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THE NUMBER AND SPATIAL DISTRIBUTION OF THE ROMA POPULATION IN HUNGARY – IN THE LIGHT OF DIFFERENT APPROACHES

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Abstract: *Measuring the number of ethnic minorities is one of the greatest challenges on the field of demography and ethnic geography. This is especially true for Roma whose census number does not coincide with estimated number by external observers. Several datasets and surveys are available to count the number of Roma people in Hungary, however they resulted in different numbers. The present study targets to overview these surveys, their approach and method and aims to provide a brief summary about the recent survey of the University of Debrecen based on the personal and electronic questioning of local representatives about the number of Roma. This study is also an attempt to show regional distribution of Roma population in Hungary. As a result, the estimated number of the Hungarian Roma community is 876,000 that is one of the highest values published so far and exceeds census number almost 3 times. The spatial patterns of Roma show their intense segregation, peripheralization and the phenomenon of ethnic change primarily in North-East and South Transdanubia.*

Key words: *census, ethnicity, Hungary, Roma, survey*

INTRODUCTION

Current paper is dealing with the issue of ethnic data collection with special attention to the Roma population. The number of Roma is a highly debated issue not only among scholars but among the public and politicians as well. The number of ethnic Roma by self-identification (for example, the numbers provided in censuses) has always been far fewer than the number of Roma estimated by experts (see e.g. Kocsis and Kovács, 1991, 1999; Ladányi and Szelényi, 2001; Kemény and Janky, 2005; Hablicsek, 2008). Consequently census results regarding the number of Roma have been considered 'unreliable' and, in order to fill the gap, there have been many surveys to measure their numbers and characteristics since the 1970s. These surveys showed that Roma number according to external identification is about 2-3 times higher than census results, thus Roma population is sometimes called as *"hidden minority"*.

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Nevertheless, significant differences can be detected even among the surveys from the same period. For example the number of Hungarian Roma population counts 315,000 by the 2011 census; demographic estimate for the same date calculated from the 2003 national survey indicated 658,000 Roma people (Hablicsek, 2008) and the survey of University of Debrecen resulted in 876,000 Roma inhabitants few years later. These differences derive from the different survey methods and basically it is back to the uncertain boundaries of the Roma ethnicity (i.e. who is Roma?) (see Ladányi and Szelényi, 2001).

The objective of this paper is to make an overview about the different data sources about the Roma population and to give a short evaluation about them. The paper also aims at to highlight the causes of the uneven numbers by the different methods and surveys. Besides the introduction of the available data sources, the objective of the study is to present the latest national estimate surveyed by the University of Debrecen and to make a comparative analysis about the geographical patterns of Roma distribution.

ROMA POPULATION IN HUNGARY AND THE DILEMMA OF MEASURING

Roma population growth in the light of the censuses

In Hungary ethnic composition of the population is generally studied by census results based on self-declaration – as censuses are considered to be regular, detailed, comprehensive, easy available and complete database with more or less similar methodologies in the neighbouring countries (Papp, 2010; Kapitány, 2013). Several studies apply census data to analyse the spatial pattern or demographic changes of the Roma population as well (e.g. Kocsis, 2010). However, it should be mentioned that an essential change in the Hungarian census methodology took place in the turn of the millennium. Before 2001 censuses intended to measure ethnic attachment by questions focusing on ethnicity and mother tongue. Answering the questions was compulsory and only one answer could be given for a question (Tátrai, 2015).

The 2001 census underwent significant changes compared to the previous practices. Besides the questions focusing on ethnicity and mother tongue, questions regarding the cultural attachment and the language used in communities of family and friendship were also asked. For each of the four questions three answers could be given. It was also an important innovation of the 2001 census that answering the questions of ethnicity and religious denomination was not compulsory. The 2011 census generally used the same method as ten years earlier, but at some points it differed from the previous one. Ethnicity gained a bigger attention, as this year two questions focused on this topic. Besides, the number of the possibly chosen answers was reduced from three to two, and the question about cultural attachment was removed from the census. Furthermore, the questionnaires could be filled in both online and on paper. The paper-based filling in could be carried out both with the help of official interviewers, and also alone, which gave the complete freedom to undertake any identities (Tátrai, 2015). The above factors should take into account when ethnic data of the censuses are analysed.

Based on the census results, *Roma population is the largest ethnic minority in Hungary* seeing any kind of sources or literature and the only ethnic group with increasing number and ratio among the total population (Figure 1). According to the 2011 census in Hungary, the number of ethnic Roma population increased by 63 per cent in ten years to 309 thousand persons. The aggregate number of those who declared Roma affiliation exceeded 315 thousand persons or 3.2% of the total population. As it is possible to declare multiple ethnic identities since the 2001 census, most of those expressing Roma affiliation self-identified Roma and Hungarian ethnicity simultaneously (about 74% of the total Roma affiliations). At the same time, only 54 thousand persons (17.2 percent of the whole Roma community) declared Roma mother tongue due to their long-standing linguistic assimilation, while 61 thousands spoke Lovari, Romani or Bayash language within their circle of relatives or friends (19.4 percent of the whole Gypsy community).

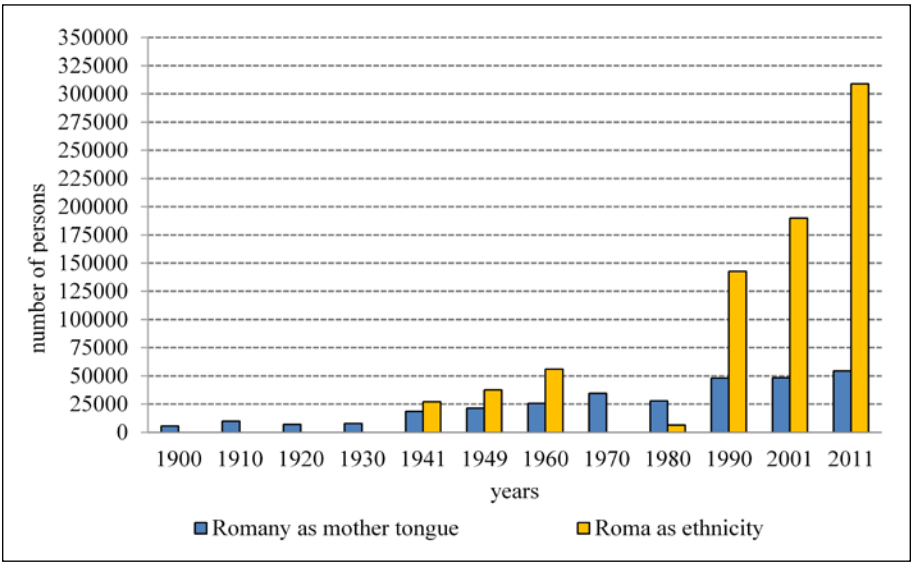

Figure 1: *The number of Roma population in Hungary by mother tongues and ethnicity*
Source: edited by the authors by the censuses from the HCSO

The Roma population growth is originated from objective and subjective factors. The salient increase in the number of Roma in the past decades is the consequence of both the above-mentioned changes in census methodology, and the high fertility rate of the Roma outstripping the respective data of any other ethnic groups. However, the growth in their number was much higher than their estimated fertility would have generated (Hablicsek, 2008), thus we argue that the census number of Roma depends primarily on the subjective nature of self-identification influenced by the diverse Roma identity constructions and the contemporary social conditions (including their stigmatized being, discrimination, etc.) (Csepeli and Simon, 2004; Tátrai, 2015).

Due to the above factors, the declaration of ethnicity is far from unambiguous in the case of the Roma population. Their intra-ethnic differences hamper them to form a compact and homogenous community. According to the mostly mutual opinion of the experts – Roma population can be divided into three large groups (see e.g. Revenga et al., 2002; Kemény and Janky, 2005):

– Hungarian Roma – in Romani: Rumungro – have been living in Hungary for centuries constitute the largest group with their share of approximately 70 per cent. Hungarian has become their native language for many generations now. At the time of the censuses, their majority declares themselves not Roma but Hungarians;
– Wallach Roma moved to Hungary from Wallachia mainly during the 19th century, and they constitute approximately 21 per cent of the total Roma population in Hungary. Their language – the Lovari dialect of the Romani language – is spoken by most of them even today;
– The Bayash group represents approximately 8 per cent of the Roma living in Hungary. Their language is the archaic Banat dialect of Romanian;
– The remaining 1 per cent is represented by the small Roma communities (Sintos, Vend Roma) living mainly along the western border of Hungary (Vekerdy, 1989; Süli-Zakar, 2012).

The listed Roma groups are sometimes sharply segregated from each other and these communities significantly differs in their social and cultural characteristics (Lengyel, 2004; Fónai and Vitál, 2008; Süli-Zakar et al., 2013; Pénzes, 2016).

Estimates and surveys to count the number of Roma population

As there are a huge gap between the number of Roma by self-identification and by ascription by external observers, researchers are interested to measure "objective" number of Roma since the second half of the 19th century but especially since the 1970s. This discrepancy is not a Hungarian phenomenon – it can be detected in the whole East Central European region (e.g. Ladányi and Szelényi, 2001; Dolná, 2009; Kyšela, 2015; Molnár et al., 2016; Szilágyi, 2016). As the task is complex, the number and method of approaches to measure Roma population are manyfold.

Due to the complexity and costliness of national surveys based on representative or non-representative population samples, they are rarely carried out and their spatial decomposition is very limited. Such surveys were implemented in Hungary in 1971, 1993 and 2003 with a two per cent sample for the first two time and only one per cent sample in 2003 (Kemény and Janky, 2005). These investigations defined Roma those who are identified as Roma by non-Roma external observers (experts) primarily based on anthropologic character, way of life and ethnic descent (Kemény and Janky, 2005). These surveys revealed the clear trend of Roma population growth (Figure 2), however, other surveys with similar method resulted in different numbers. For example 1993 national survey by Kemény and his colleagues (see Kemény and Janky, 2005) estimated Roma population share as 4.7 per cent, while the estimate by the Central Statistical Office in the same year reported about 3.9 per cent (Mészáros et al., 1994). Both results exceed the census numbers about 3 times.

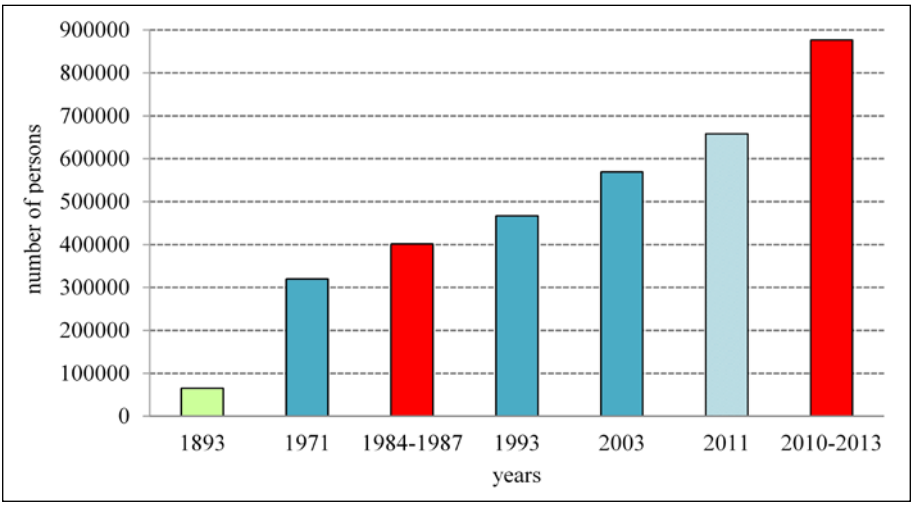

Figure 2: *The number of Roma population in Hungary according to surveys and estimates*
Sources: ***1893****: A Magyarországban…, 1895;* ***1971, 1993, 2003****: Kemény and Janky, 2005;* ***1984-87****: Kocsis and Kovács, 1991;* ***2011****: calculation by Hablicsek, 2008;* ***2010-13****: survey of the Universtiy of Debrecen*

Another survey from the 1980s applied a quite different approach. Similar to the method by Kemény and Janky (2005), the so-called CIKOBI dataset (Committees for the Coordination of Gypsy Affairs – former unit of the county councils during the socialist era) applied the external classification of Roma, however it applied territorial approach instead of representative sample, and data were collected in every settlements in Hungary. The survey was carried out between 1984 and 1987 by the questioning of local councils. Due to its method (external categorization by local experts) it worked well in small sized settlements, but resulted in uncertain figures in urban neighbourhoods. The data of Budapest was especially distorted. The total number of Roma population was 400,000 after the collection ended (see Kocsis and Kovács, 1991; Kertesi and Kézdi, 1998), which is still significantly higher than that of the 2011 census found two and half decades later.

Beyond national surveys regional or local *surveys targeted the segregated Roma colonies,* where Roma live in a compact area with colony-like circumstances. The objective of these surveys is to detect the health problems and living conditions of the communities (Kósa et al., 2007; Szakmáry et al., 2012). They are not appropriate to create a comprehensive overview about the whole Roma society.

Databases are created by the primary schools could provide interesting and important information about the number of Roma pupils by their ratio. Through these data the ethnodemographic processes (Papp, 2012) and the ethnic segregation might be detected. Before 1992, all primary schools filled out a compulsory questionnaire that contained, inter alia, the total number of students and the number of Roma students in the school. This data collection is ceased to be continued after 1992. The data

on the number of Roma students are available from 2006 in the Hungarian National Assessment of Basic Competences (NABC). School-level data are provided by the school principal estimating the ratio of Roma students in the school (Kertesi and Kézdi, 2012). This database more or less subjective as it depends on the assessment of the school principals and it covers only a small segment of the total population.

Minority local government elections are held at the time of the local governmental elections. Citizens from ethnic minorities must sign up to the minority register to vote. This list should contain at least 30 persons – except for special cases – to organize elections on a settlement. The number of registered minority voters is an important and available data, however the values might be distorted by the possibility to vote in a given location irrespectively the place of living. It is important to emphasize that this database depends significantly on the political activity but general spatial relationships can be detected on its basis comparing with other resources – namely its territorial pattern is more or less similar (Pásztor and Pénzes, 2013).

Other possibilities are provided by the analysis of the *activities of non-governmental organisations* – e.g. associations or foundations dealing with cultural and educational roles or other development tasks. However, these sources are really mosaic-like and Roma NGO activities also depend on the identity or qualification.

Data of birth/marriage register is rather appropriate to carry out historical research (Demeter and Bagdi, 2009). The identification of ethnicities by surnames and first names resulted in satisfying conclusions in the case of different nations. This way of data collection about the Roma population requires considerable experiences about a given territory due to the large scale mixing of the names (Süli-Zakar et al., 2013).

Complex approaches use more sources simultaneously and compares various types of data. Some of such research compares census data and *data collected on the field by households.* They are relevant and very precise in local level but covers only few settlements, thus they are not appropriate to give national overview (Keményfi, 2002; Tátrai, 2010; Pásztor, 2013; Balizs, 2014).

NUMBER OF ROMA POPULATION ACCORDING TO THE LOCAL REPRESENTATIVES' OPINION

The survey of the University of Debrecen and its methodology

Our research aimed at to find out the number of Roma by applying external categorization – almost ten years after the last comprehensive survey in 2003. By that time estimates about the number of Roma varied from 500 000 to one million. Our research applied similar method to the above-mentioned CIKOBI-survey; the colleagues of Department of Social Geography and Regional Development Planning at the University of Debrecen made an extended survey by personal and electronic questioning (primarily via telephone or by e-mail) of local self-governments of every Hungarian settlement to ask the number or ratio of the local Roma. It was supposed that local representatives have – in an ideal case – complex overview about their settlement and the number of local Roma population. This kind of data collections had been successfully applied in smaller territorial units (Baranyi et al., 2003; Filepné

Nagy, 2005) or even in whole countries (Matlovičová et al., 2012; Mušinka et al., 2014). This approach seems to become important in the Central and South Eastern European countries from Romania to Slovenia where recently extended research projects were initiated. Our database dates back between 2010 and 2013 and it is appropriate to make a comparison with the CIKOBI database from the mid-1980s.

Despite the common methodological basis, the survey applied a bit different methodology due to practical reasons emerged during the field work. As not all local councils showed willingness to answer, the query was forwarded to the local minority self-governments approximately in every tenth settlement. Moreover, some of the majors were ethnic Roma as well, so the original viewpoint was modified and we defined Roma those who were identified as Roma both by non-Roma *and Roma* experts.

The experiences were similar to the CIKOBI survey, namely the experts were uncertain concerning the number of local Roma mainly in the large towns. For example, the overall data for Budapest gave the interval between 105400 and 128,500. In order to be comparable and to be able to map the data, the Roma population in Budapest was determined in 120,000 that gave the "maximum likelihood" by the districts according to the data reporters. On the contrary, experts in smaller settlements provided rather confident classification, thus such data can be regarded as precise. After the data of 2011 census became available, the extremely distorting data was filtered out and data requests were sent again.

As the result of the survey of the University of Debrecen, the number of Roma was estimated in 876,000 or 8.9 per cent of the total population in Hungary. This figure is much higher than it was expected and what would have concluded from the previous surveys, however the method allows comparing only to the CIKOBI-survey: our research show that the number of Roma inhabitants was more than two times higher than the CIKOBI sum in 1987. This relatively high figure does not necessarily means "measurement error", rather it reflects the current social circumstances in Hungary. However the following factors can be considered as obstacles during the survey.

Migration causes problems in the creation of a precise overview. International migration is hardly traceable. Official statistics show insignificant degree of international migration (see Tóth and Vékás, 2013), nevertheless literature reports on Roma migrant flows to UK, Canada and Germany (Vidra and Virág, 2012; Pénzes, 2016).

It seems that non-Roma in *intermarriages,* and descendants of ethnically mixed couples are considered as Roma apart from the person's self-identification by the non-Roma (Ladányi and Szelényi, 2001; Csepeli and Simon, 2004; Kemény and Janky, 2005). This statement was also confirmed by our research experiences.

The third factor highlighted here is that imposed ethnic identity is sometimes based on social status. This means that poverty is associated with Roma, thus poor people may be categorized as Roma (Ladányi and Szelényi, 2001). Some of our informants reckon *poor people as Roma* and use equal terms with them. This characteristic could also have effect on the number of the estimated number of Roma community (Velkey, 2014).

Result of the survey in territorial decomposition

The territorial pattern of latest census data and the dataset based on the survey of the University of Debrecen represent spectacular spatial disparities. These datasets provide the detailed territorial decomposition on the LAU II (settlement) level but a comparison is expedient to make. Since rest part of the previously introduced surveys is available on the level of NUTS II regions (in which the data of Budapest and Central Hungary are united) a general overview can be accomplished on this territorial level (Table 1). The number of Roma pupils in primary schools (Kertesi and Kézdi, 2012) covers only the 6-14 years age group and the number of registered voters on the Roma minority elections includes the adult population (Minority elections, 2014).

Table 1: *Territorial division of Roma population by different resources**

Regions/data sources	CIKOBI, 1984-1987	Census, 1990	Kemény-Kertesi, 1993	Census, 2001	Kemény-Janky, 2003	*Kertesi-Kézdi, 2011*	Census, 2011	Hablicsek, 2011	UD, 2010-2013	*Minority election, 2014*
Central Hungary and Budapest	17,46	10.38	15.31	12.87	14.12	*15.05*	12.95	20.21	21.65	*11.19*
Central Transdanubia	5,14	4.08	5.20	4.57	6.52	*5.29*	5.13	6.08	6.12	*4.04*
Northern Great Plain	22,52	29.14	25.10	24.63	16.77	*25.66*	26.10	21.99	23.83	*28.35*
Northern Hungary	28,06	32.25	27.56	33.64	32.07	*30.71*	29.57	27.66	24.45	*26.90*
Southern Great Plain	8,04	7.21	7.90	7.53	12.40	*7.40*	8.20	7.40	8.82	*9.92*
Southern Transdanubia	13,67	12.70	13.98	12.84	12.37	*11.35*	13.77	12.10	10.93	*14.54*
Western Transdanubia	5,10	4.23	4.95	3.90	5.74	*4.53*	4.27	4.57	4.20	*5.07*

Source: by Kertesi and Kézdi 1998; Kemény and Janky, 2003; Hablicsek, 2008; Kertesi and Kézdi, 2012; survey of the University of Debrecen, census data from the HCSO
** Dataset about one given subgroup of the Roma population with Italics style*

The regional distribution of the censuses, surveys and registers represents some spectacular distortions – e.g. the share of Central Hungary and Budapest is ranging from 10 per cent to almost 22 per cent or the ratio of the Northern Great Plain is varying in the 17 and 29 per cent interval. These cases are not reasoned by temporal changes but clearly demonstrate the significantly different characters of the data collections. At the same time considerable uncertainty is represented by these values

in the evaluation of tendencies. For instance increasing share of Roma population is demonstrated by the census values in the case of Central Hungary and Budapest, which is confirmed by the surveys based on the estimates of local representatives (CIKOBI and the survey of the University of Debrecen). On the contrary, the surveys by Kemény and his colleagues in 1993 and 2003 show decreasing share. Similar discrepancies can be detected in the case of Northern Hungary while fluctuating values appears at the Northern Great Plain region.

The absolute numbers of results are represented on the NUTS III level by thematic map on the basis of the CIKOBI survey, the last sociological survey, the census in 2011 and the survey of the University of Debrecen (Figure 3). Figure 3 shows that outstanding values can be detected by the 2003 survey (Kemény and Janky, 2005) in the case of Heves and Békés counties. Among the four database compared it is the 2010-2013 survey (University of Debrecen), which found significantly higher values, however the territorial pattern is similar to the previous surveys.

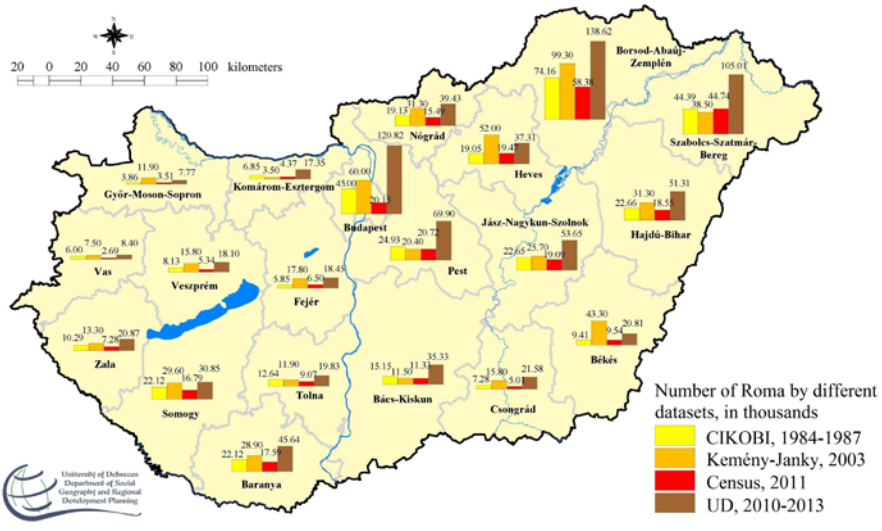

Figure 3: *The number of Roma by different datasets on NUTS III level, in thousands*
Source: edited by the authors data from Kocsis and Kovács, 1991; Kertesi and Kézdi, 1998; Kemény and Janky, 2003; the HCSO census and the survey of the University of Debrecen (UD)

The background of differences among the analysed surveys should be explained mainly by methodological reasons, nevertheless outstanding values by the 2003 research may be in connection with low sample size and thus low territorial representation.

The territorial presence of the Roma population is clearly seen on Figure 4 edited by the LAU II level data of the last census. A similar but hard-contrast pattern is illustrated by the survey of the University of Debrecen (Figure 5) that resulted in higher values in most cases. Beyond the different methodology which caused the sharp differences in the figures, the territorial pattern shown by the census and our

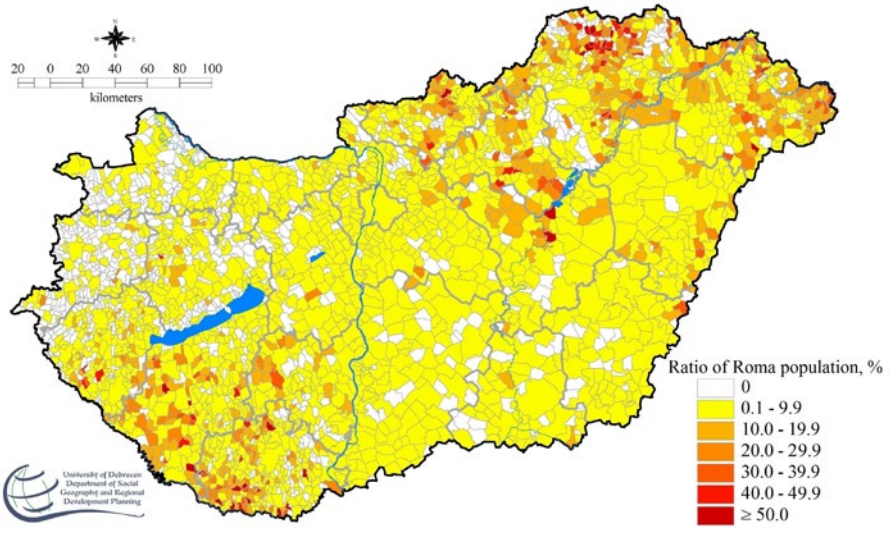

Figure 4: *The ratio of the Roma population in the Hungarian settlements in 2011, %*
Source: edited by the authors by the census data from the HCSO

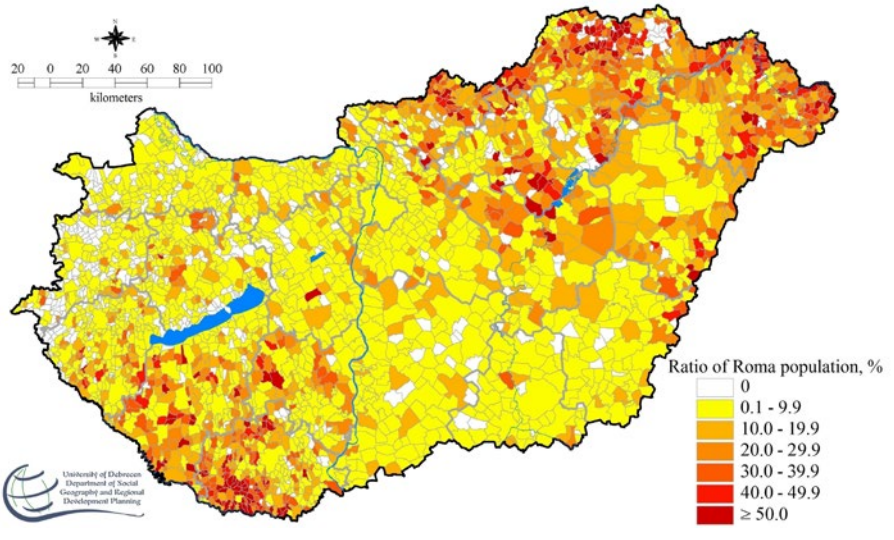

Figure 5: *The ratio of the Roma population in the Hungarian settlements in 2010-2013, %*
Source: edited by the authors by the survey of the University of Debrecen

survey is quite similar. The results of the survey by UD between 2010 and 2013 were confirmed by a recent research project (in 2016) focused on two NUTS III counties – by the questioning of the local self-governments and by the Roma minority self-governments as well (Pénzes, 2016).

The results of the 2010-2013 survey unambiguously outlines contiguous areas where demographic and social-economic trends resulted in the rapid growth of Roma population (marginalization and rising unemployment during the market transition period, a growing number of Roma moved back to depopulating, peripheral, backward villages, which in some cases contributed to selective migration, ethnic change and rural ghettoization – Virág, 2006; Pásztor et al., 2012). Due to these processes the concentration of Roma population became more visible mainly in the underdeveloped North-East Hungary (Kozma, 2008; Bujdosó et al., 2013) and South-Transdanubia.

One of the most important differences between the census data and the survey of the University of Debrecen is expressed by the number of settlements with Roma population over 50 percent (Figure 6). The ratio of Roma population was above 50 percent in 31 settlements on the basis of the census data from 2011. According to the survey of the University of Debrecen this number was 137 (including every settlement from those were characterized by Roma majority by the census) and ongoing ethnic change can be detected in the case of 102 others (ratio of Roma inhabitants above 40 percent).

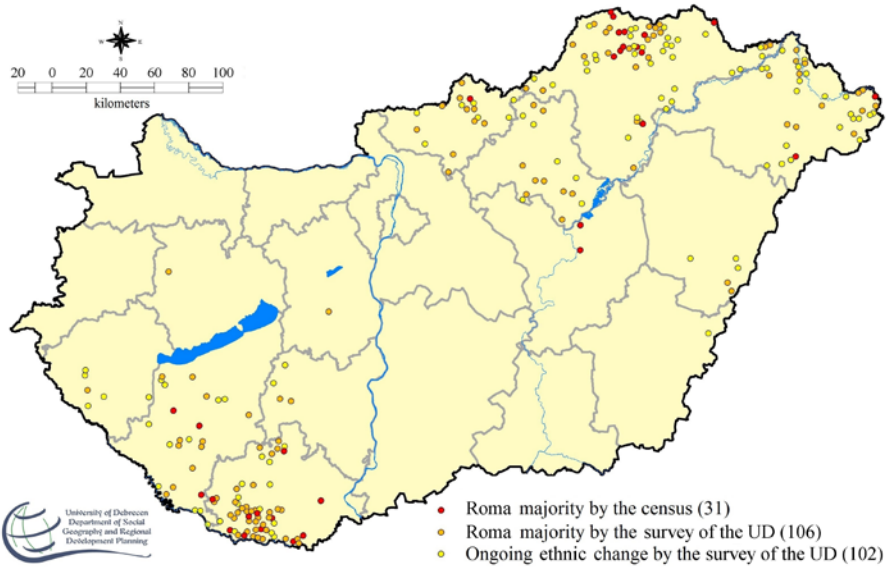

Figure 6: *The process of ethnic change by the databases from the recent years*
Source: edited by the authors data from the HCSO census and the survey of the University of Debrecen (UD)

Characteristic changes are demonstrated by the results in the ethnic structure of Northeastern and Southwestern Hungary. According to the experiences during the survey the introduced results tend to be relevant as repliers from smaller settlements could provide more precise overview about the number of the local Roma population and small villages are mostly influenced by the illustrated demographic trends of these parts of Hungary.

CONCLUSION

Measuring the number of ethnic minorities is one of the greatest challenges on the field of demography and ethnic geography. This is especially true for Roma whose census number does not coincide with estimated number by external observers, therefore Roma are sometimes regarded as a 'hidden' minority. Researching the number of Roma is further hampered by their segmentation into sup-groups, by which Roma do not form a homogenous ethnic group and have no uniform ethnic identity. These features make the issue of Roma identity more complex and uncertain at the same time. Besides, there are more other factors (e.g. migration patterns or specificities of external categorization) that mean significant obstacles to create a precious overview or estimation about the number of Roma population.

Results of the censuses and the surveys carried out in the past 50 years can be considered as inconsistent, however they all report about the same tendency, the increase in the number of Roma. Census data are based on the self-declaration; surveys build on external categorization of interviewers (and other experts) and the surveys with territorial approach apply external categorization by settlements collecting the local representatives' estimates.

The survey of the University of Debrecen became more complex with the extended range of repliers (non-Roma and Roma as well). According to the specific features this methodology resulted in the largest number (876,000) of Roma population in Hungary, which is almost three times exceed the 2011 census number and higher than it was counted/estimated from the previous surveys. Our survey revealed the territorial patterns of Roma population and show Roma concentration in regions characterised by social problems and cumulative backwardness, where selective migration and ageing of non-Roma changes the ethnic proportions. However, the relatively high figure of the survey by UD or the inconsistency among the results of other research should be attributed less to some kind of measurement error, rather it is the result of the different methodology, and the different classificatory systems. Eventually, the discrepancy of the figures by the particular surveys, the several obstacles of the measurement and the different Roma definitions suggests us that the ethnic boundary of the Roma are somewhat blurred and thus it is not possible to provide a completely precise or objective number of Roma. Notwithstanding, every survey is an important contribution to the Roma issue and every result means an important fact about the contemporary social circumstances in Hungary.

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SUMMARY

THE NUMBER AND SPATIAL DISTRIBUTION OF THE ROMA POPULATION IN HUNGARY – IN THE LIGHT OF DIFFERENT APPROACHES

The evaluations for the number of Roma population tend to represent large dispersion due to several reasons. The Hungarian Roma population is called as hidden minority because of their language use and double identity. The changing declaration of the identity, the existence of Roma sub-groups, the migration make this issue more complicated. Census data are based on the self-declaration; surveys build on external categorization of interviewers (and other experts) and the surveys with territorial approach apply external categorization by settlements collecting the local representatives' estimates. In the case of the external classification of local representatives the mixed marriages and the problem of social and territorial segregation might influence the estimations about the number of Roma population. Several existing datasets are overviewed in the study with special attention to those ones with territorial decomposition. The latest complete and settlement level estimations are available in the survey of the University of Debrecen (2010-2013). The summarized number of Roma inhabitants exceeded 876,000 people according to this survey. This value is 2.8 times higher than the census data from 2011. The territorial pattern of these datasets are similar but major differences are detected primarily by the settlements with Roma majority. The summary of this phenomenon draw the attention to one the most important social processes in Hungary with its spatial disparities at the same time.