Article

Relationship between Population and Ethno-Cultural Heritage—Case Study: Crișana, Romania

Luminița Anca Deac 1, Grigore Vasile Herman 2,*, Maria Gozner 2, Gheorghe Codruț Bulz 1 and Emilia Boc 2

1 Department of Physical Education, Sport and Physical Therapy, Faculty of Geography, Tourism and Sport, University of Oradea, 410087 Oradea, Romania; anca_deac@yahoo.com (L.A.D.); bulz.codru@uoradea.ro (G.C.B.)

2 Department of Geography, Tourism and Territorial Planning, Faculty of Geography, Tourism and Sport, University of Oradea, 410087 Oradea, Romania; mgozner@uoradea.ro (M.G.); emiliaboc04@yahoo.com (E.B.)

* Correspondence: gherman@uoradea.ro; Tel.: +40-751236226

Abstract: Crișana Region is one of the most representative and wide historical regions of Romania, which encompasses several “lands” and ethnographic areas, each of them being defined by a series of features, among which those of demographic nature (ethnicity, religion) and ethno-cultural features stand out. In this context, the aim of the current study is to identify, assess and emphasize the relationship between the demographic features and those related to the ethno-cultural heritage. The accomplishment of this work required the use of the multi-criteria analysis method, successfully applied in various activity areas, a method which is characterized by a high level of complexity. The obtained results emphasized the spatial distribution on ‘territorial administrative unit’ (TAU) level of the aggregated synthetic values and of the relationship types which were determined between population and ethno-cultural heritage in Crișana Region, Romania.

Keywords: demography; ethno-cultural heritage; multi-criteria analysis; spatial distribution; relationship

1. Introduction

Ethno-cultural heritage is the creative expression of the people in a given area [1]. Among the socio-demographic features which have a significant influence on contouring and promoting the ethno-cultural heritage, the ethnic and religious structures stand out [2–4]. Demographic data (referring to ethnicity and religion) are used in demographic anthropology [5–7] to answer certain questions of evolution and cultural type. The correlation between ethnography and demography is not recent [8], but the researchers concerned with demography were criticized for not using to the fullest the information provided by ethnography [9]. Furthermore, it was noted that researchers use ethnography only as a background for their work, and that the ethnographic articles are only cited as references or are used to corroborate the researchers’ conclusions [9]. Ethnography is generally associated with social and cultural anthropology [10], and the anthropological observations provide a better understanding of the contemporary world, a fact which is emphasized by the demographic changes caused by culture, economy, and politics [11,12].

The study was carried out in the Crișana Region, a region situated in the North-Western part of Romania, at the border with Hungary in the West and neighboring other important Romanian regions: Maramures in the North, Transylvania in the East, and Banat in the South. From a geographical point of view, the region features diverse forms of relief, from plains to hills and mountains, and a dense hydrographic network. The Eastern part of the region is bordered by mountains: Meseș and Plopiș Mountains, Pădurea Craiului Mountains, and, in the South-East, it continues with Bihor-Vlădeasa Mountains and Codru Moma Mountains. The Southern part is bordered by Zarándului Mountains. The hill formations and depressions are, from North to South, as follows: Crasnei Hills, Silvania...
Depression, Barcăului Hills, Oradiei Hills, Crisul Repede Depression, Tâșadului Hills, Crisul Negru Depression, Codrului Piedmont, and Zaránd Depression. Among the major plains in Crișana, we mention, also from the North to the South: Ierului Plain, Barcăului Plain, Miersigului Plain, Crișului Negru Plain, and Crișului Alb Plain. From the dense hydrographic network of the region, we mention the Crișul Repede, Crisul Negru, and Crisul Alb Rivers, and Er and Barcău Rivers, together with their tributaries. There are also many lakes, most of them being made by man (e.g., Cefa, Inand).

The human settlements are varied from hamlets and small villages, spread in higher mountain areas, to larger villages gathered in lower hill or plain areas, to towns and cities, the city of Oradea being the largest one and with the highest number of inhabitants in the region. Throughout time, the region has gone through various significant historical moments and administrative and territorial changes, which have all influenced population migration and, implicitly, the ethnic and religious structures. At present, the administrative organization of Romania consists of counties that are formed of TAUs (territorial administrative units), but this organization dates back only to the first half of the 20th century. Before that, there were shires that, previously, had replaced the districts [13]. Representatives for this study are also the “lands” and ethnographic areas. The communist regime had a major impact on population dynamics since one of its politics was industrialization and forced urbanization, resulting in massive migration from villages to towns. After the communist regime fell in 1989, the population migrated from one region to another and also abroad.

The socio-political and historical circumstances have always been of utmost importance for ethnography [14]. Crișana Region overlaps, from spatial point of view, the area of three Lands (Silvania Land, Beiuș Land, and Zárand Land) and three ethnographic areas (Crișurilor Plain, Crișul Repede Valley, and Ier and Barcău Valley), each of them being characterized by populations of various ethnicities and religions and ethno-cultural heritage elements, correlated with the physical-geographic support of the region and with the ethnic and religious characteristics of the population [13].

The population of the Crișana Region dates to the Neolithic era [15], the proof of its presence in the territory becoming richer over time. The demographic data used in this study are those resulting from the census made by the National Institute of Statistics of Romania in 2011. Another census was completed in 2021. However, when this study was accomplished, those data were not available yet. According to the 2011 census, the total population of Crișana is 940,061 inhabitants [16]. In 2002, the year of the previous census before 2011, the total population, on the region level, was 1,034,539 inhabitants [16], the decrease of 94,478 people from 2002 until 2011 not being significant, we assume that the difference between the results of the census from 2011 and those from 2021 is not significant for this study. From 2002 until 2011, there were also no major changes recorded regarding ethnicity and the religious structure, respectively. From an ethnical and religious point of view, the population is eclectic; there are various ethnicities (Romanian, Hungarian, Rroma, German, Slovak, and Ukrainian) and religions (Orthodox, Roman-Catholic, Greek-Catholic, Calvinist, Baptist, Pentecostal, and the Seventh-day Adventist) encountered here. Those mentioned here do not encompass the entire range of ethnicities and religions; however, they are the most representative from the point of view of number and continuity in the territory. A general characteristic is the fact that, on a regional level, the Romanian ethnicity and Orthodox religion represent the highest proportions [16].

Among the representative elements of the region and the population in Crișana, we mention the ethno-cultural heritage. Ethno-cultural heritage represents all the material and spiritual cultural values overlapping the traditions and habits of a population [17]. More precisely, ethno-culture refers to the heritage elements resulting from the traditional activities of a population, specific to everyday living, in close connection with people’s creativity, translated into daily realities expressed through various types of culture [18]. This phenomenon has been going on for a very long time, and it can, thus, be stated that the ethno-cultural heritage is in close connection with the ethnicities and religions of the region.
and that it has an essential role in perpetuating the traditions and crafts specific to Crișana Region, the purpose of anthropological demography being to understand demographic phenomena in the socio-cultural context that they exist in [5].

The ethno-cultural heritage elements studied here are representative of the population’s occupations and crafts [19,20] and they are wooden churches, the works of craftsmen from various domains (wood processing, pottery, traditional clothing and folk costumes, crafting traditional musical instruments, etc.), ethnographic museums and collections, fairs with ethno-cultural specifics and traditional music and dance festivals.

A general tendency or characteristic of contemporary societies is globalization [21]. This phenomenon affects culture as well [22], fading away the particularities specific to a certain “land” or ethnographic area. Ethno-culture has a dynamic character [23] and is influenced by several social, economic, and political factors. Though some of these factors contribute to its globalization, we consider that certain ethno-religious characteristics contribute to highlighting some specific ethno-cultural elements.

Constantin (2014) accomplished a comparative study regarding the distribution on Romanian, respectively Bulgarian, territories of certain ethnic groups, studying, at the same time, their demographic dynamics with the purpose of identifying the ethnic features which define these groups [24]. The author emphasizes the importance of ethno-cultural and ethno-religious elements reassertion in the ethnic revitalization process. In this context, the present study has the purpose of establishing the relationship between the population and ethno-cultural heritage within the Crișana Region, Romania.

The working hypothesis from which the study started off relates to the fact that between the ethnic and religious structures, on the one hand, and the ethno-cultural heritage, on the other, there are close inter-conditioning relationships of qualitative and quantitative types (the present study addresses the quantitative ones). Hence, a more complex and diverse ethnic and religious structure will lead to a larger diversity of ethno-cultural heritage and vice versa. Considering the complexity of this research, the chosen working method is a multi-criteria comparative analysis, a method which has been successfully applied in numerous studies and research regarding the assessment and preservation of cultural heritage [25,26], the identification of cultural landscapes and values [27,28], assessment of a population’s socio-economic development [29,30], the quality of environmental factors [31,32], etc.

2. Materials and Methods

In order to establish the relationship types between population and ethno-cultural heritage, the multi-criteria method [33,34] was used, taking into study, in the light of more or less strong connections, the ethnic criterion (with eight variables: total population and population of the following ethnicities: Romanian, Hungarian, Rroma, German, Slovak, Ukrainian and other ethnicities); the religious criterion (with nine variables: total population, population of the following religions: Orthodox, Roman Catholic, Greek Catholic, Calvinist, Baptist, Pentecostal, the Seventh-day Adventist, and other religions) and the ethno-cultural heritage criterion (with five variables: ethnographic museums and collections, folk festivals, fairs with ethno-cultural specific, traditional craftsmen, and wooden churches). Based on these variables, value standardization is accomplished to obtain an aggregate value for each criterion [35].

The method is also known as Min-Max Normalization Method or Value Mapping Method [33], and it is applicable by using the following techniques: Min-Max normalization using the two values (minimum and maximum); N score normalization uses the difference between X value and the arithmetic average of all variable values; and reported to the standard deviation and decimated normalization [33]. The newly obtained values, resulting from normalization, are comprised in the range [0,1].

The Min-Max normalization method has several stages [34] (Figure 1):  

1. Preparation and setting variables that are specific and representative of the analyzed domains: ethnic structure, religious structure, and ethno-cultural heritage elements
Regarding the ethnic, respectively the religious structures, the following was considered: total population at TAU level and the ethnicities, respectively, the religions, which are representative of the entire studied territory (Crișana), and the data used are those from the 2011 population census made in Romania. The data regarding the ethno-cultural elements are not comprehensive. However, the most representative ones were selected as follows: ethnographic museums and collections, folk festivals, ethno-cultural fairs, traditional craftsmen, and wooden churches.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Variables</th>
<th>Measurement Unit</th>
<th>Type of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>C₁—Ethnic structure</td>
<td>X₁—Total population</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>X₂—Romanian</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>X₃—Hungarian</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>X₄—Roma</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>X₅—German</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>X₆—Slovak</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>X₇—Ukrainian</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>X₈—Other ethnicities</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td>C₂—Religious structure</td>
<td>Y₁—Total population</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Y₂—Orthodox</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Y₃—Roman Catholic</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Y₄—Greek Catholic</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Y₅—Calvinist</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Y₆—Baptist</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Y₇—Pentecostal</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Y₈—The Seventh-day Adventist</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Y₉—Other religions</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td>C₃—Ethno-cultural heritage elements</td>
<td>Z₁—Ethnographic museums and collections</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Z₂—Folk festivals</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Z₃—Ethno-cultural fairs</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Z₄—Traditional craftsmen</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Z₅—Wooden churches</td>
<td>No./TAU</td>
<td>Quantitative</td>
</tr>
</tbody>
</table>

Figure 1. Methodology workflow chart.
The variable values are shown under the form of an observation matrix [35]:

\[
X = \begin{bmatrix}
  x_{11} & x_{12} & \cdots & x_{1n} \\
  x_{21} & x_{22} & \cdots & x_{2n} \\
  \vdots & \vdots & \ddots & \vdots \\
  x_{r1} & x_{r2} & \cdots & x_{rn}
\end{bmatrix}
\]  

(1)

where: \(x_{ij}\) represents the variable value for object \(O_i\).

The same matrix is applied for the variable values of the other criteria as well.

The normalization formula of stimulant variables is [30]:

\[
N_{ij} = \frac{(X_{ij} - \min X_{ij})}{(\max X_{ij} - \min X_{ij})} \quad X_j \in S, \quad N_{ij} = [0, \ldots, 1]
\]

(2)

where \(X_{ij}\) is the value of variable \(j\) for criterion \(i\); \(N_{ij}\) is the normalized value of variable \(j\) for criterion \(i\); \(\min X_{ij}\) is the minimum value of value \(X\) of the variable \(i\); and \(\max X_{ij}\) is the maximum value \(X\) of variable \(j\) for criterion \(i\).

Even though the variables can be stimulant, de-stimulant, or neutral, in this study, the stimulant variables (S) are of interest because they have higher values and indicate a stronger connection between criteria.

2. The second stage implies the calculation of sum value (aggregate value), after normalizing the 22 variable indicators. First, it is obtained the sum value for the first two criteria—the ethnic and the religious structures—with their 17 variable indicators, then, the obtained values are aggregated with the values of the 5 variable indicators of the ethno-cultural heritage elements. The newly obtained values are aggregated in a unique value \(q_i\):

\[
q_i = \sum_{j=1}^{n} N_{ij} \quad (i = 1, \ldots r)
\]

(3)

The criterion assessment through the variable value is achieved with the synthesis value \(Q_i\):

\[
Q_i = \frac{1}{n} \sum_{j=1}^{n} q_i \quad (i = 1, \ldots r), Q_i \in [0, \ldots, 1]
\]

(4)

3. The calculation of relation index value between population and ethno-cultural heritage is a normalized value, provided by the following equation:

\[
I = \frac{COEF_{pop} - COEF_{pat}}{COEF_{pop} + COEF_{pat}}, \quad \text{where} \quad -1 \leq I \leq 1
\]

(5)

\(I\) = Relation index between population and ethno-cultural heritage

\(COEF_{pop}\) = population coefficient

\(COEF_{pat}\) = ethno-cultural heritage coefficient

4. The fourth stage consists of determining the constant value \(k\) to categorize the objects (the 207 TAUs) in value groups according to the relationship type existing between the three criteria (domains): very weak, weak, average, and strong [35]:

\[
R(Q_i) = \max Q_i - \min Q_i \quad k = \frac{R(Q_i)}{4}
\]

(6)

Group 1: \(Q_i \in (\max[x_{ij}] - k, \max[x_{ij}])\)—strong relationship (\(Q_i \in (0.5, \ldots, 1]\))

Group 2: \(Q_i \in (\max[x_{ij}] - 2k, \max[x_{ij}] - k]\)—average relationship (\(Q_i \in (0, \ldots, 0.5]\))

Group 3: \(Q_i \in (\max[x_{ij}] - 3k, \max[x_{ij}] - 2k]\)—weak relationship (\(Q_i \in (-0.5, \ldots, 0]\))

Group 4: \(Q_i \in [\min[x_{ij}], \max[x_{ij}] - 3k]\)—very weak relationship (\(Q_i \in [\max Q_i, 0]\))

The first and fourth groups define an indirect relationship based on the presence of some extreme values of the indexes compared to those calculated and a significant difference between the values of population indexes and those of ethno-cultural heritage.
The first group represents the positive inverse relationships, where the population index values are considerably higher than those of the ethno-cultural heritage, unlike the fourth group, where the situation is reversed. The second and third groups can be approached together (Figure 2) because the values of both indexes are moderate, and the difference between values are small. Within this value range (−0.5, 0.5) there are strong relationships between the two indexes, resulting from the quantitatively moderate presence in the territory of both ethno-religious features of the population and ethno-cultural heritage ones.

<table>
<thead>
<tr>
<th>Negative inverse relationship (weak/indirect)</th>
<th>Strong positive and negative relationship (direct)</th>
<th>Positive inverse relationship (weak/indirect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ethno-cultural heritage features are significantly more important numerically than the population’s ethno-religious features.</td>
<td>Both the population’s ethno-religious features and those of the ethno-cultural heritage are present in the territory and the differences in number are not very big. The negative values can be interpreted through the prevalence of ethno-cultural heritage indexes, while the positive values between 0-0.5 are given by the prevalence of population indexes.</td>
<td>The population’s ethno-religious features are significantly more important numerically than the ethno-cultural heritage features.</td>
</tr>
</tbody>
</table>

**Figure 2.** I index values range.

The data processing was achieved with the help of ArcGis 10.6 and Excel software. The data spatial analysis was accomplished on a polygon level, 207 territorial administrative units, in order to establish the spatial relationships between population and ethno-cultural heritage.

3. Results and Discussion

3.1. Synthetic Values of Population Characteristics (Ethnicity and Religion)

The spatial distribution analysis of population features’ synthetic values (ethnicity and religion) emphasized the existence of two categories of administrative-territorial units: the first category is characterized by very low values (99.51% of the TAU), while the other one is characterized by very high values (only 0.48% of the TAU) (Figure 3).

It is worth mentioning the fact that values over 0.75 are found only in one TAU, Oradea City (index of 0.870124), which is the largest city in the region, and, more importantly, it has the most numerous population in the region: 183,123 inhabitants at the 2011 census. All ethnicities and religions are represented in Oradea, and, furthermore, the indexes obtained for ethnicity and religion are, each of them, over 0.7.

All the other TAU in the region (be they towns or communes) are characterized by very low synthetic values for population (between 0.001752 and 0.25). These are TAU with a lower number of inhabitants compared to Oradea, and not all ethnicities and religions are represented in a significant percentage. For example, Ignești commune, Arad County, has a population of only 669 inhabitants and features a synthetic value of ethno-religious index of 0.01. The tendency in this group is for one of the ethnicities, respectively, one of the religions, to be in absolute or relative majority on TAU level. The situation in which none of the ethnicities and/or religions predominates in a TAU, yet the synthetic values obtained are very low, is determined by a very low number of inhabitants recorded in the respective TAU. The average and weak ethno-religious synthetic values are not present in any TAU of the region.
The synthetic values of ethno-cultural heritage elements were calculated based on their incidence in number on the TAU level. The methodology also establishes four value groups: very high values, high values, small, and very small values; however, the group of high values (between 0.5 and 0.75) is not representative of any TAU (Figure 4). Considering the fact that variables of the ethno-cultural heritage criterion are five in number, even though the TAUs feature certain ethno-cultural characteristics, many of them do not feature any of the studied variables, hence the high number of TAUs with very low synthetic values of the ethno-cultural heritage elements.
Very high values are encountered only in Oradea City. This phenomenon is explained by the quantitative assessment of ethno-cultural heritage elements, which are 30 in Oradea (the highest number from the entire region). There are 4 wooden churches here, a museum that exhibits an important ethnographic collection, 8 folk festivals, and 2 ethno-cultural fairs are organized in Oradea every year.

The city is also represented by 14 traditional craftsmen. The high number of elements leads to a very high synthetic value (0.96). Low values of the ethno-cultural heritage elements (between 0.26 and 0.5) are noticed only on the level of 8 TAUs: Valea lui Mihai, Bogdand, Salonta, Finiș, Beiuș, Pietroasa, Buteni, and Hălmagiu, three of them are towns, and the other five are communes. Very low values are obtained for all the other TAUs from the region. This, however, does not mean that these TAUs lack completely such ethno-
cultural heritage elements (except some of them), but that the number of such elements is very low, the result being very low synthetic values (between 0.0 and 0.25).

3.3. Type of Relationships between Population Characteristics and Ethno-Cultural Heritage Elements

The types of relationships between the demographic characteristics of the population and the ethno-cultural heritage elements are determined according to the indexes obtained for the studied criteria. These indexes are encompassed in the $[-1; 1]$ range of values, and within this range, they are further divided into four categories, each TAU being included in one of the four categories (Figure 5).

Figure 5. Type of relations between the population and ethno-cultural heritage in Crișana, Romania.

(1) The group of negative inverse relationships is characterized by index values comprised in the $[-1; -0.5]$ range (Figure 5). These values indicate the fact that the
ethno-cultural heritage elements predominate numerically by comparison with the ethno-religious features. For example, the town Valea lui Mihai has a total population of 9688 inhabitants, out of which 7851 are of Hungarian ethnicity, while the rest of 1836 are, in various proportions, of other ethnicities. From a religious point of view, most inhabitants are of Calvinist religion (4701). However, the other ethnicities taken into consideration are represented. All these things reflect ethno-religious homogeneity to the TAU, with a synthetic value of 0.065372. The ethno-cultural heritage elements are 12 in this town, with an index value of 0.278333, significantly higher than the ethno-religious one. The calculated relationship index is $-0.6196$, thus placing the town Valea lui Mihai in the group of negative inverse relationships. Most TAUs belong to the group of this type of relationship.

(2) The group of strong negative relationships includes heterogeneous TAUs from an ethno-religious point of view, with all ethnicities and religions being represented, without significant differences in number. The ethno-cultural heritage elements are also present and also predominate slightly by comparison with the ethno-religious one. Within this category, there are TAUs with a relationship index value between $-0.51$ and 0. We are analyzing, as an example, the Șuncuiuș TAU, which is characterized from ethno-religious point of view by high homogeneity: from the total population of 3200 inhabitants, 2852 (89%) are of Romanian ethnicity, 262 are Roma and 64 are of Hungarian ethnicity. The other ethnicities taken into the study are not represented here. From a religious point of view, diversity is slightly higher, meaning that all religions taken into study are represented, but the Orthodox one is in absolute majority with 2949 people. The aggregate value for the ethno-religious features is 0.017982. There are three ethno-cultural heritage elements, with an index value of 0.04, lower than the ethno-confessional one. The relationship index value for the two types of features is $-0.37973$, indicating the strong negative relationship, the ethno-cultural heritage features prevailing.

(3) The third group is that of strong positive relationships, with relationship index values comprised in the 0.1 and 0.5 range. In this category are included the TAUs characterized by the prevalence of the population features. For example, the Mișca TAU has a total population of 3588 inhabitants and, except for the Ukrainian one, all ethnicities are represented, but none of them has a majority, be it absolute or relative. The religions are also represented in variable proportions, except for the Greek-Catholic one; hence it can be stated that the TAU is characterized by ethno-religious heterogeneity, with an index value of 0.056737. The ethno-cultural heritage elements are 4, and their aggregate value is 0.05. The relationship index value is 0.063122.

(4) The positive inverse relationships group is the group that includes TAUs with relationship index values comprised between 0.51 and 1 and in which the ethno-religious features are significantly prevalent to the ethno-cultural heritage ones. The Second TAU, for example, has a total population of 2543 inhabitants of various ethnicities, without any of them being in the majority, either absolute or relative. The predominant religion is the Orthodox one, in an absolute majority (2066 inhabitants), and the other religions are also represented, however, very poorly. The aggregate index value for the two features is 0.042288. No studied ethno-cultural heritage element can be found in this TAU, the value for this category being 0, while the relationship index value for the ethno-religious and ethno-cultural features is 1.

4. Conclusions

The hypothesis from which this study started off was that there is a relationship between the ethno-religious and ethno-cultural heritage elements in Crisana Region on the TAU level, considering that the entire territory is characterized by ethno-religious and ethno-cultural diversity. With the help of applied quantitative analysis, it has been proven that there are relationships between the studied elements, and they are determined by the prevalence of one of the considered criteria or the other.

The relationship between ethnography and demography has been a preoccupation of researchers since the second half of the 20th century [9], and even though demography is a
branch that uses quantitative analysis methods, the connection between the two is studied mostly by using qualitative research methods [36]. In this study, a quantitative analysis method was used to be able to quantify this relationship.

The ethno-religious diversity is higher in all countries, and this characteristic is also accompanied by globalization; interestingly, the result of globalization is the fading away of the characteristics specific to an ethno-religious group. The importance of establishing the existing relationship types between the ethno-confessional and ethno-cultural criteria consists of emphasizing their mutual influences, which can lead to keeping and promoting the ethno-religious and ethno-cultural features. The spatial distribution of relationship types (Figure 5) between ethno-religious and ethno-cultural features reveals a heterogenic dispersion. It cannot be stated that one “land” or one ethnographic area is characterized only by a certain type of relationship. All four types of relationships are present in each of the “lands” and ethnographic areas belonging to Crisana Region.

**Author Contributions:** Conceptualization, L.A.D. and G.V.H.; methodology, G.V.H.; software, E.B.; validation, E.B., M.G. and L.A.D.; formal analysis, L.A.D.; investigation, G.C.B.; resources, E.B.; data curation, M.G.; writing—original draft preparation, G.V.H.; writing—review and editing, M.G.; visualization, G.V.H.; supervision, L.A.D.; project administration, G.C.B.; funding acquisition, L.A.D.

All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** The data presented in this study may be obtained on request from the corresponding author.

**Acknowledgments:** The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

**Conflicts of Interest:** The authors declare no conflict of interest.

**References**


Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.