

## SOCIOECONOMIC DETERMINANTS AND SPATIAL PATTERNS OF POVERTY IN BORSOD-ABAÚJ-ZEMPLÉN COUNTY, HUNGARY

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### **Abstract**

*This paper examines the main characteristics of people living in income poverty in Borsod-Abaúj-Zemplén County, one of Hungary's most disadvantaged regions. Utilizing a questionnaire-based survey conducted between November 2024 and February 2025, the study analyzes the relationship between poverty status and key sociodemographic variables, including education, ethnicity, household size, settlement type, and distance from the county seat. Results indicate that lower educational attainment and Roma ethnicity are significantly associated with higher poverty rates, while rural residence and greater distance from the county seat also increase vulnerability to poverty. In contrast, household size does not show a statistically significant effect. The findings highlight persistent spatial and social inequalities in the region, emphasizing the need for targeted policy interventions focusing on education, ethnic integration, and regional development.*

**Keywords:** *income poverty, education attainment, ethnicity, number of children, regional differences*

### **1. Introduction**

Poverty remains one of the most persistent and multifaceted social challenges in Hungary, manifesting with particular severity in certain underprivileged regions. The transition from a socialist planned economy to a market-based system in the early 1990s triggered profound economic and social transformations, leading to a sharp increase in unemployment, widening income disparities, and a weakening of the social safety net. These changes not only altered the overall structure and prevalence of poverty but also intensified regional inequalities, with areas such as Borsod-Abaúj-Zemplén County experiencing pronounced socio-economic decline.

Borsod-Abaúj-Zemplén County, located in Northern Hungary, exemplifies the enduring impact of these structural shifts. The county consistently reports higher unemployment rates, lower employment levels, and significantly reduced GDP per capita compared to national averages. For many residents, poverty is not solely a matter of insufficient income. It also encompasses limited access to education,

healthcare, social participation, and political representation. The intergenerational transmission of disadvantage, the compounded marginalization of Roma communities, and the persistent lag of rural settlements all contribute to the perpetuation of social inequalities.

This study aims to identify and analyze the key determinants of income poverty among the population of Borsod-Abaúj-Zemplén County. Focusing on sociodemographic factors such as educational attainment, ethnicity, household size, settlement type, and geographic location, the research seeks to uncover the structural drivers of poverty in this region.

## **2. Perspectives on Poverty, Regional Inequalities, and Social Exclusion**

In international research, poverty is increasingly conceptualized as a multidimensional phenomenon, shaped not only by income shortages but by structural disadvantages that affect education, labor market participation, health, and social inclusion. The OECD (2019) highlights that countries undergoing rapid economic restructuring, particularly post-socialist economies in Central and Eastern Europe, tend to experience widening regional disparities and persistent pockets of deprivation. These structural inequalities are reinforced by uneven labor market opportunities, demographic decline, and the limited absorptive capacity of marginalized regions.

According to Eurostat (2023), Hungary consistently ranks among the EU member states with higher-than-average rates of people at risk of poverty or social exclusion (AROPE). Similar patterns have been observed in other post-industrial regions across Europe, such as Northeast Romania, Eastern Slovakia, and Southern Italy, where the decline of traditional industries, coupled with outmigration, has resulted in long-term socio-economic stagnation (Rodríguez-Pose, 2018; Diemer et al., 2022).

The World Bank (2020) also emphasizes that territorial inequalities in Central and Eastern Europe are increasingly linked to disparities in educational achievement, skills formation, and access to public services. Regions characterized by low human capital, poor transport infrastructure, and spatial segregation tend to face persistent and self-reinforcing forms of poverty.

A substantial body of comparative empirical research shows that education is one of the strongest predictors of poverty and labor market vulnerability. OECD and UNESCO studies stress that individuals with low educational attainment are significantly more exposed to unemployment and low-wage work (OECD, 2018; UNESCO, 2020). Educational disadvantage is spatially uneven: underdeveloped regions with poor school quality experience systematically lower student performance and higher dropout rates. Several European studies demonstrate that early school leaving and intergenerational educational inequality strongly correlate with persistent poverty, particularly in rural and post-industrial areas (Blanden et al., 2011; Iammarino et al., 2019). In these regions, limited access to quality early childhood education, teacher shortages, and school segregation further exacerbate socio-economic inequalities.

The situation of Roma communities has received increasing attention in international literature, highlighting consistent patterns of educational segregation, labor market exclusion, and residential marginalization across Europe. Research by the European Union Agency for Fundamental Rights (FRA, 2016; 2022) indicates that Roma households in Central and Eastern Europe face poverty rates exceeding 80%, significantly below-average educational attainment, and limited access to healthcare services. Studies focusing on Hungary, Slovakia, and Romania emphasize that ethnic discrimination, school segregation, and spatial isolation contribute to the reproduction of Roma poverty (Kertesi & Kézdi, 2013; World Bank, 2010). World Bank analyses (2018) highlight that Roma communities living in segregated rural settlements are particularly affected by labor market exclusion, limited transport accessibility, and multigenerational unemployment.

Public works schemes have been widely implemented across Europe, especially in economically depressed regions. However, international evaluations show that such programs often fail to support transition into the primary labor market unless they include strong training, mentoring, and employer partnerships (OECD, 2016; Eurofound, 2017). Evidence suggests that long-term reliance on public employment can reinforce dependency rather than building transferable skills, particularly in regions with weak labor demand. Comparative analyses of public works in Central and Eastern European countries reveal similar challenges: low exit rates to regular employment, limited skill development, and weak integration with social services (World Bank, 2015).

Recent EU-level policy research emphasizes the importance of place-based development strategies tailored to the needs of disadvantaged regions (Barca, McCann & Rodríguez-Pose, 2012; European Commission, 2021). Successful interventions combine regional economic development with social inclusion measures, such as skills training, early childhood education, local employment initiatives, and anti-discrimination programs.

### **3. Poverty in Hungary**

Poverty is one of the most complex and pressing issues in society, and it became particularly pronounced in Hungary during the period following the regime change. The regime change in 1990 precipitated political, economic, and social transformations. Consequently, unemployment and inflation surged abruptly, significantly exacerbating poverty and economic disparity (Andorka, 2006). After 1989, at least two-thirds of the population experienced poverty, while only about 10% saw an increase in their real income level (Monostori, 2001). The political and economic transformation of 1989–1990 presented new challenges for Hungarian society: the transition to a market economy, the emergence of unemployment, the restructuring of industry, and the reform of state redistribution systems fundamentally reshaped the nature and extent of poverty (Förster et al., 1998).

Following the regime change, Hungary shifted from a socialist planned economy to a market economy. As part of this transition, industrial restructuring was carried out, privatization programs were launched, and the country was opened up to international capital investments. While these changes contributed to increased economic efficiency in the long term, in the short term, they resulted in a significant rise in unemployment, growing income disparities, and a weakening of social security (Havasi, 1999). Unemployment rose to levels previously unknown. In the early 1990s, the unemployment rate reached 12–13%. The social welfare system was unprepared for such a large-scale challenge: the former paternalistic state care system collapsed, and the new forms of support—such as unemployment benefits and social assistance—often failed to reach those most in need.

Consequently, the poverty rate escalated to approximately 30–35% in 1995, in contrast to an estimated 10% in the 1980s, while income inequalities intensified from a level akin to that of Scandinavian countries in the 1980s to one comparable to Western European nations by 1995 (Andorka and Spéder, 1996). The escalation of regional disparities was linked to the growing The predominance of Budapest, the capital, highlights the growing divide between urban and rural areas. The trend includes the declining economic performance of traditional industrial regions, such as Northern Hungary; the dominance of Budapest, the capital, alongside the expanding divide between urban and rural areas; and the deteriorating economic performance of traditional industrial regions like Northern Hungary.

Income poverty is one of the most common forms of measurement, in which households are considered poor if their income falls below a certain percentage (e.g., 60%) of the median income. After the regime change, income poverty began to rise rapidly, particularly in rural areas and among those with low levels of education. Relative poverty refers to the disadvantage experienced in comparison to other members of

society, while absolute poverty signifies the inability to meet basic needs. In the 1990s, absolute poverty was significant, especially among Roma communities, the unemployed, and large families.

The poverty rate among the Roma population is exceptionally high. The reasons include long-term unemployment, low educational attainment, regional disadvantages, and discrimination. Government programs like the Roma Strategy have not yielded significant progress. Child poverty is particularly alarming in Hungary, as it contributes to the long-term reproduction of social inequalities. Programs launched to reduce child poverty have often lacked complexity and have failed to reach the most disadvantaged groups.

In terms of social policy measures, the Bokros Package introduced under the Horn government (1994–1998) brought significant cuts to social benefits (Ferge, 1995). Although its primary aim was to improve budgetary balance, it further worsened the situation of poverty. The first Orbán government (1998–2002) expanded the family support system (e.g., childcare allowance for parents staying at home with children, paid parental leave benefit, housing subsidies), but the impact of these measures did not equally reach all social groups (Ferge, 1996; Spéder, 2000).

After Hungary acceded to the EU in 2004, the country gained access to structural and cohesion funds. Numerous programs were launched to promote the labor market integration of disadvantaged groups (e.g., Roma, the unemployed, and people with low educational attainment). Projects aimed at social inclusion were initiated under the New Hungary Development Plan and the New Széchenyi Plan.

Under the second Orbán government (from 2010), the social support system underwent a transformation. Traditional forms of welfare were increasingly replaced by public works programs, the effectiveness of which remains questionable. The state centralized welfare decision-making, and the real value of monetary benefits declined. At the same time, more targeted—but often politically motivated—tools were introduced, such as the family tax benefit, which primarily supported the middle class.

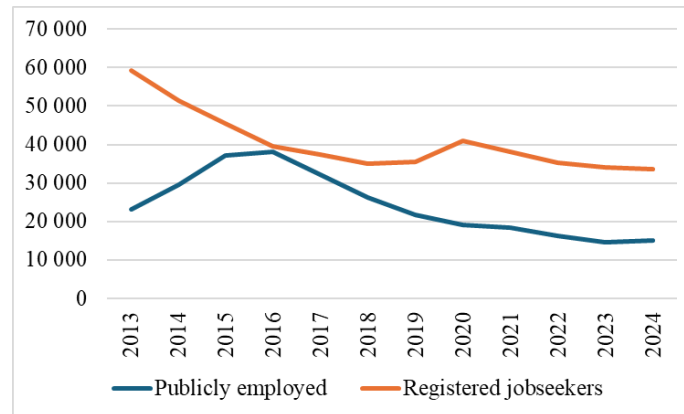
Poverty is a complex social issue that requires comprehensive and coordinated policy responses. Well-targeted social support, improvements in education and healthcare, increased equality of opportunity in the labor market, and regional development are all essential elements in reducing poverty. Only fiscal logic and sound social policy considerations can ensure the effectiveness of political tools.

#### **4. Poverty in Borsod-Abaúj-Zemplén County, Hungary**

Poverty in Hungary takes on a distinctly regional character; Northern Hungary, the Northern Great Plain, and Southern Transdanubia are the most affected regions. In these areas, economic decline, industrial downturn, unemployment, and migration have collectively contributed to long-term impoverishment. Poverty is not merely a matter of income; it also affects access to education, healthcare services, social participation, and political engagement. Persistent poverty is reproduced intergenerationally, further deepening social disparities.

In 2024, the average annual unemployment rate in Borsod-Abaúj-Zemplén County was 7%, significantly higher than the national average of 4.5%. In 2022, the employment rate among the 15–64 age group in the county was only 68.5%, compared to the national average of 74.4%. The region's GDP per capita is only 61% of the national average. According to the census, the Roma population accounts for 12% of the county's population, with some settlements having over 90% Roma residents. The county shows persistent signs of socio-economic decline. Educational attainment is low among the Roma, which strongly affects their labor market participation, and multigenerational unemployment is common. For many, public employment is the only available option, which unfortunately offers only a temporary solution, as it does not facilitate reintegration into the primary labor market.

Public employment plays a key role in the sustainability of rural areas, but in these settlements, it is less effective: public work remains the only form of employment. Figure 1 shows the number of individuals in public employment and the number of registered job seekers in the county.



**Figure 1.** Labor market situation in Borsod-Abaúj-Zemplén County, 2013–2024  
Source: own compilation based on the data of Hungarian Central Statistical Office

To alleviate poverty, it is essential to promote the educational integration of Roma students and reduce dropout rates. Support for transitioning out of public employment is also necessary—through training programs, microloans, and mentoring systems—as well as the support of local employment development projects and actions against discrimination.

## 5. Methodology

To study the poverty levels in Borsod-Abaúj-Zemplén County, we designed a questionnaire with a focus on socio-economic and demographic factors of the household. Our questionnaire comprised closed-ended questions on income levels, education level, ethnicity, number of children living in the household, rural-urban area, and distance from county seat. One of the questions referred to the income level of the informants. They could make their selection from a total of nine options, each referring to a class interval. The middle of the class interval, the number of household members, the number of children living in the household, and the official poverty lines were then used to decide whether the given informant is poor or not. Within the European Union, people falling below 60% of the equivalized median income level are considered members of “at-risk-of monetary poverty.” Our interest was to classify the respondents into two categories: poor or not poor, based on those categories, as Table 1 shows. We then analyzed the newly calculated variable, the “Poverty Indicator,” against the major sociodemographic variables in the crosstab analysis.

**Table 1**  
Annual and monthly poverty lines in Hungary, 2023

Household type	Annual poverty line (HUF)	Monthly poverty line (HUF)
1 adult	2,018,604	168,217
2 adults	3,027,906	252,325

Household type	Annual poverty line (HUF)	Monthly poverty line (HUF)
3 adults	4,037,208	336,434
4 adults	5,046,510	420,542
1 adult with 1 child	2,624,185	218,682
1 adult with 2 children	3,229,766	269,147
2 adults with 1 child	3,633,487	302,790
2 adults with 2 children	4,239,068	353,255
2 adults with 3 children	4,844,650	403,720
2 adults with 4 children	5,450,230	454,185
3 adults with 1 child	4,642,789	386,899
3 adults with 2 children	5,248,370	437,364
3 adults with 4 children	6,459,532	538,294

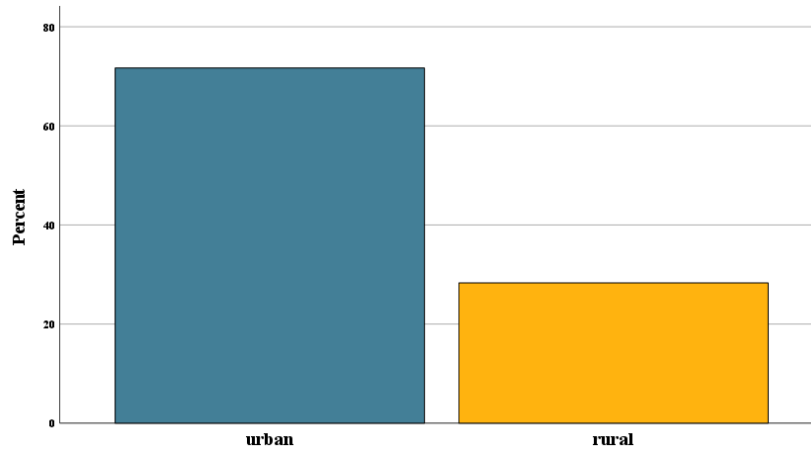
Source: own compilation based on HCSO data

We used Google Forms to build the questionnaire, which we made available to respondents from November 2024 to February 2025. Due to the nature of this study, convenience sampling was used through online tools. However, due to potential bias, the results should not be generalized beyond the sample (Malhotra et al., 2017). However, convenience sampling was considered appropriate for exploratory research. Data collection was conducted using online tools, with a particular reliance on the Facebook platform to engage with local communities in the study area due to resource constraints. The COVID-19 pandemic highlighted the effectiveness of social media platforms like Facebook for data collection purposes (Jaber and Szép, 2024). By 2024, Hungary had over 7 million Facebook users out of a total population of approximately 10 million (Facebook Users by Country, 2025), which significantly facilitated access to the study's target population and enabled rapid data collection. Today, most cities and communities maintain dedicated Facebook groups that serve as hubs for communication and discussions on pressing local issues. Utilizing these locally embedded platforms for survey dissemination can enhance the credibility and perceived legitimacy of the research while maintaining respondent confidentiality. We distributed the survey via social media, specifically through community-based Facebook groups, to effectively reach and engage the intended participants. The sample collection process did not include paid advertisements. Moreover, we created a QR code that leads to the survey and distributed the QR code, printed and stuck to walls near municipalities and city halls in the region, to allow people to access the study even if they are not part of any social media groups or if they don't have accounts on such platforms.

### 5.1. Main variables descriptive analysis

To describe the distribution of respondents by place of residence, frequency analysis was conducted using SPSS, and the results were visualized through bar charts. An informant is classified as living in a rural area if they reside in a village, whereas they are classified as an urban resident if they live in a

town. The analysis showed that a majority of participants (71.7%,  $n = 243$ ) resided in urban areas, while 28.3% ( $n = 96$ ) were from rural areas (Figure 2).

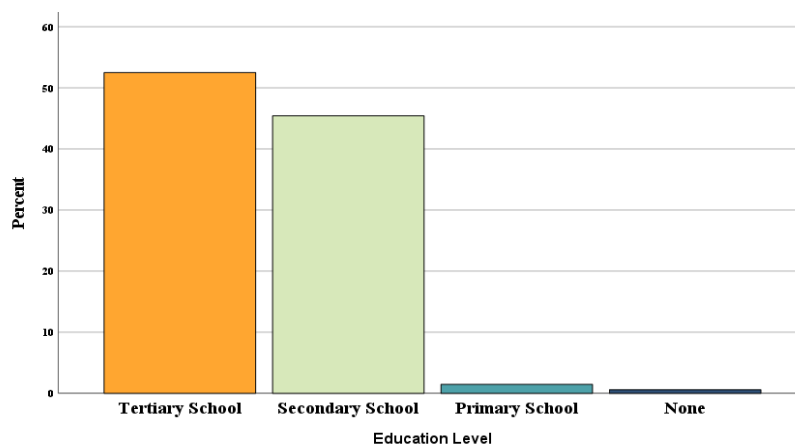


**Figure 2.** Urban-rural characteristics of the sample

Source: own compilation

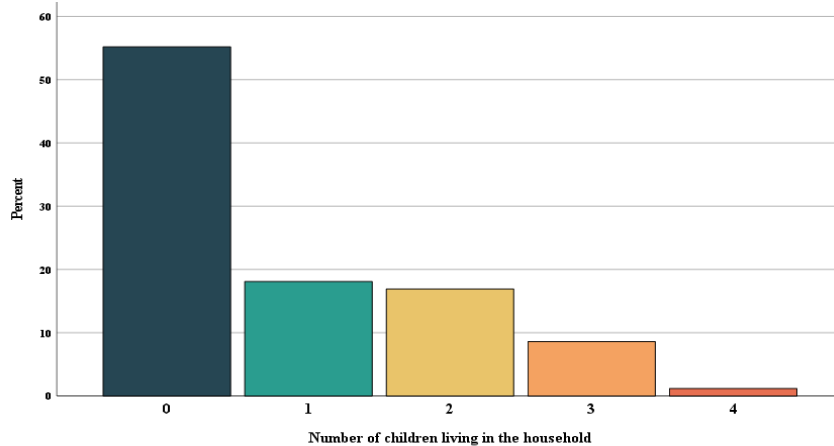
Educational attainment among respondents was assessed using a categorical variable. The frequency analysis revealed that the vast majority of respondents had attained secondary (45.4%,  $n = 154$ ) or tertiary education (52.5%,  $n = 178$ ). Only a small proportion had primary education (1.5%,  $n = 5$ ), and an even smaller share reported no formal education (0.6%,  $n = 2$ ). These results suggest a relatively well-educated sample, which may influence both access to information and household decision-making processes.

The number of children residing in each household was recorded as a discrete variable. The analysis revealed that (Figure 4) more than half of the respondents (54.9%,  $n = 186$ ) reported having no children living in the household. Households with one or two children accounted for 18.0% ( $n = 61$ ) and 16.8% ( $n = 57$ ), respectively. Smaller proportions had three children (8.6%,  $n = 29$ ) or four children (1.2%,  $n = 4$ ). A minimal percentage of responses (0.6%,  $n = 2$ ) were missing due to system-related issues. This distribution suggests a predominance of smaller or childless households in the sample.



**Figure 3.** Education level of the study sample

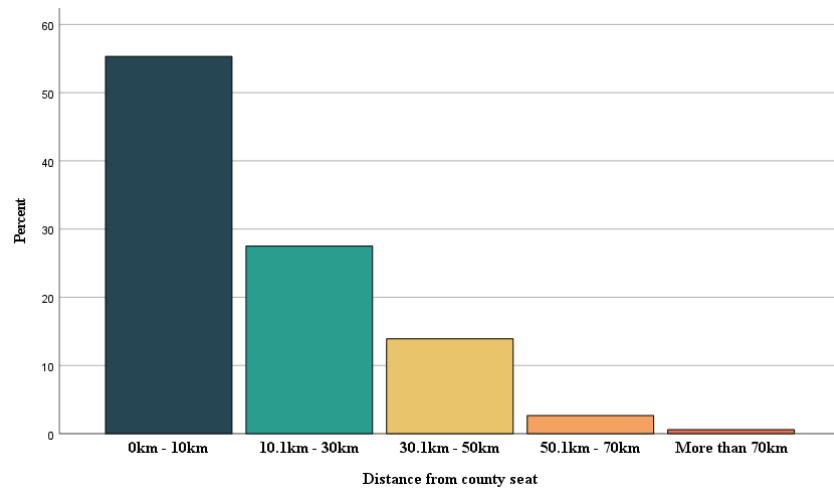
Source: own compilation



**Figure 4.** Number of children living in the household

Source: own compilation

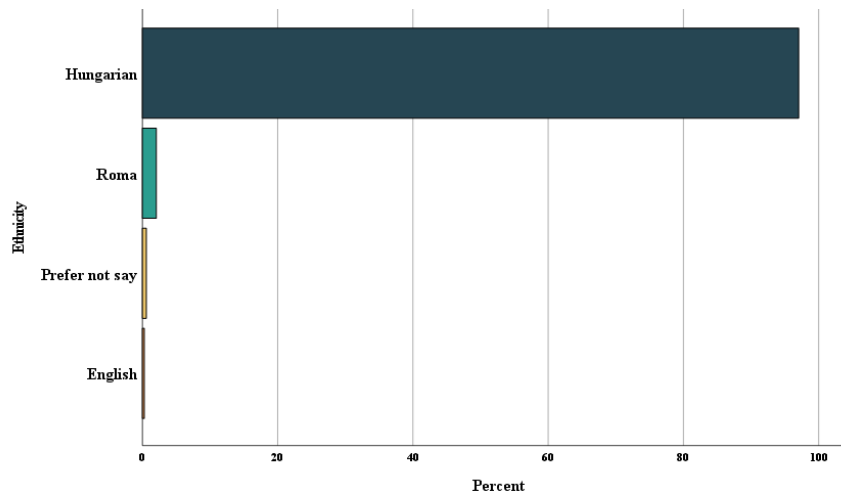
The spatial distribution of households in relation to the county seat was measured using categorical distance ranges. As shown in *Figure 5*, a majority of respondents (over 50%) lived within 0 to 10 kilometers of the county seat, indicating an intense concentration of the sample in central or peri-urban areas. Approximately 27% resided within 10.1 to 30 kilometers, while 14% were located 30.1 to 50 kilometers away. Smaller proportions of households were located farther away, with about 4% living 50.1 to 70 kilometers from the county seat and only a minimal fraction (less than 2%) residing beyond 70 kilometers.



**Figure 5.** Distance from county seat

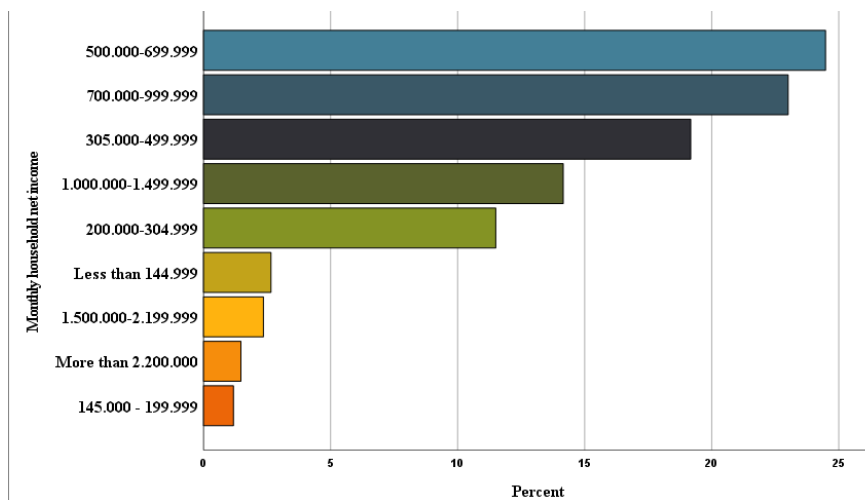
Source: own compilation

Ethnic composition was recorded as a categorical variable. Most respondents identified as Hungarian (97.1%,  $n = 329$ ), followed by a small proportion who identified as Roma (2.1%,  $n = 7$ ). A minimal number of participants identified as English (0.6%,  $n = 2$ ), while one respondent (0.3%) preferred not to disclose their ethnic background (*Figure 6*). We include only Hungarian and Roma informants for further analysis.



**Figure 6.** Ethnic decomposition of the sample  
Source: own compilation

Monthly household net income was measured using a categorical variable based on income brackets (Figure 7). The income distribution of respondents was relatively diverse, with the largest share of households (24.5%, n = 83) reporting a monthly income between 500,000 and 699,999 HUF, followed closely by 23.0% (n = 78) in the 700,000–999,999 HUF range. A notable proportion (19.2%, n = 65) fell within the 305,000–499,999 HUF bracket, while 11.5% (n = 39) reported incomes between 200,000 and 304,999 HUF. Higher-income categories (over 1,000,000 HUF) accounted for smaller shares, with 14.2% (n = 48) in the 1,000,000–1,499,999 HUF range and 2.4% (n = 8) in the 1,500,000–2,199,999 HUF range. Very few respondents reported incomes above 2,200,000 HUF (1.5%, n = 5) or below 145,000 HUF (2.7%, n = 9). The distribution highlights a concentration of households in the lower to middle-income brackets.



**Figure 7.** Monthly household net income  
Source: own compilation

Based on the reported annual household net income, respondents were categorized into two groups: poor and not poor, following predefined income thresholds appropriate to the national or regional context. This binary classification enabled a more focused analysis of socioeconomic disparities within the sample. The newly created poverty status variable was then cross-tabulated with all previously described sociodemographic and household-level variables (e.g., place of residence, education level, number of children, distance from the county seat, and ethnicity), excluding income itself to avoid redundancy. This cross-tabulation identified potential associations between poverty status and key household characteristics, offering insights into the structural factors contributing to household vulnerability.

Cross-tabulation is a statistical method that organizes data into contingency tables, enabling comparisons of frequencies across two or more categorical variables (Field, 2017). It is particularly useful for identifying patterns and associations among variables, such as poverty status and household characteristics (e.g., education, residence, employment, or number of children). To assess whether observed differences in distributions were statistically significant, the chi-square ( $\chi^2$ ) test of independence was applied. The chi-square test evaluates the null hypothesis that there is no association between the variables in the population; it compares the observed frequencies in each table cell with the expected frequencies under the assumption of independence. A statistically significant chi-square result (typically  $p < 0.05$ ) suggests that the association observed in the sample is unlikely to have occurred by chance (Field, 2017).

## 6. Results

### 6.1. Poverty and education attainment

The crosstabulation of poverty and education level (*Table 2*) shows that poor people have lower levels of education. The sample includes two informants with no formal education, both of whom are considered poor. One-fifth of the sampled population with a primary education level is poor. Out of the 176 people with higher education levels, however, only 8 live below the poverty line. The significance level of the Pearson's chi-square is below 0.05 (refer to the first row of *Table 3*), indicating that poor people have a significantly lower education level than wealthier people.

**Table 2**

*Crosstab results of the connection between poverty and education level*

			<i>Education level</i>				<i>Total</i>
			none	primary	secondary	higher education	
<b>Poverty indicator</b>	not poor	frequency	0	4	127	168	<b>299</b>
		expected frequency	1.8	4.4	136.2	156.6	<b>299</b>
	poor	frequency	2	1	26	8	<b>37</b>
		expected frequency	0.2	0.6	16.8	19.4	<b>37</b>
<b>Total</b>			<b>2</b>	<b>5</b>	<b>153</b>	<b>176</b>	<b>336</b>

Source: own computation

**Table 3**  
Pearsons Chi-Square results

	<i>Pearson's Chi-Square</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>
Poverty vs education level	29.671	3	0.000
Poverty vs ethnicity	15.525	1	0.000
Poverty vs number of children	5.880	4	0.208
Poverty vs rural-urban	12.463	1	0.000
Poverty vs distance from county seat	32.562	4	0.000

Source: own computation

### 6.2. Poverty and ethnicity

The crosstab of poverty and ethnicity (*Table 4*) shows that people from two ethnic groups (Hungarians and Roma) completed the questionnaire. Of the 329 respondents, only seven identified as Roma. More than half of the Roma informants live below the poverty line, while the poverty rate is around 10% (33 people out of the total of 329 persons) among Hungarians. The significance level for Pearson's chi-square is again below 0.05 (see the second row of *Table 3*), indicating that the poverty rate is significantly higher among Roma than among Hungarians.

**Table 4**  
Crosstab results of the connection between poverty and ethnicity

			<i>Ethnicity</i>		<i>Total</i>
			Hungarian	Roma	
<i>Poverty indicator</i>	not poor	frequency	296	3	<b>299</b>
		expected frequency	293	6	<b>299</b>
	poor	frequency	33	4	<b>37</b>
		expected frequency	36	1	<b>37</b>
<b>Total</b>			<b>329</b>	<b>7</b>	<b>336</b>

Source: own computation

### 6.3. Poverty and household size

After excluding outliers, the crosstab between poverty and the number of children in the household (*Table 5*) shows that poor people usually have more children. The significance level of the Pearson's chi-square, however, is 0.208 (third row of *Table 3*), implying that the difference in the number of children between the poor and the wealthier people is not significant.

**Table 5**  
Crosstab results of the connection between poverty and the number of children

			<b>Number of children living in the household</b>					<b>Total</b>
			0	1	2	3	4 or more	
<b>Poverty indicator</b>	not poor	frequency	170	53	50	23	1	<b>297</b>
		expected frequency	165	54	51	25	2	<b>297</b>
	poor	frequency	16	8	7	5	1	<b>37</b>
		expected frequency	21	7	6	3	0	<b>37</b>
<b>Total</b>			<b>186</b>	<b>61</b>	<b>57</b>	<b>28</b>	<b>2</b>	<b>334</b>

Source: own computation

#### 6.4. Poverty and regional disparities

We examine two aspects of regional disparities. On the one hand, we examine whether the poverty rate differs between urban and rural areas. On the other hand, we investigate if poverty rates vary based on the distance from the county seat (Miskolc).

**Table 6**  
Crosstab results of the connection between poverty and the number of children

			<b>Rural-urban area</b>		<b>Total</b>
			Rural	Urban	
<b>Poverty indicator</b>	not poor	frequency	76	225	<b>301</b>
		expected frequency	85	216	<b>301</b>
	poor	frequency	20	18	<b>38</b>
		expected frequency	11	27	<b>38</b>
<b>Total</b>			<b>96</b>	<b>243</b>	<b>339</b>

Source: own computation

An informant is classified as living in a rural area if they reside in a village, whereas they are classified as an urban resident if they live in a town. The crosstab between poverty and the rural-urban area (Table 6) shows that poverty is more common in rural areas than in urban areas. Pearson's chi-test (4th row of Table 3) shows that the difference is significant.

When examining the connection between poverty and the distance from the county seat, the crosstab results (Table 7) show that people living in or near the county seat (in Miskolc or in the surrounding area) have a greater chance of avoiding poverty, while individuals living further away are more likely to become impoverished. The significance level of Pearson's chi-square is 0.00 (refer to the last row of Table 7), indicating that people living in remote areas have more chances to fall below the poverty line.

**Table 7**  
Crosstab results of the connection between poverty and the number of children

			<i>Distance from county seat</i>					<i>Total</i>
			0–10 km	10.1–30 km	30.1–50 km	50.1–70 km	70.1 km or more	
<i>Poverty indicator</i>	not poor	frequency	178	82	32	6	2	<b>300</b>
		expected frequency	166	82	42	8	2	<b>300</b>
	poor	frequency	9	11	15	3	0	<b>38</b>
		expected frequency	21	11	5	1	0	<b>38</b>
<b>Total</b>			<b>187</b>	<b>93</b>	<b>47</b>	<b>9</b>	<b>2</b>	<b>338</b>

Source: own computation

## 7. Conclusion

This study provides compelling evidence of the multifaceted relationship between poverty and various social and demographic factors in the Borsod-Abaúj-Zemplén County, Hungary, population. Our findings demonstrate a significant association between poverty and lower educational attainment, highlighting education as a critical factor in economic well-being. Furthermore, ethnicity plays a crucial role, with the Roma minority experiencing substantially higher poverty rates compared to the Hungarian majority, underscoring persistent ethnic disparities. This result reinforces the findings in the international literature regarding the multiply disadvantaged situation of Roma living in Europe. Regional disparities also emerged as a significant determinant of poverty, with rural residents and those living farther from the county seat of Miskolc facing a higher risk of impoverishment. These spatial inequalities are in line with the international literature underlining the connection between regional disparities and poverty. It emphasizes the importance of geographic context in poverty alleviation strategies.

While the number of children in a household showed a trend toward higher poverty among larger families, this relationship was not statistically significant, suggesting that family size alone may not be a decisive factor in poverty status within this sample.

Overall, the results point out the need for targeted policies that address educational access, ethnic inequalities, and regional development to combat poverty effectively. Future research should examine the relationship between poverty and employment position, explore the underlying mechanisms driving these associations, and evaluate interventions tailored to the most vulnerable groups identified in this study. By addressing these interconnected factors, policymakers can better design comprehensive approaches to reduce poverty and promote social equity in the examined area.

During the study's preparation and execution, we recognized three limitations. Firstly, the research relies on primary data collected via a non-probabilistic survey, which may affect the extent to which the results represent the broader Jordanian population. Secondly, our online survey targeted only respondents with a mobile phone or personal computer connected to the internet, limiting our sample to a specific segment of Jordanian society. Thirdly, because all survey questions were closed-ended, we did not gather additional details that could shed light on participants' experiences regarding the study's

topics. Additionally, incorporating qualitative data would provide deeper insights into people's living experiences, enhancing understanding of behavior.

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