, for Roma ethnics, the residence type does not have a significant influence on the formation of mixed marriages.

However, this study is not without limitations. Although education is a proxy for socioeconomic status, the study did not measure income levels or job status. Other important characteristics affecting marriage decisions, such as physical appearance, were not observed. In addition, the sex ratio within each ethnic group was not included in the analysis.

## REFERENCES

- [1] Andrei, T. (2018), *Estimating female fertility for main ethnic groups in Romania in Demography of Romania*. Romanian Academy, Bucharest;
- [2] Birkelund, G.E., Heldal, J. (2003), *Who Marries Whom? Educational Homogamy in Norway*. *Demographic Research*, 8 (1), 1-30. 10.4054/DemRes.2003.8.1;
- [3] Blau, P.M., Blum, T.C., Schwartz, J.E. (1982), *Heterogeneity and intermarriage*. *American sociological review*, 45-62;
- [4] Hout, M., Goldstein, J.R. (1994), *How 4.5 million Irish immigrants became 40 million Irish Americans: Demographic and subjective aspects of the ethnic composition of white Americans*. *American Sociological Review*, 64-82;
- [5] Kochavi, A.J. (1995), *British diplomats and the Jews in Poland, Romania and Hungary during the Communist takeovers*. *East European Quarterly*, 29(4), 449;

- [6] **Potarca, G., Bernardi, L. (2018), *Mixed marriages in Switzerland: A test of the segmented assimilation hypothesis*. *Demographic Research*, 38, 1457-1494;**
- [7] **Manuilă, S. (1940), *Demografia rurală a României*, in **Banu, G. (ed), *Probleme sanitare ale populației rurale din Romania*, 145-170;****
- [8] **Manuilă, S. (1938), *Recensământul General al Populației din 29 decembrie 1930, Volumul II*. București: Editura Institutului central de statistică;**
- [9] **Melman, Y., Raviv, D. (1990), *The Journalist's Connections: How Israel Got Russia's Biggest Pre- glasnost Secret*. *International Journal of Intelligence and Counter Intelligence*, 4(2), 219-225;**
- [10] **Trebici, V. (1991), *Romania's ethnic demography*. Available at: <https://sas.unibuc.ro/storage/downloads/minoritati-79/EthnicDemo1991.pdf>;**
- [11] **Trebici, V. (1996), *Minoritățile Naționale din România: prezent și estimăție prospectivă*. *Revista de cercetări sociale*, 1, 106-123;**
- [12] **Van Ham, M., Tammaru, T. (2011), *Ethnic minority–majority unions in Estonia*. *European Journal of Population/Revue Européenne de Démographie*, 27(3), 313-335.**