HUNGARIAN DEMOGRAPHIC RESEARCH INSTITUTE

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1 INTRODUCTION

While the well-known and nearly forty-year-old Hajnal-model dividing Europe into two household formation patterns has received long-standing criticism, most criticism has been based on theoretical aspects or local data with small case numbers. More information on the household formation patterns of East Central Europe (the 'eastern' pattern according to Hajnal's terminology) has so far rarely been available. This is particularly true for the territory of the former Habsburg Monarchy and the historic Hungarian Kingdom. The MOSAIC project aimed to collect information on micro-census data preserved in different European countries and to build up an online database so as to open up new research possibilities on household structure and marriage patterns.
The Hungarian MOSAIC sample is based on the data of the 1869 population census and consists of more than 6,000 households. It contains individual data and covers all important geographic regions and ethnic and denominational groups pertinent to that period (Hungarians, Germans, Slovaks, Southern Slavs, Romanians, Roman and Greek Catholics, Calvinists, Lutherans, and Greek Orthodox population). By analysing the data we can separate the residence patterns existing in the Carpathian basin in the middle of the nineteenth century and test whether a simple dichotomous pattern ('western' or 'eastern'), a west–east slope, or a special pattern with more transitional variations existed in this vast Central European area. Besides the cultural variable denomination (which is equivalent to ethnic affiliation in some regions), we can also use geographic (region) and social (profession) ones. We would like to better understand whether the different types of household formation can be linked to ethno-cultural variations, or if they are (at least partly) the results of special sorts of local possibilities of subsistence. The existence of clear cultural (denominational) or west–east regional differences will be regarded as confirmation of Hajnal and his successors' view, while the dominance of other factors concerning household structure ('mosaic-like' regional patterns or the role of socio-professional status) will be considered as falsifying the dichotomous model.

2 RESULTS OF FORMER RESEARCH

Research on historical household structure and the rules and patterns of household formation have been a central field of family history and historical demography since the 1960s. The structure of co-resident and co-operating units can be regarded as a core element of any society, whether past or present. In pre-industrial societies households were not only the groups of people living together but also the units of demographic reproduction, work and consumption. In other words, they can be considered the framework for everyday life. Households were formed first of all by relatives, and the relationship among co-resident persons related to one and another were formed by production, taxation, the customs of inheritance, etc. Therefore the study of household structure in the past can reveal some key elements of the societies under investigation and the literature related to the topic is extremely rich. In this paper we cannot provide a comprehensive analysis of the research of the last fifty years[1], but we do try to outline

1 In this respect, we quote the work of Tamás Faragó (2003) which provides a very useful survey of the research up until the millennium. Also see: Oris – Ochiai 2002. For newer summaries see: Gruber – Szołtysek 2012 and Szołtysek 2012.

its main contours by concentrating first of all on the results of Hungarian historical demography and family history.

Research on household structure and family history has been dominated by the works of John Hajnal and Peter Laslett since the 1960s (Hajnal 1965, 1982, Laslett 1972, Laslett 1983, 1988). This domination appears to be accepted with slight modifications in some cases, and criticised and rejected as well. Authors on this topic – whether accepting or rejecting these views – always use them as a base of comparison to help determine theoretical position. Hajnal distinguished between 'Western' and 'Eastern' marriage patterns (1965), and some years later extended his theory both in space and time by formulating the theory of 'Western' and 'Eastern' patterns of marriage and household formation (1982). His suggestions were connected to and supported by the studies and methods initiated by Peter Laslett (1972). Their dichotomous 'east-west' model, in which the uniqueness of Western social and economic development was taken as a given with roots tracing back to the Middle Ages and explained by cultural and mental characteristics (rationalism, prudence and individualism), incited a lot of research. Moreover, the household typology suggested by Laslett made a large number of comparative studies possible and managed to falsify the former evolutionary model of family and household formation. Later on, and as the results of micro-level studies on the topic multiplied, the basic model was refined. These studies discovered new and local variations, which had to be taken into theoretical account. This eventually led Laslett (1983) to admit the existence of transitory zones between 'East' and 'West' (a middle occidental German and a Mediterranean one). Hungarian researchers suggested the inclusion of a transitory Central European pattern, whose characteristics derived partly from the region's geographical situation and partly from its highly varied ethnic and cultural conditions (Andorka – Faragó 1983). Austrian researchers further refined the model, suggesting newer local patterns in South-East Europe (Mitterauer 1999, Kaser 1996). All in all, the great diversity of local patterns has been identified several times (Burguière – Lebrun 1986, Todorova 1993, 1996, Fauve-Chamoux – Wall 1997, Livi Bacci 1998, Faragó 2003, Szołtysek 2008, Gruber 2009, Őri 2009, Gruber – Szołtysek 2012), as has the ideological background and origin of this kind of regional division, (Schlumbohm 2000, Szołtysek – Zuber-Goldstein 2009) and the possible connections to other divisions (van de Kaa 1999).

At the same time, the anthropologist Jack Goody questioned the basic relevance of the Hajnal model, considering 'West-East' differences as exaggerated and overly generalised. He also questioned the connection between the unique 'Western' model (late marriage, the high proportion of the never-married in older age groups, the dominance of nuclear family households and life-cycle servitude) and the development of industrial capitalism (Goody 1996). Others regarded works influenced by Hajnal and Laslett's thinking as attempts to justify the global hierarchies of the modern world and highlighted the approach's Malthusian roots (Melegh 2002). French researchers several times demonstrated the diversity of France with respect to household formation, and suggested Le Play's family types (nuclear, communitarian and stem family) instead of Hajnal and Laslett's models (Burguière – Lebrun 1986. 63). They also drew attention to the problem of rigid geographic separation instead of using more flexible cultural terms[2]. Later on, newer determinants of household formation like the type of settlement

2 It is also worth mentioning that criticism of geographic separation or the rigid dichotomous model could also lead to a confirmation of the basic idea of the Hajnal model. Thus Andorka and Faragó, in suggesting a more refined model and the inclusion of transitory zones, admitted the existence of 'Western' and 'Eastern' patterns but stressed ethno-cultural characteristics (historic Hungary as a mixture of ethnic groups of different cultures and traditions (1983)). Similarly, Peter Teibenbacher stressed the importance of ethnic characteristics in household formation instead of regional separation (2008).

and socio-professional status also emerged (Fauve-Chamoux – Wall 1997, Lundh 1995). Overall, it has become clear that family history not only needs a more refined geographic model but also a flexible and multi-causal explanation taking e.g. geographic and cultural conditions or socio-professional status into account[3].

With regard to Hajnal and Laslett's models, the other basic elements of criticism were the static feature of the sources and results they used, and that they did not take into account all those demographic constraints and determinants (infant, child and adult mortality, or migration) which directly affected the structure of households (Berkner 1972). According to Berkner and his successors' view, mortality and migration were decisive factors in the formation of household structure; households passed through cyclical change during their lifetimes which was decisively determined by the above-mentioned demographic phenomena, by the rules of inheritance and by the chronologically dynamic labour force demand of family households (Chayanov 1966). Therefore, household structure was a continuously changing phenomenon, in which demographic, cultural and economic determinants played the decisive role, instead of exclusively cultural and mental ones. So – instead of revealing the regional patterns of family and household formation – recent research has aimed to understand the dynamics and functioning of households. Since longitudinal series of household lists or series of regularly repeated population censuses have seldom survived, the most frequent method is analysis of cross-sectional data by age of household members (synthetic cohort approach), focusing on structural changes over the household life-cycle (Reher 1997).

As regards Hungarian research, it is worth distinguishing between macro- and micro-level studies and results. The scholarly efforts of Rudolf Andorka and Tamás Faragó came only few years after Hajnal and Laslett's ideas. At the macro level Faragó proved that complex household forms spread in Hungary between 1787 and 1828 (1977)[4]. But at that level of research he could not decide whether a spreading Malthusian crisis with local overpopulation or a total crisis of the whole feudal agrarian system was causing the process. Also at macro level, Faragó tested the relevance of the Hajnal line using data of eighteenth-century enumerations (2003)[5]. His results showed that there were regional patterns of marriage and household formation in eighteenth century Hungary, in which migration and mixing of ethnic groups played a decisive role. Thus Faragó simultaneously refuted the dichotomous model and the mechanical regional division, and supported what may be termed the culturalist explanation of Hajnal. Later on, attempts were made to deconstruct the Hajnal line using settlement level macro data (Őri 2009). The results of this research confirmed Faragó's statements about the existence of more alternative marriage and household patterns, drew attention to the role of settlement and farming types, but also to that of ethno-cultural characteristics in household formation (Őri 2010).

Important research efforts took place at the micro-level from the 1970s as well. A series of analyses using eighteenth-century household lists (*Status Animarum*) was published in the 1970s and 1980s. As a summary, Andorka and Faragó considered Hungary as being in a central position between the 'West' and the 'East' in terms of marriage customs and household formation (1983). Péter Pozsgai tried to clarify the household notion used by

3 Thus Mikolaj Szołtysek showed (2008. 417) that the Polish-Lithuanian area cannot be regarded as a homogenous East European region. The frequency of multiple-family households – contrary to former views – was negatively correlated with the spread of the system of East European 'second serfdom' (i.e. the important role of large manorial estates and compulsory labour of serfs).

4 Later on he extended this statement to the first half of the nineteenth century. His sources were county-level summaries of the 1784–1787 census and nineteenth century enumerations of the non-noble population (1804–1828). He used rather crude variables for measuring the complexity of households: the number of married men per household (conjugal units) in the first case, and that of sons and son-in-laws per household in the latter one. His results and methods were strongly criticised by Ildikó Husz (2002), although her micro-level results did not refute Faragó's findings.

5 His sources were the county-level summaries of the non-noble enumerations (*Consriptiones Animarum*) (age at first marriage, percentage of servants) and those of the 1784–1787 census (mean household size and the number of conjugal units per household).

18-19th century Hungarian census takers. He carefully compared successive censuses in a North Hungarian micro-region and suggested use of Chayanov's approach to understand household dynamics and the revision of Laslett's typology in order to classify the households of a different – 'Eastern' – society (Pozsgai 2000, 2001a, 2001b)[6]. Ildikó Husz analysed a longer series of church household lists in Zsámbék, a large village close to Budapest, inhabited mostly by eighteenth-century German settlers (2002). In accordance with Faragó's results, she managed to prove that household structure changed over time in the first half of the nineteenth century, that is to say more complex households became more frequent until around 1830, after which time the opposite development could be found. In her view, the main cause of this process was the changing difficulty of leaving the parental home (particularly for non-heirs in a system of stem inheritance). In this respect the role of cultural factors (the system of inheritance) and some exogenous ones (economic development, possibilities of having new plots and those of out-migration and mortality) appears to be important. Gyula Benda studied the social changes of a small Transdanubian town (Keszthely) between the middle of the eighteenth and nineteenth centuries. The process of inheritance was particularly stressed in his work on demography and the study of household structure (Benda 2002, 2008). He emphasised the role of farming and subsistence in household formation, which was reflected by differences by district within the town. The centre of the town (higher social strata, artisans, day labourers, domestic servants) and the neighbouring vineyards were characterised by a majority of simple-family households (and also by the great number of single persons or non-family households), while households in the parts of town with an agrarian population appeared to be more complex. Thus, he drew attention to the role of socio-professional status, the complexity of the larger settlements in economic and social terms and to that of inheritance in forming spatial separation and household structure. Using qualitative analysis of wills and cases of inheritance, he succeeded in demonstrating that families who owned properties in different parts of the town (e.g. arable lands and vineyards) divided those properties when parents were still alive, and particularly in vineyards heirs got some part of their inheritance after their marriage. Most male heirs therefore moved out of the parental home after marrying and were consequently registered as persons living in separate simple-family households, even if co-operation and common farming did not come to an end while one of the parents was alive. Benda and Husz emphasised the importance of the process of inheritance, which may partly explain the cyclical changes of household structure in accordance with two different types of succession (stem inheritance and equal partition among sons). Their works – together with Levente Pakot's newest paper using Chayanov's approach (2013) – open up new perspectives to understanding household dynamics, and draw attention to important new aspects in order to go beyond seemingly infertile attempts of regional division and cultural classification.

To sum up the results of Hungarian research, despite a long period of intense effort many questions remain unresolved. We are therefore unable to clearly define the main determinants of household structure in the pre-industrial era or discriminate between the causes of the results identified in different analyses. It is therefore not clear whether ethnic affiliation (Faragó 1985, Husz 2002, Őri 2009), the full and differentiated regional context (Faragó 1985, Őri 2009), the type of settlement (Benda 2002, 2008, Faragó 2005, Melegh 2000, Őri 2005, 2009), social position (Benda 2002, Faragó 2005), farming (Pozsgai 2000, Benda 2002, Őri 2005), inheritance (Husz 2002), changes during the household life cycle (Pozsgai 2000, Husz 2002, Faragó

6 He tried to take into account the fact that a considerable number of extended-family households were led by widows or widowers as the custom of retirement was basically unknown among Hungarian and Slovakian peasants in the nineteenth century. He also tried to separate stem and joint families as the results of two types of inheritance and cultural norms (Pozsgai 2000. 207–209.).

2005, Pakot 2013) or changes over historical time (Benda 2002, Faragó 1977, Husz 2002) mattered first of all or whether a combination of all these factors played a role in household formation.

The Hungarian MOSAIC sample, which contains a much larger dataset than has been available to prior research, may help us to contribute to resolving these problems. One of the great advantages of this sample is that it consists of individual-level data, which makes more subtle statistical analysis possible. Besides this, the relatively rich content of the first Hungarian population census carried out by the official statistical service (containing age, sex, marital status, denomination, socio-professional status, region, etc.) allows such kinds of multivariate analysis which, taking the possible factors together into account, may provide us with important results concerning the debates and issues detailed above.

3 MOSAIC SAMPLE FOR HUNGARY, 1869

3.1 THE TERRITORY UNDER INVESTIGATION: HISTORIC HUNGARY

The territory for which we collected data was one part of the historical Kingdom for Hungary, which existed before 1918 (Map 1).

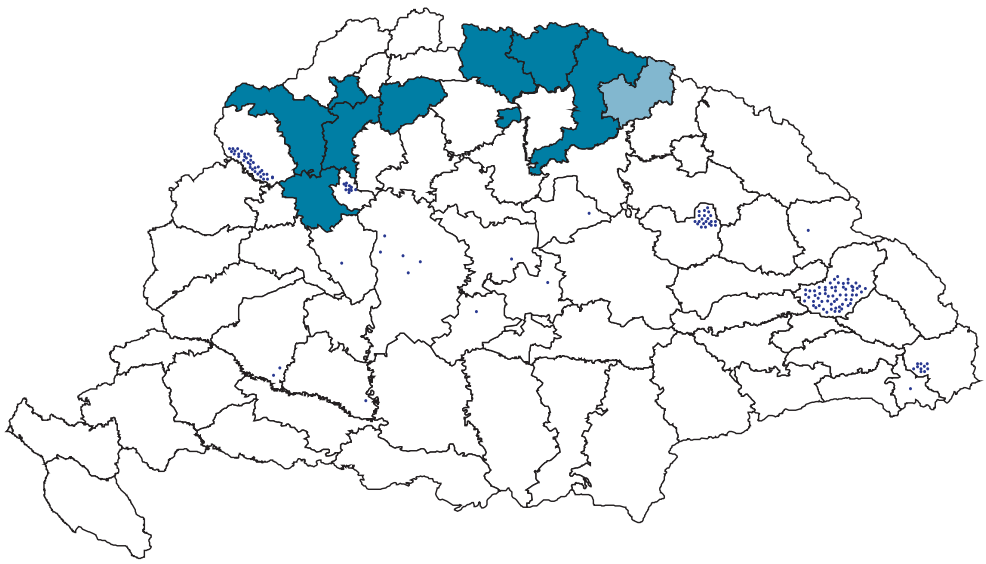
Map 1:
The territory under investigation: historic Hungary (with recent political boarders and the administrative units of the period prior to he First World War)

The area is sometimes termed the 'Carpathian basin', and nowadays extends through the territories of eight countries (Hungary, Austria, Slovakia, the Ukraine, Romania, Serbia, Croatia and Slovenia). It was the home of several ethnic groups (Hungarians, Germans, Slovaks, Romanians, Serbs, Croats, Ruthens or Ukrainians and Jews, etc.) and denominations (Roman and Greek Catholics, Lutherans, Calvinists, Unitarians, the Orthodox, Jewish, etc.). Besides ethnic and denominational diversity, the area is characterised by

its geographic and economic variety: one can find here the great Hungarian Plain which was the location of extensive stock breeding (mainly cattle and sheep) and later on wheat production, extended hilly regions which were centres of wine production and the high mountains of Transylvania (now in Romania) and Northern Hungary (now in Slovakia or in the Ukraine) where subsistence was based on extensive stock breeding (mainly sheep) and forestry.

3.2 BASIS OF THE SAMPLING PROCEDURE: THE 1869 POPULATION CENSUS

Although several census-like sources could be used to create the sample at the national level (first of all the censuses of 1784–1787, 1850, 1857, 1869 and 18–19th century church registers of households), the 1869 census seems to be the best choice because of its rich content and the large amount of individual census sheets which still survive today[7].



Note: coloured space: surviving census sheets for the whole territory of the given county (lighter: county Ung belonging to present-day Ukraine); spots or spotted areas: surviving material for separate settlements or smaller regions.

Map 2:

Surviving individual census sheets, 1869

After the compromise of the Austrian and Hungarian political elite in 1867 and the creation of the double monarchy, the first census of the independent Hungarian Statistical Office was carried out in 1869 (its exact date was 31 December 1869). In the course of the census, an enumeration of domestic animals was carried out, and data about places of residence (e.g. flats/houses) also recorded. Enumeration was house by house, and every flat received a separate sheet for registering inhabitants ('*Wohnpartei*' – see later). Name, rank, sex, denomination, profession and the character of employment/profession, place of birth, status (resident or foreigner), presence and absence (longer or not than one month) and literacy were recorded. In the remark column notes could be made on

7 It is worth mentioning that up until 1880 all censuses were carried out with the help of the local administrative authorities (data collection and summing up was done by the counties), so many individual census lists can be found in regional archives. From 1880 onwards the work was entirely undertaken by the professional statistical service, and individual data were destroyed professionally. The chances of finding individual census sheets from 1880, 1890, 1900 or 1910 are almost zero. There are some nominative lists of inhabitants from some places from 1880, which served as a basis for census taking, but they contain only limited population information. Although some exceptional material survived from later periods, for instance the census of 1941 for Budapest, it was quite clear that any sampling procedure of micro-data of households would have to concentrate on the period prior to 1880. For further information see Őri – Pakot 2012.

physical disability, military service, place of origin in the case of foreigners and place of stay in the case of absent persons[8].

A very large amount of individual data can sometimes be found for whole regions, counties or towns. The urban material contains the entire – or almost entire – censuses of the towns of Debrecen, Győr, Székesfehérvár, Szentes, Túrkeve, Magyaróvár, Kecskemét in Hungary and Braşov (Brassó) and Târgu Mures (Marosvásárhely) in present-day Romania. The complete record remained for the following counties: Torna (35 villages), Bars (212 villages), Nyitra (494 villages), Komárom (103 villages), Sáros (386 villages), Szepes (189 villages), Zemplén (463 villages), Zólyom (120 villages). A very considerable amount of material remained in county Maros-Torda (100 villages), Pozsony (55 villages), Szilágy (39 villages), Háromszék (6 villages) and Esztergom (8 villages), not to mention separate settlements (Map 2). We have information concerning the surviving material of county Ung in present-day Ukraine, but we did not search the Ukrainian archives, and this information still has to be checked in order to confirm its size.

3.3 THE SAMPLING PROCEDURE[9]

Taking the amount of surviving material into account, the censuses from 1857 and 1869 could be the basis of a country-wide sample. As the amount of surviving material is greater from 1869 and the content of the census richer than that of the 1857 census, we have chosen the latter one for sampling. In particular, the data on farm animals, houses, and literacy and the richer data on profession, etc., provide valuable variables for analysing different demographic phenomena.

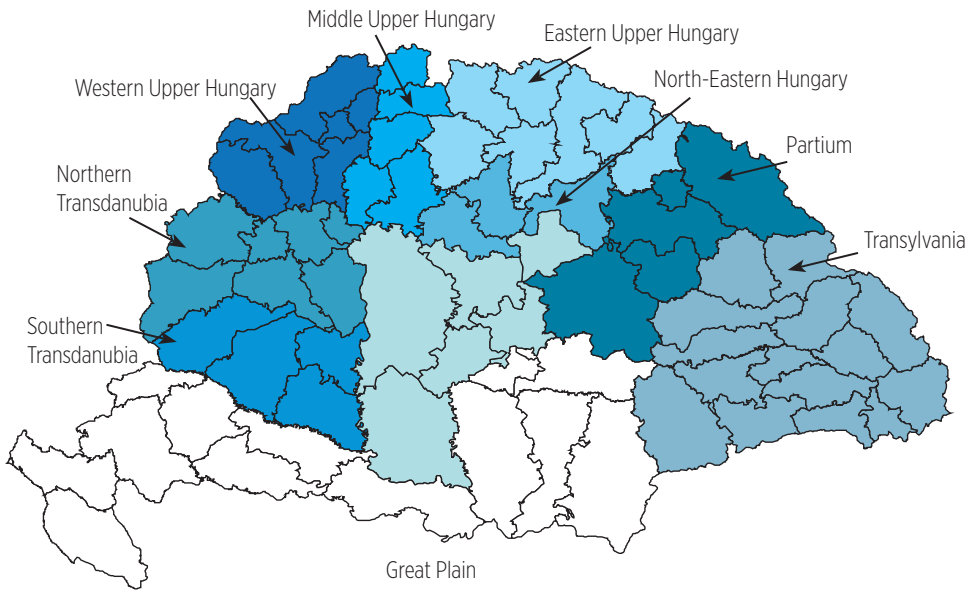
Taking into account the spatial unevenness of the surviving material and the fact that census taking itself and recent data collection and database building alike were carried out on the territories of different present-day states, it seemed a better choice to create a sample representative for the historic Kingdom of Hungary than a representative one for the surviving material.

The principles of sampling were as follows. Though the spatial distribution of the surviving material is very uneven, we tried to maintain a spatial balance, the consequence of which is that a huge amount of surviving material in Slovakia or Transylvania was represented at a considerably lower rate than other parts of Hungary where much less material remains. As a starting point we used the official statistical division of the period, but to maintain a balance in the spatial distribution of the chosen census material we created nine smaller regions, the population size of which we could use to assure correct weighting in the sample (Map 3). We tried to create territorial units that can be easily grouped by present-day political boarders (Hungary, Romania and Slovakia), and the research can be continued and extended to present-day countries if deemed useful. Croatia was left out of consideration at this stage, as was the south-eastern part of the Hungarian Great Plain (counties Csanád, Arad, Torontál, Temes, Krassó-Szörény, partly in present-day Hungary, Serbia and Romania) for which we investigated but did not find surviving census material. On the other hand, the population and territory of those counties belonging to the Ukraine were included in the sample and were taken into account in the sampling procedure.

As a first step, a rural sample of three per thousand (around 30,000 people and 5-6,000 households) seemed to be rational. First of all, we calculated the size of the non-urban population of each region. Doing this we used a legal term of the statistics of the period, which does not cover entirely the urban population but we had no better option at macro-level. On the basis of this calculation we computed the sample population size of the regions (Table 1).

8 See Appendix 2 for a detailed description of information recorded on the census sheets.
9 For more detail see Őri 2012.

Afterwards we chose villages one after another for each region until we reached or approached the planned population size. As a method we used two approaches. In two regions (Southern Transdanubia and the Great Plain) we only had a few rural communities with surviving material, urban materials being too large to include into the sample. Here we used the surviving material (villages, some fragments and outskirts of larger settlements of under 2,000 inhabitants). In other regions we used stratified random sampling, where the settlements were the sampling units. The first stratum was the region, the second the counties within regions if there were more with surviving material, and the third was the denominational distribution[10]. The task of choosing necessitated use of a random number table using the serial numbers of the settlements (according to their alphabetical order which is independent of spatial situation).



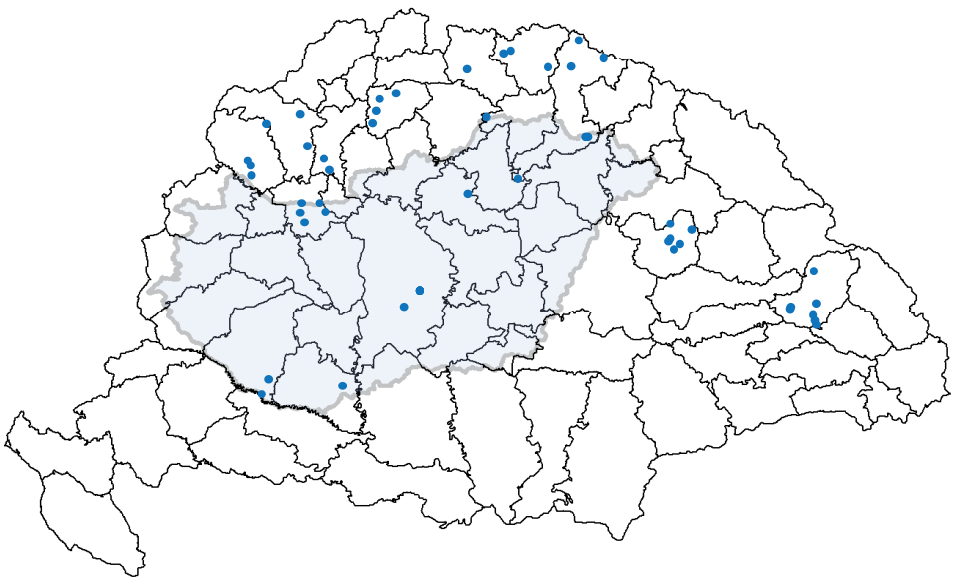
Map 3:
Regional division for sampling

Table 1
Population size of the regions and the sample planned

	Number of settlements	Average size of settlements	Legally non-urban population	%	Sample planned
Southern Transdanubia	1,450	748.6	1,085,398	10.8	3,245
Northern Transdanubia	1,457	835.7	1,217,581	12.1	3,640
Western-Upper Hungary	1,475	656.1	967,692	9.6	2,893
Middle-Upper Hungary	889	601.7	534,917	5.3	1,599
Eastern-Upper Hungary	1,983	548.6	1,087,807	10.8	3,252
North-Eastern Hungary	540	1,166.5	629,900	6.3	1,883
Partium	1,270	939.2	1,192,832	11.9	3,566
Transylvania	2,353	826.4	1,944,553	19.4	5,813
Great Plain	451	3,047.9	1,374,618	13.7	4,109
Total	11,868	845.6	10,035,298	100.0	30,000

10 Population size and denominational distribution of all settlements are available in Sebők 2005.

In the process of digitalising the data some of the villages originally included in the sample were substituted by others. In all regions we selected at least two versions so that we could substitute one or another village in case of missing or bad quality data. In the Great Plain region the enumeration of the outskirts around Kecskemét offered a large amount of high quality material so we did not need to include the fragments of the market town Kunszentmiklós where the indication of the relationship to household head was missing. In Eastern-Upper Hungary and Western-Upper Hungary four villages in total were substituted by others because their size and denominational composition were different compared to what we found in our sources and had originally calculated (in the Eastern region instead of Dúbrava we included Šarišské Dravce and Silická Jablonica), or because the quality of the census was not high enough (Čenkovce instead of Vieska and Plavé Vozokany instead of Podhradie in the Western region which cannot be otherwise identified). Map 4 shows the geographic spread of the settlements in the sample, while their exact population size and denominational distribution can be found in Appendix 1.



Map 4:
The settlements of the sample

Table 2 shows the actual sample compared to the planned one. We managed to maintain the proportions we had originally planned for, and differences are minor. The Transdanubian and East-Slovakian ('Eastern-Upper Hungary') population included in the sample is a bit larger than planned, while the Transylvanian, Partium and Great Plain sample populations are smaller than originally planned. Using regions and counties within regions as strata in the sampling procedure enabled representation of the geographic diversity of the country as far as was possible. Geographic diversity reflects economic plurality, the different locations and possibilities of subsistence, which appear to be important factor behind the very varied demographic conditions observed and described so many times. At the same time, denomination was a cultural factor available for all settlements, which may assure the representativity of the sample in this respect.

Table 2

Population size and proportions in the sub-regions, planned sample and created sample

	Legally non-urban popula-tion	%	Sample planned	Sample	%	Number of non-urban settlements with surviving material	Number of settlements in the sample
Southern Transdanubia	1,085,398	10.8	3,245	3,804	12.1	4	2 + fragments of Mohács
Northern Transdanubia	1,217,581	12.1	3,640	4,067	12.9	53	4
Western-Upper Hungary	967,692	9.6	2,893	3,030	9.6	814	9
Middle-Upper Hungary	534,917	5.3	1,599	1,779	5.7	120	4
Eastern-Upper Hungary	1,087,807	10.8	3,252	3,601	11.5	981	7
North-Eastern Hungary	629,900	6.3	1,883	2,072	6.6	103	4
Partium	1,192,832	11.9	3,566	3,471	11.1	39	6
Transylvania	1,944,553	19.4	5,813	5,801	16.2	100	7
Great Plain	1,374,618	13.7	4,109	3,781	12.0	2 + fragments	1 + fragments
Total	10,035,298	100.0	30,000	31,406	100.0	2,216	44 entire + 2 groups of fragments

In the surviving material Calvinists, Roman and Greek Catholics are over-represented while the Greek Orthodox population is strongly under-represented. The sampling procedure gave an acceptable result in this respect, and differences have almost disappeared (Table 3). The proportion of Orthodox population decreased as a result of the reduced size of the territory used for sampling. In the sample they are still somewhat under-represented, because in the Partium region we have no Orthodox villages at all. As for Lutherans, their lower proportion in the sample was caused by a lack of surviving material relating to Transylvanian German population ('Saxons'). At the same time, Calvinists remain a bit over-represented in the sample. In some cases denominational groups are identical to ethnic groups. Thus Calvinists and Unitarians of the sample are entirely Hungarians, Greek Catholics are Romanians while Lutherans are almost entirely Slovakians. By contrast, other denominational groups are heterogeneous in terms of ethnic affiliation: Roman Catholics can be Hungarians, Germans or Slovakians, and Greek Orthodox can be Romanians or Serbs. Therefore, denomination can be regarded as a cultural proxy, reflecting (for example) differences in inheritance rules.

Table 3

Population size and denominational distribution (%)

	Population	R. Cath.	Gr. Cath.	Gr. Ort.	Luth.	Calv.	Unit.	Jew.
Whole county without Croatia	13,663,285	45.9	11.6	15.2	8.1	14.8	0.4	4.0
Surviving material	1,503,649	56.0	12.8	0.9	8.6	21.6	0.3	6.4
Regions for sampling	10,035,298	46.2	14.6	9.9	9.0	15.9	0.5	3.8
Sample	31,406	47.0	15.3	7.8	6.7	18.3	0.2	4.4

3.4 DIGITALISATION AND SOURCE PROBLEMS

The digitalisation of the data clearly shows the most important problems we have to face in analysing them. First of all, while birth date, marital status, religion, and the socio-professional status of all individuals are clearly indicated on the census sheets, there is no separate column for household position or relationship to the household head. In theory, the proper order of persons on the list indicates household position: heads, their spouses, children, the spouses of children, grandchildren, other relatives and finally non-relatives would be. However, this was not always followed in practice. Thus the differing practice of enumerators remains a very important factor: sometimes they indicated the relation to household heads in the column of names and sometimes not. In the latter case the relation can be reconstructed by the order, age and family name of persons, to some extent an indication of socio-professional status (here it was often indicated that somebody was a family member, housewife, child, widow mother, or any relative supported by the household head), but many persons' status remains uncertain (widows and widowers, relatives or non-relatives, mostly older people or children). The other problem links to the relatively obscure notion of the household and the differing interpretation of census takers which was the consequence of this uncertainty. While prior to 1850 the notion of the household used for different censuses and census-like enumerations was relatively clear, and those sources were similar and comparable in this respect, from 1850 onwards the Austrian administration set up their own statistical system in Hungary, the household notion of which was maintained even by the independent Hungarian Statistical Office after 1867. Prior to 1850 household (*familia*) meant: "*all those living together, and eating together, either married to each other or not, including servants, etc.*"[11]. After 1850 the notion of *Wohnpartei* (co-resident units) was used instead of *familia* which meant: a.) marital couples with or without child/ren; b.) widowers or widows with child/ren; c.) single or widowed persons without child/ren who have servants and live alone on their fortune, office or income[12]. It is also clear that foster children and other relatives living together in the same house or flat also had to be included into the notion of *Wohnpartei*. On this basis, it does not seem probable that *Wohnpartei* would have been equal to the nuclear family according to the original intentions. It is much more probable that the newer unit of enumeration must have been close to the former household concept (the community of persons living, farming, working and consuming together), at least in most cases. But without any doubt, the notion of the "household" became less certain, and left room for inconsistent interpretation and practice. On the basis of our experiences we may conclude that *Wohnpartei* means household in most of the cases, but sometimes households might have been divided for reasons that remain unknown to us. We do not

11 See the instruction of the 1784-87census: Thirring 1938. 151.
12 See the instruction of the 1850 census: Dányi 1993. 92.

know the logic of this division but it was not automatic, e.g. the proportion of extended- and multiple-family households was also considerable in many places and we can find at least some of them in each village. Experiences gained from archive research and data digitalisation show that the division of households was relatively general in 1850 but later in 1857 and particularly in 1869 it was much more seldom. In many surviving census materials a considerable percentage of multiple-family households were recorded (e.g. married couples living together with one or more married sons or daughters or married brothers, especially if they commonly owned the same house or if they were both landowners). In other cases or places division was also general, particularly lone older persons, journeymen and their families, beggars, paupers, married relatives if they were not landowners were separated although they lived together with the house owners' families in the same houses. In all probability in some of these cases living together and subsistence differed, as these families or persons worked outside of the house owner's household. But in Transylvania sometimes even this practice differed: persons who were indicated as being kept and supported by the house owner or the head of the first household in the house were separated and registered in different households. Therefore, one has to act carefully when analysing household composition utilising the 1869 census, but in the villages where most of the houses was inhabited by one unit (*Wohnpartei*) this problem does not appear to be serious.

4 METHODOLOGY

In the course of this analysis we considered relatives living together in the same house as household members. On this basis we could perform the classification according to the Laslett-Hammel typology (Hammel – Laslett 1974). All these needed the recoding of households, and in many cases relationship to household heads. Thus the main criteria of our classification were kinship and living together under the same roof (common house or flat) and cooking and eating together (using a single kitchen or fireplace in the house), whereas the problem of common farming or subsistence could not be included at this level of analysis.

In recoding the households (*Wohnpartei,* co-resident unit in the original) we changed the original registration in two different ways. The most common was unification of separated households, whose members were relatives and lived in the same house and used the same kitchen[13]. In this way we used consequent criteria to reconstruct households which may exclude the impacts of differing interpretations and practices of the period. At the same time we may have made the wrong decision in some cases, as living together didn't exclude the possibility of separate subsistence and the division of lands and properties among cohabiting family members. Analysing the subsequent censuses of 1850, 1857 and 1869 in the north-eastern county of Torna, Péter Pozsgai succeeded in proving that the division of households into more nuclear families was not automatic and must have been close to reality (Pozsgai 2000. 190). At the same time, the division was not totally consequent and this kind of micro-analysis could not be followed in this case. Our method might be problematic, particularly in the case of married brothers who lived and ate together but who were registered separately. This phase of the household life cycle reflects the practice of inheritance in the course of which the property was shared equally among the male heirs. As Gyula Benda showed in the case of Keszthely, this was a gradual process in the course of which some pieces of land (especially vineyards) were shared out among the heirs even during the lifetime of the father (sometimes it resulted

13 Kinship was determined by clear indications found in the source, or was assumed to exist on the basis of family names and ages.

in living separately) but the final division was not carried out while one of the parents was alive. However, the final division among the brothers after the death of the parents was not automatic, and one can find many examples of common farming siblings too (Benda 2002. 126.). Therefore, on the one hand, married brothers living together in the same house cannot be automatically regarded as the members of the same household if we include the question of farming. But even in those cases the same roof and fireplace meant a very close relationship, and although the property was divided and regarded as separate units mutual help must have been evident in most of the cases[14]. On the other hand, especially in the case of landowners, division was not evident and automatic, common farming was not seldom at all. Thus we might overestimate the proportion of complex households if we consider all possible criteria, but the consequent method offered more important advantages.

Table 4

Household typology used in the analysis

1.a	Widowed
1.b	Single or unknown marital status
2.a	Co-resident siblings
2.b	Co-resident relatives of other kind
2.c	Non-related persons living together
3.a	Married couples alone
3.b	Married couples with child(ren)
3.c	Widowers with child(ren)
3.d	Widows with child(ren)
4a.1	Extended upwards, older generation's headship
4a.2	Extended upwards, younger generation's headship
4.b	Extended downwards
4.c	Extended laterally
4d.1	Combinations of 4a-4c, with older head
4d.2	Combinations of 4a-4c, with younger head
5.a	Secondary unit up
5.b.1	Secondary unit down
5.b.2	Secondary units down
5.c	Widowed parent (head) with at least two married children
5.d	Co-resident married siblings or cousins
5.e	Co-resident married siblings or cousins with retired parent(s)
5.f	Two or more kin-linked conjugal couples of unknown kin relationship

The other thing we did was separate non-relatives if they formed a nuclear family (married lodgers, servants and employees). All those families could not have been classified according to the Laslett-Hammel typology if we had not separated them. The co-residence of nuclear families in Hungary not related to each other was rather common, one

14 Faragó came to the same conclusion in analysing eighteenth-century household lists (1985. 79.). Even if the relatives living together were separated on the tax lists it was not probable that they farmed separately or that their everyday life was independent of each other.

part of them was included in the head's household without any doubt, whereas another part evidently formed separate households, especially in the case of cottars without an independent house (*subinquilini* according to the term of the period) (Faragó 1985. 25.). Independent subsistence and forming separate households was particularly apparent when the families of day labourers or servants lived together under the same roof. Therefore, although the division of non-relative nuclear families into separate households may be questioned in some cases, the division generally seems a reasonable solution to providing our database with consistency.

As a result of these two processes we reduced the number of households compared to the original database from 6,577 to 6,242, while the mean size of households increased from 4.64 to 4.89 regarding the *de facto* population, and the number and proportion of more complex households also increased[15].

In classifying the households we slightly modified the Laslett-Hammel scheme. We basically followed Mikolaj Szołtysek's classification (2008. 401.), altered in two key respects: in the extended category we differentiated according to the household headship (considering whether the extended part or the head of the nuclear part was the household head, or in other words the older or the younger generation,)[16] and in the complex category we distinguished between two or more cohabiting nuclear families in the group 5b (secondary units down: 5b1 and 5b2) (Table 4). We have to make clear that we consider widowed persons and their children to be a complete nuclear family unit within a household when they live together with their married relatives or with widowed relatives with children (parents, siblings or cousins).

In the course of analysis we coded all records of occupations on the basis of the HISCO coding scheme (van Leeuwen – Maas – Miles 2002), which were later classified according to the HISCLASS scheme (van Leeuwen – Maas 2011). Finally, the 12 classes were contracted into five broader categories (Table 5).

Table 5

Socio-professional categories used in the analysis (based on HISCLASS)

Category	HISCLASS	Name
1	1-6: non-manual, higher skilled manual and foremen	Groups of higher status (non-manual)
2	7 and 9: medium-skilled and lower-skilled manual workers	Craftsmen (artisans)
3	8: farmers and fishermen	Farmers (landowners)
4	10-12: unskilled workers and lower and unskilled farm workers	Groups of lower social status (unskilled manual)
5	Missing	Other

5 CHARACTERISTICS OF HOUSEHOLD STRUCTURE IN HUNGARY, 1869

5.1 GENERAL FEATURES OF THE SAMPLE

The sampling procedure was based on population size and the denominational distribution of regional populations. The results can be seen in Tables 2 and 3. Table 6 shows the result

15 The share of multiple-family households increased by four percentage points while that of extended-family households by one percentage point (see below).

16 See Faragó 1985. 145.

of sampling with respect to household size and complexity using two crude variables: mean household size and the number of married men per household. We provide both the data of the sample according to the original household separation of the source, and the recoded and modified version that will be used in the analysis.

Table 6

Mean household size and the number of conjugal units per household, Hungary and Transylvania and the sample, 1869

	De facto population	Number of married men	Number of households	Mean household size	Number of married men/ household
Hungary and Transylvania*	13,219,350	2,691,677	2,871,755	4.60	0.937
Original sample	30,518	6,133	6,577	4.64	0.932
Modified sample	30,518	6,133	6,242	4.89	0.983

* Source: Census 1870. 85.

Note: *De facto* population: the actual population enumerated on the spot (visitors staying there for a period shorter than one month excluded and temporary absentees included)

We can see that household size was larger and household structure more complex in the sample analysed here compared to Hungary and Transylvania as a whole. Modification of the sample (the contraction of households originally registered separately) did not cause large differences, and it clearly resulted from the method used in the course of the recoding. Our original sample otherwise very faithfully reflects the mean household size and the variable of household complexity related to the whole country.

Concentrating on the demographic features of the sample, first of all we examine the age distribution of the actual (*de facto*) population.

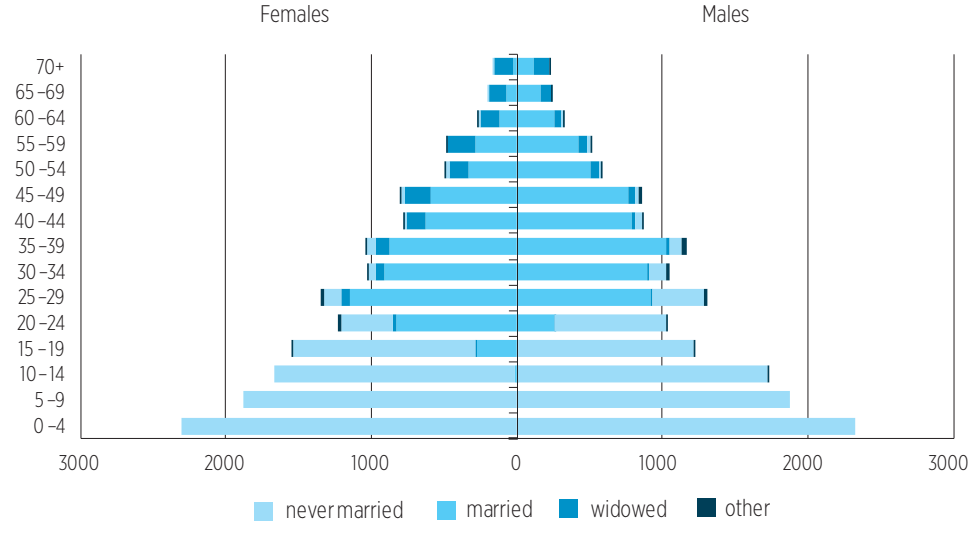


Figure 1:

The age structure of the (de facto) population by marital status, MOSAIC Sample, Hungary, 1869

The census sheets provide detailed information on the age of each individual (year of birth)[17] together with marital status. The shape of the age pyramid is that of a young population with high infant and child mortality. In higher age groups one can see smaller or larger breaks in the evenness of the pyramid, for instance in the 20–24 age-group, which might be the result of former high infant and child mortality (for example, the great cholera epidemic of 1849 or the economic crisis of the years before that). In addition, in younger age groups migration could help shape the pyramid (see later). Regarding marital status, females clearly married earlier than males, and even under the age of 20 a considerable part of the female population was married. In the higher age groups only the widowed are visible besides the married, though there were some divorced or cohabiting persons and married ones who lived separately. Therefore marriage customs can be characterised by early marriage among females, and marriage was quite general in the population. Indeed, above the age of 30 there were very few persons who were never married and they were first of all males and presumably servants. Widowhood was characteristic first of all of females as a consequence of their much worse chances of remarrying and wives' probable longer lifespan than their husbands[18].

31,406 persons were registered in the villages and outskirts of the sample. Of them, 97.3 per cent was local (resident) people whereas 2.7 per cent consisted of foreigners. The members of the first category formed the so called *de jure* population, regardless of their presence at the date of enumeration.

Table 7

Population in the sample by residence and absence/presence

		Present temporarily (1)	Present permanently (2)	Absent temporarily (3)	Absent permanently (4)	Total
Resident population	N	16	29,692	15	828	30,551
	%	0.1	97.2	0.0	2.7	100.0
Foreigners	N	24	810	1	20	855
	%	2.8	94.7	0.1	2.3	100.0
Total	N	40	30,502	16	848	31,406
	%	0.1	97.1	0.1	2.7	100.0

De jure population	30,551
De facto population (2+3)	30,518

Almost three per cent of the local population was permanently absent or temporarily present in the households (which means that they were otherwise absentees) at the census date. They outnumbered the foreigners who were present in the households at the census date. The surplus of absentees was around one per 1,000 related to resident population in 1869. We cannot consider it simply as a balance of migration as one part happened within the villages. Of the permanently absent population (97.6 per cent of the resident category) 81 per cent was registered as a child of the household head and

17 The exact date of the enumeration was 31 December 1869. It has the advantage that all individuals registered in the census who were born in the same calendar year had the same complete age.

18 For widowhood and remarriage in nineteenth century Hungary see Pakot 2009 and Pakot – Őri 2012.

worked in foreign households as servants or other employees. Similarly, almost 40 per cent of the foreigners permanently present were servant or employee, 13.1 per cent of them were household heads who moved in with their families, and one part of them must also have been servants. In the following parts all calculations related to the whole population will be made for the *de facto* population.

Table 8 shows some other characteristics of the sample population. As we have seen, marriage was a general custom, and at age 50 (an average value calculated for the age group 46–55) the percentage of the never married was below three per cent in the case of men and women alike. The singulate mean age at first marriage (SMAM) was particularly low in the case of females, while the male value was also lower than the ones observed for Western Europe, though the highest numbers (26–27 years of age on the Great Plain and Transylvania or in the western part of present-day Slovakia) are not very far from them. The proportion of servants and employees in households can be regarded as rather underestimated, since around 12 per cent of household heads registered independently worked as lower-skilled or unskilled farm workers (first of all as day labourers but also as servants – that is to say working as servants on the basis of a permanent contract but maintaining their own households).

Table 8

Mean age at first marriage, percentage of the never married at age 50 and that of servants and employees, Hungary, MOSAIC sample, 1869

MSMAM	FSMAM	% of the never married at 50 (men)	% of the never married at 50 (women)	% servants, employees
25.7	20.8	2.6	2.9	4.8

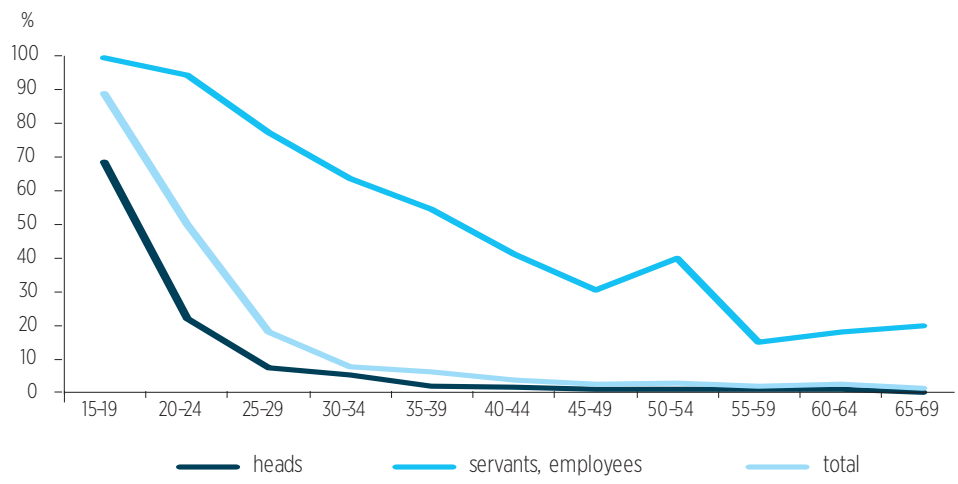


Figure 2:

The percentage of the never married males (de facto population), Hungary, MOSAIC sample, 1869

Figure 2 shows another aspect of marriage. It is clear that the mean age at first marriage for the total male population is around 25 years of age, and above 45 the proportion of the never married stabilises at a very low level. At the same time, the curve of

household heads shows smaller differences. Some of them became household heads at a very young age (i.e. under the age of 20), presumably after the death of their fathers. However, becoming household head also meant marriage, even at a relatively young age. Household heads married earlier, and around the age of 35 the rate of the ever married reaches its maximum, which remains stable as heads did not remain unmarried. The case of servants and employees was quite different. About 20 per cent of them remained unmarried even in older age groups. Moreover, they married older than the other part of the population, though it is clear that we cannot speak about life-cycle servitude in their case. Servant status was present along the whole male life course and a considerable percentage had a family. Shepherds and others of marginal status made up the largest group of the rural population that remained unmarried in the studied period.

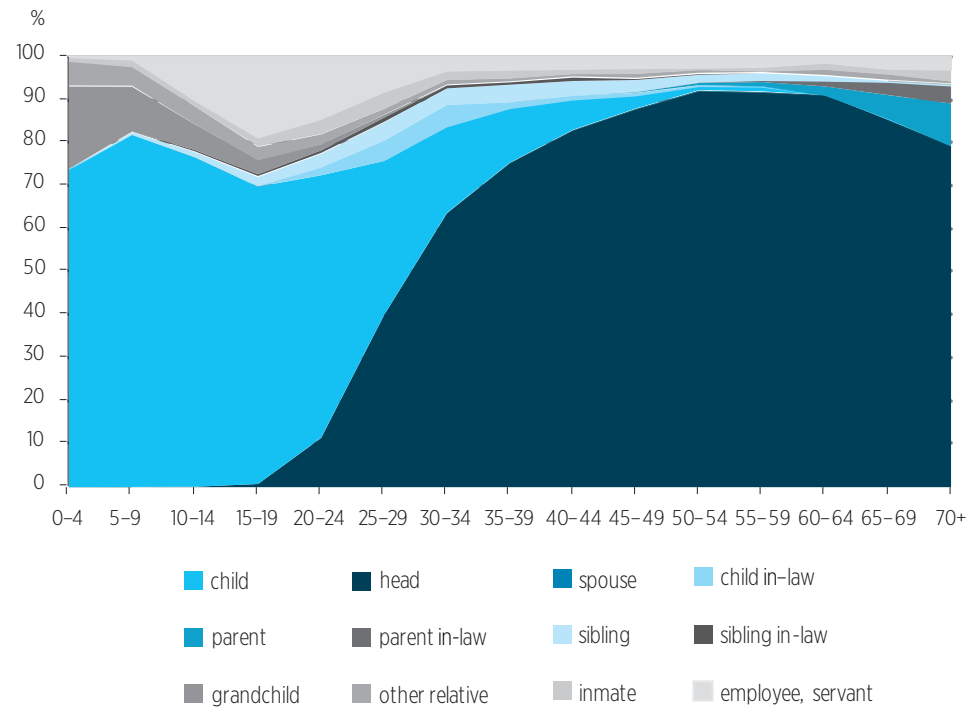


Figure 3:
The reconstructed life course of the de facto male population, Hungary, MOSAIC sample, 1869

Although we have cross-sectional data at our disposal, household position (the relationship to household heads) by age group makes the reconstruction of life course possible (Figures 3, 4). In this case we created fictive cohorts from the data of different generations (see for instance Szołtysek 2008. 408–410.). The ordinary life course of males was rather simple and in most cases consisted of two phases: they began their life as children, and after the death of their parents they became household heads. The presence of grandchildren in younger age groups and that of children-in-law, siblings, parents and parents-in-law in higher age groups demonstrates a considerable frequency of complex household forms. The presence of relatively old 'children' (aged 40) proves the same. Servitude was characteristic of younger age (about age 10–30), though this status accompanied the whole life course. Living as a relative in a family also occurred in childhood, whereas living in a household as a non-family member was more general in old age.

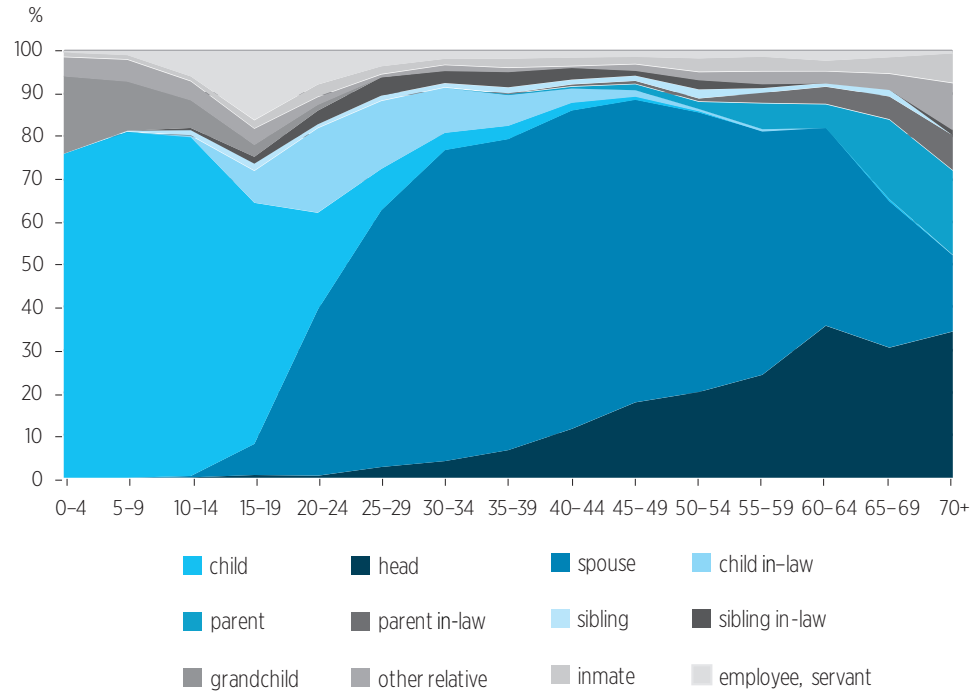


Figure 4:
The reconstructed life course of the de facto female population, Hungary, MOSAIC sample, 1869

Females were most likely to go from being children, to being spouses, and then to being household heads. In their case the child-in-law status was much more pronounced, as they moved into the households of their husbands' parents after marriage. Similarly, the status of other relatives (which in contrast to males occurs at older ages too), or inmate, parent, parent-in-law were also much more frequent compared to males in the last phase of the life course. The timing and frequency of servitude was very similar to that of males. Therefore the main difference between the male and female life course is that women lived much more frequently in dependency, in the households of others (parents or other relatives, parent-in-laws, husbands, children, children-in-laws, other relatives, even non-relatives) and they became household heads only at older age after the death of their husbands.

5.2 HOUSEHOLD STRUCTURE

We can see that early marriage in the case of females, the general custom of getting married, the different feature of servitude (first of all the presence of married servants) fits into the 'Eastern marriage pattern' depicted by John Hajnal. At the same time, the later age of marriage among males somewhat modifies this homogenous picture.

After classifying households according to the modified Laslett-Hammel typology, it appears that more than 70 per cent of households consisted of nuclear families[19]. Our recoding of households resulted in only a slight modification, the share of multiple-family households increased by four percentage points while that of extended ones by one percentage point (Table 9). If we compare it to results related to Eastern Europe and gained from a larger amount of data, it may remind us of Mikolaj Szołtysek's eighteenth century 'West' Polish pattern (2008. 401.). The 10–14 per cent of multiple-family households resembles the same data of eighteenth century German and Slovak villages situated in Hungary. At the same time, reconstructed household structures for Hungarian and especially southern Slav

19 See Appendix 3 for detailed data of classification of households.

villages show much higher shares in this category (Faragó 1996. 256.). Therefore and despite the artificially increased share of more complex households, it shows the features of some kind of transitory 'Central' or 'East Central' European model. At the same time, as compared to the distribution of households, a larger part of the population lived in more complex forms, as mean household size increased in parallel with household structure.

Table 9

Household structure by main household categories, mean household size (de facto population), Hungary, MOSAIC sample, 1869, original and modified version

	Households				Population		Mean household size
	Original		Modified		Modified		
	Frequency	%	Frequency	Per cent	Frequency	%	
1 Solitaires	228	3.5	190	3.0	190	0.6	1.0
2 No family	148	2.3	141	2.3	446	1.5	3.2
3 Simple-family households	4,919	74.8	4,380	70.2	19,357	63.4	4.4
4 Extended-family households	633	9.6	654	10.5	3,563	11.7	5.4
5 Multiple-family households	649	9.9	877	14.0	6,962	22.8	7.9
Total	6,577	100.0	6,242	100.0	30,518	100.0	4.9

Most of the households were led by men, and only 13 per cent by women (Table 10). Female heads were older, as may be expected, since they took over mostly after they had entered widowhood (Figure 5). Consequently, the households led by women were more polarised than those led by men. Older mean age of female heads resulted in a higher share of extended and multiple-family households on the one hand, and solitaires and non-family households on the other. At older ages they had a greater chance of living together with one or more married child or children as well as living as widows alone or together with non-relatives (Figure 6).

Table 10

Household heads by sex, Hungary, MOSAIC sample, 1869

	Frequency	%
Men	5,417	86.8
Women	825	13.2
Total	6,242	100.0

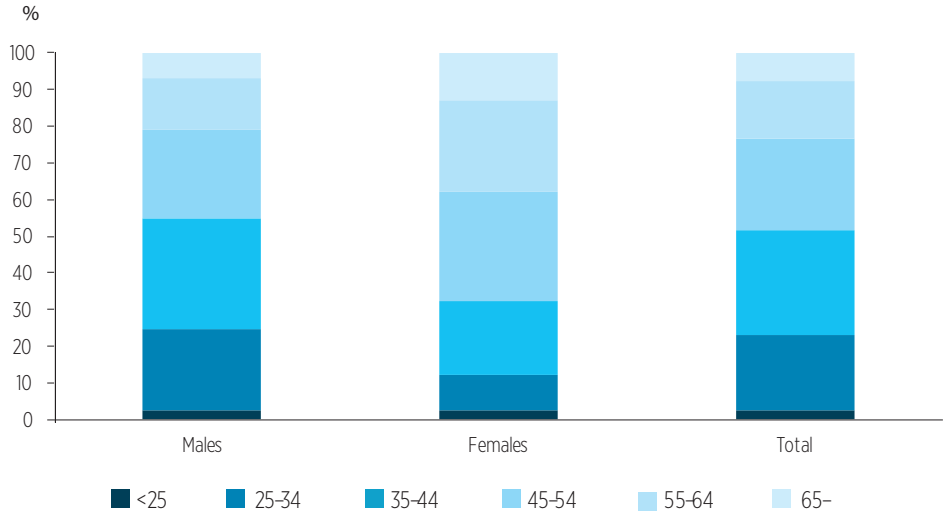


Figure 5:
Household heads by sex and broad age group, Hungary, MOSAIC sample, 1869

5.3 THE DETERMINANTS OF HOUSEHOLD STRUCTURE: DESCRIPTIVE STATISTICS

Examination of household structure by the sex of the household heads leads us to the issue of the factors that influence household composition. The distribution of households by Laslett and Hammel's main categories varies by the sex of household heads (Figure 6). The effect of the sex of the head works in all probability through the different (older) average age of female heads compared to that of males. Households led by women (mostly by widows) entailed special stages of the household life cycle, mostly by becoming widowed: living alone and living with children dominated in younger age groups, whereas living in more complex household forms became increasingly apparent in older age groups (Figure 8). Therefore, the sex of the head must be regarded as an important determinant of household structure.

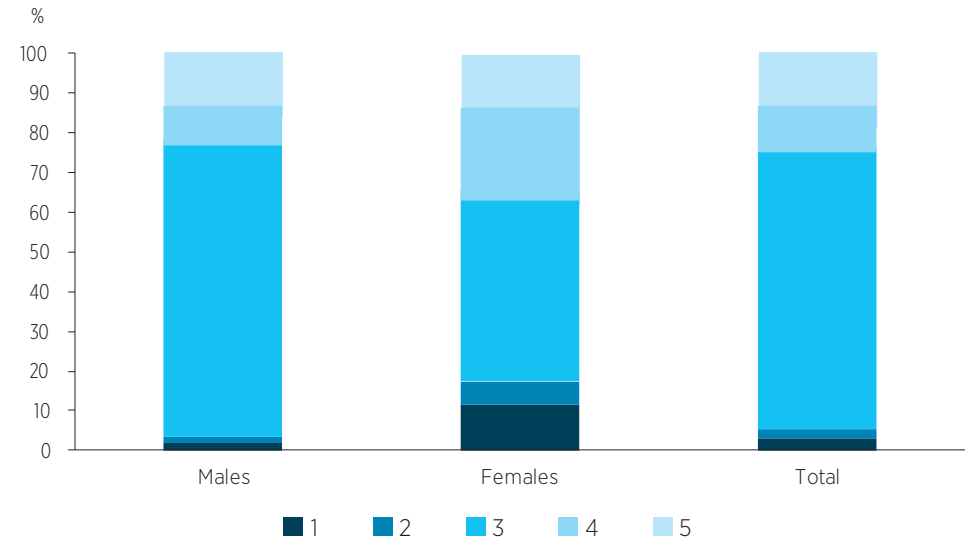


Figure 6:
Household heads by sex and household category, Hungary, MOSAIC sample, 1869

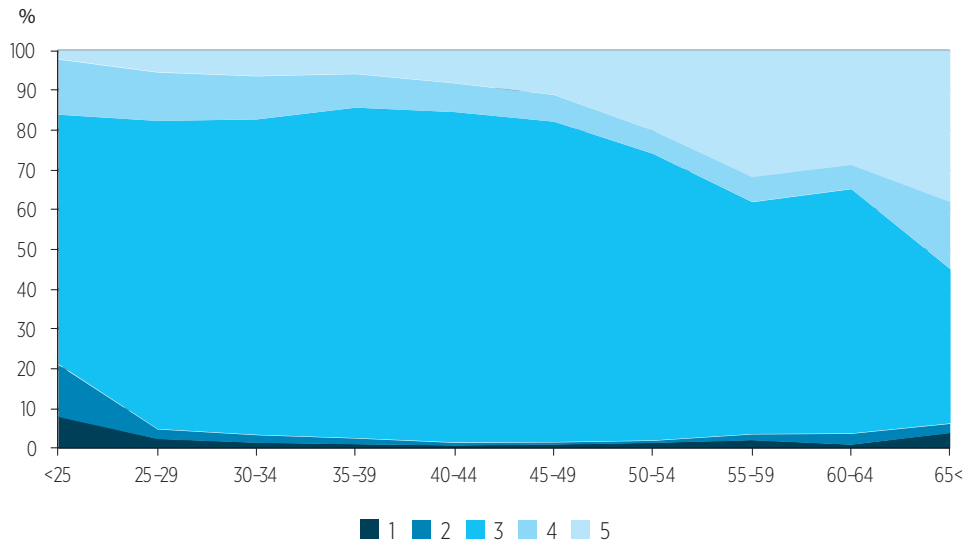


Figure 7:
Household structure by the age of heads (males), Hungary, MOSAIC sample, 1869

It follows that the age of the household heads is also a factor we have to take into account when considering household structure. It is apparent that living in a simple-family household dominates the whole life course of men. Being alone or living together with relatives or non-relatives without forming a nuclear family is characteristic of younger heads below the age of 30. Extended- and multiple-family households are present throughout the whole life course (for instance young heads living together with their widowed parents or married brothers as well as unmarried ones[20]), but it becomes much more frequent above the age of 45 (mostly living together with married sons or daughters: 8.2 per cent of the households examined). Figure 7 demonstrates well the characteristics of the male life course. Becoming a household head at a young age meant that someone had lost at least one of his parents and most frequently lived as a married head in a simple-family household, or less commonly alone or together with others (relatives or non-relatives) if he was not married. The presence of widowed parents or parent-in laws was very common in all age groups. It is also clear that the division of property did not happen in every case after the death of the parents, or that it happened only in theory; the co-residence of married brothers was not very frequent but not insignificant either (3.1 per cent of all households, mostly in younger age groups, see Appendix 3). As we have seen, the probability of living in more complex households increased with age, which meant first of all that the classic form of multiple-family households with secondary unit(s) down (a married couple together with their married child/ren). But about 88 per cent of these households consisted of a couple living together with only one married child. At this level of analysis it cannot be ascertained if these are classical stem families, or whether they were formed by demographic factors, first of all by mortality. We assume that mortality had a decisive role in shaping that proportion, and while the probability of living with one married child must have been very limited, the chance of living with more married children was even much smaller.

20 Living together with retired parents was rather rare in Hungary. See Appendix 3: this type makes up only 0.5 per cent of all households in the present study.

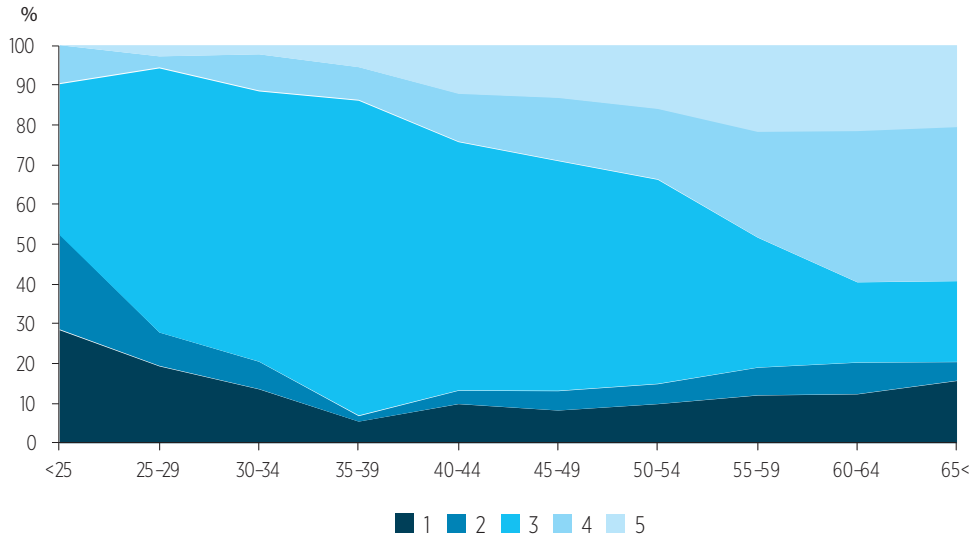


Figure 8:
Household structure by the age of heads (females), Hungary, MOSAIC sample, 1869

We have already discussed some of the characteristics of female heads. If women became household heads at a relatively young age that meant living alone (almost 30 per cent), living in non-family households (more than 20 per cent) or bringing children up as widows (40 per cent). Around ten per cent of all households led by young women consisted of widows, her children and other relatives. Later, the chance of living alone or in non-family households decreased rapidly, whereas the probability of leading more complex households increased in parallel. In older age groups almost 60 per cent of all households led by women meant that widowed heads lived together with their married child(ren). At the same time, the frequency of living alone or in non-family households increased (Figure 8).

Therefore, the second important factor influencing household structure is the age of household heads. This means that household structure was not static but altered continuously throughout the life cycle, as stated by Berkner (1972) and his successors for more than forty years.

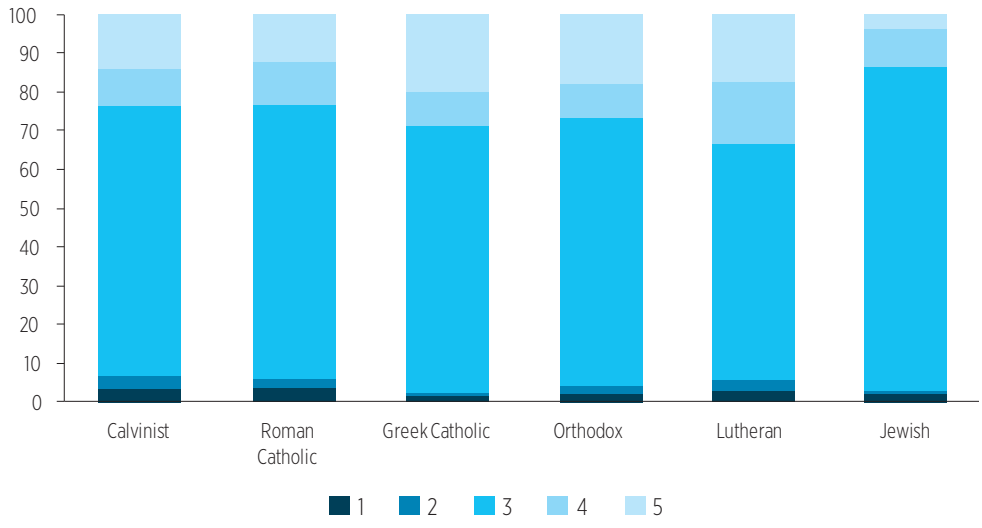


Figure 9:
Households by denomination of heads and household category, Hungary, MOSAIC sample, 1869

Religion as a cultural proxy (which can be substituted in some cases for ethnicity, and in all probability affected household structure through inheritance customs) also seems to influence household structure. Jews mostly lived in nuclear family households while Lutherans (more or less Slovaks) and Orthodox population (partly Romanians, partly Serbs) appear more likely to live in complex households. But in this case too, we have to take into consideration the fact that the spatial or socio-economic distribution of the denominational groups must have had a strong impact on the differences by the denomination presented here (Figure 9).

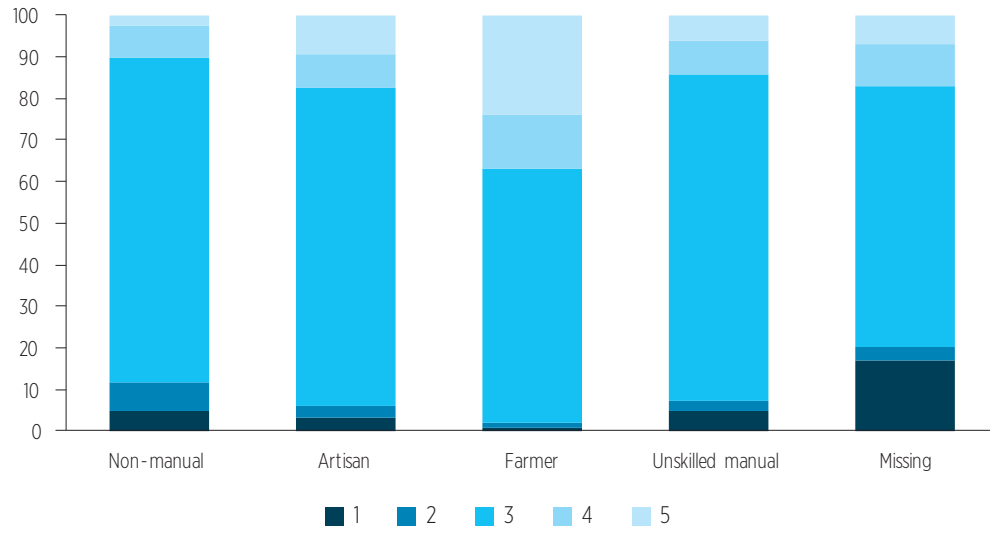


Figure 10:
Households by the socio-occupational status of the head (based on HISCLASS), Hungary, MOSAIC sample, 1869

In order to examine the impact of socio-professional status on household structure we used the HISCLASS categories detailed in Table 5. In 59 cases we had no data on occupation. The distribution of these households seems to be characterised by the high percentage of solitaires who were first of all lone women. Living alone or in non-family households was more frequent among non-manual workers (mainly the local intelligentsia) and unskilled manual workers (day labourers, farm hands, shepherds, etc.). These two groups, together with craftsmen (artisans), can be characterised by the small percentage of categories 4 and 5 (extended- and multiple-family households). Farmers (landowners, mostly landowning peasantry) lived most frequently in more complex households (categories 4 and 5). Here the labour force demand of agricultural work resulted in a higher frequency of multiple-family households, that is to say the necessity of using more of the adult labour force resulted in a larger household size (5.7 as opposed to 4.9, the mean of the whole sample population), which could be resolved by relatives living and farming together. All these suggest that the use of the foreign labour force (servants and farm hands) and relatives were alternatives of each other, and that the use of the former played a relatively smaller part in agriculture. Accordingly, the use of servants or farm hands must have been a factor which impacted on household structure, and this impact must have varied by occupation and the age of household head (by the household life cycle) or by household category. We expected the presence of servants to be highest in that phase of the household life cycle when the presence of children under age (basically under the age of 15) was strongest, and when the producer/consumer ratio in the

households was least favourable[21]. At the same time, we assumed that use of a servant labour force was more frequent in nuclear family households.

It is clear that the role of the foreign labour force in households (the percentage of households with servants and other employees) was not particularly significant, and the percentages are rather stable and low throughout the household life cycle (Figure 11). Relatively high and rising shares can be observed in the first phase of the household life cycle during the (presumably) most vulnerable period. In this period the number of children under age in the households grew rapidly, similarly to mean household size. The mean number of children (under 15) increased until the head reached the age group 40–44, while the percentage of households with a servant began to fall well before that at most from the age group 35–39 of heads. It means that about 10–15 years after the mean age at first marriage children who could help in the subsistence of the families appeared in the households, and this went together with the diminishing role of the foreign labour force. Similarly, in older age groups of heads the share of households using servant work grew somewhat, counterbalancing the loss resulting from the growing up and leaving of children. To sum up, we can conclude that the role of the foreign labour force was not considerable. It is also interesting that in contrast to pre-industrial Swedish examples (Lundh 1995. 56–57.), mean household size did not decrease significantly in the later phase of household life cycle despite the growing up of children. It means that a much more considerable share of them did not leave the parental household and thus formed more complex types.

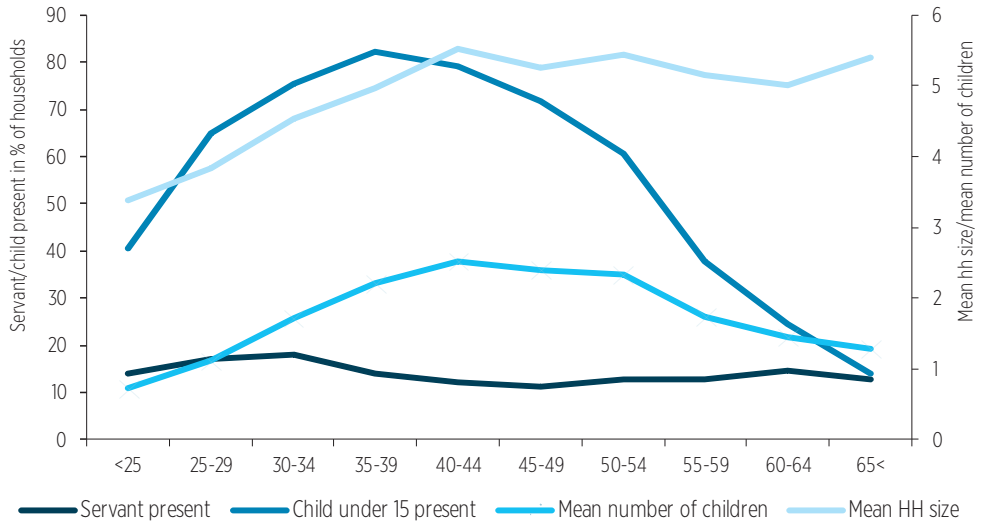


Figure 11:

Mean household size, mean number of children and the percentage of households with servants, employees and children under the age of 15 by household heads' age, Hungary, MOSAIC sample, 1869

Table 11 shows that the percentage of households with servants and employees was higher in complex household types than in nuclear family households. This proportion was naturally highest among non-family households, where the typical form of co-residence was living together with servants or employees. Servants appeared more frequently in extended family households because this type was more common in the earlier and later phases of the household life cycle, that is to say during the most vulnerable periods of

21 According to Christer Lundh (1995. 62–63.) and Levente Pakot (2013. 36.), who conducted studies looking at pre-industrial Scanian and Transylvanian villages, the producer/consumer ratio was least favourable during the first 10–15 years after establishing a new household, that is to say it was a period when the living standard of the household members decreased. A similar deterioration followed when the household head passed the age of 60.

life. At the same time, we should bear in mind that other factors might have been at work that remain hidden in the analysis. Servants were often present in households in addition to adult family members if the size of the farm or the number of farm animals made it necessary. Servants were even hired in one part of larger multiple-family households in connection with the size of lands or the number of farm animals, factors, for which we have no information in the source material. Another aspect we should take into consideration is the fact that use of the foreign labour force did not entail co-residence in a common household with them. The use of the labour force of day-labourers and other waged workers was also very common. It was only seasonal and does not appear on the census sheets, though in some regions or villages, for example in centres of wine production, it must have been very frequent. Thus, the relatively low percentage of simple-family households with servants does not mean that in those households the foreign labour force was not used but that it was seasonal and the hired workers lived outside the given households. The number of farm animals and the different types of farming the households relied on are important factors, the impacts of which on household size and structure will be the object of another analysis.

Table 11

The percentage of households with servants and employees by household category, Hungary, MOSAIC sample, 1869

	Non-family	Simple	Extended	Multiple	Total
% of households with servants, employees	38.7	12.8	15.7	14.7	13.8
N	141	4,380	654	877	6,242

Regarding regional diversity, it appears that a systematic west–east axis in household structure did not exist in historic Hungary (Table 12 and Figure 12). Similar to former analyses based on cruder variables (Faragó 2003), Transylvania in the East or the Great Plain in the middle part of the country proved to be composed of a simple household structure, as compared to the other regions. Their data very much resemble those of the western and north-western regions (Northern Transdanubia and Western-Upper Hungary). Surprisingly enough, Southern Transdanubia, despite the presence of Orthodox Serb and other Southern Slav populations, can by no means be characterised by the great percentage of complex household structure; instead, it is the data of the small town of Mohács that could have influenced the results. More complex forms (categories 4 and 5) can mainly be found in the middle and eastern part of present-day Slovakia, and to a much lesser extent in the eastern region of Partium (present-day Romania) and in the south-western region of the Southern Transdanubia.

Regional differences in household structure are observable, but we did not grasp the household characteristics of the regions as a whole. We can only conclude that geographic situation matters in this respect, and that localities dispersed in space show rather different types of co-residence. But we have to take into account that regions are units of complex geographic, economic, cultural and social conditions. The composition effect is by all means very important, while locality or region in itself as an explanatory variable of household structure can be hardly interpreted.

To sum up the results of the descriptive statistics of the Hungarian MOSAIC sample, we succeeded in revealing some factors which apparently affected the structure of households. The sex and age of household heads directly influenced the composition

of the co-resident units. The impact of the socio-economic condition (occupation) of the household heads was similarly clear. At the same time, the use of the servant labour force was of less importance, the effects of which seem contradictory and the manner in which it worked remains hidden at this stage of analysis. Religion as a cultural factor and regional differences also seem to matter, but are very complex and the composition effect must be considered very markedly in their case.

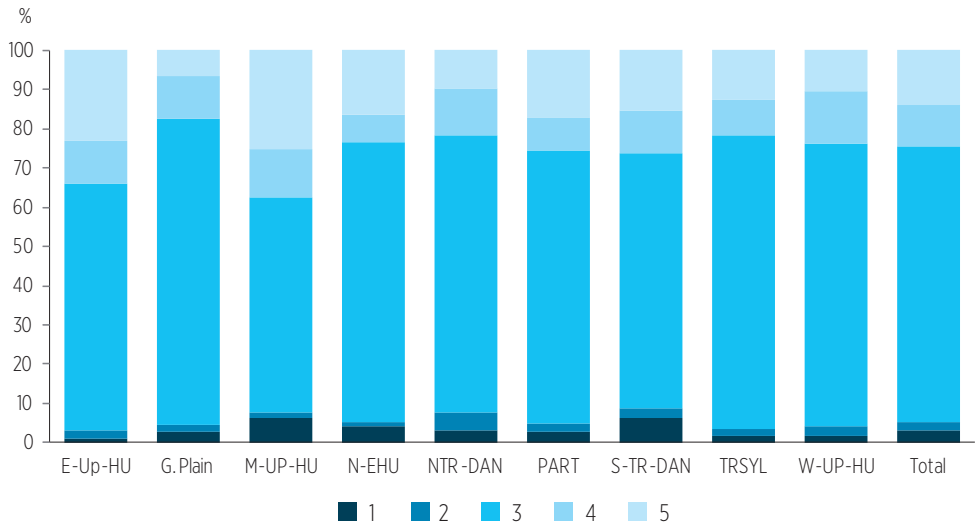


Figure 12:
The distribution of households by region and household category, Hungary, MOSAIC sample, 1869

Table 12
The percentage of households by region and household category, Hungary, MOSAIC sample, 1869

	1	2	3	4	5	Total	N
Eastern-Upper Hungary	1.1	2.0	63.0	10.8	23.0	100.0	638
Great Plain	2.7	1.7	78.2	10.8	6.6	100.0	775
Middle-Upper Hungary	6.3	1.6	54.5	12.5	25.1	100.0	319
North-Eastern Hungary	4.2	0.9	71.3	7.1	16.5	100.0	425
Northern Transdanubia	3.2	4.4	70.7	12.1	9.7	100.0	849
Partium	2.7	2.4	69.5	8.2	17.2	100.0	679
Southern-Transdanubia	6.1	2.4	65.1	11.1	15.2	100.0	783
Transylvania	1.8	1.8	74.9	9.0	12.6	100.0	1,195
Western-Upper Hungary	1.7	2.2	72.2	13.5	10.4	100.0	579
Total	3.0	2.3	70.2	10.5	14.0	100.0	6,242

5.4 THE DETERMINANTS OF HOUSEHOLD STRUCTURE: A MULTI-VARIATE ANALYSIS

In this section, and in order to exclude compositional effects, we use logistic regression analysis to test the impacts of all the factors that have been found to be important in the course of descriptive statistical analysis (Table 13). The dependent variable was whether the household was extended or multiple or not (Categories 4 and 5). The independent variables were region, religion, the age and sex of household heads, their socio-professional status (HISCLASS category) and the presence of servants or other employees in

the household. One part of the information refers to household heads (sex, age, religion, socio-professional status) and the other to households (region and the presence of servants). All appear to have been important, but the effects of composition must have been decisive except for age, socio-professional status and the presence of servants. The age of household heads was apparently linked to household structure, and on the basis of prior research we may suppose that households were not of a static structure but dynamic and permanently changing over the household life cycle as a consequence of different demographic events in the family, the type of subsistence or some exogenous impacts (mortality, economic changes, the possibilities of migration, availability of lands, etc.).

The results partly confirm and partly modify our former observations. In terms of regional differences, we can see the high odds ratios of the middle and eastern Slovakian regions and the low value of the Great Plain, which can be regarded as extreme spatial variations. The poor mountainous regions were the typical location of multiple-family households, where the possibilities of forming new households and farms were in all probability limited. By contrast, the Great Plain was a rapidly developing agrarian area in the second half of the nineteenth century, which assured quite different possibilities for leaving the parental household. The low value of the Partium region is surprising, but in the descriptive analysis the composition of its population (mainly the high proportion of Greek Catholic Romanians) might result in the relatively high percentage of households in Categories 4 and 5; after eliminating this composition effect its position has totally changed. Therefore Transylvania and the Partium region, besides the Great Plain, seem to be the typical regions of simple-family households. After filtering out composition effects, the position of Southern Transdanubia also changed somewhat. But at this point we can confirm our former observation that the regional differences do not show some kind of west–east cultural slope, and do not support the Hajnal model very much.

Age of household heads appears to be important. The higher probability of living in extended- and multiple-family households occurs in younger and (to an even greater extent) in higher age groups. Young heads lived together with their widowed but retired parents or unmarried and married siblings more frequently than they did some years later at an older age, when their relatives died or left the household. Later on, especially after 55 years of age, the probability of living in more complex forms also increased, first and foremost because the marriages of the adult sons or daughters resulted in a more frequent occurrence of complex household forms.

Sex of the household heads also mattered. Women became household heads at a significantly older age than men, generally after entering widowhood. Thus their chance of living together with their married child(ren) as household heads was greater than was the case for men. The fact that they were more likely to survive their husbands and become heads at an older age resulted in a higher probability of living in more complex households. At the same time, being elderly, female household heads could also increase the probability that at least one married child remained in the household in order to maintain the farm and family property.

Greek Catholics (Romanians) and Lutherans (Slovaks) were more likely to live in multiple-family households than Roman Catholics and Calvinists, while the higher coefficient of Orthodox population is similarly not significant. In the case of Lutherans and Greek Catholics, the effect of region cannot be entirely excluded, as in our sample they lived almost exclusively in those regions where the percentage of the multiple forms was high. Surprisingly, Jews were also very similar to Catholics and Calvinists after filtering the composition effect out. The very low level of multiple forms among them was without any doubt the result of their special socio-professional status (they often worked as local shopkeepers, innkeepers and merchants). But it is also worth mentioning that differences are smallest here, and that the results are not significant at a higher level in this respect (except for Greek Catholics).

The impact of occupation on household structure was decisive. Compared to the groups of unskilled manual workers, landowners in particular lived in complex households. The chance of their living in extended- or multiple-family households was almost four times higher than that of unskilled manual workers (first of all servants, farm hands and day labourers). Compared to them, artisans' (craftsmen) households were also more complex, because the presence of journeymen and apprentices was quite common, who in many cases were relatives of the family. Disregarding insignificant missing cases, the local intelligentsia's households were the least complex, among them Category 2 was also frequent (living together with servants, etc.).

Table 13

Logistic regression analysis on household structure (extended- and multiple-family households), Hungary, Mosaic sample, 1869

		Exp(B)	Sig.	N	%
Region	Western-Upper Hungary	(ref.)		579	9.3
	Eastern-Upper Hungary	1.44	*	638	10.2
	Great Plain	0.64	**	775	12.4
	Middle-Upper Hungary	1.89	***	319	5.1
	North-Eastern Hungary	1.17		425	6.8
	Northern Transdanubia	1.23		849	13.6
	Partium	0.60	**	679	10.9
	Southern-Transdanubia	1.39	*	783	12.5
	Transylvania	0.59	***	1195	19.,1
Sex	Men	(ref.)		5,417	86.8
	Women	1.64	***	825	13.2
Age	<25	1.32		229	3.7
	26–35	1.33	**	1,402	22.5
	36–45	(ref.)		1,754	28.1
	46–55	1.72	***	1,513	24.2
	56–65	3.85	***	905	14.5
	66+	7.27	***	434	7.0
Religion	Roman Catholic	(ref.)		2,985	47.8
	Jewish	0.94		260	4.2
	Greek Catholic	1.38	**	898	14.4
	Orthodox	1.22		486	7.8
	Lutheran	1.31	*	401	6.4
	Calvinist	1.06		1,212	19.4
Occupation	Higher	0.68	*	465	4.7
	Artisan	1.27	†	612	9.8
	Farmer	3.95	***	2,795	44.8
	Unskilled	(ref.)		2,311	37.0
	Missing	0.56		59	0.9
Servant	Not present	(ref.)		5,383	86.2
	Present	0.91		859	13.8
Nagelkerke R^2		0.23			
Constant		0.08	***		

*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Note: The variables of sex, age, religion, occupation are related to the household heads, N and % sign the number and percentage of households in the given category.

To sum up, the strong impact of socio-professional status as well as sex and age of household heads has been proven. It confirms the results of descriptive statistical analysis. The effect of servants' presence is also in harmony with the results of the descriptive statistics, though a lot of other factors (for example the size of land, the number of animals, the type of farming, etc.) remain hidden. The impact of religion appears weak, and differences are small and seldom significant. Here the Jewish denomination, which seemed to be strongly connected to the higher frequency of nuclear family households, did not prove to be an important factor. In this case the composition effect was strong, which remained hidden by using descriptive statistical methods. But otherwise the denominational factor, which we regarded as a cultural proxy, had no considerable effect on household composition. In our opinion these groups are probably too heterogeneous and broad to directly affect the formation of co-resident groups.

At the same time, the impact of regions remained significant even after filtering the composition effect out. We can say that region or geographic situation matter considerably, even if we disregard the effects of denominational or socio-occupational distribution or the specific age and sex composition of household heads. This means that geographic situation has some speciality which we could not identify using this source and these variables but which affects household formation. Naturally and beyond this, we can suggest here only some theoretical aspects which may help further examinations. The first factor which we have to take into account in the future is type of farming. Within the group of farmers (landowners) we have to separate families dealing with (for example) corn production or animal husbandry from those dealing with wine production and forestry. These specific branches of agriculture had quite different labour force demands and entailed different organisational forms that could have resulted in different household structures, and different usages of family members and foreigners in the labour force. These differing sorts of agricultural production were linked to regions of differing geographic conditions, and they also have to be taken into account to understand regionality. Another important aspect may be the population density of the regions or the settlements included in the sample. We attempted to deal with this latter variable (persons per km^2 in the villages studied) but the correlation between this and the percentage of extended- and multiple-family households seemed to be quite insignificant (the Pearson correlation coefficient was -0.026) and we did not include it in the multivariate analysis. The effect of population growth and population density could be still important, however, though the possible link between them and household composition might be multiple. Strong population growth and increasing population density might result in a higher frequency of out-migration from the paternal household and the place of residence as well. However, if the possibilities for out-migration were for some reason not present (for instance because of the large distances, the remote situation of the given place or weak labour force demand in the neighbourhood,) then children might have remained in the paternal household for a longer than was typical and it might have resulted in a higher frequency of more complex household formations recorded by one or another population census. Furthermore, the structure of the settlements which were connected very strongly with regional and geographic conditions was in all probability a decisive factor in this respect. The divided or scattered type of village (like the market towns and their hamlets on the Great Plain or the mountainous villages and their outskirts on the pastures) might have directly caused the temporal and sometimes permanent division of co-resident units (the living together itself) while the strong connection, co-operation and common farming did not finish at all. In our view it was the probable cause for the high frequency of nuclear family households on the Great Plain. There, the place of residence of family members might have differed as they could live or permanently reside in the towns or villages themselves, or in the hamlets and outskirts which were the real places of agricultural production. Therefore they

could be registered separately, although common farming and the co-operative units of subsistence were maintained after physical separation too. This was also the case in many places in Transylvania and the Partium region, but further research is needed to illuminate it by collecting more evidence about the correlation of co-residence, farming and inheritance. At the same time, in the northern part of the country families might have remained together after the death of both parents and taken over and divided the family properties. In these cases we formed multiple or extended-family households on the basis of the fact that they effectively lived together under the same roof. But in those northern and north-eastern parts the share of multiple-family households was otherwise high independent of our artificial household creation. Differing inheritance systems, cultural heritage of ethno-cultural groups, which cannot be described simply by denominational affiliation, agricultural production, land use, etc., are all possible factors that might have influenced household formation and whose regional distribution might have been very uneven. This fact has probably been shown in this analysis in the form of regional differences. The remaining impact of regional differences clearly indicates the direction towards which we have to proceed.

6 CONCLUSIONS

In the framework of the international MOSAIC project we have taken a sample for the historic Kingdom of Hungary consisting of more than 30,000 persons and 6,000 households. Sampling was based on territorial differences and denominational distribution in order to assure (to the extent possible) economic and cultural multiplicity. According to the comparison of the country as a whole and the sample taken, the differences are insignificant both concerning spatial and denominational distribution, and comparison of some household variables (mean size of households and the number of conjugal units per household) did not show significant differences either.

In the course of this analysis we tried to reveal the determinants of household structure. We pointed out that a large majority (around 70 per cent) of households was of simple structure, that is to say consisted of one single nuclear family. At the same time, the percentage of multiple-family households (about 14 per cent) was also considerable besides that of extended-family households (ten per cent). The higher frequency of more complex household forms could be linked to the sex and age of the household heads. Female heads' and older heads' higher chances of living together with married relatives was proved both by descriptive statistics and multivariate analysis. This result shows that household structure was a dynamic phenomenon which changed considerably over time. Socio-occupational status appears to be a decisive factor. First of all, landowning and farmer status was linked to a much higher frequency of more complex household forms, which can be explained by the higher labour force demand of farming compared to other professions. Multivariate analysis confirmed the marked regional variety concerning household structure, but altered the weight of one or another region somewhat, thereby revealing the role of composition effect. We also have to admit that spatial variance needs further explanation, because it succeeded in maintaining its significance after filtering for the effects of age, sex, occupational and denominational composition. In all probability, farming type, local rules of inheritance, ethnicity, and settlement type are all factors that we could not take directly into account at this stage of the research. Denominational differences remained in the course of the multivariate analysis, but the odds ratios showed weak effects.

If we consider our results with respect to the Hajnal model we can come to further conclusions. First and foremost, strong spatial differences do not follow a West–East axis. Second, the decisive role of occupation and social position, the possible role of

farming and land use, and subsequent and varied labour force demands of households (besides ethno-cultural features) can be all considered new evidence. This confirms the necessity of searching for alternative approaches to better understand the mechanisms and influencing factors of household formation.

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APPENDIX

1 SETTLEMENTS OF THE DATA SAMPLE BY POPULATION SIZE AND DENOMINATION

Region	County	Settlement name at present	Hungarian name	Denomination								Total
				Missing	Jewish	Roman Catholic	Greek Catholic	Ortho-dox	Luthe-ran	Calvinist.	Unita-rian	
Eastern-Upper Hungary	Sáros	Šarišské Dravce	Darócz	0	0	392	1	0	1	0	0	394
		Medzianky	Megyes	0	0	74	25	0	112	0	0	211
		Kamenica	Tarkő	0	0	632	104	0	0	0	0	736
	Torna	Silická Jablonica	Jablonca	0	29	98	0	0	30	427	0	584
	Zemplén	Lukacovce	Lukasócz	0	33	198	40	0	0	0	0	271
		Medzilaborce	Mezőlaborc	0	164	15	642	0	3	0	0	824
		Ostronica	Osztrozsnyica	0	17	8	147	0	0	0	0	172
	Szepes	Švábovce	Svábócz	0	24	92	0	0	293	0	0	409
Great Plain	Pest-Pilis-Solt-Kiskun	Kecskemét/Czethal	Czethal	0	0	54	0	0	1	32	0	87
		Kecskemét/Csalános	Csalános	0	0	86	0	0	1	15	0	102
		Kecskemét/Halesz	Halesz	0	0	213	0	0	4	25	0	242
		Kecskemét/ Monostorpuszta	Monostorpuszta	0	0	59	0	0	0	0	0	59
		Kecskemét/ Nyírpuszta	Nyírpuszta	0	0	746	0	0	11	603	0	1360
		Orgovány	Orgovány	0	0	479	0	0	86	434	0	999
		Kecskemét/Széktó	Széktó	0	0	190	0	0	0	42	0	232
		Kecskemét/Téglás	Téglás	0	0	526	0	0	5	26	0	557
		Kecskemét/ Úrréti puszta	Úrréti puszta	0	0	91	0	0	0	52	0	143

1 SETTLEMENTS OF THE DATA SAMPLE BY POPULATION SIZE AND DENOMINATION (CONTINUED)

Region	County	Settlement name at present	Hungarian name	Denomination								Total
				Missing	Jewish	Roman Catholic	Greek Catholic	Ortho-dox	Luthe-ran	Calvinist.	Unita-rian	
Middle-Upper Hungary	Zólyom	Bacúrov	Baczúr	0	7	23	0	0	280	0	0	310
		Brusno	Borosznó	0	0	630	0	0	2	0	0	632
		Rudlová	Rudló	0	0	5	0	0	235	0	0	240
		Sielnica	Szélnye	0	5	590	0	0	2	0	0	597
North-Eastern Hungary	Heves	Deménd	Deménd	0	5	835	0	0	0	3	0	843
	Zemplén	Kiscsécs	Kiscsécs	0	15	150	41	0	0	23	0	229
		Kisrozvágy	Kisrozvágy	0	60	164	92	0	3	158	0	477
		Semjén	Semjén	0	23	31	2	0	0	467	0	523
Northern Trans-danubia	Komárom	Kisigmánd	Kisigmánd	0	29	334	0	0	26	303	0	692
		Szák	Szák	0	4	292	0	0	440	38	0	774
		Tardos	Tardos	0	12	1249	0	0	0	0	0	1261
		Újszőny	Újszőny	0	50	1036	0	3	49	202	0	1340
Partium	Szilágy	Benesat	Benedekfalva	0	48	18	427	0	0	51	0	544
		Crișeni	Cigányi	0	9	7	596	0	0	20	0	632
		Archid	Erked	0	9	15	99	0	0	406	0	529
		Coșeiu	Kusaly	0	18	0	536	0	0	294	0	854
		Corni	Somfalu	0	26	5	607	0	0	6	0	644
		Sâncraiul Silvaniei	Szilágyszentkirály	0	10	43	32	0	0	183	0	268
Southern Trans-danubia	Baranya	Mohács	Mohács	1	328	1803	3	549	8	33	0	2725
	Somogy	Tóthszentgyörgy	Tóthszentgyörgy	0	5	78	0	0	0	358	0	441
		Tóthújfalu	Tóthújfalu	0	4	624	0	0	0	10	0	638

1 SETTLEMENTS OF THE DATA SAMPLE BY POPULATION SIZE AND DENOMINATION (CONTINUED)

Region	County	Settlement name at present	Hungarian name	Denomination								Total
				Missing	Jewish	Roman Catholic	Greek Catholic	Ortho-dox	Luthe-ran	Calvinist.	Unita-rian	
Tran-sylvania	Maros	Brădești	Bárdos	0	0	0	356	0	0	4	0	360
		Deda	Déda	0	99	10	13	1266	1	85	0	1474
		Damieni	Deményháza	0	0	495	0	0	0	1	0	496
		Sângeorgiu de Pădure	Erdőszentgyörgy	0	190	133	55	644	6	894	39	1961
		Voiniceni	Mezőszabad	0	6	6	718	0	0	2	0	733
		Sântandrei	Nyárádandrásfalva	0	0	26	276	0	0	234	10	546
		Sânșimion	Nyárádszentsimon	0	0	1	0	0	0	230	0	231
Western-Upper Hungary	Pozsony	Čenkovce	Csenke	0	0	247	0	0	1	0	0	248
		Janíky - Horné Janíky	Felső Jányok	0	18	213	0	0	0	0	0	231
		Blatná na Ostrove	Sárosfa	0	39	303	0	0	1	0	0	343
	Bars	Iňa	Eny	0	13	232	0	0	0	31	0	276
		Plavé Vozokany	Fakó Vezekény	0	12	177	0	0	520	5	0	714
	Nyitra	Veľký Lapáš	Nagylapás	0	27	379	0	0	0	0	0	406
		Radošovce	Radossócz és Kolilan	0	28	382	0	0	5	0	0	415
		Tesáre	Teszér	0	11	288	0	0	1	0	0	300
	Komárom	Radvaň nad Dunajom	Zsitvató	0	9	7	0	0	0	81	0	97
Total	1				1386	14782	4812	2462	2127	5778	49	31406
Note: 5 Catholics and 24 Armenian Catholics have been included in the group of Roman Catholics.												

2 INFORMATION COLLECTED IN THE 1869 CENSUS

Page A. Housing Facilities

Town

Street

House number

The flat is located
- in a cellar
- in the ground floor
- in the loft
- in which floor
- in attic

The flat is made up of how many
- rooms
- closets
- vestibules
- kitchens

The flat is used only for living (i.e. not for business)

Business-related facilities
- shops or stores
- pantries
- cellars
- sheds
- storages
- stables
- sheep-folds
- barns

Notes

Page B. Census of Residents

House number

Number of individuals recorded

Name

Sex

Year of birth

Religion

Marital status

Profession(s)

Character of employment/profession

Birthplace

Status (resident or foreigner)

Presence and absence (longer or not than one month)

Literacy (able or not to read, and able or not to read and write)

Remarks

Page C. Inventory of Livestock

House number

Horses
- stallions:
  - heavy
  - light
  - total

– mares: –heavy
– light
– total

– geldings: – heavy
– light
– total

– foals under three years of age

Mules

Donkeys

Hungarian cattle
- bulls
– cows
– oxen
– calves under three years

Swiss cattle
– bulls
– cows
– oxen
– calves under three years

Buffalo

Sheep
– “select”
– “common”

Goats

Pigs

Beehives

3 THE DISTRIBUTION OF HOUSEHOLDS BY THE DETAILED AND MODIFIED LASLETT–HAMMEL TYPOLOGY

	Frequency	%		Frequency	%
1a	120	1.9	4c	149	2.4
1b	70	1.1	4d1	59	0.9
2a	30	0.5	4d2	32	0.5
2b	16	0.3	4e	1	0.0
2c	95	1.5	5a	30	0.5
3a	657	10.5	5b1	451	7.2
3b	3,240	51.9	5b2	60	1.0
3c	87	1.4	5c	118	1.9
3d	396	6.3	5d	194	3.1
4a1	203	3.3	5e	17	0.3
4a2	157	2.5	5f	7	0.1
4b	54	0.9	Total	6,242	100.0

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