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Agrarian Productivity and Efficiency in East Central Europe

Gábor Demeter
Special Editor of the Thematic Issue

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BOOK REVIEWS

Hungarian Historical Review 13, no. 3 (2024): 339–360

Spatial Transformations and Regional Differences in the Medieval Kingdom of Hungary (1000–1500)

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Spatial transformations of the economies and/or demographic trends of pre-modern European kingdoms are difficult to assess, as statistical data are not available. However, it is possible to create large data sets using different types of sources, including written and archaeological, which can be used as indicators of relative population density, economic activity, and regional differences. Although most of these data included are qualitative in nature and many can only have binary values (0 or 1), the use of a large number of variables has led to reasonable results that can be compared with the results of analyses in later periods. Most of the data available are related mainly either to agriculture or ecclesiastical institutions (parishes and monasteries). The period before the Mongol invasion in 1241 is mainly represented by archaeological data, while for the fourteenth and fifteenth centuries there are considerably more written sources. One of the most important sources is the papal tithe register of 1332–1337, the only tax in Hungary directly related to the differences in agricultural incomes. However, the focus of this paper is not on individual time periods, but on the spatial changes that occurred within the medieval Kingdom of Hungary between the eleventh and fifteenth centuries, with a particular emphasis on possible driving forces behind these changes and various regional differences.

Keywords: Middle Ages, Kingdom of Hungary, regional differences, spatial transformations, long-term processes

Introduction

While the comparative study of regional differences has become an increasingly important approach in the research undertaken in recent decades, researchers face serious challenges when attempting such comparisons from a diachronic point of view. First, they must address problems concerning the changing significance of the indicators. Second, they must grapple with the problem of the changing or unknown boundaries of the territorial units analyzed.[1] If one goes further back in time, a third major difficulty arises: the lack of statistically analyzable, serial or at least numerical data. However, the possibility of processing large and complex data

1 Demeter et al., "A területi egyenlőtlenségek."

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sets containing both qualitative and quantitative data offers a new perspective for diachronic research and may help historians overcome these difficulties. In recent years, such data sets were compiled for the medieval Kingdom of Hungary, using a combination of written and archaeological evidence. Collaboration with geographers and historians who focus on later periods added a lot to the methodology and inspired new research projects, one of which started in 2024 and aims to develop the already existing medieval data set further and connect it to the databases relevant to the modern period.[2] In the discussion below, I focus on some lessons of this series of analyses, calling attention in part to how different types of agricultural incomes (basically, those characteristic of rural areas) can be represented visually and interpreted based on the available evidence.

Sources, Possibilities, and Limitations

The sources for such a database are partly written and partly archaeological. For the earlier period, i.e. the period before the Mongol Invasion in 1241–1242, archaeological evidence predominates, while from the second half of the thirteenth century onwards written evidence becomes more and more important. The problem with most of the data is that, unlike the data used in modern statistical surveys, they cannot be linked to a single date and sometimes not even to a clearly defined, brief period. The only exception is the Papal tithe register of 1332–1337, which can be supplemented by the Zagreb register of 1334.[3] These two sources cover nearly 90 percent of the parish network in the early fourteenth century. Thus, in this case too, additional sources from a longer period need to be consulted to fill in the missing data.

Another problem is the lack of continuous variables for most of the period. Hardly any tax censuses survive, and those that do survive do not cover the whole of the kingdom. Furthermore, the royal tax levied on tenant peasants was not dependent on income. The amount was the same, rather, for all taxpayers. Again, the only exception in this case was the papal tithe, since the tax paid by the priests

2 The project K145924: Regional differences of the Kingdom of Hungary c. 1500 supported by NKFIH, also aims to complement the existing eighteenth-century data set with data on parishes and the data of modern northern and eastern Croatia (medieval Slavonia with Pozsega, Valkó, and Szerém Counties, as well as the parts of Baranya County south from the Drava River). The results of the project and the datasets produced in the course of the pilot projects will be published and modelled in the framework of the GISta Hungarorum database.

3 *Rationes*; Buturac, "Popis župa Zagrebačke biskupije." On these and other, smaller sources and their evaluation, see F. Romhányi, "A középkori magyar plébániák."

to the papal curia was related, albeit indirectly and in a somewhat complicated way, to the agricultural incomes of the faithful who paid the church tithe.

Given the limitations and difficulties mentioned above, other methods are needed to measure regional differences before modern statistical data collection became a common practice. First, a combination of well-defined historical, art historical, and archaeological data needs to be compiled in a complex database. These data then need to be assessed as a proxy for development. As their relevance changes over time (for example, the presence of certain institutions, the value of privileges, or indicators such as literacy do not always reflect the same position in the settlement hierarchy), the validity of proxy data needs to be reassessed in each context.

Since life in medieval European societies was closely linked to a network of religious institutions, such as parishes and monasteries, data concerning these institutions can also serve as the basis for the database. Unlike many other phenomena in this part of Europe, these institutions are also well documented and can be (or were) precisely dated (on the basis of either written sources or archaeological/art historical evidence). Furthermore, as they were ubiquitous throughout Latin Europe, the basic structure of the network did not differ significantly from region to region. This allows for meaningful comparison of the data, even between distant parts of the continent.

One may ask why it is worth setting up such databases and analyzing them in a comparative way. Even if there are no statistical data for the medieval and early modern periods, pilot projects, such as those depicted on Maps 1 and 2, have shown that well-defined indicators and appropriate methods of creating visual depictions can lead to new, meaningfully interpretable results. In this way, we can identify long-term processes, stable and changing elements of spatial patterns, and periods of transformation. These periods of transformation do not necessarily coincide with the turning points defined by political history. This new approach thus calls attention to the importance of other factors, such as environmental changes, changes in the way of life, and technical developments, which may well have influenced settlement patterns and economic activity more than politics.

Furthermore, this methodology makes it possible to link longer historical periods and draw comparisons between data concerning recent times and data relevant to considerably earlier periods (and significantly, even to arrive at new comparisons of the pre-Ottoman period and the post-Ottoman period). This is particularly important, as the Ottoman period caused a well-known rupture in many respects, and the fragmentation of the medieval Kingdom of Hungary

during the sixteenth and seventeenth centuries, combined with the large-scale loss of sources and the profound transformation of both estate structure and society, led to discontinuities in the historical narratives and made it difficult to model the changes that took place.

This kind of research also promises to further a more nuanced understanding of how certain regions became developed or underdeveloped. Which regions enjoyed periods of continuous development, and which remained less active? If we can answer these questions with reasonable accuracy, these findings may well contribute to a better grasp of long-term processes in the past and even prospective for regional planning today.

There are limitations on the potentials of this research, however. The data sets are very different in size (from a few hundred entities—based on both written and archeological evidence—for the period of the foundation of the kingdom c. 1000 to about 15,000 entities for the end of the Middle Ages), and the data themselves are of different types, ranging from serial sources related to economy such as the papal tithe register to individual sources reflecting cultural achievements such as the schools, students attending universities or even organs and tower-clocks. Furthermore, even for individual settlements, the data are very uneven, making it impossible to interpret development levels at the settlement level. A partial exception is the group of the privileged towns throughout the Middle Ages. It is also important to note that, in the absence of serial sources, data must be collected over longer periods, often several decades. The criteria for data collection must therefore be precisely defined and strictly adhered to. However, even so, the results of the analyses cannot be tied to an exact year or even decade. A certain level of uncertainty remains, which means that only changes between relatively distant time periods (at least a hundred years) can be assessed.

One further difficulty is that data from the period after the Mongol Invasion are mainly available for settlements with parish churches. This is evident in the case of the dataset for the 1330s. Even if there are data for settlements that are not mentioned in the papal tithe list, alone the fact that the papal tithe is an exceptional continuous variable implies that settlements not on the list can be included in the database under very strict conditions. To safeguard the integrity of the dataset, only parishes can be integrated, even more so, as we have some data concerning the amount of the tithe paid by the parishes not listed. In the late medieval database, the challenge is different. As there is no continuous variable we could use, actual data collection at the settlement level is necessary and fortunately also possible (at least theoretically) due to the much

larger quantity of written evidence. However, additional data are available for only one third of the documented settlements. This means that an analysis based on raw data would use up a lot of entities that can be localized but for which no other data are available. These data thus have no real value. As the analysis of such a database would lead to distorted result. Again, the solution is to aggregate the data by parish so that the analysis can be based on a differentiated data set. Fortunately, the parish was the basic administrative unit in much of Europe between the late thirteenth and late eighteenth centuries, for instance in France and England, as well as in the Kingdom of Hungary. Thus, the use of parishes as a basis for data analysis is not only necessary but also consistent with the reality of the period.

In the following, I will present some results of the analysis of the datasets for 1220 and 1330 (marked in bold in Table 1), because the dataset for 1100 is too small for a complex analysis, and the construction of the database for the late Middle Ages has just begun. These two datasets will serve as comparative material for some aspects of the argument.

The Database

Table 1. Composition of the data sets of the periods of time investigated

c. 1100	**c. 1220**	**c. 1330**	**c. 1500**
c. 700 entities	**c. 2,300 entities (including passes)**	**c. 4,200 entities ("municipalities"/ parishes)**	c. 15,000 entities (c. 4,730 "municipalities"/ parishes)
Bishops' sees	**All data types for the time c. 1100**	**PAPAL TITHE LIST (completed with related, partly serial sources)**	Legal indicators
Collegiate chapters	**Charter evidence**	**Lay and ecclesiastical administration**	Ecclesiastical indicators
Monasteries	**Narrative sources (domestic and foreign)**	**Mendicant friaries**	Economic indicators
Monastic estates	**Privileged ethnic groups (e.g. Jews, Latini)**	**Economic and/ or judicial centers**	Cultural indicators
County castles, other strongholds	**Market, toll, ford**	**Markets, fairs**	Other specific data
Rural churches, churchyards	**Economic and judicial centers**	**Urban privileges**	

As can be seen from the data structures described in Table 1, it was necessary to create a composite "development score" based on weighted data and to establish development levels to ensure comparability. The size of the database for the early thirteenth century is about half the size of that for the 1330s and consists of c. 2,250 entities. Empirical research has shown that this is the minimum number of entities required to model regional differences in the Carpathian Basin as a whole. Therefore, the database for the late eleventh and early twelfth centuries has not been transformed into a visual representation in the same way (Map 3) and is not discussed in this article. As for the database for the Late Middle Ages (c. 1500), it has just been established, and substantial datasets will be uploaded later.

The Findings and Conclusions

Two primary outputs were produced: maps illustrating the hierarchy of settlements (Maps 1–2) and diagrams showing the development slopes (N–S and W–E, Figs 1–2). With regard to the maps, it is important to stress that, despite the collection of data at the settlement level, the analysis can only be carried out at the regional level, i.e., only the regional level can be interpreted in a historically meaningful way. The difference between the two maps is obvious at first glance: while the peripheral areas, which were barely inhabited at the beginning of the thirteenth century, were filled with settlements a century later, the central parts of the Great Plain were depopulated. At the same time, the marked contrast in settlement density between the western and eastern parts of the Carpathian Basin almost disappeared. This pattern of the settlement and parish network proved enduring. It can be seen not only on the map for 1500, but also up to the early twentieth century (Maps 4–6). It is even represented on the Lazarus-map (1528, Fig. 3) and to some extent also on the Lazius-map (1556). The latter is important because it also depicts the cause of this emptiness in a very spectacular way, showing cattle in the region and adding the inscription *Cumanorum Campus, Bachmege deserta, pascendis pecoribus apta*.[4]

4 F. Romhányi et al., "Plébániák és adóporták," 38.

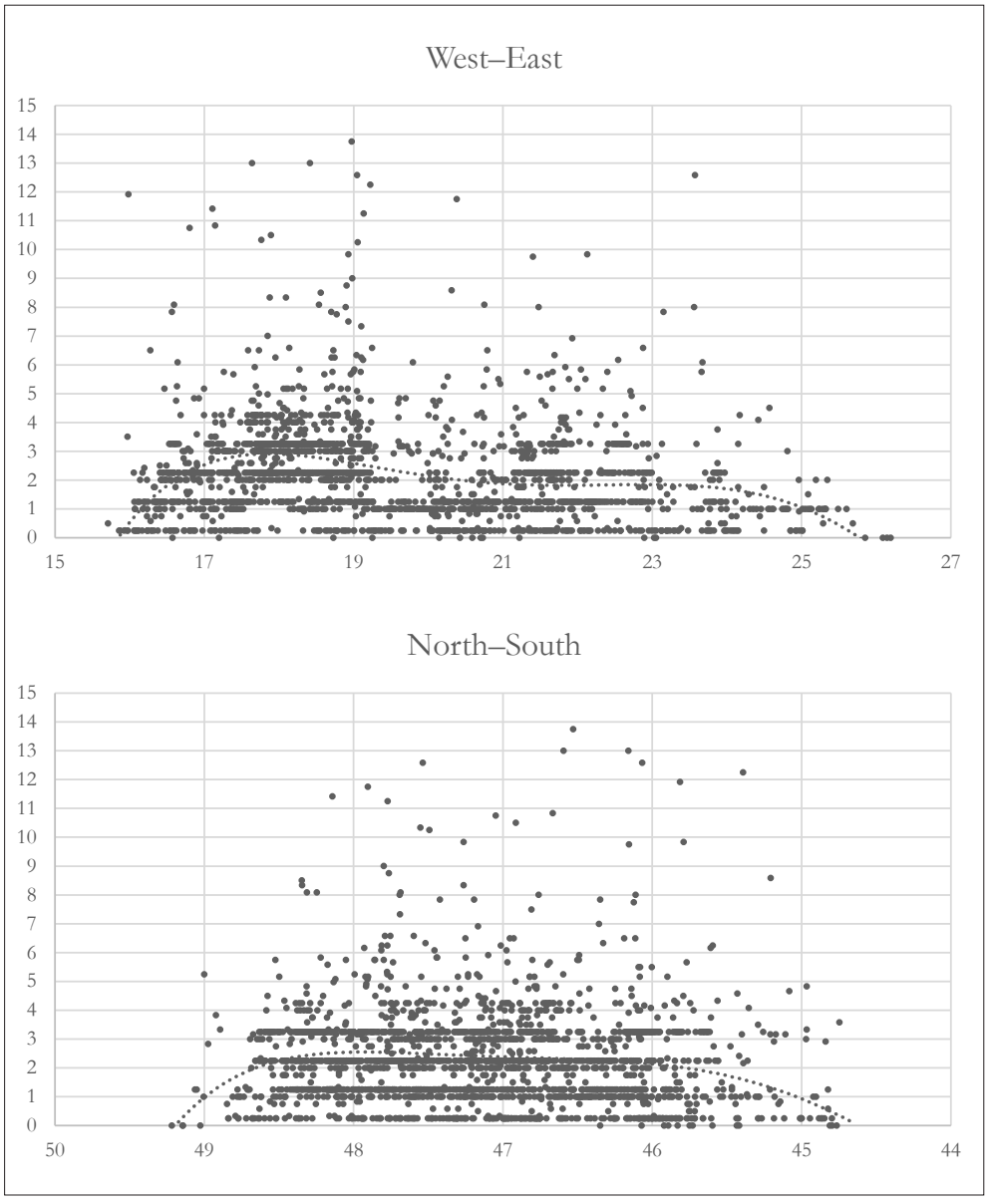

Fig. 1. Development slopes of the Kingdom of Hungary c. 1220. a: West–East section, b: North–South section. Source: database of the author.

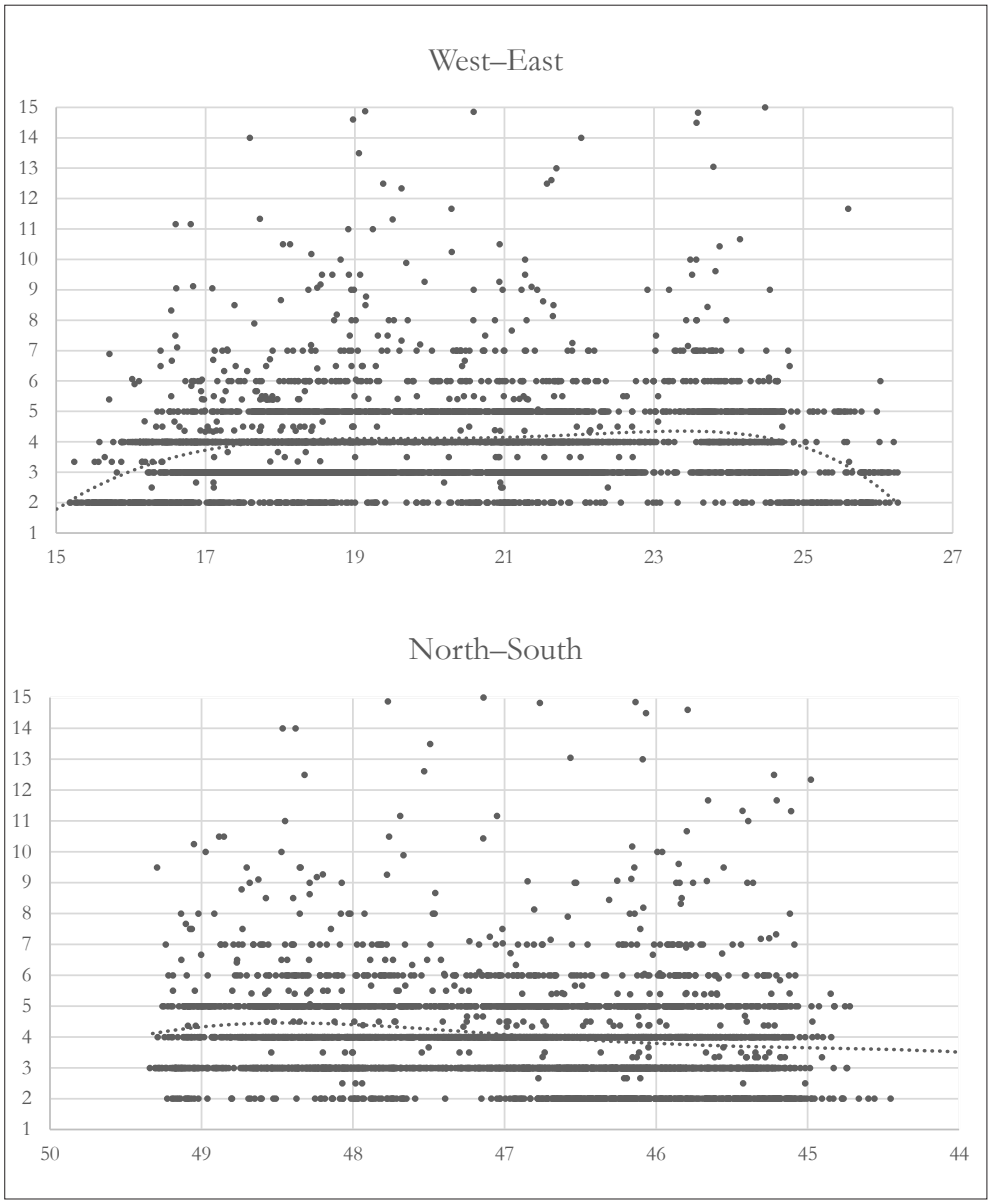

Fig. 2. Development slopes of the Kingdom of Hungary c. 1330. a: West–East section, b: North–South section. Source: database of the author.

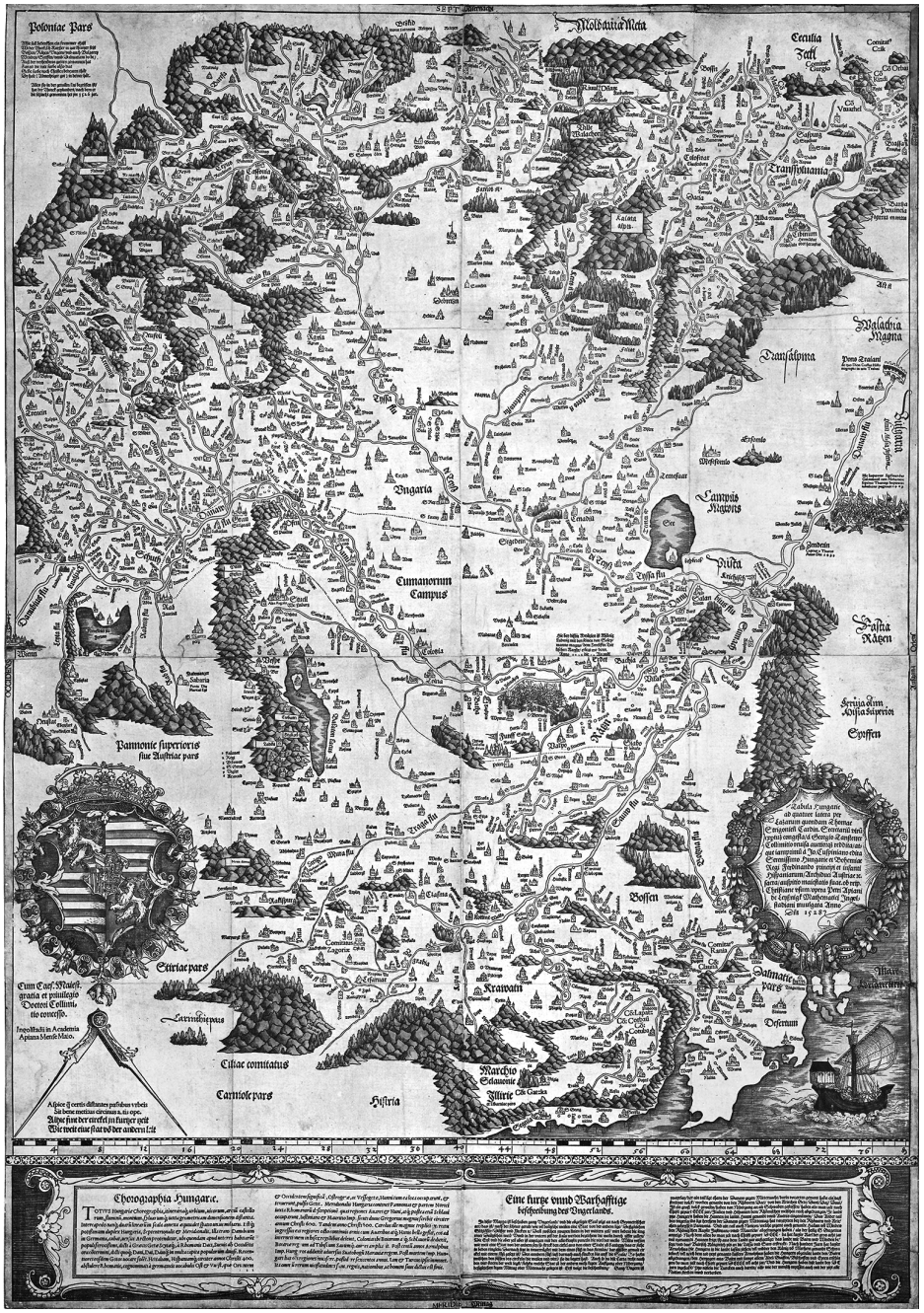

Fig. 3. The Lazarus-map (1528). The shape and the extent of the empty space in the middle of the map corresponds approximately to the loose settlement network of the Great Hungarian Plain, shown by Map 4. On the orientation and projection of the Lazarus map, see Tímár et al., "Orientation." Source of the image Wikimedia Commons.

The difference in developmental slopes is also instructive (Figs 1–2). On the one hand, there is no significant difference between the north-south transects. In both periods, the center of gravity was in the north. On the other hand, a shift can be observed in the west-south transects. While before the Mongol Invasion the western part of the kingdom was clearly more densely populated and therefore more active (more developed), the diagram for the 1330s shows a roughly even level of development, where only the periphery appears to be underdeveloped, or rather underpopulated and therefore less active.

In the creation of visual representations of the data for the 1330s, the problem of the missing parish boundaries arose almost immediately. While certain features can be represented using points, the visual depiction of regional differences can be distorted by the fact that large parts of the Carpathian Basin were characterized by a loose parish and settlement network. However, the fourteenth-century boundaries remain unknown for the overwhelming majority of the parishes. To overcome this problem, actual parish boundaries were substituted with Voronoi cells (Map 7). As parish churches served the everyday needs of pastoral care and the distances between the places in which people resided and the places where Sunday masses were held offer a good indicator of the spatial distribution of the population, the Voronoi diagram will define the areas which were closer to a given parish church than to any other parish church in the neighboring cells. This diagram thus offers a usable substitute with which to model the medieval parish system.

In this way, tithe per area unit could be calculated, and differences in certain types of land use became clear. The structure of the settlement system, including the absence of certain types of settlement, was also instructive. In southern Transdanubia, for instance, where a very dense parish network developed before the 1330s, the parsons usually paid a low (sometimes very low) sum as papal tithe. This would suggest that they had rather modest incomes. Based on this, one would conclude that the population of the region was poor. However, when projecting these sums on the Voronoi diagram representing the territory of the parishes, the picture changes radically. Based on the tithe per area unit, parts of Baranya, Somogy, Tolna, and to some extent even Vas and Zala Counties produced high values compared to other parts of the kingdom (Map 8).[5] This means that agriculture was intensive and lucrative in this part of the Carpathian Basin, and a large proportion of land, maybe around or slightly above 30 percent, was ploughed (the national

5 It is worth noting that this part of Roman Pannonia remained under Roman rule after the partition of the province in the fifth century AD, when the northeastern part was ceded to the Huns.

average was below 20 percent). Incomes from agriculture were relatively high in part thanks to viticulture, which seems to have been continuous in the region since Roman times.[6] The average size of the tenant hides in this region support this conclusion, as do data concerning very small plots in Baranya County.[7] Also, while in most parts of the kingdom an acre of c. 0.34 ha was used and approximately 120 acres were counted for a tenant hide, in this part of Hungary both the size of the acre and the number of acres per tenant hide were lower. It is even possible that in some parts of the region the Roman *iugerum* (0.25 ha) survived as a measurement unit, albeit the general the so-called "small acre" was used, a unit of measurement equal to c. 0.28 hectares.[8]

When speaking about the structure of the local settlement network, it is important to keep in mind the substantial differences between the different regions of the kingdom. For instance, southern Transdanubia, mentioned above, was (and is) a very rural region where there were very few towns in the Middle Ages.[9] The Turopolje region and Lower Slavonia, south of the Sava, as well as the Székely Land in Transylvania appear even more rural, and they both had a very low tithe per area unit ratio. At first glance, one would interpret this feature as a sign of poverty, but certain types of animal husbandry, especially sheep farming, could also contribute to that picture. Nevertheless, it is also clear that neither the Turoploje nor the Székely Land were among the wealthiest regions of fourteenth-century Hungary. On the opposite end of the imaginary scale, we find the northern mining district. In this highly urbanized region, which had important towns which paid high sums to the papal tithe collectors, there were few villages. We can count on a similarly incomplete settlement network, but with much smaller (and in the fourteenth century less wealthy) towns in the Great Hungarian Plain and Máramaros County. In the first case, this relative lack of network development was caused by large-scale livestock farming, which was widespread in the region since the mid-thirteenth century. In the second case, it was a consequence of the salt mining industry, which was the basis of the local economy. On the Great Hungarian Plain, the low number of villages compared to the emerging market towns is a fairly well-known thing, and the high lucrativity of animal husbandry was no surprise either. But the outstanding position of Máramaros County as early

6 Cf. the archaeological evidence, namely the tools connected to viticulture from Migration Period strata. Müller, *A mezőgazdasági vaseszközök fejlődése.*

7 F. Romhányi, "Plébániák és adóporták," 936.

8 Ibid., 938.

9 Cf. *Kubinyi*, "*Mezővárosok egy városmentes tájon.*"

as in the 1330s was surprising, because there is later written evidence indicating the importance of salt exploitation there. However, the position of Máramaros County was also a consequence of the fact that there were only a handful of well-off, comparatively urban settlements, and the surrounding mountainous area was almost completely uninhabited at the beginning of the fourteenth century. Thus, the incomplete settlement network, which in these cases was a consequence of the virtual absence of villages, appears at a higher level of development than expected.

The consequences of the above are somewhat paradoxical, but understandable. It is clear that urbanization significantly contributed to regional development level in the Middle Ages. But this does not necessarily explain changes in the individual income levels (the living standard) of the inhabitants of the given region. Regions with specific products such as minerals (ores or salt) or livestock usually require complex trade networks not only to sell their products but also to buy food, especially grain. Both the basis of their economy and the need to supply the population with food favored a comparatively high population density, which means the development of towns and cities. As such commodities can be produced in regions where agriculture is limited either by natural circumstances or by the type of economy itself (the need for large pastures), the village will more or less become the missing element in the settlement network. The higher level of urbanization, in turn, will lead to the emergence of more complex social and economic systems, even without the presence of institutions representing central or local power (although these institutions will of course appear in such central places). However, the essentially rural character of a region and the lack of anything resembling urban settlements, which in a modern context would be considered signs of underdevelopment and poverty, should not be perceived as such in medieval times. Also, one has to be aware of changes over time. For instance, agriculture and viticulture seem to have provided considerable incomes, while transhumant sheep-farming was not (yet) a lucrative sector in the fourteenth century, but this seems to have changed in the following century, even if sheep-farming did not become a leading economic sector (in contrast with cattle-farming). Therefore, one has to be very careful when interpreting the regional differences visible on the maps. To arrive at better models of settlement structures and developmental levels in the Middle Ages, different methods of modeling are required, as well as complex narratives that deal with spatial and sectoral changes.

Moreover, the analysis of several aspects of the medieval and early modern spatial organization in the Carpathian Basin yielded an important finding. As noted above, major political events that marked the region between the Migration Period

and the end of the Ottoman occupation (e.g., the collapse of the Avar Khaganate c. 800, the Hungarian conquest c. 900, the foundation of the Kingdom of Hungary in 1000, the Mongol Invasion of 1241–1242, the Battle of Mohács in 1526, and the Peace of Karlovac in 1699) are not reflected in the changes of spatial patterns. This means that the changes happened independently from the political events and the changing political systems. Patterns of landscape use remained essentially unchanged between the eighth and twelfth centuries, with some elements that can be traced back to the late Roman period. The transformation that took place in the long thirteenth century began well before and independently from the Mongol Invasion, and the process did not end before the first third of the fourteenth century. The new spatial structure, which stabilized by the mid-fourteenth century, persisted throughout the early modern period, despite the Ottoman occupation, and it only began to fade as late as in the last decades of the eighteenth century. Driving factors in the thirteenth-century transformation were environmental changes (a changing water regime, aeolian sand movement), dynamically increasing population (intense immigration from West and East), and new commercial and technical possibilities (the development of the mining districts due to the increasing demand for precious metals, including gold, silver, and copper, as well as changing land use in the Great Hungarian Plain to meet the demand for cattle). The newly emerging and growing sectors (mining, livestock farming) also resulted in intense internal migration.

Thus, regional characteristics can be much more persistent than presumed, and the interpretation of the stability or instability of these patterns demands a more complex approach. Speaking about long-term characteristics, we have to acknowledge, for instance, that the Budapest–Vienna economic axis, sometimes referred to as a result of the policy of the Habsburgs, who sought access to resources in the Kingdom of Hungary, seems to be much older and was present (and left discernible traces) even in the Roman period (and thus could be referred to as the "Aquincum–Vindobona axis"), which means that it was (and still is) the main development agent of the Carpathian Basin[10] and proved so strong and enduring that it was only cut in the middle of the twentieth century, with the fall of the Iron Curtain. On the other hand, the active and inactive periods of specific regions need to be looked at more attentively, and we have to look for explanations that are more complex than the narratives that refer almost exclusively to political or military events. For instance, environmental changes, technical development,

10 Demeter et al., "A területi egyenlőtlenségek."

changing energy sources, and even changing external relations seem to have been decisive driving factors in certain transformations.

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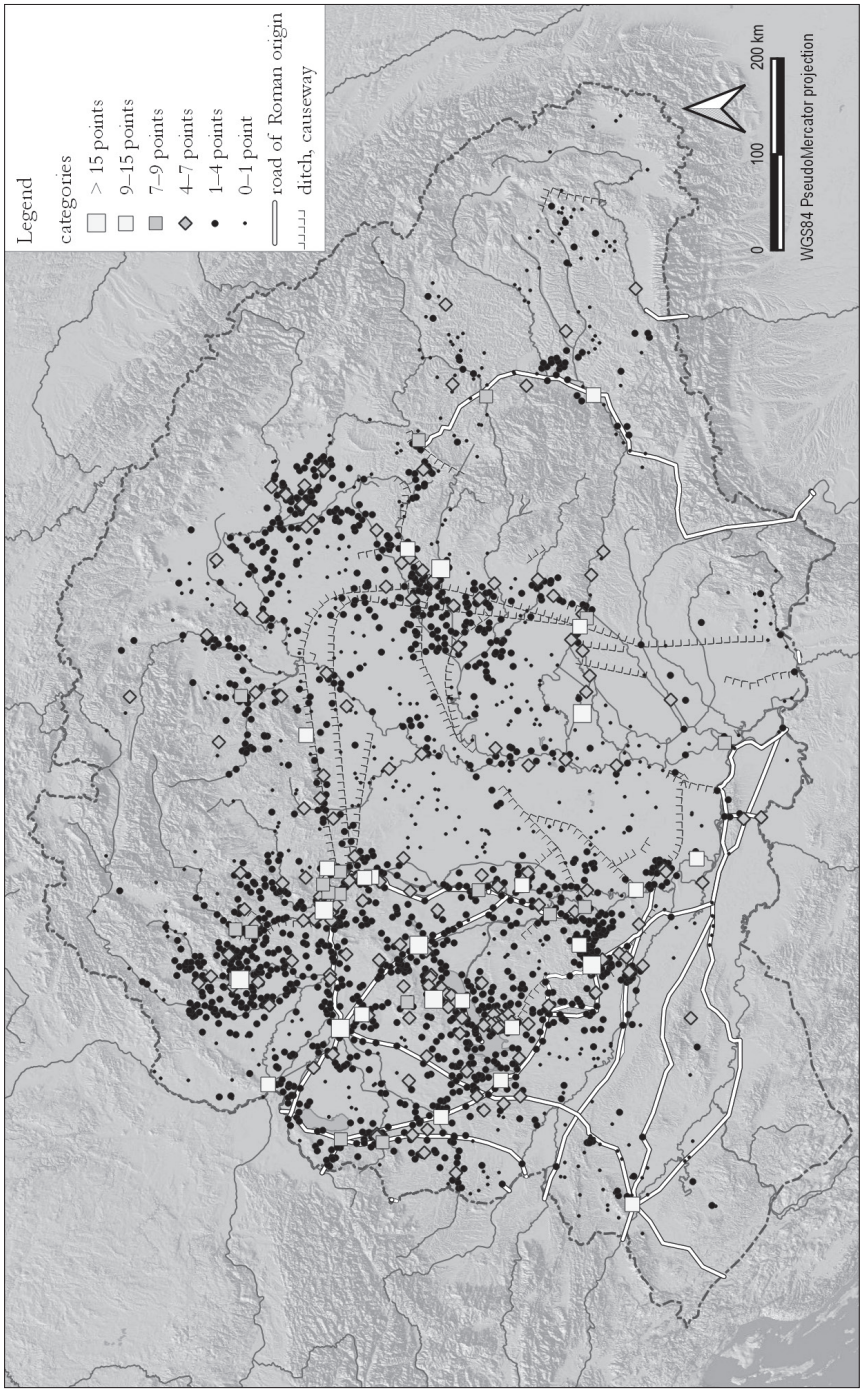
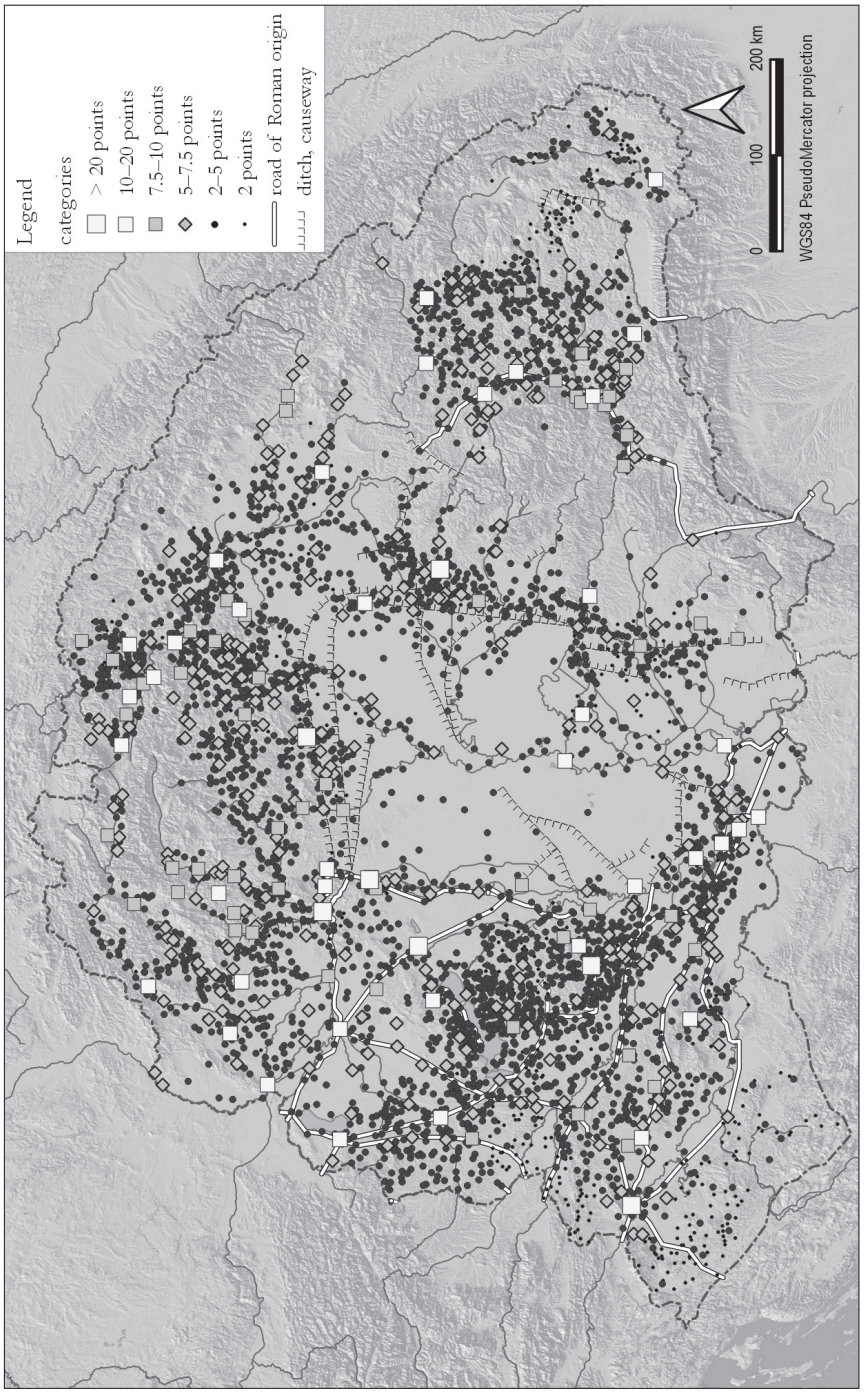
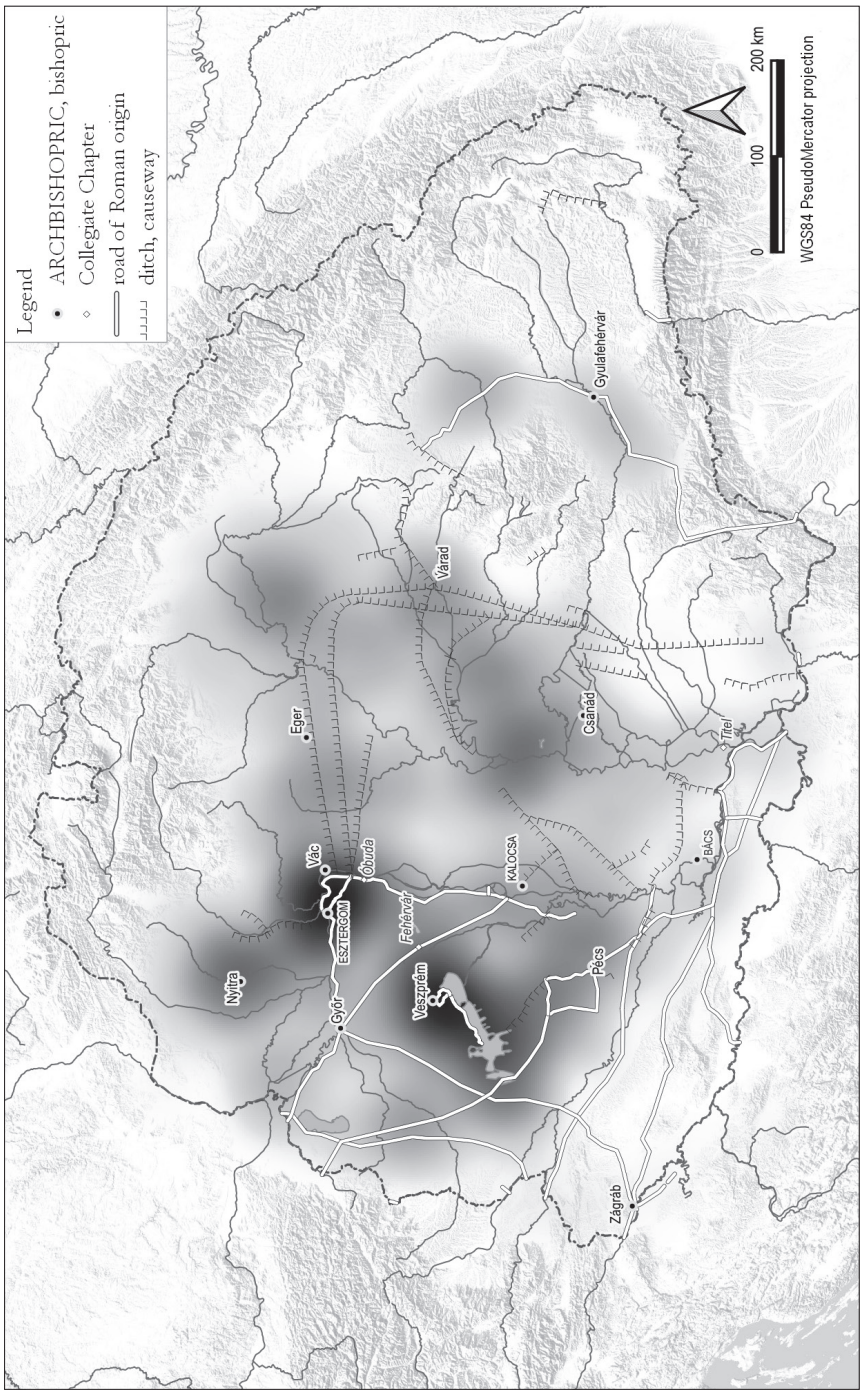


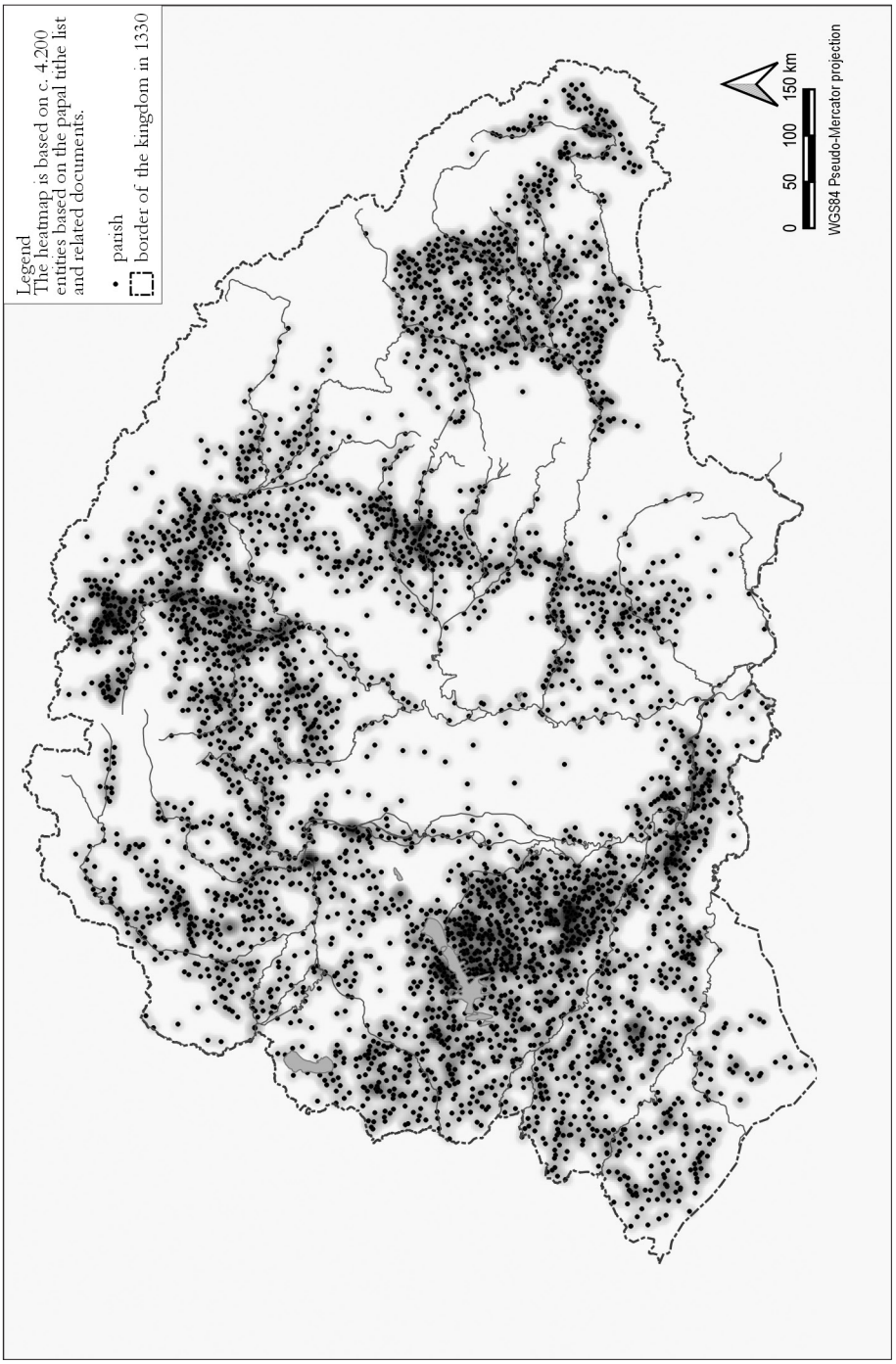
Map 1. The settlement network of the Kingdom of Hungary c. 1220, based on ***archaeological*** and written evidence.
Source: designed by the author.



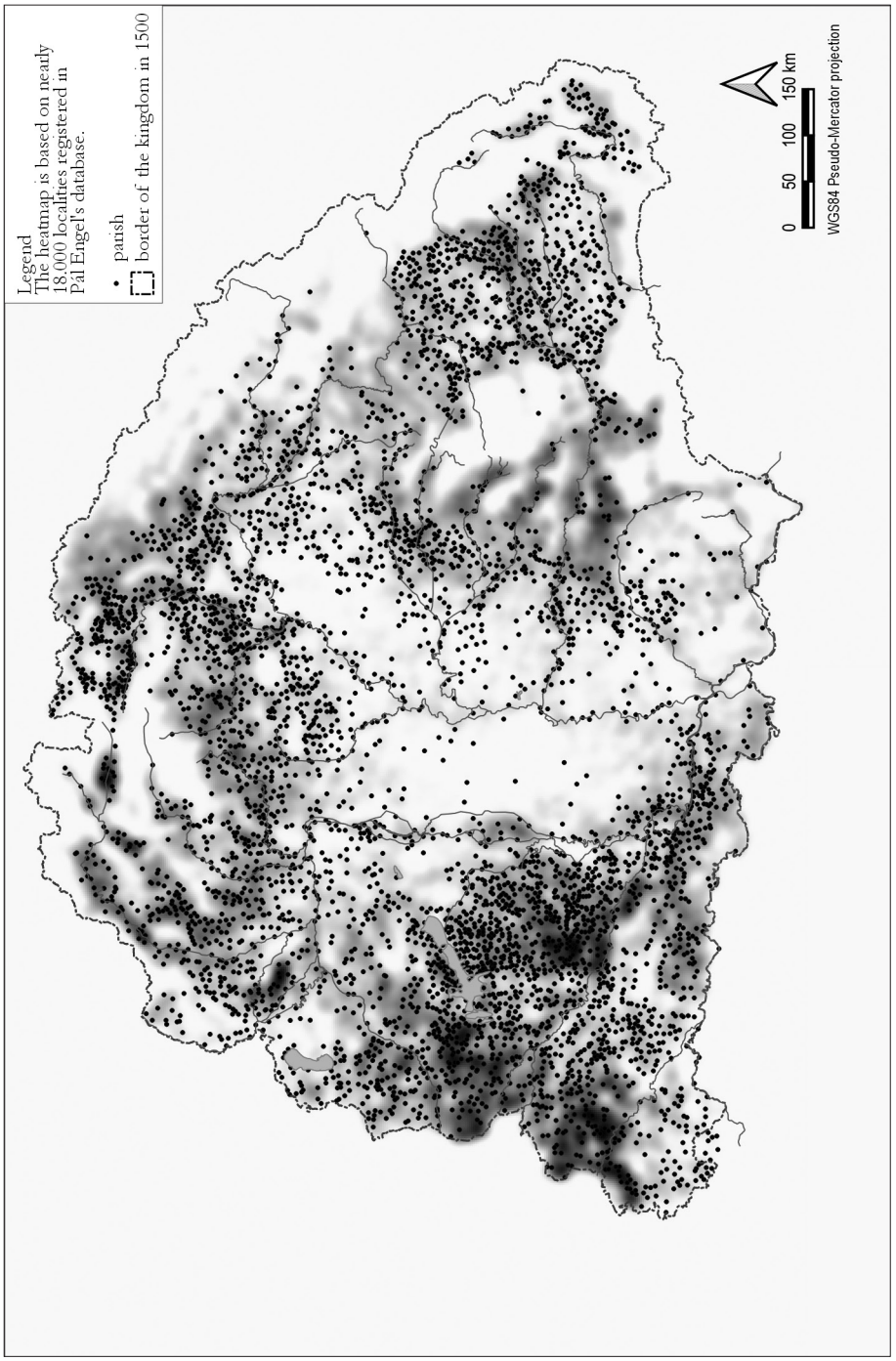
Map 2. The parish network of the Kingdom of Hungary c. 1330, primarily based on the ***papal tithe list*** and related documents.
Source: designed by the author.



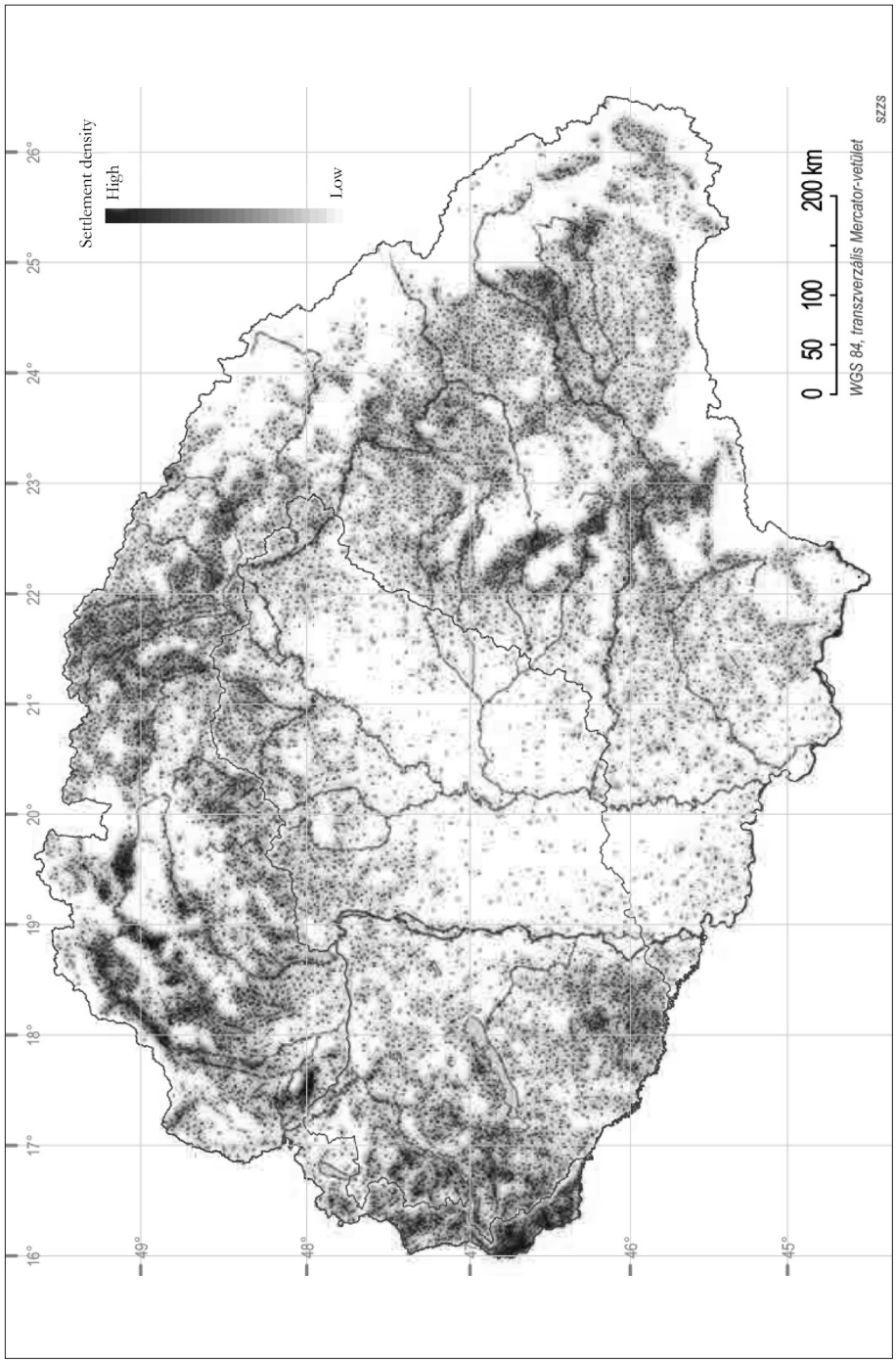
Map 3. Heatmap of the data for c 1100, primarily based on ***archaeological*** data.
Source: designed by the author.



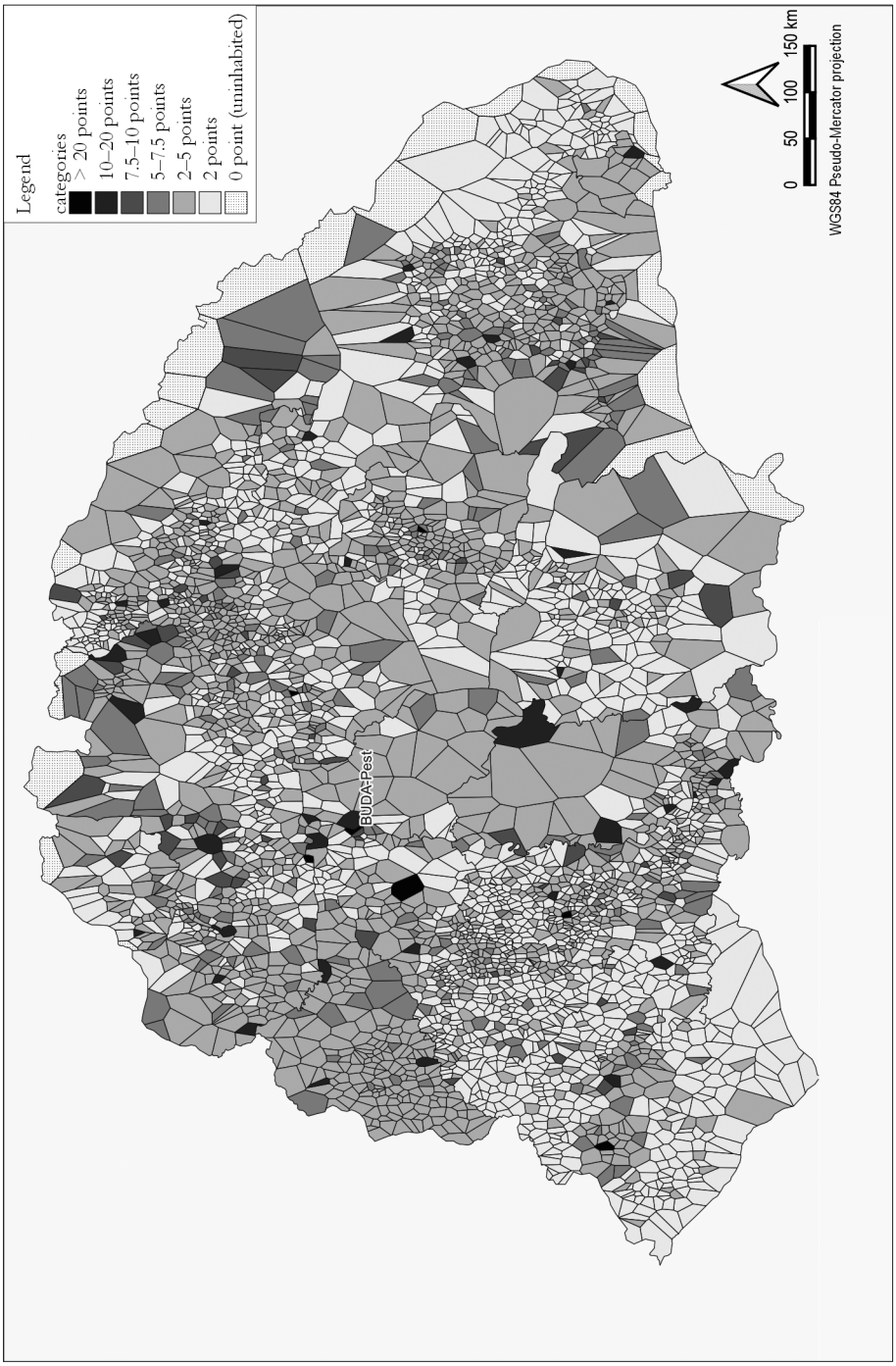
Map 4. Heatmap of the parish network of the 1330s (Ø: 30 km), with the parishes indicated as dots.
Source: designed by the author.



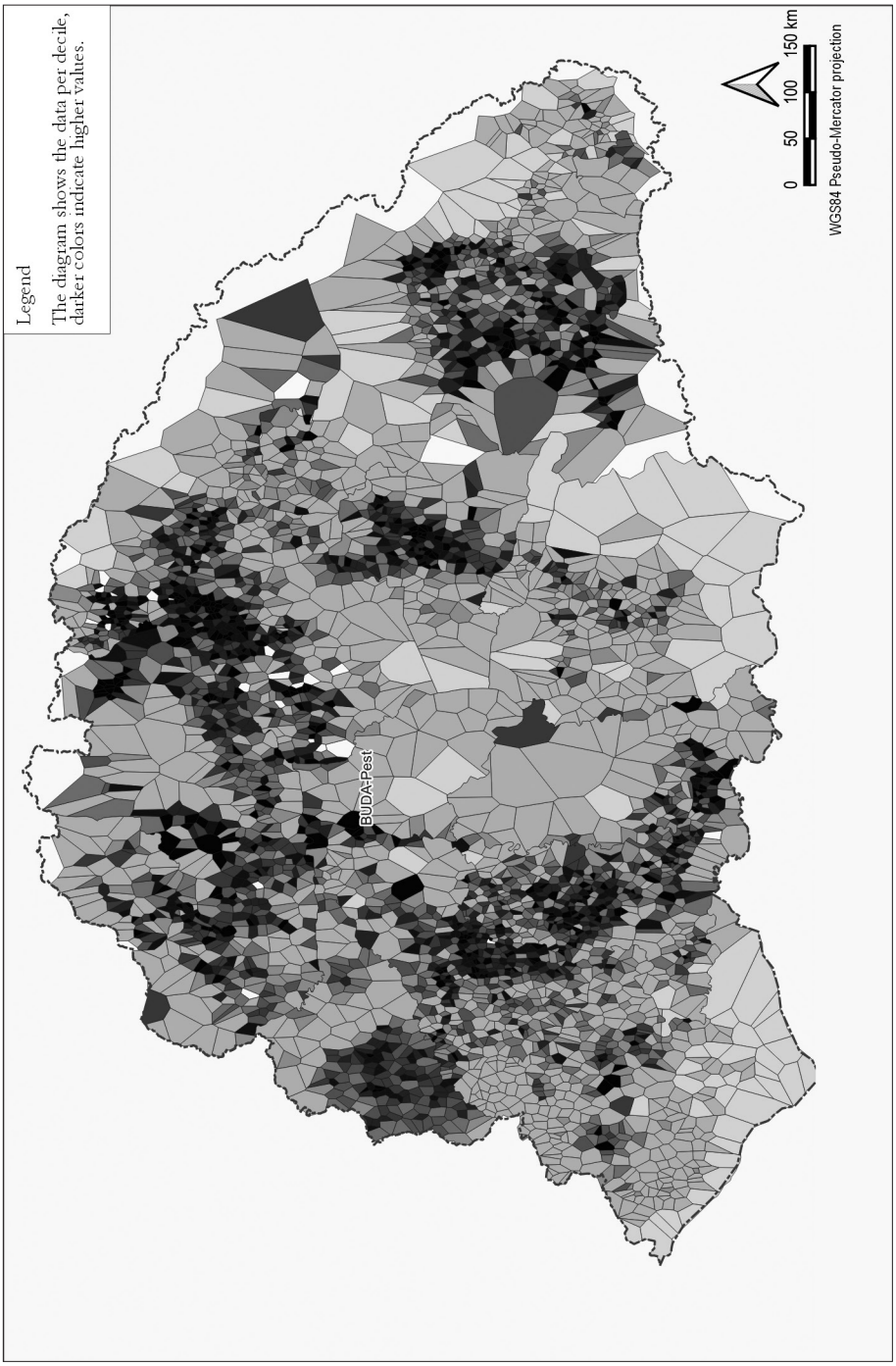
Map 5. Heatmap of the settlement network of the 1500s (Ø: 30 km), with the parishes indicated as dots.
Source: designed by the author.



Map 6. Heatmap of the settlement network of 1910, with the settlements indicated as dots.
Source: courtesy of Zsolt Szilágyi.



Map 7. Voronoi diagram of the fourteenth-century parish network of the Kingdom of Hungary.
Source: designed by the author.



Map 8. Papal tithe per area unit, projected on the Voronoi diagram of the fourteenth-century parish network of the Kingdom of Hungary. Source: designed by the author.

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Differences in Quality of Life and Profitability on Small and Large Farms (1730–1930): A Statistical Approach*

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The competitiveness and productivity of large landholdings and small estates and the incomes or welfare of the people living on such estates have long been an important issue in the Hungarian historiography – and in everyday politics too. Based on the statistical evaluation of serial sources from the 18th, 19th and early 20th centuries we give a thorough analysis on the productivity of smallholdings and large estates, which showed a remarkable a spatio-temporal diversity contrary to the statements in the literature focusing on case studies or social aspects of the problems. The size of the investigated area (Kingdom of Hungary versus Hungary after 1920), as well as land-use colored the palette further. Statistical analysis also proved that socio-economic features on large landholdings were not so unfavorable as depicted by literature. There was a remarkable diversity within the large-estates regarding productivity too, and while in the 19th century their income/ha values were better, than the income on small estates, this gap partly disappeared between 1910 and 1935.

Keywords: Productivity, incomes, large estates, smallholdings, tenant peasantry, Kingdom of Hungary, 18th–20th centuries

Introduction

The competitiveness and productivity of large landholdings and small estates and the incomes or welfare of the people living on such estates have long been an important issue in the Hungarian historiography, and indeed this issue remains controversial today. That matter at hand is not simply an economic or social question. Rather, it is one of the means through which the various political regimes after 1848 sought to legitimate their rule and policies. Neither is this issue negligible from the point of view of contemporary regional research and territorial planning. In his discussion of peripheralization at the time of the regime change in the early 1990s Endre Miklóssy identified the preponderance of large estates, rural

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overpopulation, and the marginalization of livestock farming as three of the four main historical factors contributing to the alleged backwardness of the region today.[1] Thus, the question can also be raised from the perspective of conditions today, or in other words, one could ask which former type of farm (allodial estates or farms dominated by plots) and social class (villages of former tenants with plots or villages inhabited by the landless, who after 1848 were mostly daily-wage agrarian laborers) are associated with areas which today are peripheral. The latter, the connection between the territorial pattern of social classes, and areas that are peripheral today, is not examined in the present paper.

In the interwar period, a political debate broke out on the issue of the comparative productivity of large versus small estates. Miklós Móricz (brother of the family writer Zsigmond Móricz) contended that large estates were more productive, but these estates were also associated with poorer living conditions for the populations living on them (and he supposed a causal relationship between the two).[2] Jenő Czettler pointed out the advantages of the large estates from the perspective of productivity—in the interwar period, because large estates had 20 percent better grain yields and 30 percent better yields for potatoes than small estates.[3] Mihály Kerék refuted this. He contended that livestock production on smallholdings (which most statistics do not measure) compensated for the advantages of large holdings in grain production[4] (and net cadastral land income)[5]

1 Miklóssy, "A területi elmaradottság," 881–89.

2 Large estates had higher birth rates and lower death rates than the villages dominated by small estates, but population increases were not high due to significant emigration (reaching 40 percent of the natural population increase, whereas in the small estates emigration accounted for an estimated 25 percent of the population increase), despite the fact that population density was the lowest on the large estates. Miklós Móricz interprets this as an indication that the large estate were less sustainable, although it is more likely that fewer people were needed to run a large estate efficiently. Móricz, "Nagybirtok," 293–309.

3 Czettler, "Földbirtok-politika," Table 51.

4 According to a statistical assessment of 232 small farms, Kerék argues that although large farms produced more grains (an average of +2 quintals of grain per acre and +800 liters of milk per cow compared to smallholding), the small farms had much larger numbers of livestock, which means that while the large farms had a gross income of 135–167 pengő per acre, the small farms have gross incomes of 170–190 pengő per acre. In addition, the Hungarian smallholders marketed more products (as a percentage of their products) than Balkan smallholders (which were self-sustaining economies according to Chayanov), up to 60–70 percent (compared to 25–35 percent), similarly to the large estates. It is therefore not surprising that the share of contributions made by smallholders to total marketed goods was also high. The net income was thus between 57 and 64 pengő on the small farms compared to 31–35 pengő on the large landholdings. Kerék, *A magyar földkérdés,* 361–64.

5 Net cadastral land income is calculated in Hungarian statistics as the difference between incomes and costs, so it is similar to the term profit.

per acre. A table comparing the Balkan countries in the volume by Zagorov, Végh and Bilimovich, which was published after World War II, shows that in Hungary and Romania (as opposed to Greece, which also had a polarized estate structure) the yields of large estates were 20–30 percent higher than the yields of small estates in terms of grain production.[6] However, Tibor Tóth's research on the Interwar period, which is limited to the Transdanubian region, shows that the yields were better on smallholdings, although the return rates were somewhat slower.[7] The issue is not a specific Hungarian problem. According to Yanaki Mollov, Bulgarian smallholdings had better yields *per hectare* than the large estates in the interwar period.[8] However, this is not the case if *per capita* values are calculated (labor force), and small farms were much more vulnerable to climate variability and changes in the external economic situation (including price volatility, which became an acute crisis after 1929).

The profitability of a given estate type may well have depended on many factors, including type of land use, land quality, location of the sample area, and the availability of technological advances, all of which are examined in the present study. Even the proclivities of political regimes (i.e. legal measures) may have been helpful in many cases (for instance in the case of Ottoman Macedonia in the nineteenth century or in dualist Hungary). However, there are also examples when state intervention was not beneficial (for instance the permanent agrarian crisis in Serbia and Bulgaria after 1870, which was due to the maintenance of smallholder peasant democracy). Productivity and profitability also varied over time. There are many ways to measure these changes, but they do not always produce the same results.

If our results show that productivity measured according to harvest yield per acre was better on large estates then we need to consider the possible reasons for this, which include the following: (a) plot size, parcel size, parcel numbers, (b) technological development, (c) land use and product structure of the smallholdings and large estates, (d) whether the nobility managed to acquire better quality lands after 1848, or (e) whether the landed gentry, losing their tax exemption after 1848, attempted to manipulate the cadastral land survey during the registry period (1851–1865), when land income became the basis for land tax (1865), thus reducing their land tax by claiming that their lands were of poor quality. Klára Mérey, Pál Sándor, and Lajos Für have given concrete examples of how large landowners acquired fallow land after 1848 that had formerly been

6 Zagorov et al., *The Agricultural Economy,* 15–22, and 50.

7 Tóth, *A Dunántúli kisüzemek,* 29.

8 Mollov and Kondov, *Dohodnostta.* According to our recent surveys, this did not stand for the 1860s.

used by the peasants.[9] They have also shown, furthermore, that these lands were often of better quality than the plots remaining in peasants' hands.[10] Scott M. Eddie, however, argues that this was not a general trend in 1850–1870. His sophisticated cliometric studies using country-scale data support the hypothesis that large estates (more precisely, the estates owned by the aristocracy) were subject to a more favorable tax classification than might have been expected in only one county out of the 52 studied (see the case of Viharsarok, also analyzed here).[11] The peasant estate was also sometimes placed in a higher "golden crown" category because it had a higher proportion of ploughland, even if the soil quality was actually worse because peasants were forced to cultivate more arable lands regardless of quality (see the case of Békés County in the discussion below).[12] On the other hand, the proportion of land taken up by pastures and forests was sometimes higher on large estates, and because of their generally lower income per acre, the average cadastral income per hectare on the whole large estate was also lower compared to the peasant farms, which were primarily ploughland. (The Draskovich family's estates in southern Baranya offer an example of lands with a higher proportion of pastures and forests, while the Benyovszky family's estates in the same area were primarily ploughlands).[13]

Productivity in the 18th Century

In the discussion below, I offer an overview of the issue by providing a summary of research done between 2018 and 2023. According to the census of 1728, which survived in 11 counties (2,200 settlements),[14] the declared (and this word is important) seed yield (measured in proportion to seeds sown)[15] on serf plots was not more than 1:2 in 25 percent of the settlements (500 settlements), and a seed yield of 1:4 or more was measured in only 20 percent of the settlements.

9 Für, *A csákvári uradalom,* 33–139; Sándor, *Birtokrendezési periratok,* 94–95; Orosz, *A jobbágyvilág megszűnése,* 125; Egyed, *Falu, város, civilizáció*, 134–35; Sándor, "A XIX. századi parasztbirtok," 1968, 94–117, and Sándor, "A XIX. századi parasztbirtok," 1964, 36–81.

10 T. Mérey, *A somogyi parasztság,* 248; Orosz, *A jobbágyvilág megszűnése*, 133.

11 Eddie, *Ami "köztudott", az igaz is?*, 83.

12 See Demeter et al., "Földminőség."

13 See Demeter and Koloh, "Birtokstruktúra és jövedelmezőség."

14 MNL OL. Központi Statisztikai Hivatal [Archives of the Central Statisctical Bureau]. Iratgyűjtemények (volt F iratgyűjtemény) (1701–1996), XXXII-23-j-12, 31–85.

15 In the eighteenth century, instead of yields expressed in quintals, grain yield was given as a ratio to seeds sown. Thus, all quantified data expressed here in kg, q, or tons are calculated and estimated.

(If the output is calculated in *cubulus* before sowing and harvesting and paying the tithe and state tax, a grain output of 1 to 4 was close to 800 kg/ha). The average yield of 1:3 was exceeded in Heves, Nógrád, Tolna, Sopron, and Szabolcs Counties. The lower-than-average value in Bihar and Szepes Counties, which are mountainous and forested, is not surprising, while the below average yield of Pest County is more surprising (animal husbandry still dominated the central plains in the eighteenth century due to the devastation caused in 1541–1699 during the Ottoman era). The declared yields of the municipalities of Somogy, Zala, and Vas Counties were also below 3:1. As 10 of the 11 counties are located in present-day Hungary (which is mostly lowlands), data from counties for which the sources do not provide these figures probably would not meaningfully raise this 1:3 average.[16] As the landlords and the Church each took 10 percent of the harvest and 33 percent of the harvest had to be spared as seed for the next year, this 1:3 ratio allowed peasants to keep only 47 percent of their harvest, and part of this had to be used to pay taxes to the state. Thus, in the end, not more than 30 percent remained for peasant consumption. Supposing that 200 kg of grain are required for one adult and 150 for one child every year as a minimum, this makes total human consumption for a family 1,000–1,200 kg[17] (without animals). This cannot be more than 33 percent of the total grain produced, ranging from 3,000 to 3,500 kg (otherwise the taxes cannot be paid). Calculating with a general output ratio of 1:3, this means that 1,000–1,200 kg of seed had to be set aside to be sown for the next year. Land size was calculated in *cubulus*, which indicates the volume of seed, 92 kg[18] for a Hungarian acre (1 cadastral acre equals with 5,570 sq m, 1 Hungarian acre is 4,200 sq m). Thus, 11 to 12 acres (4.5 to 5 ha) had to be sown to produce this amount of grain at an output ratio of 1:3 in order to secure the subsistence of a family. In the case of an output ratio of 1:5, the seed set aside for the next year was 20 percent of the total harvest, taxes paid to the landlord and the Church came to a total of 40 percent, leaving 60 percent for the peasant to use to feed his family and pay the royal taxes. This left him with more than 40 to 45 percent of his harvest after taxation. Thus, even a smaller

16 See Demeter and Horváth, "Sopron vármegye."

17 Glósz's calculations are very similar. From a different basis he gives five *pozsonyi mérő (pm)* for an adult person without animals, which is 225 kg. In case of animals fed from arable land this goes up to nine pm. (Glósz, "Területi hiány és felesleg"; Glósz, "A gabonakereskedelem feltételrendszere"; Glósz, "A birtokviszonyok."

18 This is only valid from the late 18th century according to Schwartner's description. See Bogdán, *Magyarországi űr-, térfogat-, súly és darabmértékek,* 303–4.

plot under 10 acres could sustain a similar family of six according to the figures used above.

To obtain more land, peasants could change the field-system and increase the ratio of cultivated lands from the usual 50 percent (the remainder 50% was used as fallow or grazeland) in the two-field system to 67 percent by applying three-field system (using one third of the plot for autumn crops, one third for spring crops and one third as fallow in a rotational system). They could also rent land from the landlords. This three-field system was often used in hilly regions in 1728 to compensate for lower soil quality.[19] Applying the three-field system in the 18th century was not necessarily the sign of modernization or relative welfare (crop surplus), as plots using three-field system were not more productive, than lands under two-field system. It was rather a response to challenges caused by relative land shortages.

In 1728, the larger plots *(sessio)* had proportionally smaller yields per acre than the smaller units of land. In the lands with poorer yields, the plots tended to be larger, both in absolute terms (*sessio* size) and measured per capita. Had this not been the case, the population would have been compelled to move. (More than 60 percent of tenant peasants worked lands that were less than half a plot. This is a clear indication of the progressive fragmentation of the lands.) In his research on the Székely Land in the early eighteenth century,[20] Dezső Garda has shown that there was no significant difference in the grain yield of the *armalist* noblemen (nobles without peasants), the tenant peasants, and the landless cottars. The yields fluctuated around nine of ten *kalangya*.[21] The differences between social groups were more pronounced in terms of livestock (1.9 and 3.7 cattle per family for cottars and members of the petty nobility, respectively). Most of the large estates were basically engaged in livestock farming in the first decades of the eighteenth century, either because of the general demand in

19 In our opinion (see Demeter and Horváth, "Sopron vármegye"), three-field system were usually applied where intensive farming was needed because of the lack or low quality of arable land. In general, seed yields were also higher for plots using the two-field system. The implementation of three-field system was to compensate for this by extending the arable area from 50 percent to two-third of the ploughland, by reducing the fallow land. In regions using three-field system the ratio of peasants with half plots or less was also high, referring to relative shortages in arable land. The data also indicate that manure was not widespread on lands of better quality and higher yield in 1728. Wheat grain yields were only 1:2.5 in villages in which manure was used, but were close to 1:3 in villages in which manure was not used. The villages in which manure was used presumably relied more on livestock farming than on crop production.

20 Garda, *Főnépek, lófők, gyalogkatonák,* 138–50.

21 The term refers essentially to a haystack, though the term does not indicate a precise shape or quantity.

Europe or because of labor shortages. Before the unification of peasant duties in 1767, the number of days spent on in *corvée* (compulsory work on a landlord's manor) or the geographical location of the manor may be a guide to the nature of the large estates *(allodia)*. Vast landholdings that made little use of *corvée* or allowed tenant farmers to free themselves of this obligation by making payments instead were more likely to be livestock farms (as these required less labor force thus were unable to exploit *corvée* efficiently), while near the larger cities (Vienna, Buda) grain production began to spread, and this required a workforce. This also suggests that the grain farming methods used on large estates may not have been very efficient in the beginning of the eighteenth century.

As eighteenth-century cadastral census data survived along the valley of the Tisza River, they can be used to quantify the share of tenant peasant plots compared to large estates, as well as to compare the yields on peasant plots and large manors at the end of the eighteenth century (Figs. 1 and 2). In contrast to Jászság and Nagykunság, the Tisza floodplain (and the Hevesi plain) was dominated by manorial ploughlands in 1786. This had not changed even in 1865, when water regulations were introduced and cadastral surveys were made to document the boundaries of estates and tenant plots.[22] In the Central Tisza floodplain, both in regional comparison and also on the smallholdings, the grain yield per acre was lower than in Nagykunság and the plains of south Heves, for instance, and more land was owned by the lords and more crops were appropriated by the nobility (Table 1), whereas the amount of land per one agricultural inhabitant (including the cottars) was the smallest.[23] On the other hand, at the end of the eighteenth century, there was hardly any measurable difference between the yield per acre of small and large landholdings according to the surviving cadastral data. In terms of the total area of large holdings and plots, there were hardly any settlements on the Central Tisza floodplain, in the Békés loess and Nagykunság, and in South Heves which did not reach the limit of self-

22 Demeter et al., *Kisatlasz*, 175 (Map 129). According to calculations based on the raw data of the 1897 Farmers' Inventory *(Gazdacímtár 1897)*, the share of arable land on large estates was above the national average in the floodplain counties, but on small farms it was even higher.

23 In Nagykunság and Csongrád Counties in the south, even the small amount of tenant ploughlands resulted in a large grain output per acre, and the landlord expropriated only a quarter of this. In the Tisza floodplain, more than half of the total harvested cereals went to the landlord, as was the case, for instance, in Heves, but the extent of the ploughlands was much greater in the latter. Thus, although the total per capita cereal yield in the Central Tisza region was higher than in the Kiskunság and Jászság, in the latter regions the proportion of grain expropriated by the landlords were only around 10 percent.

sufficiency (nine *pm*[24]/person or five *pm* without animals) calculated by Glósz, with the exception of the region of Kiskunság (Danube-Tisza Interfluve, and in this area there was still heavy emphasis on animal husbandry on the large, empty quicksand plains) and Dévaványa in the moorland of Sárrét. Here, therefore, self-sufficiency had to be achieved either through animal husbandry or other forms of work (cottage industry, migrant labor). However, if we deduct the production of large estates from the total regional production, the situation was not good elsewhere either. Along the Tisza River (in contrast to the settlements of the Nagykunság or southern Heves), the yield was often barely 5 *pm* per person for peasant plots, if landless cottars are included and the yields of large holdings are not added (Table 3). Thus, the landless cottars[25] were forced to work either on the large estates or in animal husbandry (either as owners or herders) in the late eighteenth century. As long as there was enough common grazeland (this was the case until the beginning of great water regulation works in the late 1840s), the livelihood of this stratum was assured. However, the expansion of the large estates (and private land in general) over the commons and the expansion of ploughing on the large estates at the time of the river regulations[26] eliminated their livelihood and also provided the large estates with a cheap labor force that was no longer self-sufficient and thus could be easily exploited. This class was the biggest loser of the water regulations works and the new laws on land property after 1848. (The former common lands fell into the hand of landlords after 1848, who, prompted by the European grain hunger after the great crisis in 1847, began the transformation of even lower quality lands to arable land. These lands were profitable until grain prices collapsed after 1873).

According to Glósz, one or two sown cadastral acres were usually enough for one person to subsist, and since the amount of arable land per tenant peasant in most of the floodplains reached ten to twelve acres in the beginning of the nineteenth century, families of five to six people were able to live off the land at the time. By 1910, however, even with the increase of cultivated lands due to water regulation, only an average of six sown acres was available per family, which could only be sufficient for a family of this size if yields doubled (to twelve *pm*/acre, or about one ton/ha).

24 *Pozsonyi mérő*. Hereinafter referred as *pm*. Two *pm* equals to one *cubulus*, thus one *pm* is approximately 45 kg.

25 MNL OL. A39 A Magyar Kancelláriai Levéltár [Archives of the Hungarian Chancery]. Acta Generalia (1770–1848), 3688/1786.

26 See Demeter and Koloh, "Birtokstruktúra és jövedelmezőség," 25–76.

It is also important to underline that the yields of the arable land of the landlords in the Central Tisza floodplain were not good, and water regulation resulted in the further expansion of these low-quality ploughlands. [27]

Table 1. Differences in grain productivity of Hungarian lands based on the specific variables extracted from the data of the first cadastral survey in the 1780s

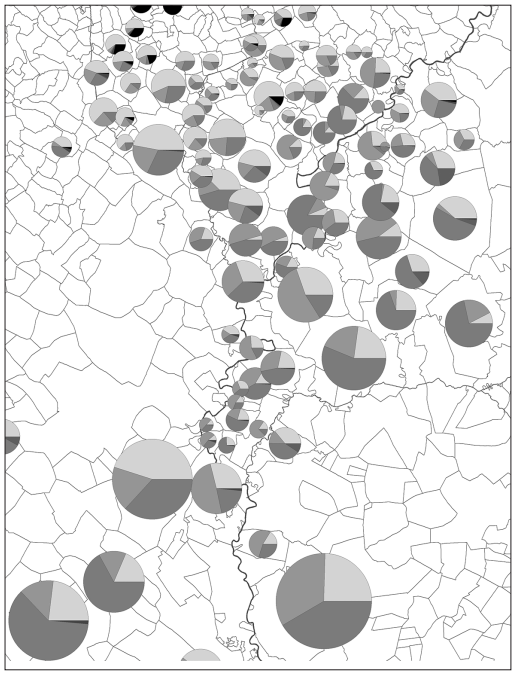
Landscape-type (1786, settlement number in brackets)	Ploughland as a proportion of the total %	Meadow and pasture as a proportion of the total %	Share of manorial ploughland (and yields) %	Ploughland, total (acre/person)	Peasant plot acre/person	Total grain output/person (in *pm*)	Yield of manorial land (*pm*/ acre)[28]	Yield of peasant plots (*pm*/acre)	Yield for one peasant (inc. cottars) *pm*/person
Western Hungary: Győr, Moson, Sopron (71)[29]	30.43	60.19	41.50	1.88	1.05	13.15	7.04	7.02	8.48
South Heves (32)	48.16	43.82	**52.98**	2.35	1.13	17.68	7.48	7.28	7.74
Tisza floodplain (31)	*20.42*	***78.19***	*58.89*	*1.81*	*0.77*	*12.57*	*7.16*	*7.27*	*5.10*
Hills of North Heves (39)	34.24	25.89	**52.15**	2.03	0.77	12.02	5.88	5.96	6.28
Nagykunság plains (12)	24.52	**71.04**	28.36	1.87	1.34	**17.17**	**9.16**	*8.76*	12.01
Csongrád County (3)	24.74	**74.11**	23.56	1.77	1.62	**15.37**	**9.55**	*8.67*	11.88
Jászság (11)	49.34	47.27	3.61	3.40	1.85	10.87	5.40	5.42	10.48
Kiskunság sand dunes (8)	30.40	**67.80**	10.63	4.15	1.88	10.08	4.85	**5.17**	9.35
Altogether (216)	30.73	61.46	37.72	2.15	1.18	13.71	6.90	6.86	7.95

Source: Calculations based on raw data published by Dávid, "Magyarország első kataszteri felmérése" and Rózsa's recent explorations, Rózsa, "Az ártéri gazdálkodás mérlege."

27 Considering arable land, small farms were more productive in Ormánság, while in Békés and Csanád Counties large farms were more productive in terms of income per acre.

28 From this, we deduct the seed. One Hungarian acre = one *cubulus* = two *pozsonyi mérő* of seed (125 l = 92 kg) = 4,200 sq m. This gives an estimate of the seed output, which is 2:7 in Moson and 2:9 in Nagykunság as a ratio of seed yield to seeds sown.

29 Control area.



Figures 1–2. The size and proportion of manorial arable land (light grey) in the surviving material of the 1786 cadastral census (based on Dávid, "Magyarország első kataszteri felmérése" and Rózsa's recent explorations, Rózsa, "Az ártéri gazdálkodás mérlege." / Regional differences in the land use of total cultivated land in 1786 based on the cadastral census (light grey for ploughland, medium grey for meadow and pasture, dark for garden and forest). There was hardly any arable land in the settlements of the Tisza floodplain, which were characterized by small administrative areas and large (manorial) estates with high share of the available arable land.

Productivity of Smallholdings and Large Estates from the 1860s to 1910

The significance of the data series published in 1865 during the first surviving cadastral survey[30] is that it is available for the whole country (except Transylvania and the large towns). To a limited extent it also makes it possible to calculate the net cadastral incomes[31] of large and small estates, since the number of settlements where *only* smallholdings or *only* large estates were recorded (the data for so-called *puszta*, or "plainland farmsteads," which had only one or two owners, were

30 *Magyarország művelési ágak szerinti terjedelme és földjövedelme*, 1865.

31 We still do not have data on settlement level yield (in tons) between 1865 and 1910. Instead, net cadastral income was measured in 1865 in forints, which was the basis of the land tax. However, this indicator reveals nothing concerning expenditures or gross incomes.

recorded separately) was statistically relevant. (Where both large estates and smallholdings were present, we cannot calculate their incomes separately.) From Table 2, it is clear that in the 1860s (after the abolition of *corvée*), the large holdings were more productive (in terms of harvest yield per acre) than smallholdings. Smallholdings had harvests per acre that were only 66 percent of the harvests (measured per acre) of the large estates.

Table 2. Differences between the profitability of small farms and large holdings in Hungary in 1865 (net cadastral income, excluding the production of livestock)

Indicator	**Small farms (sample)**	**Large landholdings (sample)**	**Large estates with some small farm**	**Country total and average****
Number of holdings	126,758 out of 2,010, 000	187 out of 23,685	138*+235	**2,034,630**
Total utilised area (acre)	1,380,000	409,000	131,487	**33,510,620**
Net cadastral income (forint)	3,610,000	1,944,000	599,600	**98,056,000**
Average size of holding (acre)	10.9	2190	1000	**16.5**
Average net income per holding (forint)	28.5	10,395	4500*	**48.2**
Net income per 1 acre (forint)	2.6	4.7	4.6	**2.9**
Proportion of area used	92	80	95	**91**
Study sample	6.2% of farms, 4.1% of land, 3.7% of income	1.1% of farms, 1.3% of land, 2% of income	0.4% of land, 0.6% of income	**100**

* Counting only large estates.

** Excluding Transylvania and Croatia and some large cities (e.g. Debrecen).

Were the differences in income between small and large estates due to technological differences, or were they rather due to the fact that after the reforms in 1848, the nobility acquired land of better quality?[32] Followers of prominent twentieth-century Hungarian historian Gyula Szekfű argue, on the basis of parcel names, that the large landowners established their estates on land cleared and cultivated in the nineteenth century and not on parcels obtained from peasants. This land therefore cannot have been of a terribly high quality and cannot have yielded impressive harvests or large incomes (and therefore there was no need for the landowners to manipulate the data). The results given

32 Eddie, *Ami "köztudott", az igaz is?*

above, however, seem to contradict Szekfű's idea, though only partially. Surprisingly, if we approach the data series in a different way, in 1865, smallholdings were overrepresented in settlements with a high net cadastral land income of over six forints[33] per acre (323,000 holdings, or 15 percent of the smallholdings, compared to 2,635 large holdings, or 10 percent of the large estates).[34] This seem to support Szekfű's thesis (according to which the land quality of the large holdings was generally poor). However, since the distribution of landholdings within a settlement (and therefore the difference in their soil quality) is not known, these data are not conclusive.[35] At the other extreme, for the settlements with a low net income of one or two forints per acre (below average), we counted 6,630 large estates and 466,000 small farms in total, which is 28 percent and 23 percent, respectively. Here, large estates are overrepresented, but this is also due to large forest estates with poor yields (this is immediately clear if one plots the large estates on the map).

In other words, the dominant land use of the estate types has a strong influence on the incomes/acre expressed in money. Despite the low group average in the sample in Table 2, smallholdings were not characterized by uniformly low productivity. In Baranya in 1910, for example, smallholdings did not yield worse net cadastral incomes per acre than the larger holdings, because the smallholdings had a higher proportion of arable land, which had higher net cadastral incomes than forests, meadows, and pastures, and this increased the weighted average of the net income per plot.

The notion that, after the 1875 tax reform, when cadastral net income became the tax base, the tax system favored large estates and the taxes placed on smallholdings were higher in absolute terms is untenable. In 1910 (the investigation was reduced to the recent territory of Hungary due to the availability of data), the direct tax[36] *per capita* in settlements dominated by large estates was 20 kronen (30 K for the large estates of aristocrats), and in settlements dominated by small estates it was 15 K (in the national territory of Hungary today).

33 One forint = two kronen (two crowns or two golden crowns) = ca. two French francs.

34 Our 1865 (and 1910) data only give the value of crop production. They do not reveal anything concerning livestock production. The figure of six forints was well above the national average.

35 For net income per acre above six forints, smallholdings included settlements such as Ruszt and Kismarton/Eisenstadt (no large holdings were recorded in either place, so there were no such settlements skewing the average upwards), which certainly owe their inclusion in the group to their special agricultural crops (wines, grape) and not to cereals.

36 That included land tax based on net cadastral income, taxes on houses, industrial taxes, and profit taxes paid by enterprises.

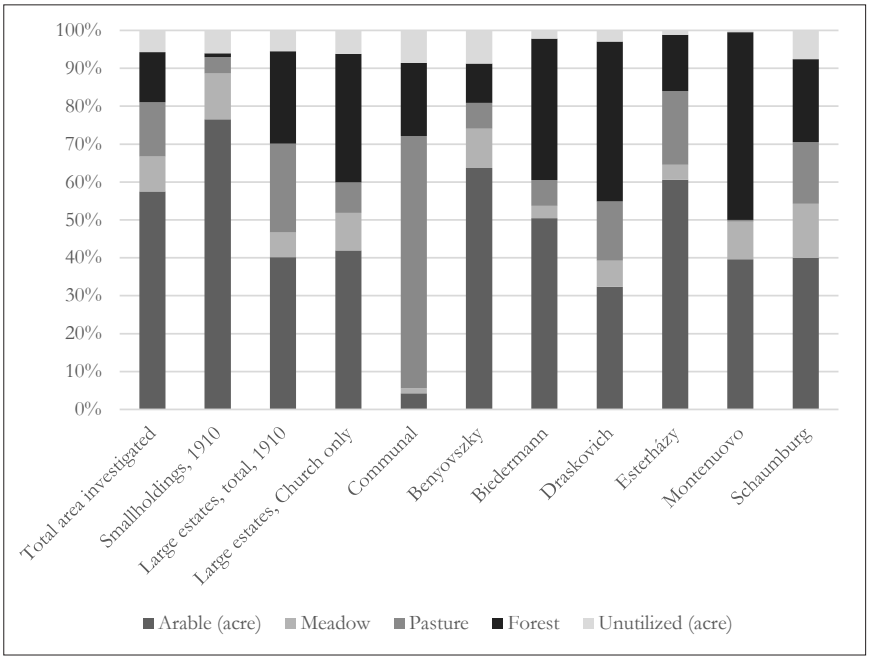


Figure 3. The differences in land use depending on estate types in two districts of Baranya County in 1910 (Demeter and Koloh, "Birtokstruktúra és jövedelmezőség.")

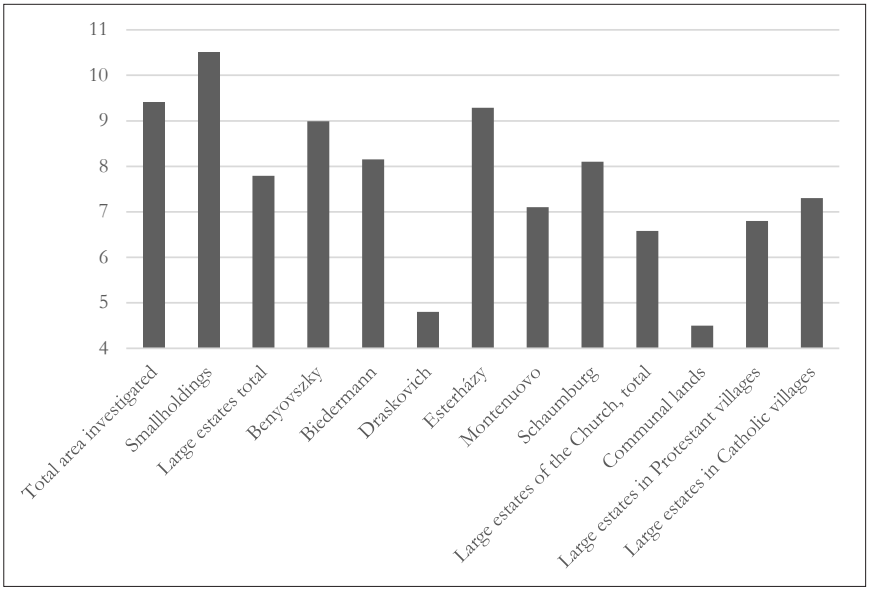


Figure 4. Net land income per cadastral acre in kronen (K) in different subsets of two districts of Baranya County (Ormánság and Hegyhát), 1910 (Demeter and Koloh, "Birtokstruktúra és jövedelmezőség.")

Table 3. The difference between the net cadastral income per acre of a large estate (over 100 cadastral acres) and the total settlement average and its relationship to the land use-types on the former Harruckern estate 1857–1865 (selected cases)

Landholder	Location (settlement)	Arable in acre	Meadow and garden in acre	Vineyard in "kapás"	Pasture in acre	Large estates in total (in acre)	Net cadastral income, in forint	Net cadastral income per acre on large estates in forint	Net cadastral income per acre on total area of the settlement in forint	Share of arable land on large estates in %
Count György Apponyi	Orosháza Kis-Csákóval	633	1		680	1,316	6,125	**4.65**	5.49	48.10
Count György Apponyi	Csaba	3,353	1,020	20	1,166	5,561	32,099	**5.77**	6.25	60.29
György Bajzáth	Szentetornya	608	64		63	736	5,802	**7.88**		82.61
Dániel Bakai	*the peripheries of Csaba*	*61*	*43*	*1*	*6*	*113*	*608*	***5.38***	*6.25*	*53.98*
József Bartóky (abarai és bartóki)	*the peripheries of Csaba*	*76*	*12*		*46*	*135*	*807*	***5.98***	*6.25*	*56.30*
Count László Batthyányi	Csákói-puszta, Csaba, Kondoros	3,912	10		255	4,178	34,205	**8.19**	6.25	93.63
Baumgarten brothers	Orosháza	1,216	144		582	1,942	11,074	**5.70**	5.49	62.62
István Beliczey	*the peripheries of Csaba*	*334*	*3*			*338*	*2867*	***8.48***	*6.25*	*98.82*
József Beliczey	*Csaba határában*	*103*				*103*	*622*	***6.04***	*6.25*	*100.00*
Rudolf Beliczey		*214*			*6*	*220*	*1,850*	***8.41***		*97.27*
József Bernrieder (Paks)	*Orosháza*	*327*	*12*			*340*	*2,853*	***8.39***	*5.49*	*96.18*
…										

Landholder	**Location (settlement)**	**Arable in acre**	**Meadow and garden in acre**	**Vineyard in "kapás"**	**Pasture in acre**	**Large estates in total (in acre)**	**Net cadastral income, in forint**	**Net cadastral income per acre on large estates** in forint	**Net cadastral income per acre on total area of the settlement** in forint	**Share of arable land on large estates in %**
Antal Wenckheim		1,456	337		28	1,822	10,286	**5.65**	6.25	79.91
Baron Béla Wenckheim	Csaba	1,103				1,103	6,624	**6.01**	6.25	100.00
Mrs József Wenckheim	*Csorvás*	*435*				*435*	*2,602*	***5.98***	*5.71*	*100.00*
Károly Wenckheim	*Csorvás*	*310*				*310*	*1,861*	***6.00***	*5.71*	*100.00*
Rudolf Wenckheim	*Csorvás*	*489*				*489*	*2,938*	***6.01***	*5.71*	*100.00*
Baron Viktor Wenckheim	*Csorvás*	*163*				*163*	*979*	***6.01***	*5.71*	*100.00*
Móric and Albert Wodianer	Gyoma	2,599	4,201	3	3,141	9,945	27,647	**2.78**	3.42	26.13
Móric and Albert Wodianer	Csorvás	723				723	4338	**6.00**	5.71	100.00

Estates between 100–500 cadastral acres are given in italics. The highlighted background indicated large estates with net incomes higher than the overall municipal average and estates where the share of arable land was above 80 percent. See footnote 40 for source information.

The same is true if we use *per acre* values instead of *per capita*. The average tax for settlements without large estates was 6.5 K per acre, and the average tax for settlements dominated by estates owned by the petty nobility was the same, whereas for villages dominated by aristocratic estates it was 7.3–8 K per acre. Since direct taxes also included land tax alongside a household tax and corporate and industrial taxes, the tax values are also indicative of income conditions. Thus, the hypothesis that large estates paid less tax per acre because the nobility used its political influence to manipulate taxation to underestimate the value of their land in the golden crown system is not tenable in general either. In fact, they did not pay less, as proved above, and Eddie's aforementioned thesis (that large estates in general did not enjoy more favorable tax rates between 1850 and 1870) seems persuasive.[37]

Mariann Nagy also concludes that the higher the share of smallholdings in a county, the lower the net cadastral income (r= -0.39).[38] Our own country-level (within the state boundaries of Hungary after 1920), settlement-scale study confirms that in the villages dominated by large holdings, net cadastral income *per capita* (27.8 vs. 21 K) and, to a lesser extent, net cadastral income *per acre* (10.5 vs. 8.6 K) were also higher in 1910 than in settlements dominated by smallholdings. However, by 1935 the difference had almost disappeared. Thus, this phenomenon showed significant dynamics within two generations!

For the mid-nineteenth century, another case study gave new information concerning the productivity of large and small estates. In 1857, several censuses of the former Harruckern estates (today Békés County in southwestern Hungary) were recorded,[39] and here the net income per acre (in forints) can be calculated for more than 80 large estates. Since we also know which settlements these large estates were located in, their net incomes could be compared with the average land incomes of the total municipality (which includes small farms) in 1865. The resulting picture is rather chaotic, because the net cadastral income per acre of large farms varied between five and nine forints/acre, and in some cases the net

37 Eddie, *Ami "köztudott", az igaz is?,* 75–88.

38 Nagy, *A magyar mezőgazdaság,* 36.

39 MNL BéML IV. Megyei törvényhatóságok, szabad királyi városok és törvényhatósági jogú városok B. 156. A Csabai Cs. Kir. Vegyes Szolgabíróság iratai 1133/1857. Birtokosok kimutatása községenként 1857-ben; MNL BéML V. Mezővárosok, rendezett tanácsú városok, községek. B.202. Szarvas mezőváros iratai 635/1857. List of landowners with more than 100 acres; MNL BéML V. Községek B. 317. Gyoma nagyközség (1872-ig mezőváros) iratai b. Közigazgatási iratok 823/1857. List of landowners with more than 100 acres; MNL BéML V. Városok B. 302. Document of Békéscsaba nagyközség iratai b. Tanács-ülési jegyzőkönyvek 582/1857. List of landowners with more than 100 acres.

cadastral income per acre of large landholdings was lower than the overall municipal average. Since this was not owing to differences in the sizes of large farms, we also examined the role of land use. Interestingly, large farms were more profitable than small farms if the share of ploughlands exceeded 75 percent of the area of large farms. (This implicitly also means that the large estates might have had better soil quality, at least for grain production, since it was the large estates that offered a viable way of expanding arable land up to 90 percent of the whole). When the share of ploughlands was between 60 and 70 percent, the net income per hectare of the large farms was equal to the average net income of the municipality, and below this percentage value, the small farms were more profitable (Table 3). Large farms were therefore more competitive in the case of monocultural farming.

Leaving aside land quality and land use as factors and focusing only on the size of the landholdings, in the 42 settlements analyzed in Békés, Csongrád, and Csanád Counties, the large landholdings had 25 percent higher net incomes per acre than the small landholdings in 1865 (Table 4), confirming the result of our general survey for 1865 but contradicting the results of the investigation of the 80 large estates above (Table 3). However, as before, we were unable to quantify the role of animal husbandry, so we cannot estimate how it would modify the differences. Net cadastral income, as an indicator, allows us to determine neither where the income/expenditure ratio was better (i.e. which estate type was more efficient) nor where the expenditures were lower (i.e. which landholding size was less capital intensive), since no other indicator is available at the settlement level beside the "income minus expenditure value" (i.e. net cadastral income).[40]

Table 4. Differences in net cadastral incomes of smallholdings and large estates (1865) on the area covered by the genetic soil map of Békés County (1858)

Dominant farm structure (by municipality)		**Net cadastral income, forint/acre**	**Net income forint/estate owner**	**Average estate size (acre)**
Mixed (25)	Avg.	4.30	135.0	31.40
Smallholdings dominate (5)	Avg.	**4.24**	**61.1**	**14.44**
Large estates dominate (12)	Avg.	**5.43**	**29846.0**	**5494.31**
Total number of settlements and "puszta" on map (42)	Avg.	4.45	8615.6	1933.97

40 Keleti, *A telekadó és kataster,* 7–14.

Using a special source, however, it is possible to examine how land quality affected income and determine whether large estates were located on better land or not in these three counties. Table 4 above is based on the cadastral survey conscription published in 1865, which includes the precise, accurate number of large and small estates (but not their size separately) and the number of "puszta." A genetic soil map of the area (the second oldest in Europe) from 1858 has also survived. By superimposing the administrative boundaries of 1865 (Figure 5) on the soil map using GIS-techniques, one can identify the dominant soil type per settlement, and the settlement level average values for net cadastral income per acre in 1865 can be compared to the soil types. Net cadastral income per acre and per holding was highest in the loess (Table 5), which also suggests that the loess was dominated by large estates, while in contrast, the sand or the saline solonetz soils (vertisols) were dominated by small estates in 1865. The net cadastral income per acre on smallholdings located on sands was good, while the incomes of small farms established on peat and solonetz soils was poor. Settlements with mixed saline-loess soils were also dominated by large estates, but with better income per acre values. In other words, the large estates were mostly located on better soils.

Table 5. Net cadastral income per acre and per holding (in forints) by soil type and average size of holdings by soil type in 1865

Soil type and settlement number		Net cadastral income forint/acre	Net cadastral income forint/estate	Average estate size
sand IV (1)	Avg.	**5.49**	*97.38*	17.74
peat (2)	Avg.	2.38	103.25	43.36
loess I (8)	Avg.	**5.91**	*2,3076.77*	3,903.40
salty/saline II (14)	Avg.	*3.51*	*1,811.74*	516.68
salty and peat (1)	Avg.	*2.32*	68.75	29.66
salty and bound clay (2)	Avg.	3.47	56.81	16.35
salty and loess (14)	Avg.	**5.09**	**10,813.64**	2,126.25
total (42)	Avg.	4.45	–	–

Source: Our calculations based on the 1858 soil map and income data published in 1865.

By comparing the productivity of small and large estates located on the *same* soil types (Table 6), one can highlight the "soil-neutral" efficiency of the farm type. The combined query of the incomes (1865)—soil (1858) database revealed that in the case of loess, the large estates were clearly more efficient, while in the

case of saline soils, the smallholdings were more efficient, obviously because the smallholder was forced to produce a minimum quantity even by investing extra work (and/or a larger workforce) to subsist, while the large farm was not under such pressure. In the case of settlements with mixed loess and saline soils, there was no significant difference between small and large farms.

Table 6. Differences in net cadastral income grouped by soil types and farm sizes (in forints, 1865)

Dominant soils (1858)	**Farm size (type, settlement number, avg. estate size)**	**Net cadastral income forint/acre**	**Net cadastral income forint/estate**
sand	MIXED estate structure (1)	5.49	97.38
peat	MIXED estate structure (2)	2.38	103.25
loess	DOMINANCE OF SMALLHOLDINGS (2) (79), cadastral acres	**4.67**	370.32
	DOMINANCE OF LARGE ESTATES (6) (4848 cadastral acres)	**6.32**	30,645.59
	TOTAL (8)	5.91	23,076.77
saline	MIXED estate structure (12)	3.52	90.46
	DOMINANCE OF SMALLHOLDINGS (1) (4 cadastral acres)	**4.06**	36.79
	DOMINANCE OF LARGE ESTATES (1)	**2.74**	24,242
	TOTAL (14)	3.51	1,811.74
saline and soot	(1)	2.32	68.75
saline and clay	MIXED estate structure (1)	*3.38*	95.65
	SMALLHOLDING DOMINANCE (1)	*3.57*	17.97
	TOTAL (2)	3.47	56.81
saline and loess	MIXED estate structure (6)	**5.53**	183.82
	SMALL FARMS DOMINANCE (3) (18 kh)	**4.52**	83.67
	LARGE ESTATES (5) (6122 kh)	**4.90**	30,007.40
	TOTAL (14)	5,09	10,813

Source: Our calculations based on the 1858 soil map and income data published in 1865.

How did landowners manage to acquire good quality land? In order to answer this question, we superimposed the soil map from 1858 on the Harruckern map of land use in the 1780s, which also contained aggregated landuse and population data at the settlement level (unfortunately, it did not include yields). Our research has shown that around 1780, most of the land far away from rivers and covered with loess was used as pasture (Tables 7 and 8), which, as public

property (communal land, which meant that both the landlord and the peasants had the right to use it), fell into the hands of the manor according to the laws of 1848. These areas, converted into ploughland as a result of the land-use change induced by grain hunger in Europe, which generated high prices, showed extremely high yields and high incomes in the mid-nineteenth century due to decades of fertilization and fallowing.

Water regulation works began here around 1865, so the statistics cited reflect the incomes of the pre-regulation situation, when plots on saline soils and peat were more exposed to water. This implicitly also meant that the water regulation work of 1865 generated a temporary ameliorating situation for the smallholders (although peat that has lost water is easily damaged by wind and compaction caused by trampling, so the improvements are only temporary). In contrast to the situation along the Körös River, in the Central Tisza region at the end of the eighteenth century the floodplains of the rivers were dominated not by small farms but by large estates and communal-public lands used as pastures and meadows for grazing. This all became manorial land after 1848. So, water regulation along the Tisza River favored large estates.

Table 7. Differences in land use types on different soils (%) and farm types in 1865

Soil type (I-V: soil quality)		**Smallholding /large holding ratio**	**Arable (%)**	**Meadow (%)**	**Pasture (%)**	**Woodland (%)**	**Vineyard (%)**	**Reed (%)**	**Uncultivated (%)**
sand IV	1	*138.17*	**65.84**	4.33	25.16	0.00	1.54	0.00	3.13
peat III	2	32.72	18.06	**29.74**	**16.28**	**10.64**	0.21	**7.99**	**17.09**
loess I	8	**17.39**	**60.37**	19.04	17.02	0.39	0.16	0.00	3.01
saline II	14	73.40	**44.02**	16.13	**28.95**	2.92	1.22	1.03	5.73
saline and sooty peat	1	*175.50*	**34.91**	**29.17**	**21.47**	0.47	0.84	2.31	10.83
saline and clay, V	2	*141.83*	**37.98**	12.40	**31.62**	3.86	3.17	0.42	10.55
saline and loess	14	52.28	**59.89**	9.44	23.21	0.94	0.64	0.78	5.10
Total	*42*	*61.32*	*51.20*	*14.96*	*24.02*	*2.06*	*0.87*	*1.06*	*5.83*

Source: Our calculations based on the 1858 soil map and the income data published in 1865 (area and income of Hungary by cultivation). The dominant land use pattern(s) have been highlighted by bold letters.

Table 8. The land use and quality of the land (in 1858) that functioned as *praedium* (non-urbarial, non-peasant plots) in 1790

Praedium	Soil quality 1858	Soil genetic type, 1858	Arable, %	Meadow, %	Pasture, %	Forests, %
Kígyósapáti pr.[41]	2	saline	0.00	4.76	**95.24**	0.00
Nagykondoros pr.	1	loess	0.00	0.00	**100.00**	0.00
Nagy Csákó	1	loess	0.00	0.00	**100.00**	0.00
Kis Csákó	1	loess	0.00	0.00	**100.00**	0.00
Csorvás dominale[42]	1	loess	0.00	0.00	**100.00**	0.00
Csorvás comm.	1	loess	0.00	0.00	**100.00**	0.00
Eperjes pr.	1	loess	0.00	0.00	**100.00**	0.00
Szénás pr.	2	saline	0.00	0.00	**100.00**	0.00
Kis Kamut pr.	1	loess	**100.00**	0.00	0.00	0.00
Szt. Miklós pr.			**100.00**	0.00	0.00	0.00
Csejti Pr.	2	saline	0.00	0.00	**100.00**	0.00
Bélmegyer pr.	2	saline	0.00	**55.03**	40.46	4.51
Gerla pr.	3	peat	0.00	**44.48**	44.48	11.04
Ölyved pr.	3	peat	0.00	**73.61**	24.51	1.88
Királyhegyes pr.		loess	0.00	12.27	**87.73**	0.00
Apáca pr.	1	loess	0.00	0.00	**100.00**	0.00
Tamás pr.	2	saline	0.00	**40.20**	24.87	34.93
Kis Péll pr.	5	clayey	0.00	24.97	**75.03**	0.00

The relationship between soil conditions and net cadastral land income can also be examined in 1910, since the genetic soil type can be considered a conservative property (at least for a span of 50 years), and the municipal net cadastral income is also available from 1883 and 1910 and even sorted even by type of land use. So, net income is available for different products (Table 9), which was not true of the survey done in 1865. The difference between loess-soils and clayey or salty solonetz soil is still remarkable, and estate size on loess remained extremely high in 1910.

41 Pr. refers to *praedium*, in this case that is economically exploited area without settlement (community) on it (Hungarian *puszta*).

42 Part of the settlement was owned by the landlord, the other part belonged to the community.

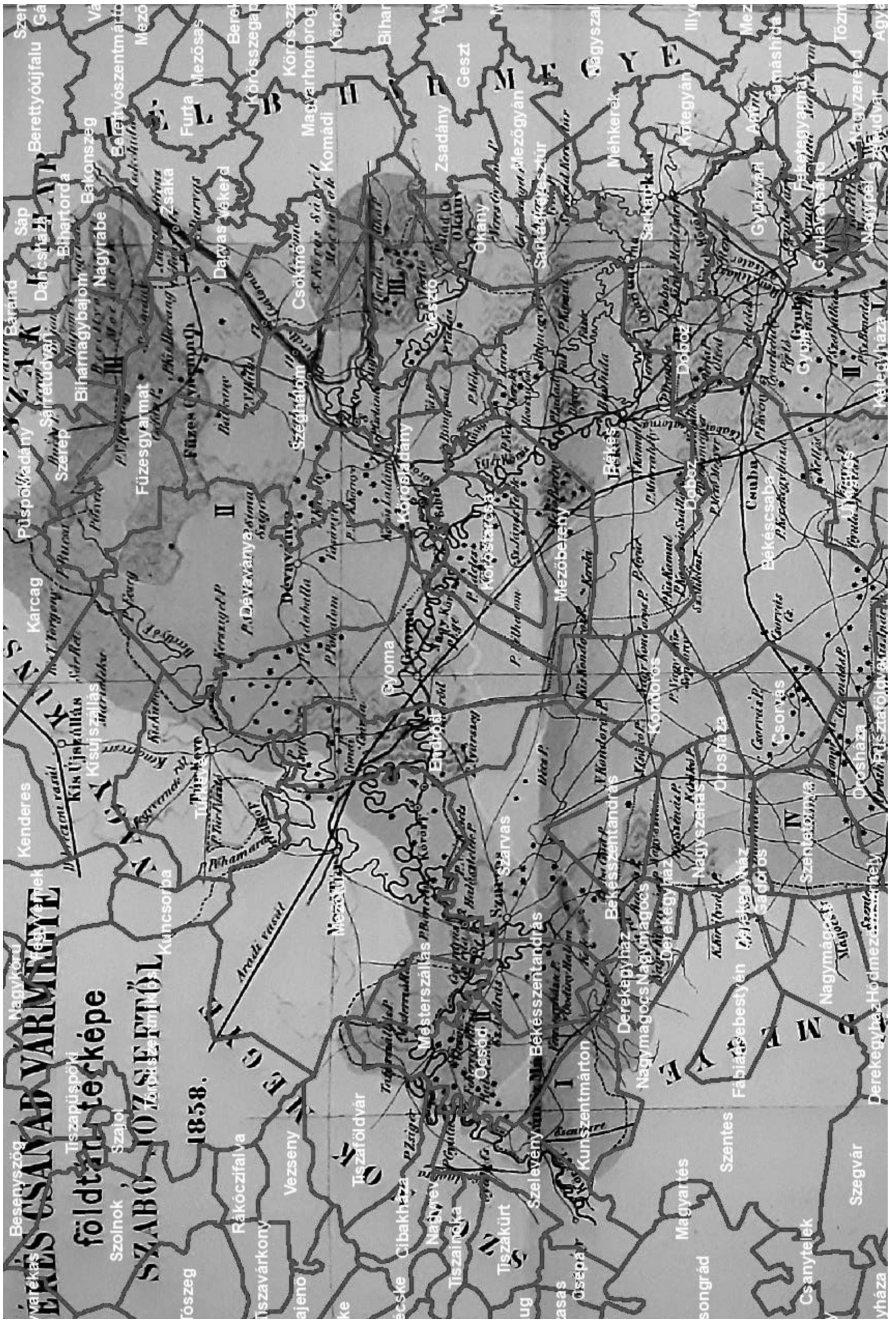


Figure 5. Overlay of the 1858 Békés-Csanád soil map with post-1886 settlement boundaries

Table 9. Differences in the net cadastral income per acre and per holding of settlements on different soil types, and the relationship between average holding size and soil type in 1910

Soil quality (settlements)	Total net cadastral income, 1865 K*/acre	Total net cadastral income, 1910 K/acre	Net cadastral income of woods K/acre	Net cadastral income of grape K/acre	Net cadastral income of ploughlands K/acre	Net cadastral income of pastures K/acre	Net cadastral income of meadows K/kat. hold	Average net cadastral income per one estate	Average estate size (acre)
clayey V (3)		**12.41**	3.80	16.87	**14.26**	2.85	6.16	243.49	18
sand IV (3)	**11 (1)**	**20.56**	8.47	23.17	**20.61**	9.21	**12.04**	128.93	6
peat III (4)	**5 (2)**	**11.83**	7.27	15.17	**13.30**	5.03	**11.13**	203.13	17
peat and saline (4)	**4.5 (1)**	10.06	8.44	13.34	11.44	3.10	7.21	*133.14*	*13,5*
loess (34)	**12 (8)**	**16.85**	5.44	21.34	**17.33**	**7.25**	**8.29**	**5,828.85**	**295**
loess and saline (2)	**10 (14)**	**19.19**	9.63	22.82	**22.17**	**7.95**	**9.40**	329.68	19
saline II (21)	**7 (14)**	**11.95**	6.16	18.85	**13.50**	4.35	6.20	315.00	24
saline and loess I and II (14)	**10 (14)**	**23.26**	6.26	17.51	**18.15**	4.96	7.56	*161.16*	*9,5*
Total: 85	*9 (42)*	*16.09*	*6.25*	*19.23*	*16.10*	*5.74*	*7.68*	*2,405.99*	*125*

* Calculated from forints. One forint = two kronen. Numbers in brackets indicate the number of settlements involved in the investigation in 1865. The sets of settlements in 1865 and 1910 are not identical, so any conclusions concerning changes in incomes should be handled with care.

Source: Our calculations based on the 1858 soil map and Arad / Békés / Csanád vármegye adóközségeinek területe és kataszteri tisztajövedelme.

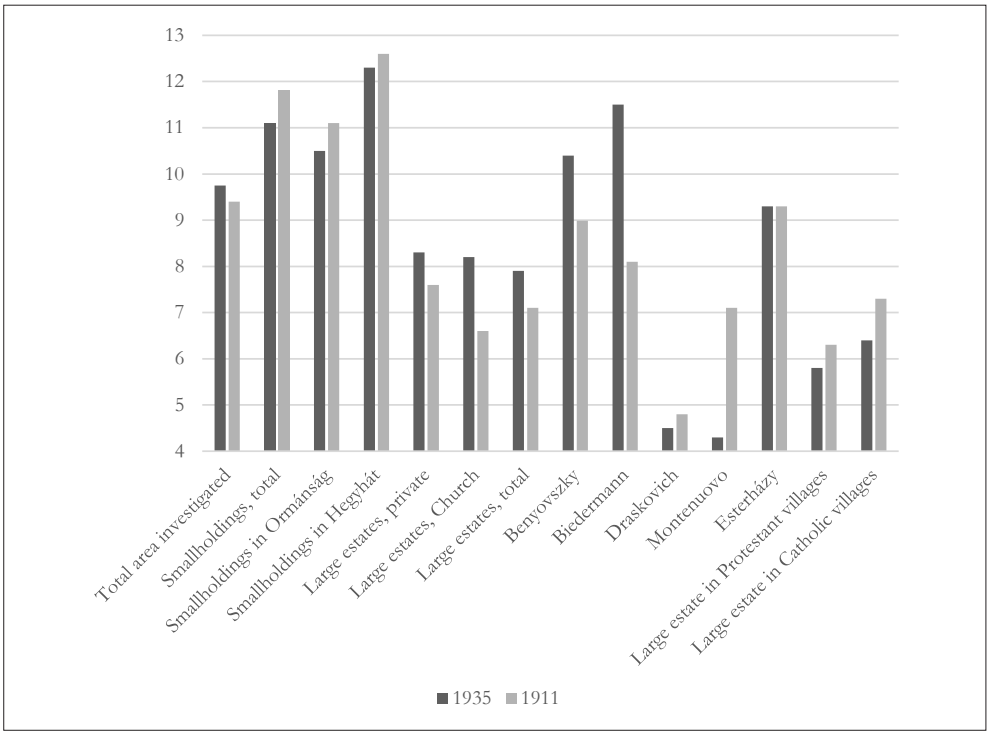


Figure 6. Differences in the net cadastral incomes of small and large estates of different types in 1935, expressed in golden crowns. (Demeter and Koloh, "Birtokstruktúra és jövedelmezőség.")

By 1935, the positive trends in the net cadastral income of smallholdings in the Pécs region (southern Hungary) mentioned earlier (Figure 4) had also changed. The net cadastral income per acre of small estates fell from almost twelve crowns in 1911 to less than eleven crowns, while that of large estates rose to over eight crowns, and on the Biedermann and Benyovszky estates, the net income per cultivated acre of land jumped from eight or nine golden crowns[43] before World War I (Figure 6) to ten or eleven. This confirms that we have a spatially and temporally fluctuating phenomenon, which also depended on market volume, soil quality, and land use, in addition to technology and crop culture.

43 Whereas golden crown and kronen before 1910 meant almost the same, the new Hungarian currency after World War I, the pengő, had a different exchange rate. Therefore we use values expressed in golden crowns (real price instead of nominal price represented by pengő) in order to make them comparable with the prewar kronen (crowns) and to eliminate the effect of inflation.

Socio-Economic Characteristics of Estate Types (1890s–1930s)

The question of profitability is therefore not settled by the series of studies summarized above. Income alone, however, does not necessarily offer a precise means with which to classify a settlement (or the type of enterprise that predominates) as developed or underdeveloped, since the concept of welfare includes a variety of other dimensions (health, environment, cultural indicators, etc.). And as a large part of the income generated in settlements that were dominated by large estates did not fall into the hands of the agrarian producers, this indicator is therefore inappropriate for comparisons of welfare. If we want to check or reproduce Miklós Móricz's local-scale research for the whole country and investigate further the contradictory picture of large estates as either "oppressive" or "modern and profitable," other social, economic and demographic factors must be taken into account in addition to cadastral income (which is more an indicator of farming quality than of livelihood).

The GISta Hungarorum database[44] allows the reconstruction of the socio-economic-demographic conditions of the settlements dominated either by large estates or small farms for 1910. Since various indicators of development are also available (the Human Development Index, HDI at settlement level from 1910 calculated by Zsolt Szilágyi),[45] it is also possible to determine whether there was a correlation between general development levels and farm type in 1910. For this purpose, we extracted a list of large farms from the compendium compiled by Gyula Hantos (1926)[46] and the Farmers' Inventory (1897). The former provides statistical data on large estate types within the post-1920 boundaries of Hungary. The latter makes the entire area of the historical country available for analysis from an earlier period, but using different criteria and classifications of large estates. The Farmers' Inventory from 1935 provides further possibilities. First, it is possible to group the settlements according to the share of the large estates as a proportion of the total area of the given settlements, and second, it is possible to examine the difference in net cadastral incomes per acre between large estates and small farms in the 1920s, but only for the post-Trianon area of the state.[47]

44 For the census data of 1910 in excel sheets, see: www.gistory.hu.

45 Szilágyi, *Az ismeretlen Alföld*.

46 Hantos, *Magyarország nagybirtok-térképe*.

47 In a separate study, the socio-economic-demographic indicators of villages in 1910 that were dominated by former tenants versus landless cottars are analyzed to examine the extent to which they differed from one another 60 years after the abolition of serfdom.

Based on Hantos' dataset from the 1920s (the postwar territory of Hungary) and the socio-economic indicators from the census of 1910, it was possible to distinguish aristocratic, non-aristocratic noble, ecclesiastic, etc. large estate types (above 100 acres), and one can also draw a distinction between large estates consisting mostly of arable land and large estates large estates consisting mostly of non-arable land. Using the socio-economic indicators from 1910, the several conclusions can be drawn, each of which I discuss below.

Natural reproduction rate (measured according to the proportion of the population under six years of age) was 1–2 percent higher on almost all types of large holdings than in the settlements dominated by smallholdings.[48] The situation was reversed for the population aged 60 and over, with a higher proportion on smallholdings (eight percent versus nine percent). The proportion of elderly people was lower on large farms dominated by arable land, indicating a larger workforce (i.e. people belonging to the work force were usually younger). In 1910, literacy rates on large estates of the noble, feudal, aristocratic, and non-feudal types were one to two percent lower than on small estates. This constitutes a significant change from circumstances in 1880, when literacy rates in the settlements dominated by smallholdings were markedly lower compared to the values in large-estate dominated settlements. Indeed, over the course of those three decades, literacy rates in settlements dominated by smallholdings increased by five percent points. Almost all large estates had 50 percent higher per capita net cadastral income than settlements dominated by smallholders (which is not surprising). The reason for this difference in per capita income clearly lies in the differences in cadastral income per acre, which was significantly higher on the large estates (10.6 vs. 8.6 kronen) than in settlements dominated by smallholdings. Since the amount of land per agricultural earner (including day laborers) was also higher on large estates, the difference in income per earner could be more than 50 percent on most large estates compared to small estates (except for Church and state-owned large estates, where the difference was smaller). The net cadastral income per acre was higher even on the large holdings that were dominated by pasture than it was on the smallholdings.

Death rates were also higher on large estates, as were birth rates. Migration gains were clearly more significant on large estates, with values up to two to

48 Differences were checked with a two sample t-tests. Hereafter, unless otherwise indicated, differences are defined as significant at p=0.05 significance level, which means that there is only a five percent probability of that the measured difference is insignificant (contrary to our assumption).

three times higher (Church and state-owned estates were the least preferred),[49] and in 1910, migration still provided a means with which to address rural overpopulation. On large estates, the death rate from measles, dysentery, and whooping cough was lower.

In terms of distance from the railways, large estates were usually closer than small estates, and the proportion of smallholders compelled to work as day laborers was also higher on large estates (not surprisingly). The quality of housing, on the other hand, was uniformly worse on large estates. In this light, it is particularly noteworthy that mortality from diseases influenced by housing conditions (such as tuberculosis and the commonly prevalent diseases mentioned above) was still lower on these estates. This was probably due to better access to health services in settlements dominated by large estates. The proportion of deceased who had received some medical treatment was also higher on large landholdings.

Finally, the HDI value calculated by Zsolt Szilágyi[50] for 1910 was also clearly better in the settlements dominated by large estates and was higher than the national average (Table 10). However, from the perspective of today's development levels and patterns, there is no connection between the present status of a piece of agricultural land as part of a periphery or core and the locations of former large estates. This means that much has changed over the course of the past century. (High development values were recorded in 2016 on former large estates, where the abundance of arable land was moderate around 1920, i.e. 50-75 percent of the cultivated land).

Based on the 1897 Farmers' Inventory (which included landowners with estates over 100 cadastral hold), we can draw conclusions for the whole country, not just for the post-Trianon area. Of the 12,600 settlements, 5,576 had no large landholdings and their complex development index was much lower than that of the settlements with large landholdings in 1910 (except the group of large estates less than 15 percent of which was arable land, i.e. they were dominated by forests or pasture). There was hardly any difference in the proportion of the population under six years of age in each group, and the same is true for the population over 60 years of age, in contrast to the results of our investigation using Hantos'

49 This did not necessarily meant that work opportunities and living conditions on the large estates were better. Rather, it was simply not possible to create new plots for smallholders at the time except by breaking existing estates into smaller fragments. This made migration a viable macro-social strategy. The populations of large estates were recruited from poor areas (such as Göcsej, Matyóföld, and Szabolcs).

50 Szilágyi, "Regional differences."

Table 10. Characteristics of the socio-economic-demographic conditions in the settlements dominated by large estates in the statistics compiled by Hantos in 1926 on large estates (group averages)

Group	Estate	Population under 6 years 1910, %	Population above 60 years 1910, %	over 60 years old / under 6 years old	Average birth rate, 1901–10	Average death rate, 1901–10	Average natural reproduction rate, 1901–10	Population increase rate, 1901–10	Average migration rate, 1901–10	Whooping cough, scarlet fever, measles as a % of total deaths, 1901–10	Tuberculosis as a % of total deaths, 1901–10
large estates of non-nobles	33	17.27	8.32	0.50	37.86	24.04	13.82	74.77	60.96	3.86	16.17
aristocrats	182	16.39	8.10	0.52	37.52	24.08	13.44	73.20	58.99	4.09	14.79
clerical	51	16.28	8.83	0.57	38.33	25.43	12.90	63.61	50.71	4.36	14.53
state (urban)	40	15.73	8.17	0.54	35.57	24.96	10.61	91.30	80.70	3.58	15.18
corporate	3	19.37	4.98	0.26	41.34	21.12	20.22	68.17	47.95	6.00	11.91
foundation	9	15.86	9.03	0.62	35.30	23.68	11.62	98.81	87.19	3.01	16.50
noble	13	16.22	8.00	0.59	38.76	25.16	13.60	111.91	96.11	2.61	15.07
hereditary	20	17.63	7.59	0.45	39.76	25.16	14.60	68.45	53.85	4.66	15.36
all large estates	351	16.46	8.20	0.53	37.60	24.44	13.16	75.80	62.16	4.02	14.99
all municipalities of the country after Trianon	3,392	15.74	9.03	0.62	35.78	23.63	12.15	44.64	31.82	4.74	16.25
settlements without large estates	3,042	15.65	9.13	0.63	35.56	23.53	12.03	41.03	28.31	4.82	16.39

Group	Settlement wealth per capita, 1908, K*	Direct tax per capita, 1909, K	Settlement income per capita, 1909, K	Earners from population, %, 1910	Industrial earners from all earners, 1910, %	Tertiary earner in %, 1910	Literate in 1910, %	Literate in, 1880, %	Increase in literacy rate (1880-1910) %	Average size of population 1910
large estates of non-nobles	34.09	23.79	8.58	39.09	9.79	16.33	63.43	45.60	17.83	5,665.21
aristocratic	29.72	20.20	7.35	39.27	11.25	15.36	64.84	44.84	20.01	5,100.73
clerical	37.09	19.60	6.97	38.70	9.32	13.33	65.93	45.50	20.43	5,408.08
state (urban)	46.29	10.76	4.19	41.37	17.58	27.70	66.96	49.17	17.79	41,761.78
corporate	9.86	34.79	5.43	37.56	6.08	9.50	59.44	36.68	22.76	2,944.33
foundation	41.73	23.45	6.23	40.09	9.12	14.18	67.15	51.70	15.45	9,236.22
noble	46.74	19.95	8.36	38.00	10.07	12.38	64.09	43.41	20.68	4,462.31
hereditary	19.96	24.50	6.25	38.07	9.27	15.62	61.83	44.43	17.40	4,368.45
all large estates	33.30	19.82	6.98	39.30	11.30	16.39	64.92	45.53	19.39	9,398.59
all municipalities of the country after Trianon	25.31	16.06	6.44	40.82	10.18	13.61	65.67	42.47	23.21	2,362.15
settlements without large estates	24.38	15.63	6.37	40.98	10.05	13.28	65.74	42.10	23.64	1,549.47

* Kronen

Group	Smallholders compelled to day laborers %, 1910	Cadastral income / agr. earner (K, 1910)	Cadastral income/ capita (K, 1910)	Cadastral income per acre (K, 1910)	Cadastral income per estate (K, 1910)	Average estate size (acre, 1910)	Average estate size per one agr. earner (acre, 1910)	Direct tax / cadastral income in 1910
large estates of non-nobles	64.32	146.00	32.76	12.78	467.44	31.81	11.64	0.73
aristocrats	62.01	125.54	28.70	10.47	1945.19	275.39	12.35	0.70
clerical	62.17	95.39	25.05	9.61	124.52	12.74	9.66	0.78
state (urban)	59.47	96.31	18.88	10.14	4776.94	247.35	10.37	0.57
corporate	43.98	258.43	32.44	11.11	5986.46	430.17	20.42	1.07

Group	Smallholders compelled to day laborers %, 1910	Cadastral income / agr. earner (K, 1910)	Cadastral income/ capita (K, 1910)	Cadastral income per acre (K, 1910)	Cadastral income per estate (K, 1910)	Average estate size (acre, 1910)	Average estate size per one agr. earner (acre, 1910)	Direct tax / cadastral income in 1910
foundation	58.01	127.40	33.31	12.00	263.55	21.74	10.75	0.70
noble	63.16	106.85	30.42	9.92	158.80	16.85	11.02	0.66
hereditary	60.43	159.60	31.05	10.93	1222.40	91.68	14.60	0.79
all large estates	61.66	122.18	27.78	10.57	1757.26	186.64	11.77	0.71
all municipalities of the country after Trianon	62.98	77.69	21.75	8.82	239.51	28.61	9.85	0.74
settlements without large estates	63.12	72.53	21.04	8.62	64.30	10.37	9.62	0.74

Group	Deaths, receiving medical treatment (1=100%)	Share of persons involved in home industry to total population, 1910	Infant mortality measured to deaths, avg. of 1901–1910 (1=100%)	Houses of bad quality material in 1910 (1=100%)	HDI in 1910 (Szilágyi 2019)	Territorial development index in 2010- (Pénzes 2014)	Distance from nearest railway station (m, 1890)
large estates of non-nobles	0.86	0.002	0.33	0.64	0.42	0.524	14,226
aristocrats	0.76	0.002	0.34	0.54	0.41	0.548	9947
clerical	0.74	0.001	0.32	0.68	0.41	0.576	14,138
state (urban)	0.87	0.002	0.31	0.54	0.43	0.616	7891
corporate	0.76	0.003	0.39	0.51	0.44	0.479	18,282
foundation	0.88	0.002	0.31	0.70	0.42	0.531	9542
noble	0.73	0.001	0.36	0.81	0.40	0.544	8090
hereditary	0.81	0.002	0.35	0.57	0.43	0.518	12,291
all large estates	0.78	0.002	0.33	0.59	0.41	0.588	10,850
all municipalities of the country after Trianon	0.48	0.002	0.32	0.46	0.38	**0.568**	11,768
settlements without large estates	0.44	0.002	0.32	0.45	0.38		11,870

dataset for the "reduced" interwar area in 1926. However, literacy rates were significantly higher in settlements with large estates dominated by ploughland (the opposite was true for the post-1920 country study). The improvement in literacy rates between 1880 and 1910 showed no significant difference between estate types (this also differs from the result of the statistical evaluation of Hantos' estate list for the post-1920 country), showing an overall improvement of 20 percent (compared to the 5 percent increase in literacy rates in settlements found in the territory of post-Trianon Hungary). The proportion of deceased persons who had received some form of medical treatment was higher on large estates than on small farms. The rate of illegitimate births was high in settlements dominated by forest holdings and was below the national average in settlements with large estates dominated by arable land. However, these two mentioned types of large holdings were the most unfavorable in terms of settlement level infant mortality in 1910.

Settlement wealth per capita was also high for large estates over 75 percent of which was arable land, as was the value of direct taxes. This was similar for "smaller" large estates under 500 acres. Municipal incomes per capita were similar in all categories, except for large estates over 75 percent of which was arable land, where we find an outlier value. Large estates over 75 percent of which was ploughland and those with over 1,000 acres had higher birth rates, while there was no difference in the death rates between estate types. However, migration rates were high towards settlements with large estates dominated by forest and grassland and estates that were over 1000 acres, while in settlements with large estates dominated by arable land the rate of population growth from migration was below the national average. The death rates from scarlet fever, measles, and whooping cough were particularly high in settlements with large holdings dominated by pasture and forests and on large holdings under 500 acres, exceeding the average measured for villages dominated by smallholdings. (Again, this contradicts the results of the earlier study on a narrower area, suggesting that the difference is not really due to the size of the estate but to other, natural geographic and cultural causes, as was true in the case of the contrast regarding literacy described above.) In the case of tuberculosis, however, there was no such remarkable difference. The share of industrial earners was significant on extremely large estates and large estates dominated by pasture, forest, and ploughland, two percentage points above the share measured in settlements dominated by small estates. Large estates dominated by ploughland and estates over 1,000 acres were four and a half kilometers closer to railway

Table 11. The socio-economic and demographic development conditions in 1910 in the settlements dominated by the large estates on the basis of the 1897 Farmers' Inventory compared with the situation in settlements dominated by small farms

Large estate	Case number (settlements)	Composite development indicator of Demeter, 1910	Population below 6 years, 1910 %	Population above 60 years, 1910, %	Literacy rate, 1910, %	Increase in literacy in %, 1880–1910	Settlement wealth per capita in K, 1909	Direct tax per capita in K, 1909
under 500 kh*	**2,215**	0.407	16.017	9.010	50.505	21.908	35.400	12.143
500–1000 kh	**1,308**	0.719	16.293	8.703	53.434	22.551	30.277	14.214
above 1000 kh	**3,559**	0.995	16.190	8.347	56.065	21.998	28.373	15.274
average of all large estates	**7,082**	0.760	16.155	8.620	53.840	22.072	30.922	14.099
average of all settlements	**12,658**	0.513	16.022	8.814	51.554	21.774	30.760	12.836
all settlements without large estates	**5,576**	**0.20**	**15.85**	**9.06**	**48.65**	**21.40**	**30.55**	**11.23**

* Cadastral acre = 5570 m^2.

Large estate	Birth rate, avg. of, 1901–1910	Death rate, avg. of 1901–1910	Natural increase avg. of 1901–1910	Total increase, avg. of, 1901–1910	Migration rate, avg. of 1901–1910	Measles, scarlet fever, whooping cough as a % of total deaths, 1901–1910	Tuberculosis as a % of total deaths, 1901–1910
under 500 kh	36.167	24.512	11.655	35.733	23.711	7.045	13.800
500–1000 kh	36.811	24.262	12.549	35.840	23.521	6.742	14.186
above 1000 kh	37.121	24.635	12.487	52.561	39.432	5.757	14.758
average of all large estates	36.765	24.527	12.238	44.209	31.576	6.342	14.353
average of all settlements	36.193	24.496	11.697	39.473	27.664	6.552	14.243
all settlements without large estates	**35.47**	**24.46**	**11.01**	**33.46**	**22.70**	**6.82**	**14.10**

Large estate	Agrarian earners from all earners, %, 1910	Industrial earners, %, 1910	Acre per 1 agrarian inhabitant, 1910	Smallholders compelled to do daily labor for wages, 1910, %	Net cadastral income/capita, 1910, K	Direct tax/net cadastral income, 1910	Net cadastral income on 1 cultivated acre, 1910, K
under 500 kh	80.28	8.54	4.675	63.83	14.87	1.043	5.927
500–1000 kh	78.17	9.13	4.720	62.49	18.40	0.992	7.210
above 1000 kh	73.16	11.35	5.059	63.13	20.16	0.967	7.774
average of all large estates	76.31	10.06	4.876	63.23	18.18	0.995	7.092
average of all settlements	78.06	9.32	5.051	65.69	15.73	1.096	6.230
all settlements without large estates	**80.29**	**8.39**	**5.27**	**68.81**	**12.62**	**1.23**	**5.14**

Large estate	Literacy rate in %, 1880	Distance from railway station (m) 1890	Decrease in distance from railway station, 1890-1910	Population dealing with home industry from total population (1=100%)	Deceased receiving medical treatment, 1910 (1=100%)	Illegitimate births, avg. of 1901-1910 (%)	Infant mortality from deaths, avg. of 1901-1910 (1=100%)	Average estate size in acre, 1910
under 500 kh	28.596	16358.1	7559.2	0.003	0.314	8.649	0.294	11.128
500–1000 kh	30.883	14662.1	6384.2	0.003	0.359	8.743	0.303	12.031
above 1000 kh	34.068	13494.4	6280.5	0.003	0.487	9.475	0.312	34.375
average of all large estates	31.768	14605.7	6699.6	0.003	0.409	9.081	0.305	23.013
average of all settlements	29.782	15689.2	7141.4	0.003	0.345	9.000	0.298	22.343
all settlements without large estate	**27.26**	**17065.4**	**7702.6**	**0.00**	**0.26**	**8.90**	**0.29**	**21.49**

stations than small estates (again excluding large estates dominated by forest and grassland).

The share of smallholders compelled to work as day laborers approached the high value typical for smallholding villages only in the type of large holdings that were predominantly pasture. This may have been due to the fact that on the large holdings that were predominantly ploughland and on extensive large holdings *landless* day laborers were often the majority of the work force. Net cadastral income per capita was more significant on large holdings than on smallholdings (except for the large estates dominated by pasture or forests), supporting the notion that large holdings were more productive (though this still does not include data on livestock). For large holdings of over 1,000 acres 75 percent of which were ploughland, net cadastral income per acre was also notably high.

The significance of the 1935 Farmers' Inventory for the present investigation (as well as the inventory from 1910, which we did not use here) is that it allows us to determine the productivity of small farms. By aggregating the total area and total income of large farms by settlement given in the inventory and subtracting these values from the total income and total area of settlements published by the Central Statistical Bureau in 1935 we can calculate the unpublished cadastral income data for smallholdings. In addition, it is also possible to create groups based on the proportion of large holdings (as a percent of area) per settlement and calculate the socioeconomic indicators for these subsets, within the post-1920 state boundaries.

The share of large landholdings as a percentage of total cultivated land in 1935 was analyzed in the following subgroups: above 60 percent, 40 percent-60 percent and 20 percent-40 percent. 1,970 settlements had large estates of over 500 acres (a share usually higher than 60 percent of the total cultivated land of the settlements), 500 settlements had large estate(s) between 100 and 500 acres, and 275 settlements had only large estate fragments under 100 acres (here the share of large estates was usually less than 20 percent of the total cultivated land). Some 600 settlements had no large holdings at all on their administrative area. To sum it up, in 1935, 56 percent of the settlements had a landholding of over 500 acres on their territory (Table 12).

Despite the fact that the 1910 value of the historical HDI calculated by Szilágyi did not show significant differences between the estate types, this does not exclude the possibility that some of its components (HDI is composed of literacy rate, life expectancy, GDP/capita) did so—offsetting each others' effects.

Table 12. The value of socio-economic-demographic indicators (1910's census) in the sub-groups of the large landholding population, based on the categorizations used in the Farmers' Inventory *(Gazdacímtár)* in 1935

Estate type by size in acre (settlement number in brackets)	**Settlement size (population), 1910**	**Average death rate, 1901–1910 (1=100%)**	**Population under 6, 1910 (1=100%)**	**State tax per capita (1910, K)**	**Crude death rate, avg. of 1901-1910**	**Literacy rate in 1910 among population above 6 years, %**	**HDI 1910 (Szilágyi, Zsolt, 2019)**	**Composite development in 1910 (composed of the single variables used here)**
under 500 acres (502)	900.664	0.024	0.160	7.177	23.283	78.275	0.382	1.214
above 500 acres (1969)	3267.898	0.024	0.147	13.012	24.045	77.125	0.387	1.379
fragment (275)	1103.306	0.022	0.161	7.092	23.464	78.143	0.380	1.104
All settlements' value	*2611.682*	*0.024*	*0.149*	*12.388*	*23.845*	*77.440*	*0.385*	1.321

Estate type by size in acre (settlement number in brackets)	**Average cadastral income of large estates, 1935, aK***	**Average cadastral income of large estates per acre, 1935, aK**	**Proportion of estates under 1 acre, 1935 (1=100%)**	**Proportion of estates over 100 acre, 1935 (1=100%)**	**Average size of all estates inc. large landholdings (kh)**	**Total cadastral income of ALL estates in 1935, aK**	**Total cadastral income of smallholdings in 1935, aK**	**Cadastral income of smallholdings per acre in 1935, aK**
under 500 acres (502)	2058.86	7.169	0.232	0.422	1409.34	11305	9100	7.299
above 500 acres (1969)	18,926.28	6.643	0.262	0.600	5519.81	47914	27,483	6.184
fragment (275)	262.19	7.534	0.277	0.197	1237.12	11149	10,829	4.935
All settlements' value	14,047.96	6.830	0.258	0.526	4317.04	37281	22,403	6.264

* Golden crowns instead of pengő to make data comparable with that in 1910.

However, there were no differences in mortality rates, neither within the large estate types nor compared to the national average (mortality rates were used as proxies to life expectancy missing from 1910). The proportion of the population under six years of age was one percent higher on settlements with large estates compared to settlements with no estates over 100 acres kh, and 1 percent higher than the national average. The direct taxes per capita, which functioned as the basis of the local municipal surtax (and was used as a proxy to substitute missing settlement-level GDP data by Szilágyi, were high on large estates of over 500 kh (direct taxes still applied to incomes from tertiary and secondary sectors, in addition to agrarian land taxes).

However, compared to the previous examinations, there is a significant difference in net cadastral income per acre. The net cadastral incomes per acre on large estates were lowest for large holdings over 500 acres in 1935. At the same time, the net cadastral incomes of small farms were also low, somewhat lower than that of large holdings, but this situation was reversed for holdings between 100 and 500 acres. Here, the net cadastral income per acre on a large estate was higher than on large estates over 500 acres, but the net incomes of smallholdings were even greater. In contrast, the cadastral incomes per acre of the fragmented large estates exceeded that of the other categories of large estates and was also higher than cadastral incomes on smallholdings, since the net cadastral incomes of the small estates were lowest here, in this category, where there were hardly any large estates anyway. In other words, the presence of large landholdings seems to have had a positive effect on the net cadastral income per acre of small landholdings too.

If the values of single variables are aggregated in one composite development index, the most undeveloped settlements were those where only fragments of large estates were found (less than 100 acres in 1935), while settlements with large holdings over 500 acres showed development levels above the national average (1.37). This sheds new light on Móricz's investigations concerning the welfare of the people who lived and worked on large estates in the interwar period.

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The Share of Tithe Paid by Parish Priests in Sixteenth-Century Transylvania: A Topographical Approach

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The most important source of income for the medieval Latin Church, the tithes paid by lay people from their crops and livestock, was divided between several levels of the ecclesiastical hierarchy. The set of beneficiaries varied from one country or diocese to another, while the proportions essentially from one locality to another. In the Transylvanian diocese, the bishop (or the chapter) got the substantial part of the tithe (half to three quarters), while the archdeacon, as regional magistrate, uniformly received a quarter. Despite the canon law standards, in many cases only a fraction of the *quarta* remained to supply the parish priest. On the other hand, the parish priests from the deaneries of royal Saxons (i. e. German settlers) could usually keep the full tithe.

The aim of my research is to reconstruct the share of tithe of the Transylvanian parish clergy by locality, to map it and to analyze the spatial inequalities thus revealed. Due to the unilateral source endowments, we have only a few direct data on this, so I calculated indirectly the size and proportion of the priestly share, based on the data of a list from 1589, which only gives the local rents of the bishops and the archdeacons' share of tithe. According to my results, the inhabitants of 1239 localities paid tithes in mid-sixteenth century Transylvania. For 457 settlements (mostly in the Székely Land) we do not know the share of the priest. In the known cases, the three most common distributions were when the local priest received no tithe (35%), a quarter of the tithe (36%) or the whole tithe (25%). The spatial distribution of the parishes with *quarta* was not uniform, but rather concentrated in some small areas due to various historical reasons. The level of priestly share correlated with secular and ecclesiastical privileges, the ethnicity of the population that paid the tithe, and the person of the landlord.

These results can provide important aspects for the interpretation of sources based on priestly income, such as the papal tithe register of 1332–1336, fundamental to the history of medieval Transylvania.

Keywords: Transylvania, tithe, parish priest, distribution, *quarta*, Saxons

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Introduction

As any historian of feudal institutions knows, the practice of tithing is rooted in the regulations of the Old Testament.[1] Early Christianity was still averse to it, but in the fourth and fifth centuries the idea of tithing began to become increasingly accepted. In Latin-rite territories, from the Carolingian period onwards, the tithe became a compulsory ecclesiastical annuity paid by all members of the fold. This was, of course, achieved with the support of the reigning secular power.[2] Theoretically, the tithe should have been paid on all kinds of income, but due to the socio-economic conditions of the Middle Ages and the early modern period, it was collected primarily from the annual wine and grain harvests and secondarily from the reproduction of certain domestic animals (for instance sheep and bees).[3] For this reason, the tithe records (documents, accounts, receipts, etc.) are an important source for the study of the rural history of Western and Central Europe.[4]

According to the Church Fathers (and to the canon law that quotes them), one of the functions of (and thus justifications of) tithing is to acknowledge God's rule *(signum dominii)* and one is to provide support for the poor and others in need *(tributum egentium animarum)*. The argument for a fitting tribute to the clergy (as a spiritual elite) emerges rather rarely and relatively late.[5] Whatever the reason for this, the Church had always been considered the administrator and thus the actual holder of the tithe. Its exclusive right to this income was confirmed by several papal decrees and synods of the eleventh–thirteenth centuries against secular bodies of power.[6] Not without reason: the tithe was by

1 Körting, "Zehnt"; Jagersma, "Tithes in OT"; Eissfeldt et al., "Zehnten," 1878–79. Cf. Gen. 14:20, 28:22; Lev. 27:30–33; Num. 18:21.24–28; Deut. 12:6.11.17, 14:22–29, 26:12–26; 2 Chron. 31:5–12; Neh. 10:38–40, 12:44, 13:5.12–13; Mal. 3:8–10; Tob. 1:6–8; Matt. 23:23; Luke 11:42.

2 Zimmermann, "Zehnt," 495–98; Puza, "Zehnt," 499–500; Constable, *Monastic Tithes*, 13–56; Eissfeldt et al., "Zehnten," 1879; Vischer, "Zehntforderung"; Boyd, *Tithes and Parishes*, 26–46; Lepointe, "Dîme," 1231–32; Viard, *Dîme*, 17–148.

3 Zimmermann, "Zehnt," 499–500; Puza, "Zehnt," 500–501; Constable, *Monastic Tithes*, 16–19, 34–35; Eissfeldt et al., "Zehnten," 1879; Lepointe, "Dîme," 1232–33; Viard, *Dîme*, 101–5, 150–60.

4 Dodds, *Peasants and Production*; Le Roy Ladurie and Goy, *Tithe and Agrarian History*.

5 CIC, vol. 1, 784 (C. 16, q. 1, c. 66); ibid., vol. 2, 563–65, 568 (X 3.30, c. 22, 26, 33). Cf. Constable, *Monastic Tithes*, 10–13, 36, 43–44, 47–52; Vischer, "Zehntforderung," 210–11, 214–16; Lepointe, "Dîme," 1236–39; Viard, *Dîme*, 89–91.

6 CIC, vol. 1, 417–18 (C. 1, q. 3, c. 13–14), 801 (C. 16, q. 7, c. 3.); ibid., vol. 2, 561–62 (X 3.30, c. 15, 17, 19.), 1048–50 (VI 3.13, c. 2), 1062–64 (VI 3.23, c. 13). Cf. Zimmermann, "Zehnt," 497, 498; Puza, "Zehnt," 500; Eissfeldt et al., "Zehnten," 1879; Lepointe, "Dîme," 1234–35; Viard, *Dîme*, 205–17.

far the most important source of revenues for the Church, accounting for up to three quarters of a bishop's income.[7]

The income from the tithe was divided among different actors in the ecclesiastical hierarchy. As the bishoprics were the first rank to be established in the early church and in the newly Christianized areas, the bishops themselves usually received the greater part of the tithes. Over time, tithing rights were granted to the chapters and their members, monastic convents, altar foundations, etc.[8] From the outset, however, it was clear that the local priests were also entitled to a share *(pars condigna)* of the tithe from their parishes. The most commonly used principle in this respect was laid down by Pope Gelasius I (492–496), whose provisions were applied to the matter of tithing from the eighth century onwards. According to him, church revenues were to be divided into four parts, one of which (a *quarta*) was to go to the diocesan bishop, another to the parish priest, a third to the maintenance of the church *(fabrica)*, and a fourth to charity.[9] In practice, however, the set of beneficiaries varied from one diocese to another, and the proportions differed essentially from one locality to another. For example, in the areas that converted to Christianity between the eighth and eleventh centuries, the bishops generally received a much larger slice, and the local clergy received little more than metaphorical crumbs.[10] However, the higher magistrates, such as the archbishop or the pope, usually did not receive a share of the tithes of other bishops' dioceses (only from their own dioceses). The so-called "papal tithe," which was decreed by the Second Council of Lyon (1274) and then by the Council of Vienne (1311–1312), was a different kind of tax. It obliged all ecclesiastics to pay a tithe of their income to the papal court for six years.[11]

7 Puza, "Zehnt," 501; Fügedi, "Wirtschaft des Erzbistums," 258.

8 Constable, *Monastic Tithes*, 57–197; Lepointe, "Dîme," 1234; Kuujo, "Zehentwesen in Hamburg–Bremen," 218–41; Plöchl, "Zehentwesen in Niederösterreich," 49–54, 89–92; Viard, *Dîme*, 173–75, 181–204; Loy, "Zehnt im Bistum Lübeck," 5–9, 52–54.

9 Zimmermann, "Zehnt," 497; Puza, "Zehnt," 500; Constable, *Monastic Tithes*, 27–28, 35–42, 49–56; Eissfeldt et al., "Zehnten," 1879; Boyd, *Tithes and Parishes*, 75–79; Lepointe, "Dîme," 1234; Viard, *Dîme*, 112–24, 175–80.

10 Zimmermann, "Zehnt," 497–98; Lindner, "Zehntwesen in Salzburg"; Boyd, *Tithes and Parishes*, 79–153, 233–34; Kuujo, "Zehentwesen in Hamburg–Bremen," 168–91; Plöchl, "Zehentwesen in Niederösterreich," 55–56, 84–89.

11 Hegyi, "Egyházigazgatási határok," 9–17; Dudziak, *Dziesięcina papieska*, 56–100, 180–203; Hennig, *Päpstliche Zehnten*, 7–26; Samaran and Mollat, *Fiscalité pontificale*, 12–22; Fejérpataky, "Prolegomena," xx–xxii, xxv–xlvii.

In order to interpret the sources regarding the tithing, it is essential to map the local distribution of this income among the different ecclesiastical actors, since individual tithe data usually refer only to the share of one of the beneficiaries. A demographic or economic-historical evaluation[12] of the papal tithe registers of 1332–1337,[13] crucial to any overview of the topography and incomes of the Hungarian Church, is only possible if we know the multipliers that can be applied to the amounts paid by a priest, as this information is essential if we seek to use these amounts to calculate the total production of his parish in a given year. I have recently completed this work on parishes in mid-sixteenth century Transylvania, and I present my findings below. Essentially, I seek to identify the external factors that shaped the observed regional differences.

The Structural Framework of Tithing in Transylvania

Historical Transylvania was the eastern province of the Hungarian Kingdom in the Middle Ages, but in the mid-sixteenth century, it became the core territory of an independent principality. In terms of secular administration, it was divided into three major parts. First, there were the seven counties covering the western, northern, and central areas, which were inhabited by serfs and nobles. The feudal system in these regions differed from the average Hungarian system only in minor details. The so-called King's Land (Königsboden, *Fundus Regius*), which was inhabited by privileged Saxons (i.e. German settlers), was the second area, and the Székely Land in the east was the third. The Saxons formed a comparatively urban, literate society, while the Székelys were a closed ethnic group governed by oral tradition. The Romanian population, which for the most part followed the Orthodox rite, did not have its own administrative units and lived largely in the mountainous parts of the counties and the Saxon territories.[14]

From the ecclesiastical point of view, most of Transylvania fell under the jurisdiction of the bishop of Transylvania, who had his seat in Gyulafehérvár (Alba Iulia/Weissenburg)[15] and whose authority extended north-westwards

12 Cf. F. Romhányi et al., "Regionális különbségek"; F. Romhányi, "Plébániák és adóporták," 916–27; F. Romhányi,"Középkori magyar plébániák," 348–51; Engel, "Probleme," 57–63; Fügedi, "Történeti demográfia," 25–28; Györffy, "Päpstliche Zehntlisten"; Györffy, *Einwohnerzahl*, 29–30.

13 Edited in RatColl, 41–409.

14 Cf. Chaline and Saudraix-Vajda, "Introduction"; Hegyi, "Transylvanie"; Roth, *Kleine Geschichte*.

15 The names of the Transylvanian localities are used in their Hungarian form, as these are the names that appear in the sources. However, in the first occurrence of the place name, the current, official (Romanian) form, and, where appropriate, the historical German variants of the name are given, too, in brackets.

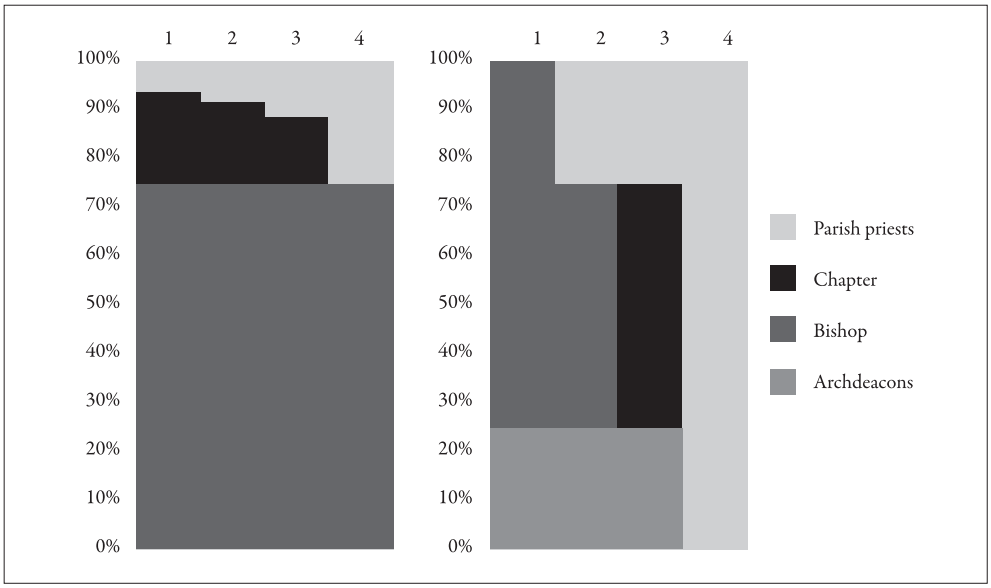

Figure 1. The old (Veszprém) and the new (Transylvania) model of distribution of the tithe.

beyond the Meszes (Meseş) Mountains, and up to the Tisza River.[16] The southern part of the King's Land (the area around Szeben [Sibiu/Hermannstadt] and Brassó [Braşov/Kronstadt]) was under the direct jurisdiction of the archbishop of Esztergom. A small region, the so-called Kalotaszeg, which is roughly the area surrounding the headwaters of the Sebes-Körös [Crişul Repede] River), belonged to the diocese of Várad (Oradea), while the region of the Lápos Basin (Ţara Lăpuşului) formed a part of the diocese of Eger.[17]

On the question of the distribution of the tithes among the holders in Hungary, the secondary literature is unanimous in stating that three quarters of the tithe went to the diocesan bishop in each settlement, while the remaining quarter *(quarta)* was shared in various proportions between the cathedral chapter and the local parish priest. The latter's share is usually estimated at a quarter of a *quarta*, i.e. one sixteenth of the tithe.[18]

16 In the discussion below, I ignore this part of the diocese due to the lack of sources and limit my investigation to Transylvania in the secular sense.

17 Hegyi, "Esperességek," 359–63; Hegyi, "Relation of Sălaj," 62–65; Kristó, *Early Transylvania*, 79–84; Kristó, *Vármegyék kialakulása*, 426–27, 478, 482–512. Cf. RelColl 49–50, 54, 70, 76, 84, 89, 91–144, 327, 330, 355–56.

18 F. Romhányi, "Plébániák és adóporták," 918 (see note 27, too); Solymosi, "Tized," 66; Rácz, "Magisztrátus-jog," 151, 159–60; Györffy, "Päpstliche Zehntlisten," 64; Csizmadia, "Rechtliche Entwicklung," 230–31; Mályusz, "Tizedkizsákmányolás," 322.

The model above (see Fig. 1), however, is based solely on a few thirteenth-century papal and royal documents concerning the distribution of the tithe, as well as on a detailed examination of the tithing system of the diocese of Veszprém.[19] Although it does seem to be valid for some other dioceses, too (e.g. Győr, and Várad), I believe that the general application of this model to the whole kingdom was done rather hastily in the earlier secondary literature. Based on my study of primary sources, a different system seems to have prevailed in Transylvania and in the dioceses of Eger and Zágráb. In these territories, the bishop (or the chapter) was entitled to the major share of the local tithe, which varied between half and three quarters, depending on the parish priest's share. The archdeacon, as regional magistrate, uniformly received one quarter in his own district.[20] In conclusion, the crucial difference between the previous model and the present one is that here the parish priest did not share a quarter of the tithe with the canons. Rather, he shared three quarters of the tithe with the bishop or with the chapter or, sometimes, with other beneficiaries (such as the abbot of the Kolozsmonostor Convent, altar directors, etc.).[21] On the other hand, the parish priests of Saxon deaneries on the so-called King's Land could usually keep the full tithe *(libera decima)*.[22]

Sources and Methods

The 447 surviving sources of which I am currently aware on the medieval history of the tithe in Transylvania (up to 1556)[23] relate mostly to the tithing affairs of the bishop and the chapter, as well as of the Saxon clergy. There is, at the same time, disappointingly little data on the tithing income of Hungarian priests in

19 Solymosi, "Kirchliche Mortuarium," 52–54; Holub, *Zala*, vol. 1, 383–404.

20 1298: Ub, vol. 1, 210; 1334: ibid., vol. 1, 465; 1357: ibid., vol. 2, 146–47; 1367: DocRomHist C, vol. 13: 332; 1380: Ub, vol. 2, 528; 1394: ibid., vol. 3, 75; 1428: ibid., vol. 4, 327; 1439: AAV, RegSuppl, 357: 26r and RegLat, 367: 142v; 1451: DL 39579; 1505: DL 65194; 1509: DF 253542; 1510: SJAN-SB, F 1, 1-U5-1226; 1517: DL 82485; 1518: DF 277755; 1526: DF 253624; 1536: EgyhtEml, vol. 3, 75; 1538: ibid., vol. 3, 313; 1541: Batthyaneum, ACT, 5-41; 1550: MNL OL, P 1912, 36-1; 1552: SJAN-CJ, F 378, 1-64; 1554: Batthyaneum, ACT, 5-98.

21 Hegyi, "Tized intézményrendszere," 189–94, 197–200.

22 Ibid., 195–97; Hegyi, "Plébánia fogalma," 16–19; Müller, *Landkapitel*, 122–83; Teutsch, *Zehntrecht*, 18–47.

23 Cf. Hegyi, "Tized intézményrendszere," 185–87.

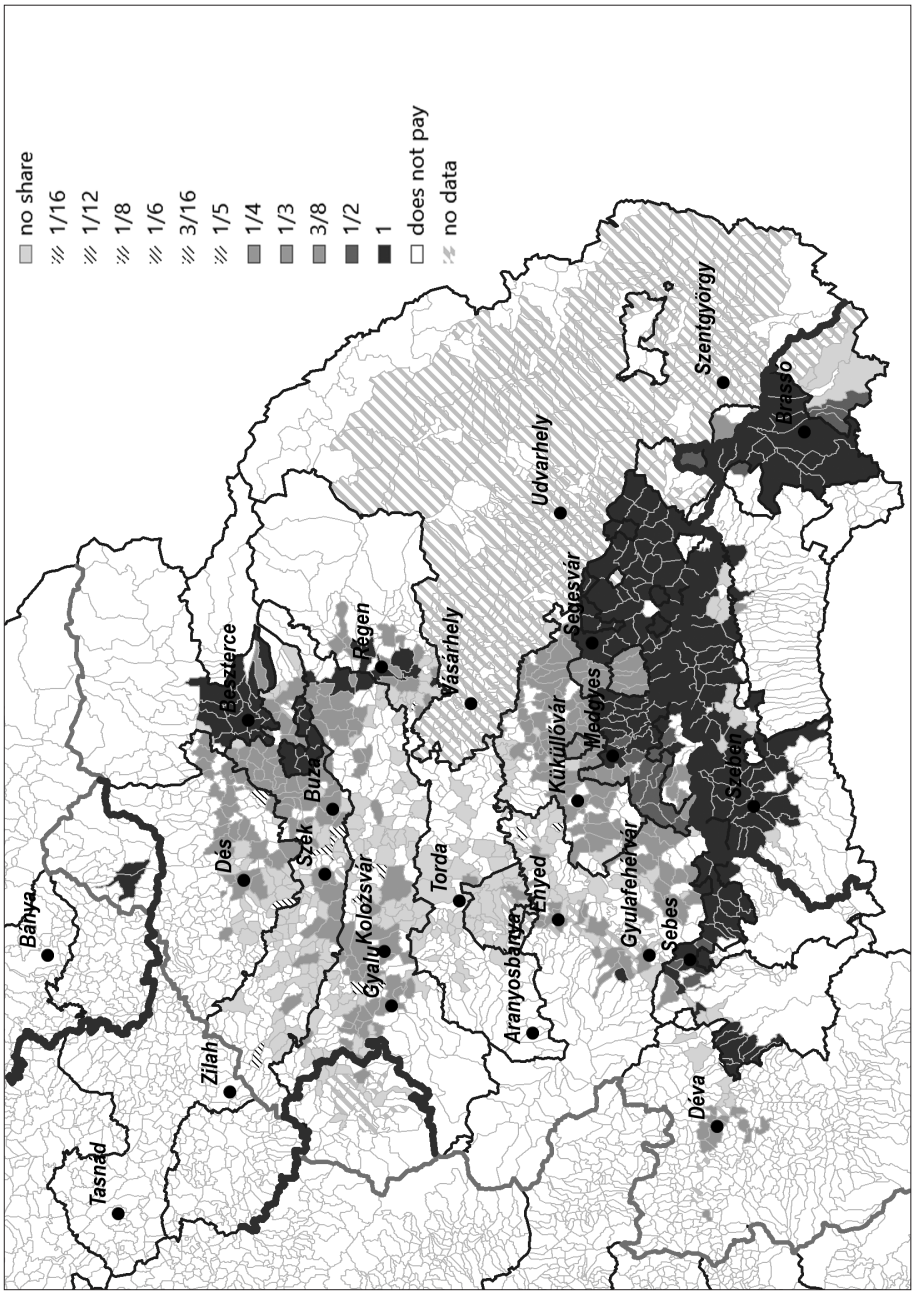

Figure 2. Transylvanian dioceses with the share of priests

the counties.[24] With these data alone, it would be impossible to reconstruct the topography of the clergy's tithe share.

However, a somewhat later but comprehensive document allows us to arrive at this reconstruction through an indirect procedure. An inventory from 1589 shows the price for which the episcopal (E) and the archdeaconal (A) tithes were rented out to local landlords in each tithe-paying settlement of the seven counties.[25] These parts of the tithes were secularized in 1556, that is, confiscated to provide the material basis for the nascent principality, and from then on, they were administered by the princely treasury.[26] We are not so much interested in the specific amounts as in their relative proportions, which remained largely unchanged for decades (if not centuries). A fragment of a similarly structured list from 1563 covering some parts of Küküllő and Fehér Counties, can be used as a reference, and its data are in most cases identical to those from 1589.[27]

As mentioned above, these two lists do not include the precise wages corresponding to the tithe of the priest (P). We have seen, however, that in most places the archdeacon's share (A) was a quarter of the total tithe (T), so we can calculate the priest's share, too, as follows:

$T = 4A$

$P = T–E–A = 4A–E–A = 3A–E$

And the share itself is: $p = P/T$

It is true that, in some cases, this method does not lead to meaningful results, for example because the share of the archdeaconry is missing[28] or its quadruple does not reach the sum of the rents.[29] But we cannot expect structural regularities

24 1322: Ub, vol. 1, 368; 1398: DF 257485; 1414: ZsOkl, vol. 4, no. 1632; 1444: KmJkv, 1: no. 522; 1521: KvOkl, vol. 1, 353; 1541: Batthyaneum, ACT, 5-41. Cf. Hegyi, "Tized intézményrendszere," 194–95; Hegyi, "Plébánia fogalma," 14.

25 Edited in Jakó, *Dézsma*, 20–75.

26 EOE, vol. 2, 64–65, 74–75, 82, 97; ErdKirKv, vol. 1/1, no. 79, 138; ibid., vol. ½, no. 24, 72; ibid., vol. 1/3, no. 363, 1137. Cf. Vekov, "Hiteleshely és szekularizáció," 135–37.

27 SJAN-SB, F 3, 1-173. (I am grateful to Emőke Gálfi for drawing my attention to the document.) The dating of the source is justified by the fact that it mentions the widow of Nikola Cherepovich (who died in June 1562) and notes that Gergely Apafi (who died before September 1563) was still paying the rent for the tithe in person.

28 FH: Bece (Beţa), Feldiód (Stremţ); KÜ: Boldogfalva (Sântămărie); DO: Kisbudak (Buduş/Budesdorf), Várhely (Orheiu Bistriţei/Burghalle); BSZ: Somkerék (Şintereag); KL: Gyalu (Gilău), Gesztrágy (Straja), Középlak (Cuzăplac). Cf. Jakó, *Dézsma*, 23, 29, 45, 48, 53, 58, 59. For ease of identification, I have also included the county code before each group of settlements (BSZ = Belső-Szolnok, DO = Doboka, FH = Fehér, HD = Hunyad, KL = Kolozs, KÜ = Küküllő, TD = Torda).

29 FH: Lapád (Lopadea Nouă); HD: Rápolt (Rapoltu Mare); KÜ: Küküllővár (Cetatea de Baltă/Kokelburg); DO: Kiseküllő (Aşchileu Mic), Mikó (disappeared), Hídalmás (Hida), Esztény (Stoiana),

to be applied mechanically, especially not in the medieval world. In such cases, other, individual approaches or estimates yield results. Nevertheless, the method outlined above produces acceptable proportions in the vast majority of cases, and this indirectly supports its validity. When the value of the *quarta*[30] is also explicitly referred to in any of the registers of 1563 and 1589 (for 104 localities), there is a direct way of checking the correctness of our calculations, and the result is generally reassuring (see Table 1).

Where possible, I have also used early modern *urbaria* and ecclesiastical sources, which usually confirm the data of the 1589 register.[31]

Evaluation of the Findings

I have identified a total of 1239 tithe-paying settlements in the territory of historical Transylvania, where a total of approximately 2150 settlements existed in the mid-sixteenth century. It can therefore be concluded that about 900 settlements did not pay tithes. Typically, these were settlements where the population for a long time (often from the moment they had been founded) had been predominantly Orthodox Romanians. Tithing as a compulsory ecclesiastical tax did not exist in Eastern Christianity, and this custom was respected by the Hungarian ecclesiastical and secular authorities.[32] Settlements which had been inhabited by Catholics who were later replaced by Romanians were, in principle, treated differently. In 1408, a decree stipulated that these settlements were still obliged to pay the tithe to the Catholic Church.[33] However, despite its repeated renewal, in many cases the decree was not enforced,[34] which explains why among the 900 villages without tithe there were several, especially in the Székás area (Podişul Secaş) of Fehér County, that lost their former Catholic Saxon

Olnok (Bârlea); BSZ: Monostorszeg (Mănăşturel); TD: Décse (Decea), Szengyel (Sângeru de Pădure). Cf. Jakó, *Dézsma*, 21, 24, 29, 38–41, 49, 67, 68.

30 In the register of 1589, the term *quarta* is always used in the absolute sense, i.e. it refers to a quarter of the total tithe. By contrast, the adjectives *integra* or *medium* referred to the portion rented (E+A).

31 Prodan, Iobăgia, vol. 1, 255–56, vol. 2, 568, 630; Jakó, *Gyalui urbárium,* 52, 53, 57, 69, 97, 100, 109, 127, 143, etc.; Ursuţiu, *Gurghiu*, 39, 63, 66, 76, 82–83, 103, etc. – MonAntHung, vol. 2: 99, 101, 249; 4: 284, 290; EREK, KvGylt, B 2, Prot. 1/1, p. 1–14, 519–664; Buzogány et al., *Küküllői Egyházmegye*, passim; Gudor, *Gyulafehérvári Egyházmegye*, 369–425.

32 Hegyi, "Did Romanians," 694–97, 707–10.

33 Hegyi, "Terrae Christianorum."

34 Hegyi, "Románok tizedfizetése," 25–29, 31–32, 35–36.

population only after the Turkish invasions of the fifteenth century[35] and later became Romanian.[36]

In addition to the Romanian villages, a few other localities were exempted from tithing. Three of these localities were mining towns in the mountains, which had predominantly Saxon (and partly Hungarian) populations,[37] presumably with infertile lands, where grains and grapes, the main base for tithes, were not grown. Some Hungarian villages with Catholic parishes in Hunyad County[38] also did not pay the tithe, presumably because their inhabitants were all minor nobles and were not obliged to pay taxes.

For more than a third (457) of the 1239 settlements that did pay the tithe it is not possible to determine (or even to estimate) the amount of the priestly tithe. The vast majority of these settlements (417) were found in the Székely Land, because for this territory (except for the Aranyos Seat), as a consequence of low literacy rates, we have no usable medieval or early modern data on the tithe incomes of the clergy, not only from the Middle Ages but also from the early modern period. There is only some general evidence that this privileged but poor, partly mountain dwelling population did pay the tithe.[39] In the case of Kalotaszeg and the Maros (Mureş) Valley between Nagyenyed (Aiud/Engeten) and Gyulafehérvár, the scarcity or even complete lack of sources is also to blame for the holes in our knowledge.[40]

However, the 771 known cases are still representative of the situation in the counties and the *Fundus Regius*. The three most common types of distribution were when the local parish priest received no tithe (269.5[41]); a quarter of the tithe (278.5), or the whole tithe (189).

35 Cf. Gündisch, "Türkenabwehr."

36 E.g. Drassó (Draşov/Troschen), Birbó (Ghirbom/Birnbaum), Alamor (Alămor/Mildenburg). Cf. Hegyi, "Románok tizedfizetése," 26–27, 30–31, 35.

37 FH: Abrudbánya (Abrud/Grossschlatten); TD: Offenbánya (Baia de Arieş/Offenberg); BSZ: Radna (Rodna/Rodenau).

38 Hosdát (Hăşdat), Rákosd (Răcăştia), Lozsád (Jeledinţi). For their Catholic parishes, see: 1503: DL 46764; 1524: DL 47548; 1533: MNL OL, R 391, 1-8-4.

39 1462: SzOkl, vol. 1,192; 1466: ibid., vol. 8, 115; 1496: Barabás, "Tizedlajstromok," 427; 1503: SzOkl, vol. 3, 155; 1522: ibid., vol. 2, 10; 1535: SJAN-CV, F 65, 2-4-1(6).

40 The villages of Kalotaszeg district are listed in the tithe register of 1589, but since they were previously part of the bishopric of Várad, the distribution of the tithe was different from that of Transylvania, and therefore the share of the priests cannot be calculated in the same way as described above (cf. Jakó, *Dézsma*, 61–64). On the tithe-paying settlements from the valley of the Maros River: 1477: Barabás, "Tizedlajstromok," 417; 1496: ibid., 421, 428–29; 1504: DF 277689, fol. 2v–3r, 7v–8r.

41 The fractional numbers appear due to the fact that the territory of some settlements was divided between two ecclesiastical units, and this might result in differences regarding the distribution of the tithe.

As I have already mentioned, the latter option, which accounts for almost a quarter of all known cases, was almost exclusively linked to the Saxon parishes. However, it was not specific to all Saxon settlements, but only, with a few exceptions, to privileged areas on royal land.[42] It was therefore determined primarily (though only in broad terms) by the existence of secular self-government and only secondarily, in the details, by the ecclesiastical administration. The priests of the deaneries of Szeben and Brassó, which were directly under Esztergom's jurisdiction, enjoyed the same rights in this regard as the free Saxon deaneries under the jurisdiction of the bishop of Transylvania. The main reason for this was that the cornerstone of the Saxon privileges, the Andreanum of 1224, had already guaranteed the priestly *libera decima*.[43] However, this happened at the expense of the former tithe-holders (the bishop and the chapter of Transylvania), and it was necessary to obtain their consent, which always involved the payment of a symbolic annuity *(census)*. Only some of these agreements have survived: those of the Transylvanian chapter with the deaneries of Medgyes (1283, 1289) and Sebes (1303, 1330), and that of the bishop with the deanery of Kozd (c. 1330).[44] However, similar arrangements must have been made for all of the deaneries established on the territory of the free (royal) Saxons, i.e. Szászváros (Broos), Kézd, Királya, and Beszterce.

Those parishes of the aforementioned deaneries, which were located on the territory of the counties, also enjoyed the right of "free tithing," at least until around 1580.[45] This was probably because they were originally royal estates, too, and their situation was little different from that of their fellows who later moved on to self-government. Exceptionally, the Saxon parishes of the deanery

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The settlements in question are Balázsfalva (Blaj), Medgyes (Mediaş/Medwisch), Segesvár (Sighişoara/Schässburg), Kecset (Aluniş), Gyeke (Geaca), Gyerővásárhely (Dumbrava), Sztána (Stana), Almás (Almaşu), Kispetri (Petrinzel), and Bábony (Băbiu).

42 Hegyi, "Tized intézményrendszere," 195–96; Hegyi, "Plébánia fogalma," 19; Müller, *Landkapitel*, 123–127.

43 Ub, vol. 1, 34 = CDTrans, vol. 1, no. 132.

44 1283: Ub, vol. 1, 145 = CDTrans, vol. 1, no. 399; 1289: Ub, vol. 1, 160 = CDTrans, vol. 1, no. 445; 1303: Ub, vol. 1, 226–27 = CDTrans, vol. 2, no. 21; 1330: Ub, vol. 1, 421–26, 433–36 = CDTrans, vol. 2, nos. 618, 676–77; [c. 1330]: Ub, vol. 1, 440 = CDTrans, vol. 2, no. 688.

45 1543: Batthyaneum, ACT, 5-59 (Igen [Ighiu/Krapundorf]); 1560: MNL OL, F 4, Alba, 1-5-13 (Kisenyed [Sângătin/Klein-Enyed]); 1614: MNL OL, F 1, 10, p. 154 (Fogaras [Făgăraş]. I am grateful to Tamás Fejér for sending me the transcription of the source.); 1622: Kemény, "Bruchstück," 394 (Kövesd [Coveş/Käbisch]); 1627, 1637: UhEmLt, 2/15 (Moha [Grânari/Muckendorf]); 1640: ibid., B 10, 10 (Héjjasfalva [Vânători/Diewaldsdorf]); 1642: Bod, *Historia ecclesiastica*, vol. 1, 280 (Bürkös [Bârghiş/Bürgisch]); 1648: Kemény, "Bruchstück," 396–97 (Réten [Retiş/Rittersdorf]). Cf. Müller, *Landkapitel*, 125–26, 174–75.

of Régen, which were entirely on the territory of the counties, were also in possession of the full tithe[46] for reasons that are not yet known. Another special case in the western part of the King's Land were the Romanian villages which were settled in the fifteenth and sixteenth centuries in the neighborhood of certain Saxon villages[47] and paid the full tithe to the parish priests.[48] However, two Saxon villages (Petres [Petriş/Petersdorf] from the deanery of Királya and Buzd [Buzd/Bussd] from the deanery of Medgyes) as well as the entire deanery of Selyk (Şeica/Schelk), which also belonged to the King's Land but probably joined it with a delay, were excluded from the circle of those who kept the whole tithe. I touch on them in the discussion below.

In terms of the distribution of tithes, we find a particular diversity in the ten Hungarian serf villages under the jurisdiction of the deanery of Brassó at the end of the Middle Ages. Those which had previously been in royal hands for a long time as part of the domains of Höltövény (Hălchiu/Heltesdorf) and Törcsvár (Bran/Törzburg) castles, were allowed to retain the full tithe in the fifteenth century (or at least claimed it, as the Saxon clergy did), but later most of them were forced to cede half of it to the castellans for the maintenance of the castle.[49] Only Újfalu (Satu Nou/Neudorf), which seceded from the royal estates in 1404 and later became the property of the city of Brassó (1462), was able to preserve successfully the *libera decima*.[50] In contrast, the priests of villages permanently owned by private landlords did not receive any tithe at all.[51] This state of affairs was not changed by the fact that they all ended up in the same

46 Jakó, *Dézsma*, 71–72; Müller, *Landkapitel*, 165–67.

47 Vajdej (Vaidei), Dál (Deal), Kerpenyes (Cărpiniş), Poján (Poiana Sibiului), Ród (Rod/Rodt), Guraró (Gura Râului/Auendorf).

48 Müller, "Rechtslage der Rumänen," 110, 154, 156, 167–68.

49 Apáca (Apaţa), Krizba (Crizbav), Csernátfalu (Cernatu), perhaps even Bácsfalu (Baciu) and Türkös (Turcheş). See: 1456: Ub, vol. 5, 527, 529–30; 1506: RechnKrsdt, vol. 1, 104; 1544: Brandsch, "Dorfschulen," 503; 1554: RechnKrsdt, vol. 3, 469. Cf. Barcsay, "Bárcai magyarság," 1310, 1337. – Previous attempts by the castellans to expropriate a part of the tithe: 1351: CDTrans, vol. 3, nos. 618–620; 1352: ibid., vol. 3, no. 660; 1354: ibid., vol. 3, no. 772; 1355: ibid., vol. 3, no. 800; 1361: ibid., vol. 4, no. 95–96. – On the history of land tenure: 1366: DocRomHist C, vol. 13, 101–2; 1444: DL 29252; 1460: Ub, vol. 6, 85; 1476: Ub, vol. 7, 115–16; 1484: Ub, vol. 7, 369–70.

50 1404: Ub, vol. 3, 333; 1456: Ub, vol. 5, 528; 1462: Ub, vol. 6, 127–29, 142–43; 1471: Ub, vol. 6, 489, 493–94. Cf. Müller, *Landkapitel*, 137–38; Barcsay, "Bárcai magyarság," 1341.

51 Hosszúfalu (Satulung), Tatrang (Tărlungeni), Zajzon (Zizin), Pürkerec (Purcăreni). See: 1367: DocRomHist C, vol. 13, 299–301; 1373: ibid., vol. 14, 398–401; 1544: Brandsch, "Dorfschulen," 503–4. Cf. Müller, *Landkapitel*, 137–38; Barcsay, "Bárcai magyarság," 1335, 1337–38.

position in secular terms, becoming parts of the domain of Törcsvár pledged to the city of Brassó in 1498.[52]

Compared to the three large groups referred to above, the number of parishes where the parish priest received half the tithe is small but significant (23). These parishes were also located in the King's Land. Apart from Buzd and the abovementioned villages around Brassó, the 13 parishes of the deanery of Selyk belonged here, the Saxon population of which must have arrived sometime around 1300 and which only belatedly became part of the King's Land, being formerly a noble estate.[53] Although between 1322 and 1504 they had continued a lawsuit against the bishop for the same privileges as the other free Saxons, they did not succeed in obtaining the full tithe. They were granted only half of it by acquiring after 1357, in addition to their original *quarta*, the archdeaconal share of tithe.[54] Three villages from the deanery of Sebes[55] took a different path. During the Turkish invasions from 1438 and 1442, their populations had shrunk dramatically, and the Transylvanian chapter had gotten its hands on their tithes. When these localities were repopulated by Saxons, the chapter returned only half of the tithes to the parish priests.[56]

There were only two settlements in which the priest received between half and a quarter of the tithe: in Küküllővár, he received three eighths of the tithe and in Gyalu he received a third.[57] None of this was merely a matter of chance. Küküllővár was in royal hands for a long time and functioned as a sub-residence of the voivodes and vice-voivodes, and Gyalu was a sub-residence of bishops.[58]

52 1500: DF 247090; 1548–1555: RechnKrsdt, vol. 3, 469. Cf. W. Kovács, "Participation of the Counties," 685–86.

53 In 1305, some of the villages here (Baromlak [Valea Viilor/Wurmloch], Iványfalva [Ighişu Nou/Eibesdorf]) were still in the hands of private landlords (Ub, vol. 1, 229–30 = CDTrans, vol. 2, no. 44), and in 1322 the area is described as a "novella plantatio" (Ub, vol. 1, 369).

54 1322: Ub, vol. 1, 369 = CDTrans, vol. 2, no. 444; 1323: Ub, vol. 1, 376 = CDTrans, vol. 2, no. 465; 1357: Ub, vol. 2, 146–47 = CDTrans, vol. 3, no. 959; 1364: AAV, RegVat, 251: 347r-v; 1369: Ub, vol. 2, 323 = CDTrans, 4: no. 732; 1414: Ub, vol. 3, 591–92, 596–97, 600–1; 1415: Ub, vol. 3, 644–51, 662–63; 1416: ZsOkl, vol. 5, no. 1618; 1454: KmJkv, vol. 1, no. 1147; 1504: Teutsch, *Zehntrecht*, 132–36, DF 246275, SJAN-SB, F 1, 1-U5-1882. Cf. Müller, *Landkapitel*, 168–70; Teutsch, *Zehntrecht*, 35–38.

55 Szászpián (Pianu de Jos/Deutschpien) with Oláhpián (Pianu de Sus/Walachischpien), Lámkerék (Lancrăm/Langendorf), Rehó (Răhău/Reichenau).

56 1494: DF 245206; 1477: Barabás, "Tizedlajstromok," 418; 1496: ibid., 420–21, 433; 1504: DF 277689, fol. 2v, 10v; 1513: DF 277731/b, fol. 1v. Cf. Müller, *Landkapitel*, 160–61.

57 1589: Jakó, *Dézsma*, 29 (Küküllővár); 1640: Jakó, *Gyalui urbáriumok*, 57; 1666: ibid., 148; 1679: ibid., 205 (Gyalu).

58 The bishops also provided generously for the local priests of their estates beyond Meszes Mountain: they received half the tithe in Zilah (Zalău) and a third in Tasnád (Tăşnad) (Diaconescu, *Izvoare*, 37, 117).

The set of localities with a priestly *quarta* was the most numerous and also the most heterogeneous. Their most significant subgroup (114) was that of Saxon deaneries falling wholly or largely within the territory of the counties, i.e. Sajó, Teke, Székás, Négyfalu (Vierdörfer), Hidegvíz, Lower and Upper Küküllő, and Szentlászló. These deaneries, which had attained only a lower degree of ecclesiastical self-government, also secured a quarter of the tithe from their ecclesiastical and secular superiors.[59] Here we have to take into account the aforementioned Saxon village of Petres too, which became a member of the deanery and of the seat of Beszterce after having been a noble estate at the beginning of the fourteenth century.[60]

The ecclesiastical landowners (the bishop and chapter of Transylvania and the abbot of Kolozsmonostor) also consistently gave the local parish priests the canonically prescribed *quarta* of their own estates (for the domains of Gyalu, Enyed, and Gyulafehérvár),[61] except when the identity of the ecclesiastical landlord and the tithe-holder differed.[62] The monarch also set an example by granting a quarter of the tithe to the parish priests of the royal cities, salt-mining towns, and domains.[63] He or the later baronial owners were responsible for the priestly *quarta* of the Hungarian parishes of other domains (Bálványos [Unguraş], and Csicsó [Ciceu]) and estates (Bonchida [Bonţida], and Búza [Buza], as well as the villages of the Bánfi and Dezsőfi families in Upper Valley of the Maros River).[64] Some families of the middle nobility (Apafi, Bethleni, Erdélyi de Somkerék) also granted the quarter of the tithe to the priests of

In contrast, the cathedral city of Gyulafehérvár had only a parish with *quarta* (1754: Gudor, *Gyulafehérvári Egyházmegye*, 399).

59 Hegyi, "Plébánia fogalma," 19; Müller, *Landkapitel*, 131–32, 134, 145, 151–52, 178–80; Teutsch, *Zehntrecht*, 32–34.

60 Cf. [1314?]: Ub, vol. 1, 300 = CDTrans, vol. 2, no. 218.

61 1414: ZsOkl, vol. 4, no. 1632; 1444: KmJkv, vol. 1, no. 522; 1580: MonAntHung, vol. 2, 99, 101 (estates of the Kolozsmonostor Convent); 1589: Jakó, *Dézsma*, 52–53 (bishop's domain of Gyalu). On the chapter estates, the priests' share of tithes can be more or less deduced from the *quarta*s of the provost and the canons (1477: Barabás, "Tizedlajstromok," 417–18).

62 E.g. FH: Kutyfalva (Cuci), Koppánd (Copand), and Nagylak (Noşlac) (cf. Jakó, *Dézsma*, 21–23). They were the estates of the chapter, but their tithe belonged to the bishop.

63 Royal city: Kolozsvár (Cluj/Klausenburg). Salt-mining towns: Dés (Dej), Désakna (Ocna Dejului), Szék (Sic), Kolozsakna (Cojocna). Torda (Turda) seems to be an exception in this respect, as the priest here received little or no tithe (cf. Hegyi, "Plébánia fogalma," 15–16). Royal castles with their domains: Déva (Deva), Küküllővár, Görgény (Gurghiu).

64 On estates and their landlords see Pál Engel's digital map of medieval Hungary (available for download here: https://abtk.hu/hirek/1713-megujult-engel-pal-adatbazisa-a-kozepkori-magyarorszag-digitalis-atlasza).

their Catholic estates, others only to the parish priest of the central settlement of their estate.[65] The remaining dozen or so villages could receive the *quarta* by occasional donations, for which some documents have survived.[66]

Contrary to what is widely stated in the secondary literature, the number of clerical benefices, which represented a fraction of a quarter of a tithe, was extremely small in Transylvania. It is even possible that some of them are in fact the result of a calculation error, because the contemporaries rounded off the numbers for the sake of simplicity, and thus these numbers do not accurately reflect the smaller ratios. Mostly, the centers of some manors or estates can be included here (with one sixth or one eighth as the priestly share),[67] as well as the Hungarian villages of the Zsuki family, where the priests uniformly received half of the *quarta* (i.e. one eighth of the tithe).[68] The one-sixteenth share, which is considered common in the literature, occurs marginally, only five times, and exclusively in the northern part of the province.[69]

Almost as numerous as the places with *quarta* were the tithing villages where the parish priest received nothing from the tithe (more than a third of the known cases). For the most part, these settlements were the Hungarian villages of the small and middle nobles from the western bank of the Kis-Szamos (Şomeşul Mic) River, the Mezőség (Câmpia Transilvaniei), and between the Maros and Kis-Küküllő (Târnava Mică) Rivers, as well as the settlements of the Aranyos Seat (with the exception of Felvinc [Unirea]).[70] Their landlords may not have had sufficient lobbying power, or more likely, they would not have looked kindly on the local priest having an income that exceeded their own.

In the late Middle Ages, demographic changes often led to changes in the structure of the local tithe. Exceptions were those villages of the Szászváros Seat, which were formerly inhabited by Saxons and then by Romanians. These villages continued to pay tithes to the parish priest of Szászváros.[71] Usually,

65 FH: Tövis (Teiuş); TD: Felvinc (Unirea), Gyéres (Câmpia Turzii), Vajdaszentivány (Voivodeni); KL: Szamosfalva (Someşeni), Fejérd (Feiurdeni); DO: Drág (Dragu), Doboka (Dăbâca).

66 1398: DF 257485 (Szengyel [Sângeru de Pădure, TD]); 1541: Batthyaneum, ACT, 5-41 (Solymos [Şoimuş, HD]).

67 One sixth: Apanagyfalu (Nuşeni, BSZ). One eighth: Léta (Liteni, KL); Magyaregregy (Românaşi, DO).

68 KL: Alsózsuk (Jucu de Jos), Felsőzsuk (Jucu de Sus), Kályán (Căianu).

69 DO: Kiseskküllő (Aşchileu Mic), Esztény (Stoiana),Szentegyed (Sântejude); BSZ: Girolt (Ghirolt), Monostorszeg (Mănăşturel). In contrast, it appears that beyond the Meszes the p = 1/16 share was much more common (Diaconescu, *Izvoare*, 13, 15, 17, 19, 106, 189, 191).

70 If it were more documentable, we would probably find it in most parts of the Székely Land, too.

71 Szarkad (Sereca), Berény (Beriu), Kasztó (Căstău), Perkász (Pricaz). Cf. Müller, *Landkapitel*, 133; Müller, "Rechtslage der Rumänen," 195, 235.

when a Catholic community in the King's Land died out and the village was left deserted[72] or was repopulated by Romanians,[73] the priest's share ceased to exist, and the full tithe was collected by the secular Saxon authorities or (in the deanery of Sebes) the chapter of Transylvania. The same processes led to similar results on Church estates, too.[74] On the other hand, if the Catholic population disappeared in one of the villages lying on the territory of nobles, the result was ambiguous, depending on the attitude of the landlord and the time of the change. In some cases, the tithe continued to be paid (without the priestly part, of course),[75] but in most cases, the tithe was completely abolished.[76]

As a result of the Reformation and the secularization of Church estates and revenues, the medieval ecclesiastical framework was shaken and ecclesiastical immunity and privileges were weakened. Under these circumstances, many communities were not able to resist the increasing pressure of secular elites to expropriate more and more of the tithes, even if their populations remained adherents of Western denominations. From 1580 onwards, the parish priests in the King's Land had to be content with three-quarters of the tithe, as the princely power expropriated a *quarta* for the benefit of the treasury, first for a fee, and then from 1612 on, without payment.[77] Encouraged by this, the Diet passed a resolution in 1588 stating that if there were places in the counties where the *libera decima* existed, the priestly share should be reduced to *quarta*.[78] The primary victims of this provision were the parishes of the deanery of Régen, which lost a significant part (even if not always three quarters) of their tithe income from the

72 Szászárkos (near Balomir), Giesshübel (near Szászsebes [Sebeş/Mühlbach]), Fehéregyháza (near Szerdahely [Miercurea Sibiului/Reussmarkt]), Underten (between Alcina [Alţina/Alzen] and Kürpöd [Chirpăr/Kirchberg]). Cf. Jakó, *Dézsma*, 25; Müller, *Landkapitel*, 161.

73 Alkenyér (Şibot/Unterbrotsdorf), Felkenyér (Vinerea/Oberbrotsdorf), Cikendál (Ţichindeal/Ziegenthal), Glimboka (Glâmboaca/Hühnerbach), Hóföld (Fofeldea/Hochfeld), Illenbák (Ilimbav/Eulenbach), Szászaház (Săsăuş/Sachsenhausen), Kálbor (Calbor/Kaltbrunnen), Boholc (Boholţ/Buchholz), Sona (Şona/Schönau). Cf. Müller, "Rechtslage der Rumänen," 192, 212, 217, 224–25, 234–37, 240.

74 FH: Poklos (Pâclişa), Sóspatak (Şeuşa), Táté (Totoi). Cf. Hegyi, "Románok tizedfizetése," 28, 30–31; Hegyi, "Did Romanians," 710 (note 73).

75 E.g. FH: Veresegyháza (Roşia de Secaş/Rothkirch), Meggykerék (Meşcreac); DO: Sajósebes (Ruştior/Niederschebesch), Solymos (Şoimuş/Almesch), Radla (Ragla/Radelsdorf), Alsóbalázsfalva (Blăjenii de Jos/Unterblasendorf), Fata (near Nagydemeter [Dumitra/Mettersdorf]). Cf. Jakó, *Dézsma*, 20, 23, 45, 47.

76 FH: Váralja (Orlat/Winsberg), Feketevíz (Săcel/Schwarzwasser), Alamor, Hosszútelke (Doştat/Thorstadt), Drassó, Dálya, Kútfalva, Birbó, Henningfalva (Henig). Cf. Hegyi, "Románok tizedfizetése," 26–28, 30, 34.

77 1580: EOE, vol. 3, 149–51; Teutsch, *Zehntrecht*, 164–68; 1612: EOE, vol. 6, 254–55; Teutsch, *Zehntrecht*, 191–95. Cf. ibid., 55–67.

78 EOE, vol. 3, 244.

following year onwards.[79] Even more vulnerable were the settlements in which the Saxons had been replaced by Hungarians, and the parish was therefore cut off from the protective framework of the Saxon deaneries.[80] Some settlements fared even worse. Some Hungarian villages between the two Küküllő Rivers[81] lost the priestly *quarta* altogether sometime between 1563 and 1589.[82]

Conclusions

In conclusion, parishes which had the same share of the tithe as their incomes were geographically concentrated. The settlements which retained all or half of the tithe for their priests covered roughly the large southern and small northeastern blocs of the King's Land. These areas were surrounded to the north, respectively to the west, and south by a wide band of settlements in which the parish had a quarter of the tithe, with addition of the wider area around Kolozsvár and, presumably, the Fehér County section of the right bank of the Maros River. In most of the rest of Catholic villages, the local priest received none of the tithes.

Another important observation is that the level of tithe sharing correlated with secular and ecclesiastical privileges, the ethnicity of the population that paid the tithe, and the person of the landlord. A high level of self-government, the existence of a deanery, the presence of a Saxon population, and ecclesiastical or royal possession were all advantages for the local priest in terms of the degree of his share from the tithe, while Hungarian villages with serf populations, owned by the petty nobility, and in particular villages which had been deserted and then repopulated by Romanian serfs were the least likely for him to enjoy any revenue from this ecclesiastical tax.

79 Teutsch, *Zehntrecht*, 185–86, 188–89. Cf. Müller, *Landkapitel*, 166.

80 E.g. 1664: Gudor, *Gyulafehérvári Egyházmegye*, 378 (Krakkó [Cricău/Krakau], FH), 406–7 (Alvinc [Vinţu de Jos/Winz], FH).

81 KÜ: Gálfalva (Găneşti), Pócsfalva (Păucişoara), Kissáros (Delenii), Kóródszentmárton (Coroisânmartin), Besenyő (Valea Izvoarelor), Mikefalva (Mica), Kápolna (Căpâlna de Sus), Héderfája (Idrifaia), Harangláb (Hărănglab), and probably also Szőkefalva (Seuca).

82 These findings are based on a comparison of the registers from 1563 and 1589 (SJAN-SB, F 3, 1-173, fol. 4r-v; Jakó, *Dézsma,* 34, 35, cf. Table 1, too).

Table 1. The priest's share of tithe in the settlements where the value of the *quarta* is known[83]

Name of settlement	Page	E	A	q	T	P	p
Fehér County							
Nagylak (Noşlac) and Káptalan (Căptălan)	21	[60]	20	20	80	0	0
Szentkirály (Sâncrai)	(f. 1r) 21	(36) 40.50	(14) 13.50	13.50	54	0	0
Bagó (Băgău)	21	20	8	7	28	0	0
Lapád (Lopadea Nouă)	(f. 1r) 21	(36) [40]	(12) 8	12	48	0	0
Háporton (Hopârta) and Ispánlaka (Şpălnaca)	(f. 1r) 21–22	8	(4) [4]	(4) [3]	(16) 12	(4) 0	(1/4) 0
Ózd (Ozd)	(f. 1r) 22	30	10	(10)	40	0	0
Herepe (Herepea)	(f. 1r) 22	36	12	12	48	0	0
Csekelaka (Cecălaca)	22	16	6	6	24	2	1/12
Lőrincréve (Leorinţ)	23	4	2	[2]	[8]	q	1/4
Forró (Fărău)	(f. 1v) 23	36	12	12	48	0	0
Szentbenedek (Sânbenedic)	(f. 1v) 23	36	12	12	48	0	0
Hunyad County							
Rápolt (Rapoltu Mare)	24	40	10	12.[50]	50	0	0
Arany (Uroi)	26	6	3	2.25	9	0	0
Küküllő County							
Hosszúaszó (Valea Lungă)	(f. 2v) 27	50	25	(25)	100	25	1/4
Nagyekemező (Târnava) and Kisekemező (Târnăvioara)	27	120	60	60	240	60	1/4
Bogács (Băgaciu)	27	124	62	62	248	62	1/4
Nagykőrös (Curciu)	27	72	36	36	144	36	1/4
Felsőbajom (Bazna)	27	100	50	50	200	50	1/4
Szénaverős (Senereuş)	(f. 2v) 28	64	32	32	128	32	1/4
Szentiván (Sântioana)	29	32	16	16	64	16	1/4
Balázstelke (Blăjel)	(f. 2v) 30	44	22	22	88	22	1/4
Ádámos (Adămuş)	(f. 3r) 30	18	9	(9)	36	9	1/4

83 Source of data: SJAN-SB, F 3, 1–173 (the values in brackets), Jakó, *Dézsma,* 20–71 (page numbers refer to this). Abbreviations: E = episcopal share of tithe, A= archdeaconal share of tithe, q = *quarta,* T = the whole tithe, P = priest's share of tithe (for all these, the amount of the corresponding wage is indicated in florins), p = the rate of the priestly tithe. The first three are taken directly from the source, the others are calculated using the formulae: T = 4q; P = T – (E+A); p = P/T.

Name of settlement	Page	E	A	q	T	P	p
Dombó (Dâmbău)	(f. 3r) 30–31	16	8	8	32	8	1/4
Fületelke (Filitelnic)	(f. 3r) 31	28	14	14	56	14	1/4
Domáld (Viişoara)	(f. 3r) 31	16	8	8	32	8	1/4
Királyfalva (Crăieşti)	(f. 3r) 31	32	16	(16)	64	16	1/4
Ernye (Ernea)	(f. 3v) 32	14	7	(7)	28	7	1/4
Mikeszásza (Micăsasa)	(f. 3v) 32	(13.33) 12	(6.67) 8*	6.67	26.67	6.67	1/4
Désfalva (Deaj)	(f. 4r) 33	14	7	7	28	7	1/4
Sárd (Şoard)	34	2	1	1	4	1	1/4
Gálfalva (Găneşti)	(f. 4r) 34	(20) 30	10	10	40	(10) 0	(1/4) 0
Kissáros (Delenii)	34	36	12	12	48	0	0
Péterfalva (Petrisat) and Pettend (deserted)	35	28	8	9	36	0	0
Kóródszentmárton (Coroisân-martin)	(f. 4r) 35	(10) 15	5	(5*)	20	(5) 0	(1/4) 0
Besenyő (Valea Izvoarelor)	(f. 4r) 35	(16) 24	8	8	32	(8) 0	(1/4) 0
Harangláb (Hărănglab)	(f. 4v) 35	(24) 36	12	12	48	(12) 0	(1/4) 0
Csapó (Cipău) and Kisfalud (deserted)	35	18	6	6	24	0	0
Kisszőllős (Seleuş)	(f. 4v) 36	(–) 36	18	(18*) 18	72	18	1/4
Kiskend (Chendu Mic), Nagykend (Chendu Mare) and Balavásár (Bălăuşeri)	36	10	5	5	20	5	1/4
Szancsal (Sâncel)	36	16	8	6	24	0	0
Doboka County							
Bádok (Bădeşti)	37	6	2	2	8	0	0
Magyarújfalu (Vultureni)	37	16	8	8	32	8	1/4
Csomafája (Ciumăfaia)	37	6	2	2	8	0	0
Báboc (Băbuţiu)	38	6	2	2	8	0	0
Fodorháza (Fodora)	38	6	2	2	8	0	0
Vajdaháza (Voivodeni)	39	25	8.33	8.33	33.33	0	0
Hídalmás (Hida)	39	20	4	6	24	0	0
Récsekeresztúr (Recea-Cristur)	39	13	4.34	4.34	17.34	0	0
Páncélcseh (Panticeu)	40	12	4	4	16	0	0
Köblös (Cubleşu Someşan)	40	18	5.50	6	24	0.50	0

Name of settlement	Page	E	A	q	T	P	p
Derzse (Dârja)	40	13	4.33	4.33	17.33	0	0
Felsőtők (Țiocu de Sus)	40	20	6	6.50	26	0	0
Alsótők (Țiocu de Jos)	40	6	2	2	8	0	0
Kecsetszilvás (Pruneni)	40	14	4.66	4.67	18.66	0	0
Szava (Sava)	42	16	5	5.25	21	0	0
Cegőtelke (Țigău)	42	16	8	8	32	8	1/4
Nagydevecser (Diviciorii Mari), Kisdevecser (Diviciorii Mici)	42–43	26	13	13	52	13	1/4
Veresegyház (Strugureni)	43	10	5	5	20	5	1/4
Szentandrás (Șieu-Sfântu) and Kajla (Caila)	44	18	9	9	36	9	1/4
Kisbudak (Buduș)	45	15	–	5	20	5	1/4
Várhely (Orheiu Bistriței)	45	6	–	1.50	6	0	0
Móric (Moruț)	46	40	20	20	80	20	1/4
Inner Szolnok County							
Dés (Dej)	47	12	6	6	24	6	1/4
Szentmargita (Sânmărghita)	47	20	10	7.50	30	0	0
Somkerék (Șintereag)	48	6	–	[2]	8	q	1/4
Dengeleg (Livada)	49	33	11	11	44	0	0
Iklódszentiványi (deserted)	50	6	2	2	8	0	0
Zápróc (Băbdiu)	50	3	1	1	4	0	0
Kozárvár (Cuzdrioara)	51	15	5	5*	20	0	0
Péntek (Pintic)	51	12	4	4	16	0	0
Girolt (Ghirolt)	52	17	5.75	6.08	24.32	1.57	1/16
Kolozs County							
Kolozsvár (Cluj-Napoca)	53	500	250	250	1000	250	1/4
Gyeke (Geaca)	53	12	4	4	16	0	0
Novaj (Năoiu)	53	3	1	1	4	0	0
Légen (Legii)	54	8	4	3	12	0	0
Zutor (Sutoru)	54	6	2	2.67	10.67	2.67	1/4
Vásárhely (Dumbrava), Inaktelke (Inucu), Sztána (Stana) and Kiskapus (Căpușu Mic)	55	18	6	6	24	0	0
Tamásfalva (Tămașa)	55	13	5	4.50	18	0	0
Mócs (Mociu)	55	10	3.34	3.34	13.34	0	0
Palatka (Pălatca)	56	25	9	8.50	34	0	0
Fejérd (Feiurdeni)	57	40	20	20	80	20	1/4
Méhes (Miheșu de Câmpie)	58	16	6	5.50	22	0	0
Középlak (Cuzăplac)	59	20	–	5	20	0	0
Fűzkút (Sălcuța)	59	16	8	8	32	8	1/4
Vajola (Uila)	60	12	6	6	24	6	1/4

Name of settlement	Page	E	A	q	T	P	p
Torda County							
Szind (Sănduleşti)	65	22	7.34	7.34	29.34	0	0
Boldoc (Bolduţ)	65	8.50	2.48	2.75	11	0	0
Egerbegy (Viişoara)	65	18.50	6.68	6.68	25.18	0	0
Gerend (Luncani) and Szentmárton (Gligoreşti)	66	26	8.68	8.68	34.68	0	0
Csanád (Pădureni)	67	12	4	4	16	0	0
Jára (Iara de Mureş)	69	12	4	4	16	0	0

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Agricultural Productivity in the Western Borderlands of the Grand Duchy of Lithuania (Second Half of the Sixteenth Century)

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The purpose of this article is to determine the grain yields in the royal manors of the Grand Duchy of Lithuania in the 16th and 17th centuries. The manorial system in the Grand Duchy of Lithuania appeared with the land reform in the mid-16th century (*Volok* Reform), when the three-field system was introduced here. However, there were far fewer manor farms in Lithuania than in Poland, but they were very large. Most of them produced grain for export based on peasant labor force. The inventories of the royal estates give account on the seed demand and yields of the most important cereals: rye, oats and wheat. The analysis of more than a dozen manors showed varying yields in Lithuanian estates (Grodno Starosty, Brest Ekonomy and Kobrin Ekonomy), which were due to natural environmental conditions, as well as elemental disasters or human activity.

Keywords: grain yield, productivity, 16–17th-century Lithuania, *volok* reform, manors

Introduction: State of Research

Studies on crop yields in the Polish–Lithuanian Commonwealth have a deep tradition. The most extensive analysis of the productivity of peasant and manorial farms was done by Alina Wawrzyńczyk[1] and Leonid Żytkowicz[2] over 50 years ago, focusing mainly on royal and church estates in early modern Poland. Other prominent scholars of the economy of early modern Poland have also paid attention to agricultural productivity, including Jerzy Topolski, Andrzej Wyczański, and Stefan Cackowski.[3] Piotr Guzowski and Monika Kozłowska-Szyc are also currently pursuing research on the subject.[4] The conditions of the

1 Wawrzyńczyk, "Próba"; Wawrzyńczyk, *Gospodarstwo chłopskie*; Wawrzyńczyk, *Studia nad wydajnością*;

2 Żytkowicz, *Studia*; Żytkowicz, "Plony zbóż."

3 Wyczański, *Studia nad gospodarką;* Wyczański, "O badaniu plonów"; Topolski, *Gospodarstwo wiejskie*; Cackowski, *Gospodarstwo wiejskie*.

4 Guzowski and Kozłowska, "Wysokość plonów"; Kozłowska-Szyc, "Wysokość."

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agricultural economy in the Grand Duchy of Lithuania have also long remained at the center of research by historians. Most of the scholarship has been devoted to the period of the *Volok* Reform[5] in the second half of the sixteenth century, in particular to the layout of manors and the lists of the duties of serfs.[6] Several works also dealt with the efficiency of agriculture in medieval Lithuania. The economics of the Roch demesne (Novogrudok province) and the Trotsinski estate (Brest–Lithuanian province) were analyzed by Rożycka-Glassowa.[7] Jozef Ochmanski wrote about the efficiency of the grand ducal economy in the Kobrin ducal estate.[8] Also, Stanislaw Kosciałkowski examined the significance of Lithuanian yields, supported by yield estimates made by Antoni Żabko-Potopowicz in selected grand ducal estates in the eighteenth century.[9] Thus, the scholarship on the agricultural economy of the Grand Duchy of Lithuania and its efficiency are for the most part several decades old. A recent summary of the research was presented by Alina Czapiuk in the 1990s,[10] but this research and the various works of secondary literature mentioned by Czapiuk are in need of an update, urging for some comparative focus on similar questions in other regions.

Case Studies: Selection of the Analyzed Area

Though numerous shorter works of secondary literature have been published on the subject, there is still a lack of a more complete work focused on the study of the functioning of the agricultural economy in the second half of the sixteenth century. I neither intend nor claim, in the discussion below, to discuss all aspects of the productivity of Lithuanian agriculture in the Renaissance. I present my

5 A 16th-century land reform in parts of the Grand Duchy of Lithuania (Lithuania proper, Duchy of Samogitia and parts of White Ruthenia). The private initiative was copied by other nobles and the Church, because the reform increased effectiveness of agriculture by establishing a strict three-field system for crop rotation. The land was measured, registered in a cadastre, and divided into voloks (21.38 hectares or 52.8 acres). Volok became the measurement of feudal services (like sessio in the Kingdom of Hungary). The reform was a success in terms of the annual state revenue that quadrupled. In social terms, the reform promoted development of manorialism and fully established serfdom in Lithuania, limiting social mobility. (Remark of the editor)

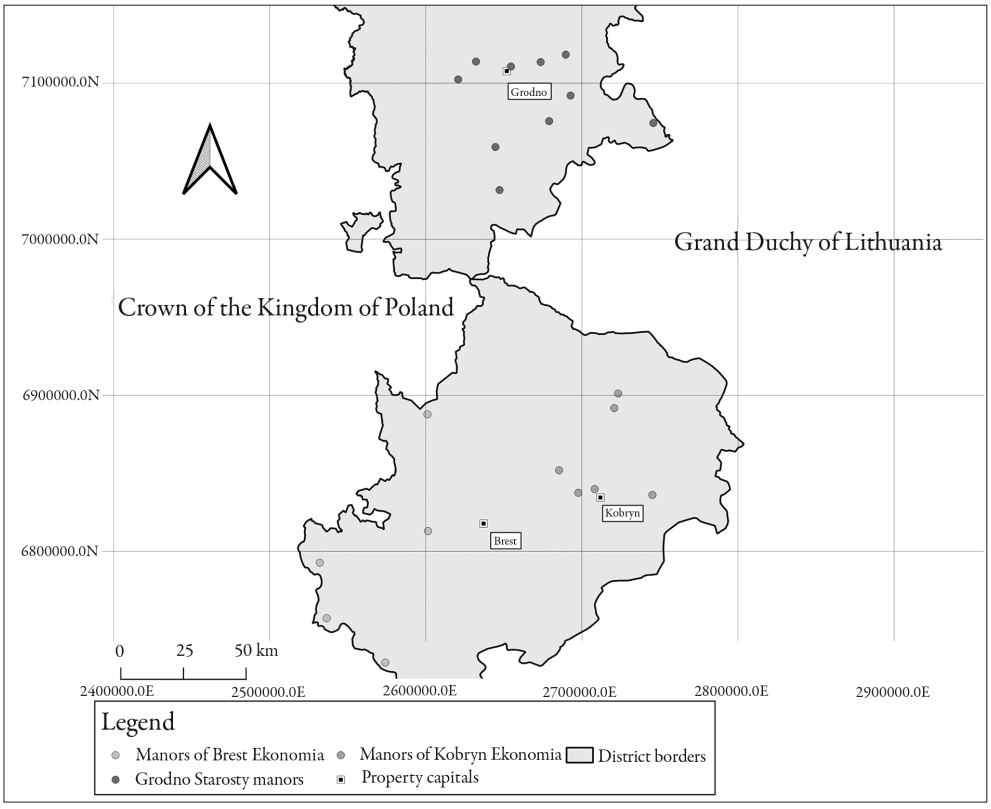
6 Daunar-Zapolski, *Dzyastvennaya gazpadarka*; Picheta, *Belorussiya i Litva*; Jurkiewicz, "Czynsz i pańszczyzna"; Łożyński, "Stan gospodarczy."

7 Rożycka-Glassowa, *Gospodarka rolna.*

8 Ochmański, "Gospodarka folwarczna."

9 Żabko-Potopowicz, *Praca i najemnik*; Kościałkowski, *Antoni Tyzenhauz*, vol. 2, 62–68. Primarily it concerns the fact that the sources referring to the grand ducal estates form the 1780s provide just *lucrum ziaren do intraty*, so only the crops that were sold and not all the crops that were harvested.

10 Czapiuk, "Uwagi," 131–37; Czapiuk, "Reformy"; Czapiuk O plonach."



Map 1. Location of farms in the Grodno Starosty (1578), Brest *ekonomia* (1588), and Kobrin *ekonomia* (1597)
Source: Own compilation based on, AGAD, AK, sign. I/10, pp. 23, 97, 127, 171, 194, 238, 266, 296–297; AGAD, ASK LVI, sign. 11, k. 16, 21v, 24–24v, 28v, 32v–35v; AGAD, The so-called Lithuanian Metryka, sign. 29, pp. 28, 34–36, 51–52, 71–73, 89–90, 101.

findings primarily with the aim of furthering a more nuanced interpretation of the findings of research focusing on regions to the east of the (quite thoroughly studied) Kingdom of Poland. This will make it possible to include further areas in the analysis of the manorial system.

In order to discuss agricultural production in the Grand Duchy of Lithuania from the perspectives of total yield and quality, I focused on three estates as case studies: the Grodno royal estates (1578),[11] the Brest royal estates (1588), and the

11 The ambiguity of the Grodno estate's name results from the differences in the printed and archival sources, where both names appear, as well as *voloshci grodzieńskie*. For the purposes of the discussion here, I use the name of Grodno Starosty, which I presume on the basis of several sources to have been in use in 1578. Golovatskiy et al., *Pistsovaya kniga Grodnenskoy*, vol. 1, III, 3; Golovatskiy et al., *Pistsovaya kniga Grodnenskoy,* vol. 2, 25–26; AGAD, AK, sign. I/10, p. 1–3.

Kobrin royal estates (1597). This selection was not random. In accordance with the 1588 Privilege of Counties on the Table of His Majesty the King, some of the Lithuanian royal (state) properties were transformed into *ekonomias*, or in other words, they put under the control of the monarch and generated a significant share of the income of the court treasury.[12] The existence of Lithuanian *ekonomias* was confirmed in 1589, and in 1590, in accordance with legislation passed by the parliament the royal table estates in Poland were also separated.[13] *Ekonomias* were usually large estates which included several towns, several manors, and dozens or even hundreds of villages. *Sejm* acts mention 11 *ekonomias*. Five of them (Tczew, Malbork, Rogozin, Sandomierz, and Sambor) belonged to Poland, as did the Cracow grand-government and a number of *regalia*. Another six *ekonomias* (Brest, Grodno, Kobrin, Mogilev, Olitsa, and Šiauliai) were within Lithuania. Our goal, therefore, was to select relatively extensive areas for the study of relationships on the landlords' estates.

Characteristics of the Sources

Most of the court estates have well-preserved treasury sources from the second half of the sixteenth century. The documents which were drawn up during the period of the *Volok* Reform, are widely known among scholars.[14] The documents offer detailed descriptions of the land, the boundaries of the manors, towns, and villages, and the duties of the serfs, but they reveal little concerning the extent of production on the grand ducal farms. Only inventories from the 1570s and 1590s make it possible to analyze the productivity of manorial farms, in addition to examining a number of duties of the populations living on the estates. The inventories of the Brest and Grodno estates were compiled after the deaths of the previous possessors.[15] This is not true in the case of the source on Kobrin's *ekonomia*, which was created at the express order of King Sigismund III Vasa, who did not give any specific reason for his command.[16] The estates included in this study were found in the western stretches of Lithuania, in Grodno and Brest-Litovsk Counties.

12 AGAD, AK, sign. I/7, pp. 1–3.

13 *Volumina Constitutionum*, vol. 2,106, 116, 148.

14 Golovatskiy et al., *Pistsovaya kniga byvshago Pinskago starostva;* Golovatskiy et al., *Pistsovaya kniga Grodnenskoy,* vol. 1, III, 588; Golovatskiy et al., *Pistsovaya kniga Grodnenskoy,* vol. 2, 25–166.

15 AGAD, AK, sign. I/10; AGAD, ASK, LVI, sign. 11.

16 AGAD, Metryka Litewska, sign. 29.

The Crop Yields

There are two basic methods for examining a farmer's harvest. The first method involves taking the number of threshed crops and dividing the harvest by the size of the previously sown crop (which gives the yield ratio). Thus, we talk about the ratio of one seed sown to one grain harvested. The methodology requires following rules:

1. The study of the proportion of seeds sown to grain harvested must be limited to individual crop species. Thus, we do not deal with the combined yields of rye and wheat unless, for example, we are interested in the yield of winter cereals, which, however, requires appropriate separation of the data.

2. Analysis must be based on standardized units of bulk measures. If a source only offers information concerning seeds sown counted in threescores[17] and information about the harvest as measured in barrels, we are not able to give the yield of a particular crop. However, if we were to break this data down (for instance, to arrive at an approximation of the number of grains in a barrel), then the source might contain useful information concerning the yield per threescore.

The above method has been widely used in historical and contemporary scholarship on agriculture in the Polish and Lithuanian lands. Certainly, one of the great advantages of this methodology is its comparative simplicity, assuming we have reliable data in consistent units of measurement.

Another strategy is to indicate crop yields by presenting yield efficiencies in terms of the number of quintals per hectare. This method forces the historian to calculate older units of bulk and area measurements into modern ones. It is thus more time-consuming, as it requires knowledge of several conversion factors. Unfortunately, it is sometimes completely unreliable if the sources do not indicate the size of a given farm. The aforementioned method is used by scientists analyzing agriculture in Western Europe (for instance), but Polish researchers also do not shy away from using the method of estimating yields in quintals per single hectare.[18] Due to the difficulty of determining the acreage of old manor farms, we chose the first method of analysis, showing the yields as a ration of seeds down to grains harvested.

17 A conversion unit of about 60 sheaves of a given crop.

18 *Historia Polski w liczbach*, 78, 215, 218; Santiago-Caballero, "Provincial grain yields in Spain"; Cerman, *Villagers and lords*, 101. There are other methods of presenting data on yields, e.g. in bushels per acre. Campbell and Overton, *A New Perspective*, 70.

For the analysis, we chose all the manors on each estate: ten on the Grodno Starosty, five on the Brest estate, and six on the Kobrin *ekonomia*. In the sources provided precise data on crops sown, harvests counted in threescores, and threescore efficiency rates. In accordance with the Volok Law regulating relations on the grand ducal estates, all estates used the system of a barrel of brine, equal to four Cracow bushels.[19]

Table 1. Average crop values on the Grodno Starosty, Brest and Kobrin *ekonomias* (1578–97) (yield measured to sown seed)

Property	**Winter rye**	**Spring rye**	**Winter wheat**	**Spring wheat**	**Barley**	**Oats**	**Peas**	**Buckwheat**
Grodno Starosty	2.7	1.2	2.5	4.6	2.8	1.9	2.6	2
Brest Ekonomia	3.9	2.6	4.6	2.9	2.8	2.5	3	1.8
Kobrin Ekonomia	2.5	1.6	1.2	0.3	2.7	2.1	2.6	2.5

Source: Own compilation based on, AGAD, AK, sign. I/10, pp. 23, 97, 127, 171, 194, 238, 266, 296–297; AGAD, ASK LVI, sign. 11, k. 16, 21v, 24–24v, 28v, 32v–35v; AGAD, The so-called Lithuanian Metryka, sign. 29, pp. 28, 34–36, 51–52, 71–73, 89–90, 101.

The Table 1 shows the arithmetic average yield on the Grodno Starosty and the manors on the Brest and Kobrin estates in the second half of the sixteenth century. The data suggests that spring wheat was one of the most successful crops on the Grodno estate. In practice, however, this crop was grown on only one grange of the Grodno estate, which in principle excludes the sense of including data on average yields. The data for winter wheat on the Brest estate were identical, although this crop was only grown the farms belonging to three landlords. Quite good values were generated by winter rye on the Brest *ekonomia*, which usually boasted the best indicators of manor management efficiency. The weakest yield parameters were obtained by spring rye and oats, the average figures for which, as a ratio of grains harvested to seeds sown, ranged from 1.2 to 2.6 and from 1.9 to 2.5, respectively. A comparison of average yield values on these estates to average yields shows that in most cases the Lithuanian estates were not nearly as productive or efficient as the estates in Poland, for example, where the corresponding figures were 3.2–5 for rye, 4.3–7.6 for wheat, 4.5–8

19 Jaroszewicz, *Ustawa na wołoki*, 238–39; *Encyklopedia Historii Gospodarczej*, vol. 1, 344; Boroda, *Pojemność miar nasypnych*, 24.

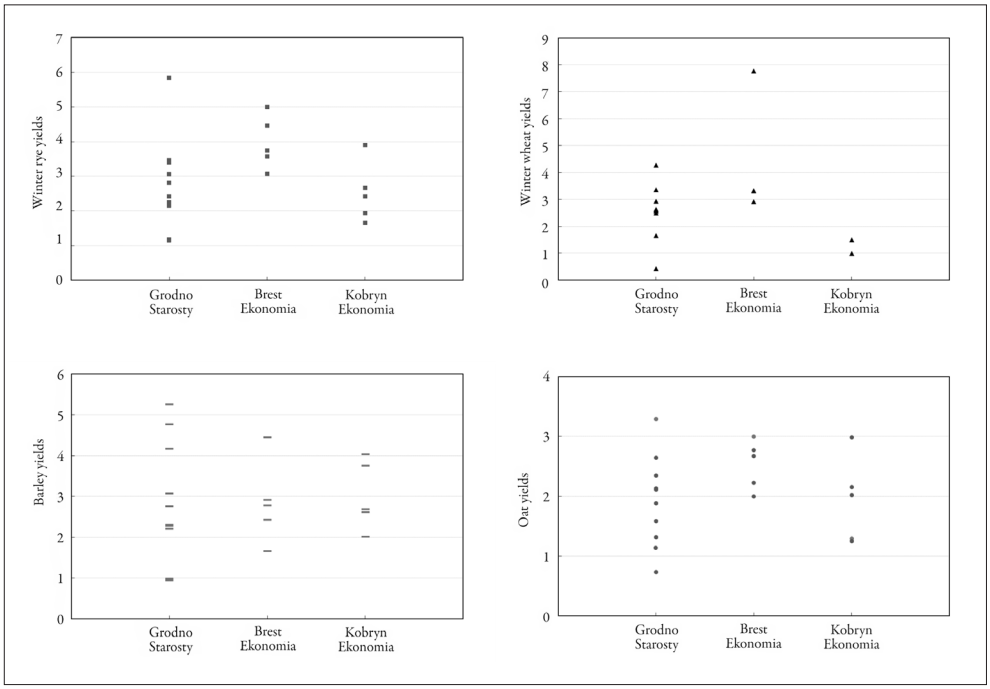


Figure 1. Variability of yields of winter rye, winter wheat, barley, and oats on the Grodno Starosty, Brest *ekonomia* and Kobrin *ekonomia* (1578–97)
Source: Own compilation based on, AGAD, AK, sign. I/10, pp. 23, 97, 127, 171, 194, 238, 266, 296–297; AGAD, ASK LVI, sign. 11, k. 16, 21v, 24–24v, 28v, 32v–35v; AGAD, The so-called Lithuanian Metryka, sign. 29, pp. 28, 34–36, 51–52, 71–73, 89–90, 101.

for barley and 1.8–7 for oat.. The averages for the harvests on the grand ducal estates better resemble the yields obtained in Ducal Prussia (rye: 3.5; wheat: 5; barley: 4; oats: 2.8). [20] In comparison with Poland and Prussia, wheat did not fare nearly as well, achieving a similar average only on the Brest economy. Yields were much lower on the other estates, reaching just over one to about 2.5 grains per seed sown.

In addition to indicating the average yield, it would be worth considering the variety of parameters obtained. To this end, one could approach the issue from a comparative discussion of data concerning the yields of four of the most important crops: winter rye, winter wheat, barley, and oats. The focus on these

20 Cerman, *Villagers and lords*, 96. Rye crop yields were also much lower than in the collations referring to the relatively close Knyszyn Starosty in Podlasie. Czapiuk, "Uwagi," 135–36.

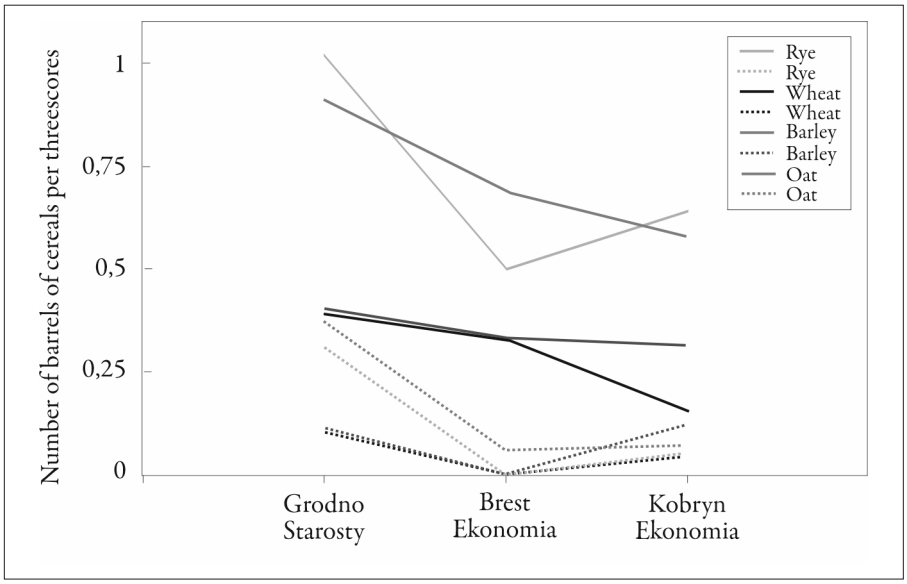


Figure 2. Productivity of crops on the farms of Grodno Starosty and the Brest and Kobrin *ekonomias* (1578–97) in barrels/threescore. Average values are indicated by a solid line, and the standard deviation by a dashed line.
Source: Own compilation based on, AGAD, AK, sign. I/10, pp. 23, 97, 127, 171, 194, 238, 266, 296–297; AGAD, ASK LVI, sign. 11, k. 16, 21v, 24–24v, 28v, 32v–35v; AGAD, The so-called Lithuanian Metryka, sign. 29, pp. 28, 34–36, 51–52, 71–73, 89–90, 101.

four crops is dictated by two factors: they achieved the highest yields among grains and these regularly appeared in the farm accounts.

Fluctuations in yields are evident throughout the study of any selected crops. Only some manors achieved similar yield values, which clearly escape us when focusing only on average grain yields. We see the greatest differences in yields in the case of the manors of Grodno Starosty, which could be due to the larger number of farms owned by lords and not the king. The condition of crops on some of the grand ducal farms presents a remarkably unfavorable picture. This is evident in the case of particularly poor yields of spring and winter wheat, where the yields sometimes approached the lower limit of profitability.

The reasons for the unevenness of the harvest are quite well explained by an analysis of the treasury sources. In 1578, the Grodno Starosty was plagued by hailstorms and fires in selected villages. It is likely that the recorded drought was indirectly responsible for the fires, such under such circumstances, a moment of carelessness with fire would have been enough for buildings to start burning

quite quickly.[21] The mention in the records of uprooted garden crops also suggest drought conditions (though it is not known whether these crops were uprooted as a result of human activity), but there are other direct references to the disastrous yields too. Usually, lower yields occurred on manors where the records also indicate unfavourable weather events (Horodnica, Mosty).[22]

Let us take a look at how the efficiency of a single, threshed threescore of crops presented itself. As with the first chart, the target of the analysis will be winter varieties of rye, wheat, barley, and oats.

As the survey of the west-Lithuanian estates indicates, the maximum results were obtained for winter rye and oat crops. If we look at the average yield of a single mound of individual crops, it becomes clear that the highest yields were obtained on the Grodno estate. Simultaneously, the Grodno estate had the most varied crop threshing parameters. The average threshing rates per threescore oscillated around one barrel of brine. The crop yields were smaller on the Brest and Kobrin *ekonomias*. Barley and oat yields were similar. On average, barley and oat yields were noticeably better ion the Grodno estates and worse on the other estates. The threescore yield on the Brest *ekonomia* showed variation only in the case of oats. The poor values of threescore of wheat are confirmed in the source dedicated to the Kobrin property, where a very bad wheat yield is mentioned.[23] The accounts of the Kobrin *ekonomia* were also inaccurately kept, since in the case of the Horodec manor we have no data at all on the threshing or yields of rye or oats.[24]

The agricultural conditions on the estates under discussion were certainly also influenced by the number of livestock. Livestock breeding made it possible not only to obtain meat, hides, and dairy products. Livestock were also used in the fields, for instance in ploughing. In addition, livestock produced a certain amount of fertilizer, which made it possible to achieve higher yields of grain crops. As the sources do not always give a precise record of all the animals on a given manor, I consider only the presence of cows, as the records concerning cows on the estates are more precise.

21 AGAD, AK, sign. I/10, p. 27, 28, 31, 97, 180, 239, 258, 299.

22 AGAD, AK, sign. I/10, p. 20, 97.

23 AGAD, Metryka Litewska, sign. 29, 72.

24 AGAD, Metryka Litewska, sign. 29, 101.

Table 2. Number of milking cows and heifers on the farms of Grodno Starosty and the Brest and Kobrin *ekonomias* (1578–96)

Estate	Manor farm	Number of cows	Number of cows per Lithuanian volok of the farm[25]
Grodno Starosty	Horodnica	6	0.6
	Nowy Dwór	12	0.3
	Kotra	11	2.7
	Odelsk	0	0
	Skidel	0	0
	Łabno	6	0.2
	Jeziory	4	0.3
	Sałaty	0	0
	Mosty	5	0.3
	Wiercieliszki	18	1.5
	Milkowszczyzna	0	0
	Krynki	0	0
	Świsłocz	16	1.7
Brest *ekonomia*	Woin (Wohyń)	0	0[26]
	Kodeniec	0	0[27]
	Połowce	–	–
	Kijowiec	11	0.9
	Rzeczyca	–	–
Kobrin *ekonomia*	Kobryń	5	1
	Czerwaczyce	13	2.3
	Wieżece (Wieżki)	6	0.2
	Prużany	16	0.5
	Czachec	–	–
	Horodec	5	1.6

Source: Own work on the basis of AGAD, AK, sygn. I/10, 22, 51, 94, 170, 193, 237, 264, 294, 297; AGAD, ASK LVI, sign. 11, 16, 27; AGAD, Metryka Litewska, sign. 29, 28, 33–36, 50–53, 70, 73, 89–90, 101.

The recommendations of the Volok Law of 1557, which regulated relations on the estates surveyed, said that each manor should have at least 20 cows. If a lord's farm did not have that many animals, he was ordered to obtain more by purchase.[28] The sources indicate that already by the late 1570s the Grand Duke of Lithuania's instructions were not being followed. A survey of estates with a certain number of cattle shows that the Grodno estate had an average of 8.5, the Brest *ekonomia* 3.6, and the Kobrin *ekonomia* 9 mature cows per farm

25 One Lithuanian *volok* is roughly 21.3 hectares, Ochmański, "Gospodarka folwarczna," 372.

26 The cowshed was ravaged and probably emptied by Mielnik Chamberlain Kasper Dembinski during the 1588 interregnum, AGAD, ASK LVI, sign. 11, 27.

27 This property was also ravaged by the Mielnik Chamberlain. AGAD, ASK LVI, sign. 11, 24

28 Jaroszewicz, *Ustawa na wołoki*, 243.

(Table 2). We should approach the above data with a great deal of caution. The Milkovshchyna, Odelsk, and Skidel manors, which were on the Grodno estate and were leased by the widow of the late Grodno starost and the Vilna voivode, were not included in the survey.[29] This certainly contributed to lower average numbers of livestock in the records. Similarly, we should not trust the information from the Brest *ekonomia*, where we know the number of livestock for only one lord's farm. However, the number of livestock on the Lithuanian estates was much lower than, for example, on the estates in the neighboring Knyszyn Starosty (Podlasie), where there was an average of 41 cows (milking and barren) per single manor.[30] Recalculation of the number of milking and barren cows per Lithuanian volok shows considerable diversity in cattle. Values varied the most on the Grodno Starosty, but because of the single census of the cowshed in the Brest *ekonomia*, we cannot make a full comparison of livestock on the estates under study.

Conclusion

The above observations call attention to the differences in the crop yields on the farms of the Grodno Starosty and the Brest and Kobrin *ekonomias*. The best yields were generated by the crops of the Brest property, which usually had better agricultural conditions. Typically, Kobrin's *ekonomia* had the least productive harvests. This was probably related to the generally inferior conditions of the estate, as evidenced by the few mentions of wheat fertility or the poor condition of agriculture in 1597. The Grodno Starosty was also plagued by unfavorable natural events that reduced the quality of manor crops. However, there is no need to overestimate the negative effects of weather phenomena that periodically afflicted societies in modern Europe. In the case of some estates, it is likely that crop yields were only recorded in the wake of adverse weather events. However, the results of the study show primarily the inferior efficiency of the manor economy on the estates of Western Lithuania, which clearly differed from the situation in the neighboring Kingdom of Poland. The comparatively low crop yields on the estates discussed above were certainly affected by the low numbers of livestock, resulting not only from robberies suffered by the nobility during the interregnum, but probably also from real shortages in the number of livestock.

29 AGAD, AK, sign. I/10, 1.

30 Czapiuk, "Uwagi," 136–37.

It would certainly be worthwhile to undertake further research on the efficiency of agriculture on the Grodno Starosty and the Brest and Kobrin *ekonomias*, as this research would show (at least, the discussion above suggests so) that the farms owned by the landlords continued to produce comparatively poor crop yields.

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The Export Potential of Hungarian Agriculture and the Issue of Added Value between the two World Wars

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This study presents developments concerning Hungarian agricultural exports during a period when the production structure changed significantly and the international agricultural market changed fundamentally. As a result of the Treaty of Trianon, the market and logistic networks developed over the previous centuries had changed significantly, and new actors came to play increasingly prominent roles in trade relations in the Danubian Basin. Hungary, with its small consumer market but significant agricultural potential, had been fundamentally dependent on the value of its agriculture produce on foreign markets. However, the reorganization of the international market quickly brought to the surface the contradictions and structural imbalances of Hungary's massive agricultural production. Analyses of the agricultural history of the past century repeatedly revealed the problematic nature of the low value-added production of Hungarian agriculture.

Keywords: Hungary, agriculture, trade, export potential, added value

Introduction

The evolution of a country's export activity is mainly determined by two broad sets of factors. The first is the country's internal economic conditions, and the second is the country's interactions with the world around it. By analyzing developments involving Hungarian agricultural exports between 1929 and 1937, Miklós Siegescu shows in detail how domestic economic factors, such as production surpluses and price levels, and international economic conditions influenced Hungarian agricultural exports. His study also discusses the development of Hungarian foreign trade relations, especially with Austria, Germany, Italy, and Czechoslovakia and the effects of trade policy measures. It also provides detailed statistical data on the evolution of Hungarian foreign trade and agricultural exports, with emphasis on the role of the world market and international trade policy in the economic outcomes.[1] The interwar period bore witness to major changes in both areas.

1 Siegescu, "A magyar mezőgazdasági kiviteli," 538.

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Based on these considerations, the present study examines the challenges faced by Hungary in its trade policy and the results of its attempts to respond to these challenges. The situation in Hungary was aggravated by the fact that nearby East European countries also produced massive agricultural exports, and West European industrial states granted significant advantages to overseas agricultural products compared to Hungarian goods. These factors made Hungary's export markets unstable and difficult to predict.

Against a backdrop of restructuring and a fundamental lack of confidence in Hungary among its trade partners (in part since Hungary had been an enemy country for many of them during the war), the country had to seize every opportunity to find external markets for its agricultural products. Thus, the interwar period bore witness to an intensive search for foreign markets from the postwar crisis through an economic boom (peaking in 1929) and the Great Depression (1930–1934) to a new phase of prosperity (from 1935) marked by an economic policy of continuously increasingly military investments.

Hungary needed to increase its exports and achieve a positive trade balance to secure enough gold standard currencies to finance its massive prewar and postwar foreign debts. However, the demand for Hungarian export goods (mainly low added-value products which were easily found elsewhere) was volatile, and the prices of agricultural produce were generally going down. This resulted in a usually passive balance of trade and increasing financial (and political) indebtedness.

In the discussion below, I examine the evolution of the structure of Hungarian agricultural exports, with particular emphasis on the proportions of lower and higher value-added products and attempts at diversification.

Agriculture after the Treaty of Trianon

Agricultural lands in Trianon Hungary were put to various uses in proportions that differed significantly from the ways in which they had been used when the country had been part of the Austro-Hungarian Empire. While the share (but not net amount) of arable land significantly expanded (from 43.9 percent to 60.3 percent), the forested area drastically decreased, from 27 percent to 12 percent. Only a fraction of the gardens (25.2 percent), meadows (25.2 percent), and pastures (30.6 percent) and a larger share of vineyards (68.9 percent) that

had been within the borders of the country when it had been part of the Dual Monarchy remained within the new borders.[2]

In the new national territory, the distribution of land ownership showed a different structure compared to the pre-Trianon situation. Due to the land reforms, the imbalance in land distribution slightly decreased. The proportion of small and large estates changed, reflecting the distinct characteristics of the areas which had been made part of the neighboring states and the territory which remained to Hungary, rather than a worsening of the overall imbalance.

The proportion of small farms decreased, and many peasants found it increasingly difficult to live off their land. While 70.1 percent of farms over 1,000 cadastral yokes (1 yoke equals 0.58 hectares) remained within the new boundaries, the country lost 70 percent of small farms under 10 yokes. Additionally, Hungary retained 40.1 percent of farms between 10 and 50 yokes, 46.1 percent of those between 50 and 100 yokes, 46.7 percent of farms between 100 and 200 yokes, and 57.8 percent of farms between 200 and 500 yokes.[3]

The proportion of large landholdings did not change drastically. In terms of land ownership, before Trianon, 30 percent of the arable land was owned by large landholders with more than 1,000 cadastral yokes. In the new borders, this figure increased to 44 percent. However, it is important to distinguish between landholdings and landholders when analyzing these figures.

As a result of the territorial changes, the structure of the agricultural labor force differed in post-Trianon Hungary. The ratio of agricultural wage laborers to smallholders increased. If we consider smallholders with less than five cadastral holds of land as part of the agrarian proletariat, the proportion of the population involved was significant. However, these proportions depend on how ownership is defined. Different approaches to measuring land ownership, either through occupational classification or cadastral records, lead to varying results. For example, some agricultural laborers owned small plots of land, while others, who leased land, did not appear as owners in the statistics. The labor market situation was somewhat alleviated by the loss of regions such as Upper Hungary, which traditionally employed large numbers of seasonal workers, thus reducing the pressure on Hungary's agricultural workforce.[4]

2 Buday, *Magyarország küzdelmes évei,* 12.

3 Based on the data from MSK, New Series, vol. 56.

4 Zeidler, "Társadalom és gazdaság," 11; Gunst, *Magyarország gazdaságtörténete,* 40.

Table 1. Different types of agricultural producers (as a percentage)

	Before Trianon	**After Trianon**
Owner and tenant	35.2	31.4
Other independent	0.5	0.7
Family worker (unpaid)	31.1	21.9
Administrative manager *(gazdasági tisztviselő)*	0.2	0.3
Farm hand *(cseléd)*	9.9	14.7
Agricultural laborer	23.1	31

Source: "A háború előtti Magyarország," 292–93.

Exposure to External Markets

As a consequence of the Treaty of Trianon, Hungary became heavily dependent on foreign trade. The country lost the secure markets it had had access to under the Monarchy. The former single market was replaced by countries with independent economic policies, new customs borders, tariffs, and independent currency zones. Distrust among the successor states contributed to the strengthening of exclusionary policies, as many of the newly emerging states interpreted the post-Trianon situation as requiring a restructuring of old economic relations and a partial or complete reorganization of traditional market and capital relations.[5] However, the economic interdependence of the countries in the region is well illustrated by the fact some 20 years later, the Little Entente had not been able to eliminate export-import trade with Hungary. In fact, a significant share of the trade in goods among the states of the Little Entente was routed through Hungary by rail and water. Almost only arms shipments avoided Hungary.

Before 1918, most of Hungary's agricultural exports did not go beyond the borders of the Monarchy, i.e. agricultural produce was exported to a protected market of 52 million people, where prices were significantly higher than on the global market. Hungary had been in a customs and monetary union with the Austrian hereditary provinces for centuries and with Bosnia and Herzegovina for decades. Austria was able to absorb Hungarian agricultural produce, thus protecting the prices. With the breakup of the Monarchy, Hungary lost this advantage. The limited domestic market made agricultural exports especially vital, but the opportunities to sell products and produce became increasingly

5 Mózes, *Agrárfejlődés,* 185.

limited.[6] The country could only sell its surpluses at world market prices and was vulnerable to external market and political changes.[7] Moreover, this happened at a time when Hungarian agriculture, which had high costs, could only achieve low export prices. Whereas before 1918 Hungarian agriculture had benefited from the protection of high tariffs, it now faced open competition on the world market.[8]

In 1920, many of the territories that were ceded were heavily dependent on agricultural imports, as their own agricultural production had not been sufficient to meet the needs of their population even before 1919. Since the remaining territory had already produced the largest share of agricultural surpluses, the relative surplus of agricultural production increased significantly after the signing of the Treaty of Trianon. There was no demand within the country for a significant portion of the agricultural produce, so this surplus had to be sold on foreign markets. Between 1924 and 1938, 55–70 percent of the agricultural produce brought to market was sold abroad, as was 55 percent of cereals, 38–40 percent of sugar and sugar beet production, 25–30 percent of tobacco, and 20 percent of the potato crops. And this list includes only the items that were exported in large quantities during the period in question. One could add to it to include items that were only occasionally exported in large quantities.[9]

The division of labor that had developed over the course of centuries in the Carpathian Basin and the forms of cooperation among specialized areas of production and consumption that had been consolidated under the Austro-Hungarian Monarchy were greatly hindered by the new postwar frontiers, and this was only aggravated by the political rivalry and nation-building programs initiated by the successor states, including the creation of unified, protected national markets. No state in the region was an exception. Hungary, Romania, and the Kingdom of Serbs, Croats and Slovenes all focused on industrial development, while Austria and Czechoslovakia strove for agricultural self-sufficiency. These tendencies put the theory and practice of comparative advantage into a kind of parenthesis, and, in a spirit of mutual mistrust, the states of the region strove to build complex national economies, i.e. economies that provided strategic security. All this created an economic structure in the Danube basin in which several parallel capacities operated at an unnecessarily

6 Föglein, "Tradíció és modernizáció," 259.

7 Schlett, "Agrár-közgazdaságtan," 18–19.

8 Orosz, "A modernizációs kísérletek," 248.

9 Gunst, "A magyar mezőgazdaság piacviszonyai," 517–18.

high cost but which, in the event of war, was less economically vulnerable to the need to import items of strategic importance. Economic cooperation among the nations of the former Monarchy was thus hampered not only by higher tariffs but increasingly by politically motivated economic policies, leading in the longer term to a decline in foreign trade relations. In the years following the war, however, autarchic ambitions were less prevalent for a time, and traditional specialization and cooperation continued for a while.[10]

This economic cooperation was encouraged by Article 205 of the Treaty of Trianon (identical to article 222 of the Austrian peace treaty), which called for a regional customs agreement among Austria, Hungary, and Czechoslovakia within five years of the signing of the treaty. However, these states were unable to conclude such a treaty and instead maintained the obsolete tariff system inherited from the Monarchy, supplemented by special provisions and import restrictions. Hungary, however, paid considerable attention to promoting foreign trade relations through bilateral and multilateral trade treaties and the application of the so-called most-favored-nation principle. Hungary needed these advantages because its relatively costly agricultural sector and less developed industry were the only way to compete on export markets.

In the early 1920s, in the absence of a general customs agreement, the region's foreign trade relations were facilitated by bilateral treaties. An important consideration in the setting of tariffs was to blunt the differences between the producer groups involved in agricultural exports and the industrialists wishing to protect domestic industry. Agricultural import tariffs were therefore set at low levels, since they posed little threat to domestic sales, while the high import tariffs on industrial products were used both to protect the nascent industrial sector in Hungary and to provide indirect support for the marketing of agricultural produce, in so far as promises to reduce industrial import duties could be used to obtain more favorable terms in trade agreements.

These tariffs and agreements alone could hardly have affected the structure of Hungarian exports and imports. In Trianon Hungary, agricultural surplus production was a fundamental characteristic due to the higher proportion of land suitable for cereal production. After 1920, the country was dependent on the income brought in through agricultural exports, mainly of grain and flour. Whereas immediately before the war, in years of particularly poor harvests,

10 Zeidler, "Társadalom és gazdaság," 13–14.

Hungary had had hardly any surpluses crossing customs borders, after the war, economic prosperity depended mainly on these agricultural exports.

Austria and Czechoslovakia remained important partners, but the Hungarian agricultural sector faced unprecedented difficulties in the face of general international oversupply and competition in transport and tariffs, as well as world market prices. Its low productivity and relatively high production costs made sales difficult, even though Hungary had a vital need for export earnings. It had to meet its international payment obligations, make up for an increasingly pressing shortage of capital, and cover the large costs of imports of raw materials and consumer goods by Hungarian industry. Hungarian agriculture was unable to meet these demands as part of the new international constellation, and the trade balance showed a significant deficit until the end of the 1920s.[11]

Gyula Balkányi paints a vivid picture of the loss of markets and its effects in *Közgazdasági Szemle* (Economic Review):

> Today's generation grew up in a nursery, used to an economic milieu where the "market" was the internal consumption of a large economic area in a customs union with our country. "Our market," as we remember it, is an area to which producers from competing countries do not have equal access. The market for Hungarian grain, flour, cattle, pigs, fat, bacon, fruit, and wine was, as we remember it, *Austria*. Not in the way that we were allowed to export goods there. But in the way that others were not allowed to export there. The market, in this exclusive sense, was lost to us. (…) While we were in Greater Hungary and in a customs union with Austria, we did not have to worry about competition from overseas countries. Our goods were known in Austria, our production was adapted to this market. And if there was a threat to our markets—competition by Italian or Spanish wines, frozen meat from Argentina—we could always help by raising customs duties or banning imports. (…) Now, however, we are on a market where our competitors also operate, where we must strictly align our prices with the pricing demands of our rivals, and where we must strive to offer the quality that consumers' desire. If we provide a better product than our competitors, we must use the most extensive promotion to convince buyers of the superiority and excellence of our prices. The notion that even such a market can be ours must become deeply ingrained in the mindset of today's generation.[12]

11 Ibid.

12 Balkányi, "Magyarország mezőgazdasági kivitele," 138–39.

The Collapse of Agro-Vertical Integration

Following the Treaty of Trianon, there was a serious imbalance between agricultural raw material resources and processing capacity. It soon became apparent that the highly productive milling, sugar, beer, and leather industries which had previously been designed to supply the Monarchy were unable to utilize their existing capacities. While a significant proportion of the raw material base, including the most important grain-producing areas (South Bačka, Banat, Grosse Schütt), was detached from Hungary, the processing capacities of the Budapest mills were concentrated in the remaining territory of the country.[13]

The situation in the timber industry was similar after Hungary's loss of most of its forestlands to the neighboring countries. The redundancies were soon followed by factory closures: mills became warehouses and breweries became chocolate and sugar factories and textile mills.

The milling industry was hit hardest, losing a significant proportion of its natural raw material base and a significant part of its upstream markets along the River Danube. Budapest mills also lost Serbian and Romanian wheat as the milling trade ceased.[14] Previously, the milling industry in Budapest sourced 50–60 percent of its raw materials from the detached territories. The mills were able to grind 64.5 million quintals of grain, whereas the country's grain production in the early 1920s averaged 24.2 million quintals. In 1913, 13 mills were working in Budapest, compared with only 9 in 1921. The rest were idle. The mills were also operating at a reduced capacity.[15]

The situation was made critical by the customs policy pursued by Austria and Czechoslovakia, the only countries of the one-time Monarchy which still imported substantial quantities of Hungarian flour in the 1920s. Both countries were keen to support their own milling industries and therefore preferred grain imports to flour imports. The autonomous Austrian agricultural tariffs of 1925 and the Czechoslovak agricultural tariffs of 1926 greatly reduced Hungarian

13 See Klement, "Budapest és a malmok."

14 The milling trade in the milling industry refers to the practice where mills process foreign raw materials, such as grain imported from abroad, and then export the resulting flour or other processed products. This process was common in Central Europe, particularly in countries like Hungary, where the milling industry played a significant role in the economy. One of the main advantages of the milling trade is that it allows the country to export processed products with greater added value instead of raw grain. This practice previously contributed to the development of the milling industry, and also played an important role in international trade.

15 *Közgazdasági Értesítő,* March 7, 1929, 2–3.

flour exports and increased grain exports. As a result, Hungarian mills were able to use only 20-25 percent of their capacity, and thus the production costs were far higher than the costs incurred by their competitors. This led to a crisis in the milling industry.[16]

By the end of the decade, the circumstances had improved, and the domestic milling industry was functioning at about 40 percent of its prewar capacity. This improvement was due to the increased demand for Hungarian flour, which can be partly explained by the stabilization of the international economic situation and the restoration of trade relations. Still, the importance of the milling industry after Trianon is shown by the fact that it accounted for 13–15 percent of the total industrial output in the 1930s, topping all other branches/categories except for textiles and the iron and metal industries.

As a result of the Treaty of Trianon, twelve of the 30 sugar factories in operation at that time remained in Hungary, accounting for 41 percent of the beet processing capacity in 1914. The neighboring countries acquired 48.1 percent of the territories which had been used for sugar beet production.

The remaining factories represented 43 percent of the beet processing capacity in 1912. The industry had to cope with serious external and internal problems. As with the milling industry, it had lost part of its natural raw material base (especially to Czechoslovakia) and a significant part of its upstream markets. The decline in sugar exports is illustrated by the fact that, whereas in 1913 they amounted to 68.9 million gold crowns, in 1926 they were only 23.9 million. Underutilization of capacity and low production volumes due to low domestic consumption resulted in higher unit costs.[17]

By 1923, sugar production was already covering domestic consumption, and exports also began. By 1928–29, production reached 82 percent of the prewar (proportional to territory) production level. As a result of the 1929 crisis, production significantly declined, and at the lowest point of the crisis in 1932–33, it fell to 42 percent of the pre-crisis level. The 60 percent share of exports in 1929 had fallen to 4 percent by 1938 as a result of the fall in international sugar prices. Even with cheap exports at dumped prices of eight to ten p*engő*s (1.4–1.75 dollars) per quintal, sugar factories were still making minimal profits, but they were threatened by financial collapse. They asked the Government to reduce the high

16 Eckhart, *A magyar közgazdaság száz éve,* 274.

17 Szegő, "A magyar cukoripar," 31; Vajda, "Cukoripar," 667.

taxes on sugar (sugar tax, treasury share, sales tax), amounting to 52 percent of the 1.27 *pengő* (0.22 dollar) retail price, but in vain.[18]

The New Customs System

With the dissolution of the Austro-Hungarian Monarchy, the previous customs system became obsolete, and establishing the country's economic independence became a pressing task. The creation of a new customs tariff system was an essential means with which to strengthen the Hungarian economy. However, the rapid introduction of the new tariffs was made more difficult both by certain clauses of the peace treaty (which required most-favored-nation concessions for the Allied and Associated Powers) and by the conflicting interests of the domestic industrial and agricultural lobbies. According to the those working in agriculture, the reestablishment of free trade within the former Monarchy would be the ideal solution when building new regional trade relations, while those in industry favored the creation of a strong system of protective tariffs. The former did not reckon with the fact that Austria and the Czech Republic how already begun to pursue policies designed to protect and support the farms created by the postwar land distribution and that autarkic agricultural policies were being strengthened on the former export markets. This made it impossible for a reciprocal trade policy to develop, and the surplus production of cereals in the early 1920s also provided these industrialized countries with cheaper import opportunities. Contemporaries realized that the war had shattered the quasi-equilibrium on the agricultural market of the previous decades. The increase in demand for food and raw materials and the drastic drop in production in some areas (or the drop in exports due to the war) encouraged the United States and other countries less affected by the war (e.g. South American countries) to increase their output in agriculture and food products. During the postwar economic recovery, when production began to reach prewar levels anyway, these surpluses resulted in a significant oversupply and caused a drop in world prices (Fig. 1). Austria bought one-third of its cereals from the United States, and Czechoslovakia bought half of its flour from the United States.[19] This was an awkward consequence of the foreign trade struggles and regional "self-isolation" policies among the small states of Central Europe.

18 Pál and Salánki, "A cukoripar fejlődése," 328.

19 Buzás, "Magyarország külkereskedelme," 148.

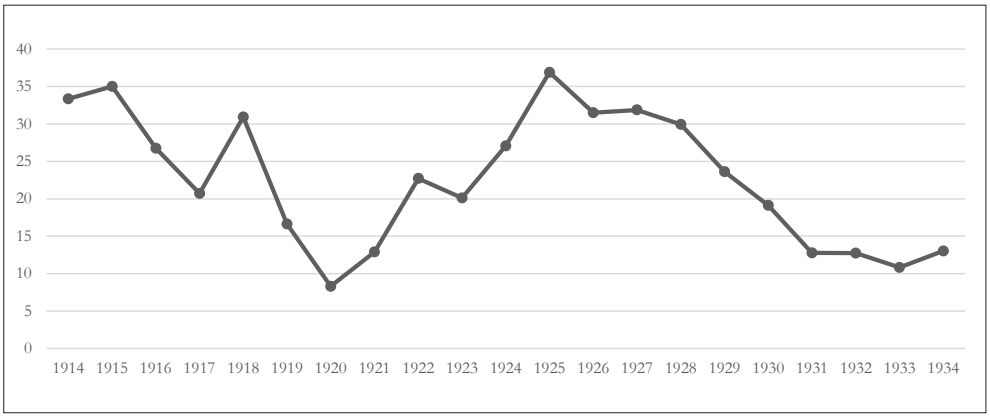

Figure 1. The average annual price of wheat between 1914 and 1934 (*Pengő* per 100 kilograms). The low prices from 1915 to 1921 for all grains (wheat, rye, barley, oats, corn) were government-regulated maximum prices aimed at curbing speculation and inflation. Source: Rege, "Magyarország búzatermelésének," 463, 471, 474; Szőnyi, "Gabonaárak," 204.

Customs policy debates were most heated over the 1923 tariff bill, which was strongly protective of industry and was intended to further rapid and far-reaching industrialization. Critics emphasized that Hungary, as an agricultural country, should be cautious when offering strong protections to industry as a means of developing the national economy. The new tariffs would foster industrial development only if they did not endanger the interests of the agricultural sector and consumers.[20]

Finally, the new customs regime introduced in January 1925 included more and higher import tariffs (30 percent on average). While tariffs on light industry products reached 50 percent, certain agricultural equipment and major raw materials were allowed to enter the domestic market duty-free. The new system also fueled the hope that a reduction in certain tariffs based on reciprocity could serve as a basis for negotiating easier placement of Hungarian agricultural exports.

Foreign Trade Agreements

In the interwar period, every small Central European country sought to protect its domestic market from foreign competition while also aiming to secure export opportunities for its domestic producers. However, this dual objective posed

20 Matlekovits, *Vámpolitika és vámtarifa*, 51.

significant challenges during international trade negotiations, as protectionist tariff policies and efforts to promote exports often represented conflicting interests. As a result, the formation of customs and trade agreements between various countries was often prolonged and required compromises.

In the period between 1925 and 1929, the main objective of Hungarian trade policy was the negotiation and adoption of bilateral agreements. The principal aim was to secure favorable conditions, especially low tariffs, for Hungarian agricultural and food exports. The strategic importance of this is also shown by the fact that agriculture provided 60 to 65 percent of Hungary's total exports throughout the period. In order to minimize the deficit in the foreign trade balance, every effort had to be made to ensure that agricultural products could reach the markets of potential importing countries.

The most important trade partner, of course, was Austria. Its share of Hungary's exports declined significantly in the 1920s, from 60 percent before the war to 34 percent by the end of the decade, but it still remained Hungary's most important trade partner. The central issue of the Austro-Hungarian negotiations was the level of Austrian tariffs on Hungarian agricultural goods and Hungarian tariffs on Austrian industrial goods. After lengthy negotiations lasting some 14 months, the treaty regulating trade between the two countries and the supplementary tariff agreement were concluded on May 9, 1926.

Significantly, the reduction of import duties on wine and flour was the most contentious issue in the Hungarian proposals and the one on which the Austrians were least willing to make concessions. In the end, the agreement was concluded, which was regarded in economic circles as the first significant step toward boosting foreign trade. However, the protectionist spirit that prevailed was illustrated by the fact that in December 1926, a Christian Socialist representative, speaking for the agricultural representatives, called for a review of the recent agreement and an increase in the tariff rate for agricultural products.

In the end, the agreement was concluded. In economic circles, it was regarded as the first significant step towards boosting foreign trade.

In the spring of 1927, a similar treaty was concluded between Hungary and Czechoslovakia after difficult diplomatic negotiations. This treaty was all the more important, because a previous agreement between the two countries, reached in 1923, had not contained a tariff section and had not specified the meaning of the "particularly favorable treatment" that the two parties had pledged to accord each other. Thus, the 1923 agreement did not substantially further the expansion of Hungarian agricultural exports to Czechoslovakia, and

it also did not prevent Czechoslovak agricultural protectionist measures. From time to time, the Prague Government issued bans on the import of Hungarian flour and increased tariffs on certain agricultural products.

Thus, following the political disintegration of the Austro-Hungarian Monarchy, previous trade relations also began to deteriorate. Although Czechoslovak industrialists and Hungarian landowners would have been interested in establishing relations, both had lost political influence in their respective domestic contexts.

In Hungary, the lobbying power of industrial capitalists increased, while in Czechoslovakia, those involved in agriculture gained influence, and they were opposed to any compromise. Although negotiations for a trade treaty were underway, they progressed very slowly and the establishment of relations on a new basis was hampered by political differences. Finally, the introduction of new Hungarian tariffs made it imperative to normalize trade relations. A trade agreement was concluded on May 5, 1927, based on the principles of most-favored-nation treatment and parity.

The agreement reflected stronger agricultural protectionism in Hungary and industrial protectionism in Czechoslovakia. When the agreement was reached, trade between the two countries was already in decline, and the decrease was particularly marked in exports from Czechoslovakia to Hungary. Imports of raw materials from Czechoslovakia continued to increase, but textile imports fell, very much in line with the intentions of Hungarian industrial policy. While in 1924 textiles still accounted for half of Czechoslovak exports to Hungary, in 1929 they accounted for just over a third. The Czechoslovak government, however, welcomed the decline in Hungarian agricultural exports and intensified its trade relations, if only for political reasons, with the two other Little Entente states.[21]

The Great Depression

The global economic crisis immediately disrupted the slowly developing trade relations and significantly worsened the sales position of Hungarian agriculture. In addition to the decline in export volume, the price drop of export goods also had a detrimental effect on Hungary's foreign trade balance. The fall of agricultural prices alone between 1929 and 1931 caused a 100 million *pengő*

21 "A Magyar–Csehszlovák Vegyesbizottság," 1107.

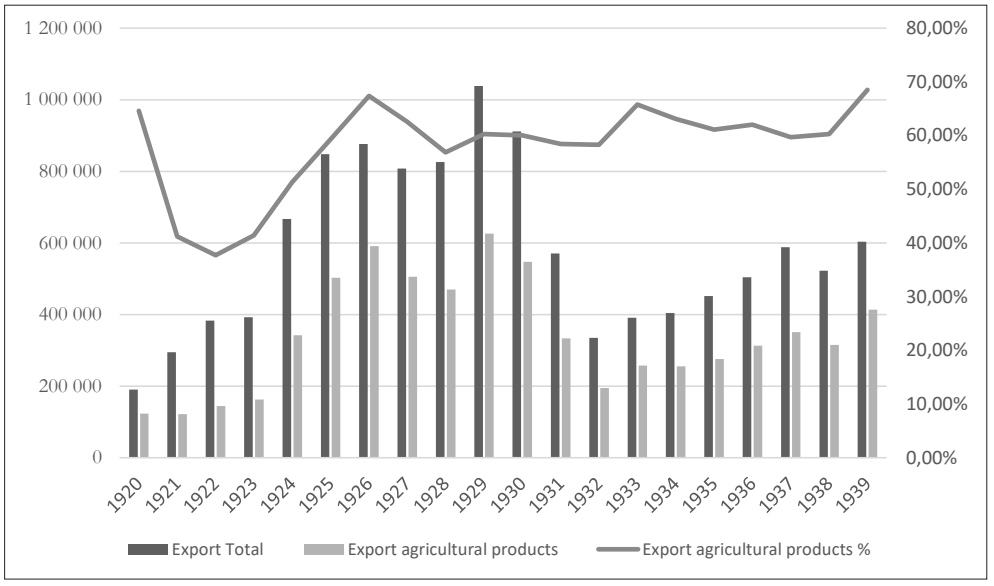

Figure 2. Changes in exports between 1920 and 1939 (thousand *pengő*)
Source: Based on the data from the MSK, New Series, vols. 75, 77, 78, 80, 81, 82, 84, 85, 95, 98, 101, 106, 109, 111.

(17.4 million dollars) drop in Hungary's trade balance. The dramatic fall of the ratio of agricultural prices to industrial prices dealt a particularly strong blow to the trade balance, since Hungary exported mainly agricultural produce and imported mainly industrial goods. As a result, in 1932 imports fell by 39.1 percent and exports by 41.4 percent[22].

As countries sought to balance their trade, they responded to the crisis by strengthening their protectionism. The culmination of this process was Czechoslovakia's withdrawal from the trade agreement with Hungary in 1930. Czechoslovakia intended to strengthen its economic ties with the other two Little Entente states by significantly reducing trade with Hungary. In the non-treaty situation, as of 1930, Hungary's exports to Czechoslovakia fell from 16.8 percent of total exports to 4.2 percent the following year. Between 1929 and 1931, Hungary's total exports fell by 45.1, while exports to Czechoslovakia fell by 86 percent. As a result of the crisis, Hungarian agricultural exports fell sharply both in volume and especially in price. The maximum agricultural export of 626 million *pengő*s in 1929 fell to a minimum of 195 million *pengő*s in 1932.[23]

22 MSK, New Series, vol. 84, 21.
23 MSK, New Series, vol. 82, 51.

Hungarian agricultural policy reacted with the introduction of the *boletta* system (July 1930) and the price premium system (July 1931) as an immediacy measure for the sale of agricultural produce, as well as intervention buying. Long-term solutions also had to be introduced without sacrificing the farmers' free choice of production. Károly Ihrig, a prominent agricultural economist of the era, saw the key to expanding sales opportunities in improving the marketability of products and establishing cooperatives that would ensure greater organization and profitability for small farms.[24] Kálmán Ruffy-Varga was of a similar opinion, stressing the need for official certificates issued by the state for each type of Hungarian wheat in response to the quality requirements of foreign countries, which allowed only the highest quality wheat to be exported.[25]

Foreign Trade Agreements in the 1930s

For Hungary, finding the way out of the struggles it faced with agricultural exports was facilitated by the opening of the German, Italian, and Austrian markets. In the 1930s, the agreements made with these countries became the foundation of Hungary's foreign trade. Under an agreement concluded in Rome in May 1934, Italy and Austria undertook to purchase Hungary's surplus wheat at a profitable price. By this time, Germany had also realized that it was a mistake to use agricultural tariffs to hinder agricultural imports from countries in which Germany also sought to sell its industrial products.

From the onset of the economic crisis, German foreign trade policy increasingly reflected the effort to make concessions to the agricultural exports of the countries in Central and Southeastern Europe to secure markets for German industrial goods. Through bilateral trade agreements, Germany committed to purchasing agricultural products from Hungary.[26]

This was influenced by the realization that the *Südostraum*, "abandoned" by the Western powers, could easily be tied to Germany by bilateral trade agreements which would serve long-term German geopolitical aims. However, there was also a simple economic and financial reason to open towards the markets to the east. Germany had lost its previous overseas sources of raw materials due to currency difficulties. Furthermore, the German agricultural market could provide a solution to the most serious problems faced by the

24 Ihrig, *A szövetkezetek,* part 4, chapter 4.

25 Schlett, "Megkésettség," 219.

26 Fejes, "A magyar–német gazdasági," 370–71.

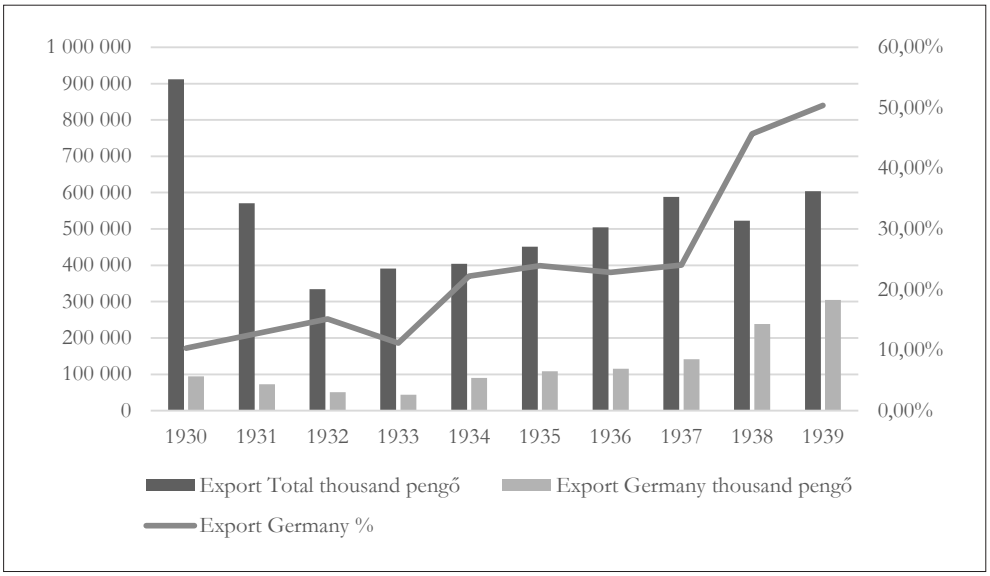

Figure 3. Changes in export between 1930 and 1939
Source: Based on the data from the MSK, New Series, vols. 81, 82, 84, 85, 95, 98, 101, 106, 109, and 111.

countries of this region, especially Hungary, after the breakup of the Monarchy: the permanent crisis of overproduction caused by the loss of agricultural export markets. In 1934, a bilateral agreement was reached between the two countries, a supplement to the 1931 trade treaty, allowing Hungary to sell substantial quantities of grain, livestock, fat, meat, and bacon in Germany. Within one year (in 1934), Germany's share in Hungary's exports doubled (from 11.2 to 22.2 percent) and then continued to increase until 1938, when, because of the Anschluss, Hungarian exports to Germany nearly doubled again (from 24.0 to 45.7 percent). Meanwhile, Hungarian imports from Germany rose from 14.9 percent (in 1933) to 24.9 percent (in 1937) and then to 43.9 percent in the year of the Anschluss. By the mid-1930's Germany had become Hungary's most important foreign trade partner, and by the end of the decade, half of Hungary's foreign trade was directed to and received from Germany.

One of the consequences of the boom in exports to Germany, however, was that the Hungarian agricultural sector became a major creditor to the German economy due to the surplus in foreign trade caused by Germany's reluctance to balance the clearing bill and, in fact, to pay its debts. The clearing imbalance was due to the fact that Germany significantly limited its exports of raw materials, as domestic demand increased in preparation for the war. While its

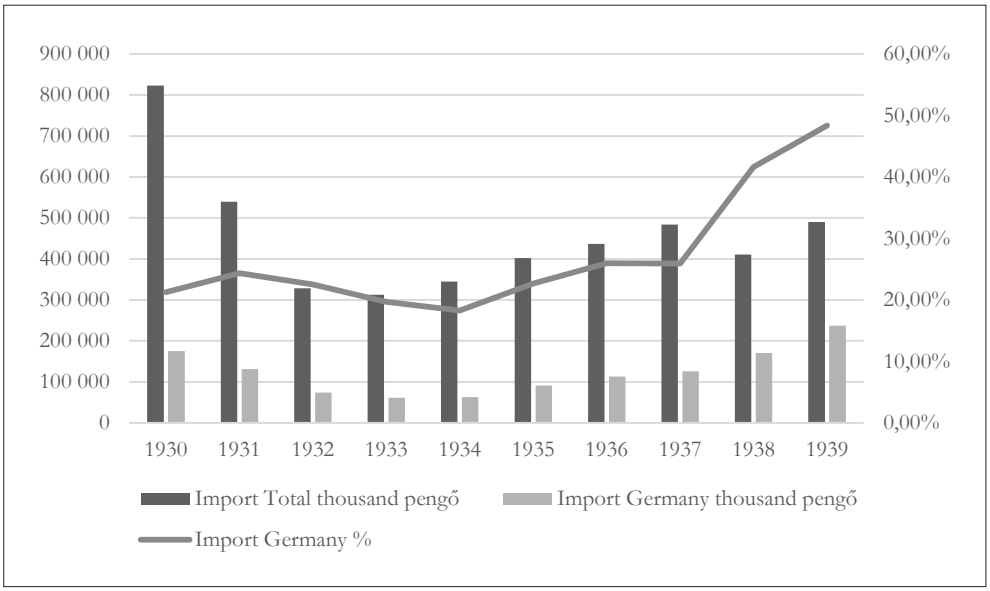

Figure 4. Changes in import between 1930 and 1939
Source: Based on the data from the MSK, New Series, vols. 81, 82, 84, 85, 95, 98, 101, 106, 109, and 111.

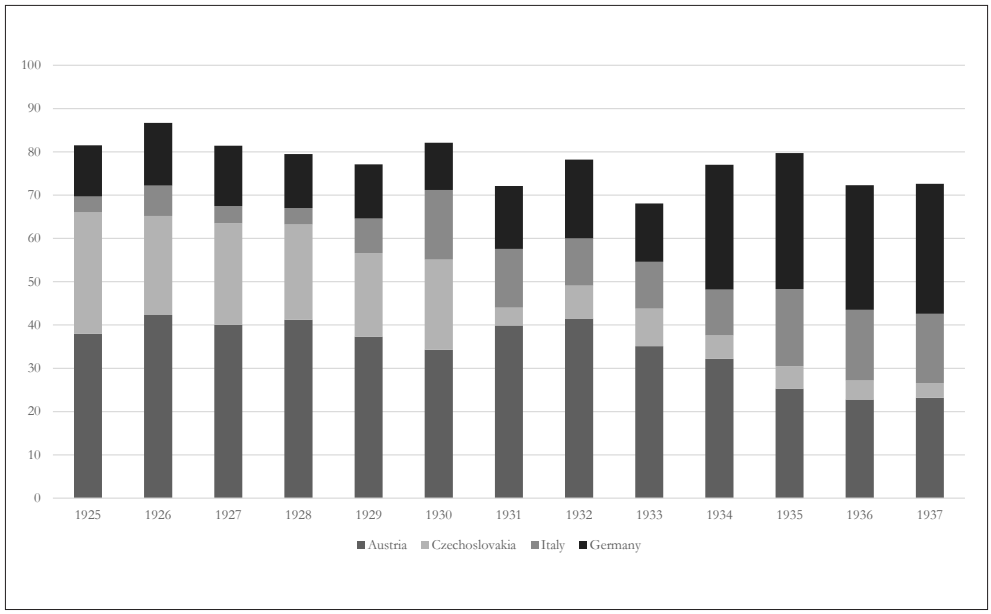

Figure 5. Distribution of agricultural exports to the most important countries between 1925 and 1937 as a percentage)
Source: Buzás, "Magyarország külkereskedelme," 148.

share of Hungarian imports of raw materials and semi-finished goods averaged 26 percent between 1927 and 1933, it was only 12.9 percent in 1937.[27]

The "missing" German products had to be imported from countries with freely transferrable currencies. This prevented exports to countries that would not have paid with hard currency. The Hungarian Government ordered export companies to sell their products amounting to at least 20 percent of the value of their exports towards Germany in countries which made their payments in gold or hard, freely transferrable currencies. In order to achieve this aim, the government also provided proportional export subsidies to these companies. Export earnings had to be transferred to the Hungarian National Bank, which paid the companies the equivalent in *pengő*s at the official exchange rate, while the Treasury added different premiums (according to each country and product), thus providing a considerable incentive for exporting companies. In 1935, premiums were set at 38 percent for "franc" exports (Belgium, France, Switzerland) and 50 percent for exports in a convertible foreign currency, irrespective of the nature of the products.

In 1936, the Price Compensation Fund *(Árkiegyenlítő Alap)* was created to support agricultural exports, and in its first year, 1.75 million *pengő*s (306 thousand dollars) were allocated from the state budget and a further 1.228.315 *pengő*s (215 thousand dollars) were made available thanks to the extra revenues from the high prices of exports to Germany. This enabled foreign exchange earnings of 10,891,504 *pengő*s (1.9 million dollars) in 1936. This scheme also helped increase Hungarian exports to Great Britain and the United States in the second half of the 1930s.[28] Exports to the United States increased in both 1936 and 1937 but then declined, while exports to Great Britain only rose until 1936, after which they started to decrease, with a dramatic drop by 1939.[29]

In the case of Hungary, the importance of agricultural exports in exchange for hard currency stemmed from the desire to reach an equilibrium in the balance of trade but even more so from the indebted country's need to produce enough hard currency to finance the regular repayments of capital and interest. It is hardly a mere coincidence that the intentions of creditor countries began to appear behind the increase of sterling and dollar-based Hungarian exports. Thus, from the beginning of the Great Depression until the outbreak of World War II, important agricultural trade relations were established with countries

27 Bende, *Magyar Külkereskedelmi Zsebkönyv*, 1938, 72.

28 Szuhay, *Állami beavatkozás.*

29 Based on the data from MSK, New Series, vols. 85, 95, 98, 101, 106, 109, and 111.

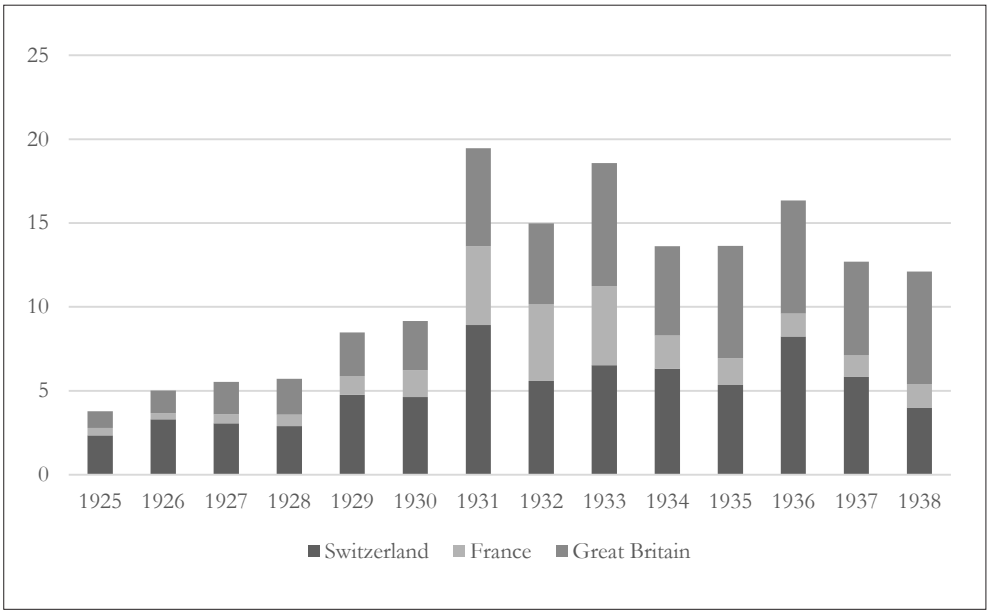

Figure 6. Agricultural exports to Switzerland, France, and Great Britain (as a percentage). Source: Gunst, "A magyar mezőgazdaság piacviszonyai," 529.

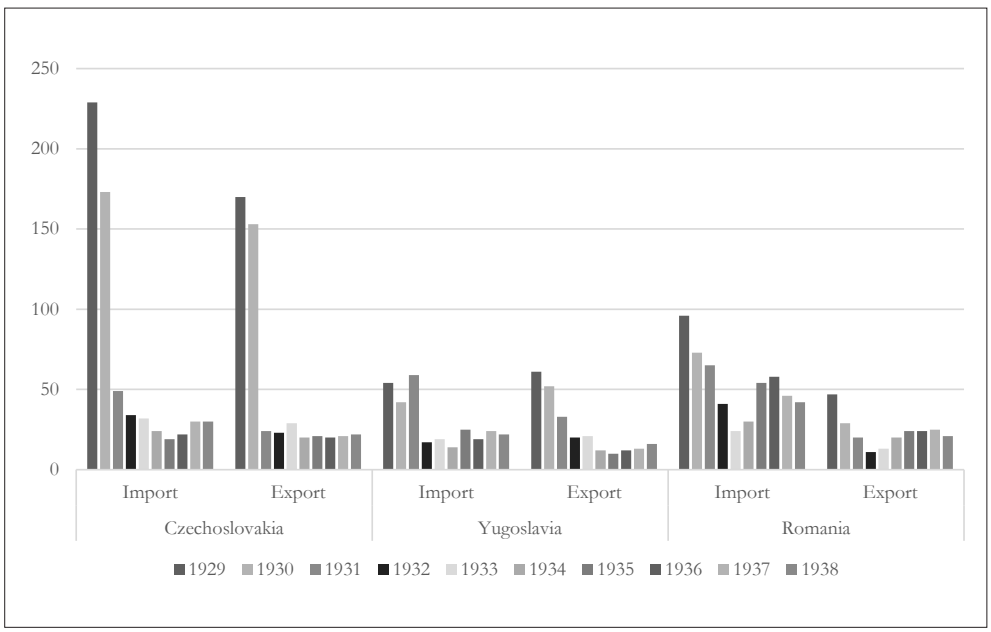

Figure 7. Hungary's foreign trade with the Little Entente countries (in millions of *pengő*) Source: *Statisztikai Tudósító*, March 29, 1939. 4.

that had previously functioned not as agricultural markets but as creditors for the Hungarian economy. Thus, Hungarian agricultural products with low added value could also help improve the country's unstable financial situation (Fig. 6).[30] When analyzing the changes in agricultural exports, one should note that after the sharp decline during the economic crisis, the country was able to increase its agricultural exports significantly, but there was a significant concentration of the markets, which led to increased dependence on the German Empire.

The decreasing diversification of the destination of Hungarian agricultural exports is reflected in the drastic decline of trade with the Little Entente countries. In addition, the balance of Hungarian foreign trade with these countries ran deficits almost every year.

The Issue of Added Value

Another key explanation for the specificities of Hungarian exports lies in the product structure. If we look at the distribution of external trade by economic sector and by the degree of processing of goods,[31] it is striking that between 1935 and 1939 the share of raw materials in Hungarian imports declined significantly (from 47.7 to 35.5 percent), while the share of finished goods continued to rise (from 25.5 to 35.4 percent).[32]

In the second half of the 1930s, the proportion of raw agricultural products in agricultural exports continued to rise from an already high level, while the share of processed food products declined (see Fig. 9). Exports of cereals and livestock increased, whereas higher value-added products, such as meat and meat products, as well as dairy products, experienced stagnation or decline.[33]

The changes in agricultural trade are even more noticeable when we break down the volume of exports by product group according to the degree of processing. The most important products in total exports were wheat and wheat flour.

One of the most striking changes in the 1930s was the sharp downward trend in flour exports. It also shows the profound changes that had taken place in

30 Siegescu, "A magyar mezőgazdasági kiviteli," 548.

31 It is important to note that the Hungarian Central Statistical Office (KSH) applies two different approaches in classifying raw materials, semi-finished products, and finished goods: one based on production and the other on usage. In this article, I follow the production-based approach and categorize the products accordingly.

32 *Kereskedelmünk és iparunk az 1939. évben*, 34.

33 Bede, *Magyar Külkereskedelmi Zsebkönyv,* 1938, 26, 32–33.

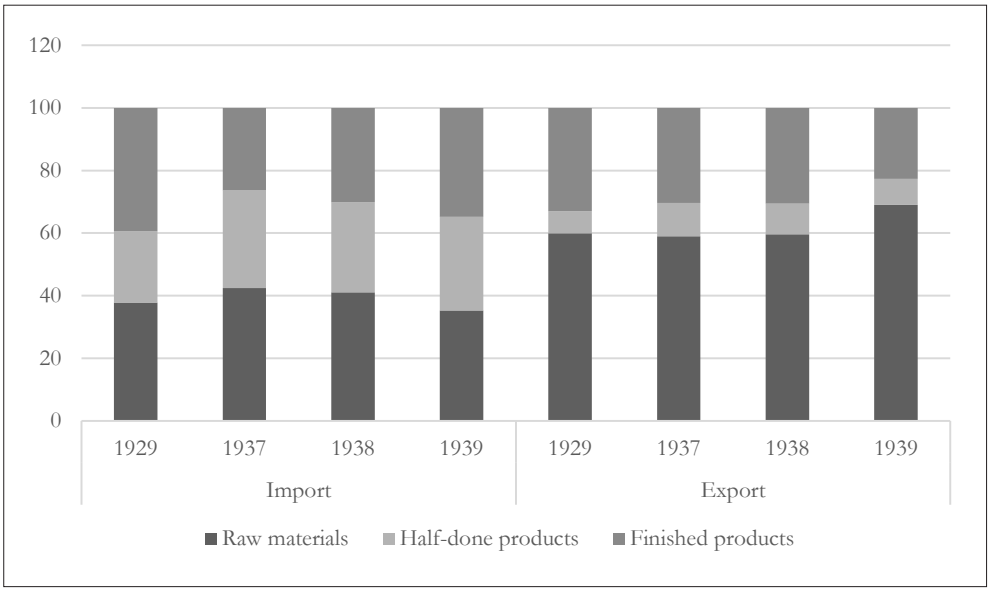

Figure 8. The distribution of foreign trade according to the degree of processing of the products (as a percentage)
Source: Based on *Kereskedelmünk és iparunk az 1939. évben*, 34.

Figure 9. Ratio of agricultural raw materials and manufactured goods in exports (as a percentage)
Source: MSK, New Series, vol. 81, 417; 82, MSK, New Series, vol. 81, 417; vol. 82, 406; vol. 84, 376; vol. 85, 374; vol. 95, 377; vol. 98, 371; vol. 101, 360; vol. 106, 305; vol. 109, 301; vol. 111, 291.

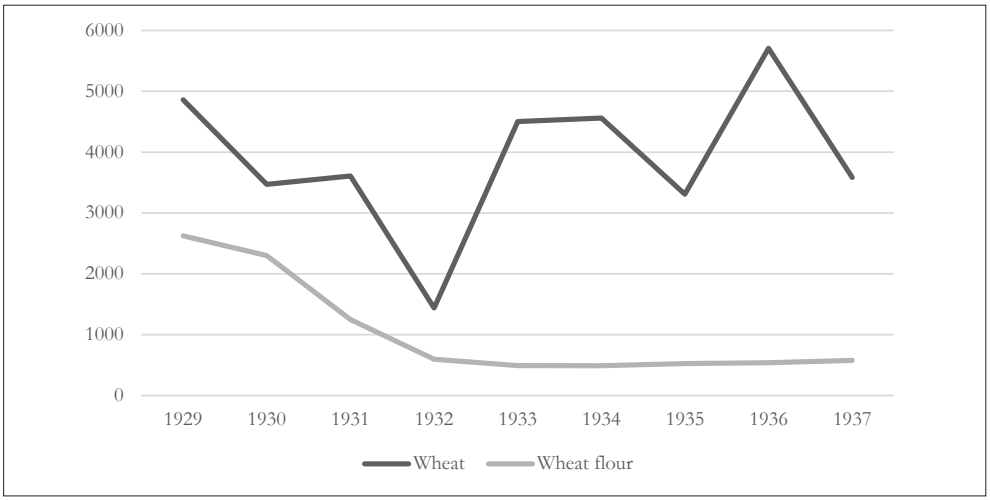

Figure 10. Development of wheat and wheat flour exports (in thousands of quintals)
Source: Own compilation based on Siegescu, "A magyar mezőgazdasági kiviteli tevékenység," 551.

international agricultural trade. These adverse changes cannot be attributed solely to the failings of Hungarian agricultural policy, as they also reflected the aspirations of the traditionally agricultural importing countries of the period. Namely, in an uncertain international environment, importing countries, motivated by growing protectionism, sought to reduce absolute exposure to strategic commodities by limiting their imports to the most profitable form possible. Thus, of course, they also secured the economic benefits of processing for their own country.

Summary

With the dissolution of the Austro-Hungarian Monarchy, the traditional markets for Hungarian agricultural produce became less accessible. This in turn triggered a transformation in Hungarian trade policy. The disintegration of the single customs area, the lack of competitiveness, and the political tensions among the countries of the Danube Basin created permanent difficulties for Hungary in its efforts to bring its agricultural produce to international markets. Meanwhile, Hungary's more industrialized neighbors, Austria and Czechoslovakia, fulfilled their import demands with lower-cost goods from overseas. In this period, the Hungarian milling industry, which in 1910 was still the second largest supplier of flour to the world market after the United States, had to dismantle much of its infrastructure because of market losses and underutilization.

These structural problems did not end until Germany, which had previously satisfied its immense demand for agricultural and food products with cheaper American goods, opened its vastly expanding markets to Hungarian agricultural products for economic and geopolitical reasons. However, due to clearing settlements, Germany's increasing military preparedness, and the dominant party's ability to assert its interests, Hungary, with its agricultural trade surplus, increasingly became a financial backer of the German Reich. Meanwhile, the financial pressure of repaying and servicing loans taken out in the 1920s, primarily from sources in Great Britain and the United States made agricultural exports to creditor countries necessary due to the lack of foreign currency. As a result, the role of agricultural exports in this trade relationship also became more significant, as creditors were eager to recover the funds they had previously lent their debtors. The government was ready to pay export premiums, which also contributed to maintaining the balance of Hungary's payment situation.

The most important lesson of the period is that export-driven agriculture faced increasingly shifting and unpredictable demands. After the Great Depression this led to the realization that foreign market expansion could only be achieved within "imperial" relationships. It was the (geo)political (imperial) rationality of Germany on one hand and the financial rationality of Hungary's creditors on the other which were able to provide an adequate market for Hungarian agricultural produce.

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The Incomes and Expenditures of Agrarian Family Enterprises in Interwar Hungary*

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Hungarian statistics in the era of the Dualism and the Interwar period did not go below the settlement level and did not provide any information on the number of livestock and the income from them. Therefore, we do not have exact data on the main problem of the period – whether the large estates or the smallholding showed better yield/ha values, and on the minimum viable size of small farms. Although the movement of ethnographic writers has depicted a dark overview of many settlements, in most cases these do not provide quantifiable data. The surveys organised by the OMGE or the agricultural schools provided statistically relevant quantitative data on certain layers of the peasantry, but the poorest, daily wage-earners remained under-represented in the studies. Therefore, sources that record the incomes and expenditures of these strata in detail (which is the focus of agricultural economists), together with their living conditions (which is the focus of the village researchers' movement), is particularly valuable. At the University of Debrecen, under the supervision of Rezső Milleker, professor of geography, dozens of theses were written on this topic - though not all of them were conducted according to the professors' pre-written guidance. In this paper, we try to shed light on the distribution of income and expenditure of the smallholder-peasant class, which was also hit by the recession of the Great Depression, by analysing one of the best, but unpublished work. Beside revenue sources, strategies of survival, techniques of tax-evasion, the profits compared to loan interests are also discussed.

Keywords: smallholders, farm profitability, tax, loans, peasant account books, Interwar Hungary, demographic conditions

Introduction

The events of 1848 can be considered milestones in the development of the Hungarian economy and Hungarian society. Though the war of independence had failed, but dramatic transformations in the legal environment and social relations could no longer be hindered. In the Dualist Era after the Compromise of 1867, the process of modernization accelerated. The transformations also affected

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the circumstances of those living off agriculture. Serfdom had been abolished, which was a progressive development, but at the same time, the tenants lost most of their leased lands and resources shared with the landlord (common pastures, forests), which fell into the hands of old landlords according to the new laws. The implementation of land redemption in 1848 allowed peasants to become the owners only of their urbarial plots. As a result of this, the multitude of peasants, including those who had not necessarily been poor before, were threatened by impoverishment. Meanwhile, despite general modernization, those who made their living in agriculture continued to live according to the traditional way of life, in some cases even until the mid-twentieth century. As sociologist and former Hungarian Minister of Interior Erdei Ferenc put it, "the peasant social forms remained intact even when the overall structure of society was built on a different principle."[1] According to Erdei, peasants did not adapt to the new market economy in Hungary, because "a peasant farm is not at all a business enterprise designed with commercial rationality, but rather a traditional household farm that operates within traditional frameworks and produces goods. Ultimately, it is incapable of providing surplus for the producer to be sold at the market."[2] This was generally true, though there were exceptions. In the second part of the discussion below, I offer examples of farmers who took the challenges of the new era into account and tried to adapt to a modern (marked-oriented) economy.

On the eve of World War I, most people in Hungary still worked in agriculture. According to István Szabó, based on the data from the 1910 census (recalculated to the postwar area of Hungary), 56 percent were engaged in small-scale farming, including landless agrarian wage laborers and peasants who owned plots of land.[3] Due to the polarized estate structure, i.e. the dominance of large estates, the majority of Hungarian society had hardly any land. This threatened the self-subsistence of agrarian families, which had to face the challenge caused by further estate fragmentation.[4] These difficulties had accumulated over the decades, and social tensions had intensified. The agrarian movements at the turn of the century, emigration to the United States, and the very limited land reform after World War I were (unsuccessful) responses to these challenges.

1 Erdei, *A magyar paraszttársadalom*, 34–35.

2 Ibid., 55.

3 Szabó, *Jobbágyok, parasztok,* 364.

4 At the time of the land tenure reform in 1767, two-thirds of the peasantry were landholders with an average landholding of 0.41 units *(sessio)*, but by the time of the peasant emancipation in 1848, only one-third remained, and the average plot size had decreased to less than 0.35. Glósz, "Zsellérek és töredéktelkes jobbágyok," 176.

The land issue was not resolved between in the interwar period, leaving many questions unanswered. The censuses done by the state and the data gathered in 1941 clearly illustrate the situation of the impoverished who made their living off agriculture. The proportion of those living off agriculture decreased slowly during the interwar period. In 1920, it constituted 55.7 percent of the population. It was still 50 percent in 1940,[5] but in absolute terms, the number people working in agriculture had increased.[6] In 1930, Hungary's population density was 93.4 people per km,^{2} making it the eighth most densely populated country in the world at the time.[7]

According to the censuses, in 1920, 1,212,000 people[8] in Hungary lived off agricultural wage labor (meaning that they did not own their own land), and two decades later, their number was still nearly one million (979,000). Considering the general decrease in the number of those living off agriculture, their number as a proportion of the agrarian population did not decrease significantly. Including family members and dependents, this group accounted for nearly two million people. Those with a few hectares of land (a maximum of five hectares, which was the minimum necessary for self-subsistence) were not in a much better position either, and they accounted for nearly one million people.

Another sharp dividing line was drawn between those who owned some amount of land but not enough to subsist on, thus compelling them to search for extra income. In the second half of the twentieth century, historians tried to determine how much land was needed for a family to subsist (this in fact was a key question with political consequences after 1945, when land reforms were initiated to provide plots of a minimum size but still adequate to ensure self-subsistence. Based on Péter Gunst's work,[9] Gábor Gyáni concluded that a family estate capable of self-sufficiency typically ranged from a minimum of five to ten cadastral acres, depending on the region, crops, and the role of husbandry, and could extend to a maximum of ten to 20 cadastral acres.[10] In censuses, however, tracking and defining this thin line between self-subsistence and wage labor is difficult. In the census of 1920, for example, those with ten or fewer cadastral acres were all classified as agricultural laborers, while by 1930,

5 Gunst, "A mezőgazdaság fejlődésének megrekedése," 286.
6 Tóth T., *A magyar mezőgazdaság struktúrája az 1930-as években,* 19.
7 Gunst, "A mezőgazdaság fejlődésének megrekedése," 286.
8 Gyáni, "Magyarország társadalomtörténete a Horthy-korban," 321.
9 Gunst, *A paraszti társadalom Magyarországon a két világháború között,* 17–18.
10 Gyáni, "Magyarország társadalomtörténete a Horthy-korban," 307.

they were referred to as smallholders (likely indicating that they could sustain themselves off their land).[11]

The work organization of the self-sufficient peasant families fundamentally differed from "wage labor-based capitalist enterprises,"[12] as the former's primary goal was simply to ensure a livelihood. According to Chayanov's theory of labor-consumption balance,[13] the value of the work done by the "self-employed" in self-subsisting peasant economies cannot be expressed in monetary terms, as the results of their productive labor do not enter the market. The peasants only undertook more work when their economic conditions worsened, thus increasing their "self-exploitation" to make a living.[14]

If we look at the macroeconomic environment, during the interwar period, agriculture accounted for about 40 percent of the national income in Hungary.[15] At the same time, the difficulties following World War I are well illustrated by the fact that the domestic market consumed only 50–60 percent of agricultural production.[16] The rest had to be marketed to foreign countries, which were adopting protectionist tariff policies after the collapse of the Austro-Hungarian common market. In the early 1920s, the agricultural sector ran a debt of 1.3 billion Golden Crowns, which could be estimated at 15 percent of the capital stock. This debt was eliminated with the introduction of the *pengő*, but in the following years, it reemerged because "the market adaptability of Hungarian agriculture was minimal."[17] The interest rates on loans available to the agricultural sector were around 10 percent, but since "here, the profitability of agriculture only reaches five percent of the invested capital in very exceptional cases, under such circumstances, taking out loans for agriculture can only be unprofitable."[18] The structure of production had hardly changed, as evidenced by the fact that in Hungary, the average yield of wheat had stagnated around 13.8 quintals per

11 Ibid., 306.

12 Pozsgai, "Paraszti háztartás és munkaszervezet," 344.

13 Chayanov, *On the Theory of Non-Capitalist Economic Systems,* 5. Regarding the historical backdrop against which this theory emerged and receptiveness to it in Russia, see Kövér, "A. V. Csajanov orosz gyökerei," 89–92.

14 Pozsgai, "Paraszti háztartás és munkaszervezet," 346–47.

15 Wheat contributed to the agrarian income by 11.3 percent in 1931–1932, while the most significant sector was livestock slaughtering, at 17.5 percent. Matolcsy and Varga, *Magyarország nemzeti jövedelme*, 65 and 71; Gunst, "A mezőgazdaság fejlődésének megrekedése," 379.

16 Tóth T., *A Magyar mezőgazdaság struktúrája az 1930-as években,* 32.

17 Ibid., 47.

18 Bernát, "A mezőgazdasági termelés jövedelmezőségéhez," 373.

hectare even at the outbreak of World War II, while in Germany, there was a 55 percent increase over the course of these two decades.[19]

Engagement with the "agricultural issue" among experts as well as engagement with marketing problems affecting agriculture began in 1927, when Lajos Juhos[20] emphasized in a presentation at the beginning of the year that there was a need for statistical data to formulate future development plans. From December 12, 1927, the National Hungarian Economic Association (Országos Mezőgazdasági Egyesület, OMGE) organized "Farmers' Days," when several issues affecting the agricultural sector, generally referred to as the "agricultural crisis,"[21] were identified. The decision was made to involve, alongside the Hungarian Royal Central Statistical Office (Központi Statisztikai Hivatal, KSH), the National Hungarian Economic Association and the National Agricultural Business Institute in the collection of agricultural-related data.[22] Simultaneously, the examination of peasant farming began along several paths.

At the end of 1927, the OMGE Economic Section was asked to organize data collection. The representative research resulted in a dataset collected from 392 agricultural enterprises, the aggregated results of which were published under the title "The Crisis of Our Agriculture" in 1929 and then reissued in 1930.[23] In the 1930s, data collection[24] continued, although due to the Great Economic Crisis, the findings were not published for some years.[25] I do not provide a detailed overview of the information published by the OMGE regarding the operation of peasant farms. As a single example, let me note that in 1932, the national economic income per cadastral acre on the Hungarian Great Plain for small farms was 85.85 *pengő*. After deducting labor costs and

19 Tóth T., *A Magyar mezőgazdaság struktúrája az 1930-as években,* 33.

20 Lajos Juhos (1879–1940) was an agricultural vocational educator in Debrecen, Mosonmagyaróvár, and Keszthely. He introduced the German Laurer system of agricultural smallholder bookkeeping in Hungary. Between 1935 and1937, he was the director of the Economic Academy in Debrecen-Pallag. Mudrák, "Egyetemi és kari vezetői névsorok," 554.

21 For the text of the resolution formulated by the participants in the conference, see OMGE, *Mezőgazdaságunk válsága számokban,* 8–9.

22 Sipos, "A termelői és fogyasztói árak vizsgálata Magyarországon," 10.

23 Tóth T., *A Magyar mezőgazdaság struktúrája az 1930-as években,* 18.

24 From the collected data, several derived figures were also calculated, such as total raw yield, net income, and efficiency. Five decades later, Tibor Tóth sought deeper connections through factor analysis from the data. Tóth T., *A dunántúli kisüzemek termelése és gazdálkodása az 1930-as években,* 52 and 55–137.

25 Contemporaries also used these raw data for scientific research. There was generally a positive correlation between livestock, capital, labor costs, and profitability based on various aspects. Éber, "A földárak és földhaszonbérek alakulása tíz év alatt," 799–804.

public charges, a net yield of 9.11 *pengő* per cadastral acre remained, based on the data from the enterprises examined.[26]

In 1929, the Keszthely Economic Academy was established. The Department of Business Studies of this academy also collected data on "small enterprises." Of the 126 farms they examined, 60 percent were unprofitable during the crisis years 1931–1932. They could not even cover their operating costs.[27] At the Debrecen Economic Academy, Lajos Kesztyűs Sarkadi (1890–1957) prepared detailed statistics concerning the economic results of 100 mainly landowners from the Trans-Tisza region. In in 1931, data from 15 farms (with a size of 50–200 cadastral acres) were processed, while in 1932, data from eight farms were analyzed. In 1931, the focus was on farms with sizes between 50 and 100 cadastral acres, where the rounded net income of 40 *pengő*s corresponded to an interest rate of 3.13 percent. Compared to a bank interest rate of five percent, the interest loss was 1.87 percent. In 1932, typically half of the estates between 100 and 200 cadastral acres ended the year with a net loss based on their operational costs.[28] He also noted regarding the farming of smallholders that their average yield of cereals was about two quintals per hectare lower compared to those with 100-200 acres, because they lacked expertise and their soil preparation was weaker. The small landowners were usually mentioned only from a statistical perspective (instead of offering solutions to help them raise yields), which simply meant that those with one or two cadastral acres had very low average yields which negatively impacted the averages of those with less than 100 cadastral acres. [29]

As a result of the emerging economic crisis, the market positions of agriculture deteriorated. If we consider the price index in 1929 as 100, by 1933, it had decreased to 62.[30] In the case of wheat, which was the most important cereal crop, the price index fell from 100 units in 1913 to 77 in 1932, and by 1934, it had dropped to 41 units.[31] By 1932, 49 percent of farms and 36 percent of land was indebted, with a debt service consuming 60 percent of revenue.[32]

26 *Mezőgazdaságunk üzemi eredményei 1933. évben,* 67.
27 Juhos, "Dunántúli kisgazdaságok jövedelmi helyzete," 289.
28 Sarkadi Kesztyűs, "A vagyonleltár értékelése," 225.
29 Sarkadi Kesztyűs, *A magyar mezőgazdasági politika feladatai*, 10.
30 Tóth T., *A magyar mezőgazdaság struktúrája az 1930-as években, 33.*
31 Ibid., 37.
32 Ibid., 47.

In 1931, for properties up to five cadastral acres, the value of debt per acre was 45 *pengő*.[33] Thus, the costs of servicing consumed 88 percent of the profits.[34]

Ultimately, in the interwar period, the standard of living of the agrarian population stagnated compared to 1913, while during the years of the economic crisis, it declined.[35]

Research Objectives, Sources, and the Framework of the Investigation

The aim of this study is to illustrate, based on the examples of small farms on the outskirts of Törökszentmiklós during the crisis years of the 1930s, how the economies of smallholder families developed, with particular attention to their financial situation. Relevant sources are scarce, as the census data from the Dualist era did no go below settlement-level to inquire into the financial circumstances of families.[36] The aforementioned István Szabó was referring to the decades preceding World War I when he wrote that "based on written sources, it is easier to follow and understand the economic management of a serf from the fifteenth and sixteenth centuries than, for example, that of a peasant landowner from the 1860s–80s."[37] We can consider his findings valid for the poor peasant layer in interwar Hungary too, as research focusing on the circumstances of the history of the peasants has hardly dealt with quantitative data at a finer resolution than the settlement level.[38] The peasant way of living usually did not include a detailed family "account book" over the course of a year, and statistical data were still not available below settlement level (however, the categorization of land size became more sophisticated).

In the country of "three million beggars" (as interwar Hungary has been called), beside the official statistics and abovementioned institutions and associations, the so-called village research movement also tried to portray the everyday lives of the common people in their numerous publications, but the active members of this movement did so in a qualitative rather than a quantitative way. The ethnographer Edit Fél attempted to use such sources to illustrate the everyday life of an extended family consisting of 14 people in Marcelháza (now in Slovakia),

33 Ibid., 49.

34 Ibid.

35 Gunst, "A mezőgazdaság fejlődésének megrekedése," 391.

36 István Szabó summarized the obstacles to historical research on peasant life. Szabó, *Jobbágyok, parasztok,* 351–61. Source of the quote, ibid., 359.

37 Ibid., 358.

38 Ibid.

but incomes were not expressed in strictly financial terms.[39] None of the village researchers relied on detailed income data or expenditures in their published works when mentioning the problems of village life.

Alongside the well-known works of Géza Féja, Zoltán Szabó, and Imre Kovács, a special yet largely unevaluated series of investigations was initiated by Professor Rezső Milleker (1887–1945),[40] the founder of the Geography Institute at the University of Debrecen.[41] He encouraged his students "to go into the field" (usually to their birthplaces) to record the circumstances of "typical" families, including financial data and material aspects. For the students' benefit, a questionnaire was even created, yet despite this, the essays written by the students to complete their degrees had very heterogeneous structures.[42] Several of them did not provide any numerical data at all, while others focused on ethnographic or physical and geographical descriptions or merely presented descriptions of the circumstances and lifestyle of a single family. Among the remaining essays, the one that most closely followed Milleker's written instructions was the work titled "The Types of Economic Farms of Pusztaszakállas" by Károly Molnár, who completed his university studies in 1933.[43] After graduation, Molnár taught for a few years (1936–1939) in his native village at the local boys' school.[44] In 1937, a printed version of his speech titled "The Good Student and the Good Pupil" was published in the local school bulletin.

Pusztaszakállas lies on the outskirts of Törökszentmiklós. In 1930, the town had an area of 53,000 cadastral acres, including several outlying inhabited areas (so-called "tanyák" or farmsteads),[45] including Pusztaszakállas. The population of Törökszentmiklós in 1930 was 28,503, 12,371 of whom lived on the outskirts,

39 The result of Edit Fél's research was first published in Érsekújvár in 1944. Her data collection included quantifications of annual consumption, but wherever possible, she combined human and animal consumption; for example, in a large family, 50 to 60 quintals of potatoes were consumed. No monetary values were assigned to these items. Fél, "Egy kisalföldi nagycsalád társadalom-gazdasági vázlata."

40 Bagdi, "Statisztikai módszerekkel mért fejlettség és szociográfiai valóság," 199–227.

41 Süli-Zakar, *Milleker Rezső professzor élete és debreceni munkássága*, 2–4.

42 Some papers have also been published in print, and even Mihály Kerék referred to the thesis work of Károly Szalánczi published in 1932. Kerék, "A mezőgazdasági munkás anyagi helyzete," 24.

43 According to the university records, Károly Molnár attended from the first semester of the 1929/30 academic year until the end of the 1932/33 academic year. Hallgatói anyakönyvek.

44 Deák, *Polgári iskolai író-tanárok élete és munkái*, 318. As a history and geography teacher, he taught German, history, agriculture, and practical farming to his students. *A Törökszentmiklósi,* 1937, 6–7, *A Törökszentmiklósi*, 1939, 12.

45 In 1926, there were six state rural elementary schools operating with six classrooms and nine teachers. Botka, *Adatok Szolnok megye történetéből.* 767.

accounting for 43.4 percent of the town's population.[46] According to Molnár, around 1930, Pusztaszakállas[47] had a population of only 250 and covered a total area of 3,000 cadastral acres, but half of this was marshlands and swamps along the Tisza River, while the other half consisted of fertile black soil where only potatoes did not thrive.[48] In the early 1930s, the settlement consisted of 42 houses (plus a school and a community center) in which 52 families lived.[49] The area of the settlement given in cadastral acres was distributed among only 19 landowner families who owned 17 acres, 3.5 acres, 5 acres, 20 acres, 4 acres, 2 acres, 14 acres, 8 acres, 1.5 acres, 4 acres, 2 acres, 13 acres, 30 acres, 6 acres, 1 acres, 5 acres, 1.5 acres, 23 acres, and 180 acres.[50] Nine families made a living off fishing, and one person lived in the village as a retired gendarme. A blacksmith, two masons, and three cobblers also lived there, but they too could not make a living solely from their work, so, during the harvest season, they had to take on agricultural wage work.

Land consolidation was not executed in the area. There were no vineyards or orchards at all, and the 750 cadastral acres of pasture was private property and not communal land. In terms of landownership, there was one estate exceeding 500 cadastral acres in Pusztaszakállas, while an additional four individuals owned between 100 and 500 cadastral acres, four individuals had between 50 and 100 cadastral acres, 35 individuals owned between ten and 50 cadastral acres, and 21 individuals had land holdings of less than ten cadastral acres.[51]

In Törökszentmiklós as a whole, five-sixths of the land was in the hands of large landowners, while "medium and small landowners[52] made up a significant portion of the population, but it was rare to find a farmer with 100 acres. The number of veterans' new plots was five, with 20 acres of land per person."[53] The leadership of Törökszentmiklós consisted of a "representative body made

46 *Az 1930. évi népszámlálás,* 416–17.

47 According to the official census of 1930, 640 people lived in Pusztaszakállas. *Az 1930. évi népszámlálás,* 416–17.

48 Molnár, "Pusztaszakállas gazdaság-formái," 2.

49 On average, five individuals made up a family.

50 Molnár, "Pusztaszakállas gazdaság-formái," 4.

51 MNL JNSZML IV.407. Jász-Nagykun-Szolnok Vármegye alispánjának iratai. 14530/1939. tanyai iratok. Adatgyűjtő-ív [é.n.] (1930?) 4.

52 The redistribution of land was completed in 1929. The number of people who acquired plots was 2,000. However, during the Great Economic Crisis, 700 beneficiaries of the land reform lost their lands because of indebtedness, and their arrears had be collected from the remainder community of beneficiaries. Szakál, "Törökszentmiklós története 1932-től 1938-ig," 9.

53 Ibid., 7.

up of 20 large landowners, as well as affluent middle and small landowners and wealthy intellectuals."[54] It is also important to note that Törökszentmiklós had a debt of 1.1 million *pengő* in the mid-1930s, which significantly affected both sides of the budget.[55] In order to balance the municipality's budget, a 21 percent municipal surtax[56] and a three percent emergency surtax were imposed in 1932, and by 1933, the rate of the municipal surtax had risen to 49 percent.[57]

According to Zsolt Szilágyi's calculations, Törökszentmiklós was considered a "market sub-center" in the interwar period, as it remained in the "shadow" of Szolnok. In practice, this meant that the town was unable to attract residents from other settlements beyond its own population.[58] Lajos Tímár defined the settlement as a "rural market town."[59]

Family Types in Pusztaszakállas

1932, the year in which Molnár pursued his research year, represented the economic low point of the ten years between 1929 and 1938.[60] In his unpublished thesis, Molnár identified six different family types in Pusztaszakállas, but he did not clarify the criteria he used to select the families presented, thus depriving future generations of the opportunity to determine through further research whether the selected six families represent the local society correctly. It seems that the size of the family, the amount of land they owned (even if only a small

54 Ibid., 14.

55 The annual revenue of Törökszentmiklós was around 700,000 *pengő*. This debt was incurred due to the implementation of various construction projects, thus loans had to be taken for the district court (320,000 P), the boys' civil school (340,000 P), the public slaughterhouse (140,000 P), and the establishment of the water supply system and the organization of the market (416,000 P). The annual interest exceeded 100,000 *pengő* (15 percent of the yearly budget). MNL JNSZML IV.407. Jász-Nagykun-Szolnok Vármegye alispánjának iratai. 14530/1939. tanyai iratok Kivonat Törökszentmiklós község képviselő testületének 1930. évi december hó 19. napján tartott rendes közgyűlés jegyzőkönyvéből. 4–5; Kivonat Szajol község képviselőtestületének 1930. október 18-án megtartott közgyűlésén készült jegyzőkönyvből, 1–2.

56 This means an additional 21 percent, considering the state taxes levied to the city as 100 percent, and this surtax was collected and used by the municipal government directly.

57 The municipal surtax rate kept increasing in the following years, finally reaching 63 percent in 1937. Szakál, "Törökszentmiklós története 1932-től 1938-ig," 7.

58 Several towns near Törökszentmiklós attracted the people of the town to their markets. Szilágyi, *Ismeretlen Alföld,* 151.

59 The basis for the qualification was that in Törökszentmiklós, the proportion of earners working in public service and self-employed individuals in the field of commerce and credit was 9.4 percent altogether. Timár, "A szociológia és geográfia pörlekedésének egy lezártalan fejezete," 91–92.

60 Éber, "A földárak és földhaszonbérek alakulása tíz év alatt," 298.

amount), their ages, and their farming practices all played a significant role in his classifications.

The families from Pusztaszakállas included by Molnár in his discussion owned a certain amount of land. The average size of the lands owned by the 19 families was 17.9 cadastral acres. If one excludes the landowner with the 'extreme' 180 cadastral acres (none of the six different types presented could have owned this much land), the average size decreases to 8.9 cadastral acres. Based on Molnár's descriptions, we do not need to consider anyone with a landholding larger than ten cadastral acres (when they owned more land than this, farmers tended to employ agricultural labor, at least during the agricultural "high season," but there is no indication of this in the descriptions). This leaves us with only twelve small landowners, whose average property size was merely 3.6 cadastral acres. The six families under discussion constituted 50 percent of them and thus represent this subgroup.

Demographers evaluate the "developmental cycle" of a family as a process of continuous change, since along with advancing age, births, deaths, and migrations also modify the structure of the family.[61] A key factor in Chayanov's theory regarding peasant economies is the number and composition of the members of a household. He calculated that in the case of marriages, a child reaching adulthood was born every three years, resulting in increasingly deteriorating living conditions during the first 14 years. From the age of 15, the firstborn child could be considered an asset as someone who could be part of the household workforce. Thus, the ratio of dependents began to decrease.[62] Molnár very was probably not familiar with this theory, but he did take age into consideration, as he introduced, for example, "young married couples" who were just starting their careers, as well as couples over 70 years of age.

If children who had reached adulthood married but remained on the same property as their father, then multiple generations lived together. It was possible to increase the amount and intensity of labor without employing servants, while young people, on the other hand, did not immediately have to face the full burden of independent life.[63] If we consider the long-term changes in household structure, there was a national trend indicating that in the nineteenth century, household sizes increased, followed by a rapid decline starting in the early

61 For more details, see Faragó, "Nemek, nemzedék, rokonság," 467.

62 A firstborn child was regarded as suitable for work once he had turned 15. Thus, the number of dependents began to decrease. Pozsgai, "Paraszti háztartás és munkaszervezet," 348.

63 Heilig, "Háztartások és gazdaságok," 214.

twentieth century.[64] Molnár's research also confirms Faragó's general statistical observation that large families were also disappearing in Pusztaszakállas.

A Large Family with a Small Estate (Type I)

Molnár did not provide any supporting points or other references regarding the family he referred to as Type I, nor did he clarify the basis for its classification. Based on the narrative description, it seems that (using Laslett's typology) the *two-generation extended family* was the decisive factor here. The 54-year-old farmer had seven children, three of whom were already married when the data was collected. Among them, his 28-year-old son lived with his wife in the same household as his father. Their house had a thatched roof and two rooms and a kitchen, but Molnár was unable to provide the exact floor area of the house. One of the rooms was 6 × 4.5 × 3 meters in size. Five people slept in this room. During the summer, the farmer and his two younger sons slept in the barn. With regards to the buildings used for farm work, there was a stable, a pigsty, a barn, and a beehive. According to Molnár, however, the farmer did not understand beekeeping.[65]

The family had six cadastral acres of land and one cadastral acre of meadow. The most complex "budget" was provided in this case, so I have organized the data in tables. Molnár paid attention in his essay to high taxes in the case of each family type examined. In the case of the first type, however, even the taxes levied under different titles were given in detail (Table 3).

The family had 46 fruit trees (which bore apples, plums, and walnuts), and they consumed the fruit themselves. Their meals were not regular. They ate what they could produce, typically potatoes. One of their winter dinners, for example, consisted of bread and onions, which they salted or dipped in vinegar. They didn't engage much with culture. Their "library" consisted of a psalm-book and a calendar, while the source of information (even concerning public affairs) was not newspapers, but rather their neighbor.[66]

64 Faragó, "Nemek, nemzedék, rokonság," 466–69.

65 Molnár, "Pusztaszakállas gazdaság-formái," 6.

66 Ibid., 7.

Table 1. Annual incomes of a large family with small holdings in 1932 *pengő*

I. Growth	**Crop**	**Amount**	**Unit price (P)**	**Total (P)**
	wheat	15 quintals (q)	18	270
	barley	6 q	11	66
	cob of corn	15 q	7[67]	105
	straw	32 q	0,45	14,4
	crushed straw	20 q	0,5	10
	scene	29 q	6,5	188,5
	carrot	50 q	1	50
	potato	4 q	8	32
	Total			**735,9**

II. Vegetables	common bean	15 kg	0,3	4,5
	pea	5 kg	0,32	1,6
	ground sweet peppers	4 kg	3,1	12,4
	vegetable (cabbage)	10 kg	0,15	1,5
	cucumber	10 kg	0,2	3
	onion	104 kg	0,28	29,12
	garlic	2,5 kg	0,5	1,25
	poppy seeds	3 kg	0,8	2,4
	white cabbage	40 heads	0,01	0,4
	Total			**56,17**

III. Livestock	**Animal**	**Individuals**	**Unit price (P)**	**Total**
	pork	2	40	80
	goose	17	7	119
	chicken	48	1,8	76,8
	Total			**275,8**

IV. Wage	**Work-related**	**Subject**	**Unit price (P)**	**Total**
	harvest	9,8 q wheat	18	176,4
	harvest	0,85 q barley	11	9,35
	harvest	2 carts of straw	6	12
	Total			**197,75**

V. Casual work	**Work-related**	**Person**	**Occasion**	**Total**
	harvesting potatoes	3	12 days	36
	harvesting onions	3	5 days	12
	fish transportation	3	12 times	96
	Total			**144**

Source: Molnár, "Pusztaszakállas gazdaság-formái."

67 In 1932, the average price of corn was 11.49 *pengő* per quintal, and the price of an ear of corn had to be lower than that. Sipos, "A termelői és fogyasztói árak vizsgálata Magyarországon," 16.

The family could not make ends meet solely by cultivating their own land, so the head of the family, along with his two oldest sons, took on day labor jobs, which included assisting in the harvesting of onions and potatoes. In total, they earned 144 *pengő* from the harvest, receiving a daily income of one *pengő* for potato[68] picking, while for onion picking, they were paid only 80 fillér (one-hundredth of a *pengő*) per person for one day (Table 1). Based on the data, fish transportation was the most profitable, as it provided a daily allowance of three *pengő* per person. The published data, however, do not indicate what the weight of the fish that had to be carried was. During the harvest, members of the family also took on work for other farmers, but they were paid in kind,[69] receiving nearly ten quintals of grain and two carts of straw, which Molnár valued at a total of 197.5 *pengő*.[70] The value of the crops they produced themselves, from wheat to potatoes, amounted to a total of 735.9 *pengő*, while the garden vegetables represented only 56.17 *pengő*. The family gained significant income from the livestock, as they were able to sell geese, chickens, and pigs for a total value of 275.8 *pengő*[71] (Table 1). Geese were the most economically viable animals to raise, as they were able to find food in the wet habitats around them. (Half of the territory of Pusztaszakállas was wetland.) According to the figures provided by Molnár, the family's total income was 1409.62 *pengő* in the year under consideration, of which 29.8 percent was made in cash (419.8 P), while the rest was in kind.

The goods necessary for the family's livelihood could be valued at 713.75 *pengő*, although this was not all spent as cash because they consumed items that they

68 Molnár calculated the price of potatoes at 8 *pengő* per hundredweight. The numbers he provided may not have been entirely accurate. According to Sándor Sipos's data, the producer price of potatoes in 1932 was 5.28 *pengő* per quintal, while the consumer price was 17.6 *pengő*. On the other hand, Matolcsy provided the data for the "winter semester," thus giving the price of potatoes for 1931/1932, which he categorized according to five varieties. The most expensive variety was the "Korai rózsa" [Early Rose] at 9.33 *pengő* per quintal, while the cheapest was the Wohltmann at 4.85 *pengő* per quintal. Ultimately, the type, size, quality of the potatoes, and the timing of the sale may have influenced the prices, so we cannot verify Molnár's data. Sipos, "A termelői és fogyasztói árak vizsgálata Magyarországon," 12; Matolcsy and Varga, *Magyarország nemzeti jövedelme,* 25.

69 In a contemporary study, Kerék determined the wages of harvesters to be one-tenth or one-eleventh of the actual amount of grain harvested, which was supplemented only by flour and bacon as food. Kerék, "Adatok a magyar mezőgazdasági munkáscsaládok," 596.

70 In 1932, the producer price of wheat was 17.95 *pengő* per quintal, so it can be assumed that the family in question fared better than they would have if they had received their dues in cash, but the essay did not reveal how many days the two boys worked for the nearly ten quintals of wheat. Sipos, "A termelői és fogyasztói árak vizsgálata Magyarországon," 12.

71 Molnár, "Pusztaszakállas gazdaság-formái," 10.

themselves produced (the data are therefore estimates). The amount spent on animal fodder was practically produced by them, but to reach the 300 bundles of corn stalks, it was necessary to purchase 100 bundles.

Table 2. Daily consumption of a large family with smallholdings and expenses necessary for the operation of a farm in 1932 (in *pengő*)

I. Consumption	**Product**	**Amount**	**Unit price**	**Total (P)**
	flour	1,050 kg	0.4	420
	meat	60 kg	1.3	78
	bacon	20 kg	1.8	36
	fat	25 kg	1.8	45
	sausage	5 kg	1.8	9
	white sausage	5 kg	1	5
	chicken	30 pieces	1.6	48
	fish	10 kg	0.8	8
	egg	100 units	0.08	8
	kitchen garden produce			56.17
	Total			**713.17**

II. Livestock	**Product**	**Amount**	**Unit price**	**Total**
	scene	29 q	6.5	188.5
	corn	15 q	7	105
	carrot	50 q	1	50
	miller's bran	3.45 q	13	44.85
	crushed straw	20 q	0.5	10
	corn stalk	300 bundles	0.06	18
	Total			**416.35**

III. Economic expenditures	**Value**
blacksmith work	25
bogging work	15
2 large ropes	8
1 chain of links	2
chimney sweeping	6
40 kg of slaked lime	4
pasture rent	46
40 kg of wheat for the herdsman	7.2
to the shepherd	3.5
Food for the shepherd for 15 days	15
vaccination	2
Total	**133.7**

Source: Molnár, "Pusztaszakállas gazdaság-formái."

Their animals were let out to the village's herd and pigsty, so the herdsman and the swineherd looking after them had to be paid (a total of 25.7 *pengő*) (Table 2). Several items appeared as expenses for which cash had to be paid, such as sugar, salt, coffee, etc. The salt (Table 3) was not only for meals but also for preserving meat and supplying the livestock's salt demands. A total of 300 *pengő* was paid for clothing and footwear. The total amount due for the entire year was 279.58 *pengő*. The largest item was the tax and loan arrears from the previous year, amounting to 116.56 *pengő* (41.7 percent), which indicates that tax payments had not been made even in the previous year, and it can be assumed that the figures increased year by year (at least considering the rate of the aforementioned surtax). The land and house tax amounted to 85.39 *pengő* in 1932 (30.5 percent), while the church tax and the value of public works were both reported as 24 *pengő* each. This last tax was imposed by the municipality of Törökszentmiklós to finance public works.[72]

Table 3. Family expenses of a large family with smallholdings in 1932 (in *pengő*)

At Grocer's	**Product**	**Quantity**	**Unit price**	**Amount**
	sugar	10 kg	1.4	14
	coffee	2 kg	7	14
	salt	63 kg	0.4	25.2
	pepper	1.5 kg	9	4.5
	acetic acid	10 liter	0.4	4
	lamp glass	4 pieces	0.25	1
	shoe polish	4 pieces	0.48	1.92
	comb	1 piece	0.7	0.7
	kerosene	26 liter	0.36	9.36
	matches	52 boxes	0.06	3.12
	Total			**77.8**

Clothes	**Product**	**Total**
	1 men clothing	32
	2 pairs men boot	54
	3 pairs women clothing	30
	5 pairs women shoes	75
	2 hats	12
	1 winter hat	7
	6 pair men underwear	36
	6 pair women underwear	12

72 In 1931, the government made it mandatory for municipalities to take care of the poor living in the settlement. For more details, see Gyáni, "Közmunka a Horthy-korban," 30–33.

Clothes	Product	Total
	4 pair silk stockings	12
	4 nightgowns	7.2
	6 ? scarf?	15
	12 textile handkerchiefs	6
	shoes repairs	2.5
	Total	**300.7**

Taxes	Type of taxes	Amount
	land and property tax	85.39
	disability tax	0.45
	income tax	19
	road tax	3.1
	local tax	2.1
	healthcare tax	4.98
	public work	24
	last year's arrears	116.56
	church tax	24
	Total	**279.58**

Source: Molnár, "Pusztaszakállas gazdaság-formái."

Despite the apparent abundance of data, the information available is probably not complete, making it impossible to determine the balance between revenue and expenses accurately. We can assume that the cash actually earned for daily labor and some marketable goods could be used to cover the expenses that had to be paid in cash (e.g. taxes). From the sale of sheep, there was an income of 144 *pengő*, and the sale of pigs, chickens, and geese generated 275.8 *pengő* income for the family, totaling 419.8 *pengő* (Table 1). On the expenditure side, the amount left at the spice shop was 77.8 *pengő*, and the total spent on clothing was 300.7 *pengő*, making a combined total of 377.7 *pengő*. Taxes had to be paid in cash, but their total amount (279.58 *pengő*) was much higher than the difference between revenues and expenditures, which was just over 40 *pengő*. This contradiction cannot be definitively resolved based on the available data. The list of agricultural goods produced cannot be considered complete either. The family kept a cow and its calf, but it doesn't seem likely that they were not able to consume any dairy products over the course of the entire year. The value of the chickens appears in our tables with two different amounts. Those sold were successfully sold at a price of 1.6 *pengő* each, while for personal consumption their value was determined to be 1.8 *pengő*. From a consumption perspective, the more than one ton of (reported) flour used annually for baking bread came to less than a half a kilogram of bread per person per day for the eight-member family. This is not much. A hundred eggs per

year (i.e. two eggs per family per week), the annual 20 kg of bacon rounded to 7 grams per day, and 8.5 grams of fat were allocated daily per person. Meanwhile, the men spent the summer harvesting and doing other physical work, which required a high daily calory intake. Finally, 63 kg of salt seems excessive for preserving 60 kg of meat. Indeed, it would have been too much for salting the meat, bacon, or the five kg of sausage in the pantry preserved for later consumption. No matter how modest the circumstances of the family were, these low values still seem contradictory or simply implausible.

A Couple without Land (Type II)

It is worth beginning with the summary assessment written by Molnár about an individual classified as Type II: "He does not care much about the past: he did not enjoy better times before, nor will he in the future." This individual, Molnár implies, lives only for today, and for him, the most important thing is spirits [meaning not holy water but brandy]. He had, at least according to Molnár, neither principles nor culture: "They are the most extreme people in the village and the most uncultured people."[73]

A 64-year-old fisherman lived with his wife in their own house, which measured $10 \times 3.5 \times 2$ meters and consisted of three rooms (a living room, a kitchen, and a pantry). The man used a fur coat as a blanket. He did not have an outbuilding for his livestock, so he kept his pig in his room, along with the trough. According to Molnár, the "hygiene was primitive," as they never bathed and practically never washed themselves and changed their underwear only once a month. Their income situation could be summarized with the simple principle that "[only] God knows what you will live off today and tomorrow,"[74] so they ate irregularly and ate whatever they happened to receive or find in the natural world around them. They had few work opportunities. In winter, for example, they sometimes patched socks and repaired shoes for others. Of the labor they performed over the course of the year, only the work they did during the harvest seasons could be quantified, as the man worked 252 hours alongside the threshing machine. However, the time spent on fishing could not be precisely determined. In light of the this, their cash income was low. The largest amount, 128 *pengő*, came from fishing, but half of the revenue from this had to be paid

73 They could only write down their names. Molnár, "Pusztaszakállas gazdaság-formái," 19 and 25.
74 Ibid., 19.

as a fishing fee. In a year, the man consumed food worth 108 *pengő*, but this can only be considered a theoretical, calculated value, as he received, exchanged, or "found" most of the products listed here. For food, over the course of the year,[75] he paid cash (1.8 *pengő*) for three kg of mutton. At the spice shop, he spent 11.92 *pengő* in a year, for example, 3.2 *pengő* for eight kg of salt, 0.27 *pengő* a lampshade, and 7.04 *pengő* for 22 liters of kerosene. He also paid 1.44 *pengő* for 24 boxes of matches. He carried a debt to the shop of a few *pengő* all year round. He only spent money on clothing when a given garment was completely worn out. He replaced his shoes every six to seven years, and even then, he only wore them in winter. Thus, over the course of the year, he spent only 10.5 *pengő* on a total of four pieces of clothing.[76]

His total income was 123.9 *pengő*, which he earned from the slaughter and sale of pigs (47.4 P), the sale of 15 chickens (7.5 *pengő*), patching (5 *pengő*), and fishing (64 *pengő*). In total, 116.76 *pengő* was spent over the year, including rye at 20.9 *pengő* (17.9 percent), tobacco at 8.84 *pengő* (7.6 percent), and *pálinka* (fruit brandy) at 72.8 *pengő* (62.4 percent), in addition to the items mentioned in the previous paragraph.[77]

According to the balance published by Molnár, there should have been some *pengő* left in the farmer's pocket, but this was not the case in practice, because if he earned any income from patching (which amounted to a total of 5 *pengő* per year), he immediately bought a larger quantity of fruit brandy. His tax liability amounted to 27.3 *pengő*, which he tried to manage by paying a third of his annual tax, but he never intended to pay the remaining two-thirds. He did this simply to avoid being harassed by the authorities.

If we want to determine the balance of the revenues and expenditures with scientific rigor, we also encounter contradictions. For example, Molnár did not specify how much the farmer earned from his 252 hours of work next to the threshing machine. We must also assume a lack of information regarding the pig slaughter, as the text mentions an animal weighting 110 kilograms. In the case of pigs, it is necessary to consider that slightly less than half of the live weight should be accounted for as meat. If the owner sold nine kg of bacon, ten kg of fat, and 15 kg of meat, then there must have been at least 30 kg of meat left, which he probably consumed himself with his wife. Thus, he ate not only what he claimed

75 He had 150 kg of corn throughout the year, but it can also be classified as laborer's wages, because the farmers allowed him to collect the smaller cobs that were not gathered after the corn was harvested.

76 Molnár, "Pusztaszakállas gazdaság-formái," 23.

77 Ibid., 24.

to have found, exchanged, etc. We must assume that the use of eight kg of salt bought from the shop was necessary for the preservation of this amount of meat.

Molnár finally noted that "there are five or six such families with the difference that they are young and have one or two children."[78] The number of children and their ages were not considered decisive factors in determining this type based on this remark. In this context, while the activities of the landowner were listed, the size of the landholding was not mentioned, which is why I consider this couple a possible representative of the class of landless day laborers, even though they were no longer active in the labor market due to their age.

A Couple with a Small Landholding (Type III)

The third type was represented by a 76-year-old farmer regarding whom Molnár remarked that "there are seven families of this type in the village, with the exception that they have children who have already left home."[79] The presence and number of children were therefore not primary factors in the identification of this type. This farmer had five acres of farmland, but he rented them out to someone for half of the harvests, probably due to his age. (The average price of such a smallholding was 853 *pengő* in the 1930s.)[80]

The couple lived in a house that was 18 meters long and four meters wide with a ceiling four meters in height. It was built half of stone and half of adobe, with a tiled roof. Several of the surrounding farming buildings were also covered with tiles. Molnár referred to their bathing habits as "rural," which meant that they washed themselves in cold water every day, while on Sundays they used warm water.[81] In terms of their meals, Molnár highlighted caraway seed soup as a frequent item during the day and bread with bacon for dinner. Between 15 and 20 liters of wine were consumed annually, along with an additional five liters of brandy, while tobacco was consumed at a rate of one pack per day, valued at 0.11 *pengő* per package.

The farmer's 65-year-old wife cultivated some corn and also kept a vegetable garden measuring a square rod. Molnár was unable to determine the necessary work hours afterwards, but the couple worked on some land for 310 days of the year (but not all day).

78 Ibid., 25.

79 Ibid., 33.

80 Éber, "A földárak és földhaszonbérek alakulása tíz év alatt," 304.

81 Molnár, "Pusztaszakállas gazdaság-formái," 26.

Since they did not have children,[82] they did not want to adopt a new lifestyle. In terms of their income, the goods obtained from the natural world around them played a significant role.

Table 4. The annual income in *pengő* in 1932 of a 76-year-old smallholder with five cadastral acres who was no longer actively working

Land leased for the half of the products			
Crop	**Amount**	**Unit price *(pengő)***	**Value *(pengő)***
wheat	8.1 q	15	121.5
barley	4.8 q	7	33.6
straw	30.0 q	1	30
Total			**185.1**

Land leased for the third of the products			
Crop	**Amount**	**Unit price *(pengő)***	**Value *(pengő)***
corn	8 q	4	32
pumpkin	24 q	0.5	12
Total			**44**

Source: Molnár, "Pusztaszakállas gazdaság-formái."

The couple kept poultry (20 hens and 3 roosters) and managed to sell some of the brood and the eggs they produced: 100 chicks for 50 *pengő*, 70 larger chickens for 74 *pengő*, and 100 eggs for 28 *pengő*, for a total of 152 *pengő*.[83] The vegetables grown in the garden were valued at 12.66 *pengő*, of which only the red onions were sold (two quintals for a total of nine *pengő*). The cash income was further increased by a calf which the farmer bought and sold on the same day, which generated a profit of 45 *pengő*.

During the year, items produced by and consumed within the household as internal consumption (flour, meat, bacon, fat, sausage, chicken, eggs) amounted to a total of 352.66 *pengő*, while at the grocery store, a total of 52.12 *pengő* was spent on spices, sugar, coffee, salt, pepper, kerosene, etc. Molnár reported a total of 72.2 *pengő* for clothing expenses, but noted in his list that certain items, such as suits, boots, and hats, were purchased only every two years.[84] The clothes were worn until they became unusable, so some pieces of clothing were six or seven years old. For the maintenance of the house, the farmer spent ten *pengő* in the year examined (three *pengő* for chimney sweeping, five *pengő* for plastering and whitewashing, and two *pengő* for 20 kg of lime)[85] (Table 5).

82 They had an adopted daughter, but it was not revealed how old she was, when they started raising her or until what age they did so. She had married by 1932 and lived in a separate household.

83 Molnár, "Pusztaszakállas gazdaság-formái," 28.

84 Ibid., 30.

85 Ibid., 31.

The farmer's tax book was not available when Molnár visited the community, so the tax amount listed as 20.6 *pengő* was written into the "accounting records" from memory, but Molnár found the estimated amount to be low. The total cost of pig farming for the entire year was 83.68 *pengő* for two piglets (their purchase price was 20 *pengő*, and the rest was spent on feeding them, such as five quintals of barley for 33.6 *pengő*). Both animals were slaughtered, and their total value was determined to be 140 *pengő*, although it was not revealed how many kilograms they weighed.[86] For the poultry, a cost of 20 *pengő* was calculated for feeding, while the total value of the day-old chicks, larger chickens, and eggs that were sold was 152 *pengő*. For personal use, a value of 53 *pengő* was accounted for from the poultry yard. From the harvested fruit, the farmer was able to sell one and a half hundredweight of apples and plums, which brought in revenue of twelve *pengő*.

On the income side of the annual revenue, we find 222.76 *pengő* earned from cultivating the land (185.1 *pengő* from the farmer's own land, 34 *pengő* from a third of the corn, and 3.66 *pengő* from the vegetable garden). In cash, the actual revenue amounted to 370 *pengő*s (152 *pengő* from poultry sales; the price of the cow was 140 *pengő*, "trading" brought in 45 *pengő*, and the sale of onions, pumpkins, and fruits brought in a total of 33 *pengő*), which represented 62.4 percent of the total annual revenue.

On the expenditure side, 225.07 *pengő* were recorded, of which clothing accounted for 72.2 *pengő*, the total amount spent on purchased tobacco and wine was 46.15 *pengő*, and taxes were listed as 20.6 *pengő*[87] (Table 5).

Table 5. The balance of annual cash flow in 1932 in *pengő* for a 76-year-old smallholder with five cadastral acres who was no longer actively working

Income	**Value *(pengő)***	**Rate (percent)**
Animal husbandry	292	78.9
Crop production	33	8.9
Trade	45	12.2
Total	**370**	**100**

Expenses	**Value *(pengő)***	**Rate (percent)**
Clothing	72.2	32.1
Spices	56.12	24.9
Beverages, for amusement	46.15	20.5
Taxes	20.6	9.2
Animal purchase	20	8.9
Economic expenditures	10	4.4
Total	**225.07**	**100**

Source: Molnár, "Pusztaszakállas gazdaság-formái."

86 Ibid., 31.

87 Ibid., 32.

Considering the balance, 144.93 *pengő* constituted the "remainder." Behind the seemingly positive balance was the fact that the farmer was saving the money he had brought in by selling the cow because he wanted to buy a new one. Regarding the profit generated by "being the middleman" in the sale of the calf, Molnár noted that the farmer could not make such profits in an average year.

Older Members of Cohabiting Couples from two Generations ("Grandparents") (Type IV)

Molnár classified a small landowner with four cadastral acres and seven grown children as a member of the fourth type of family. This landowner lived with his wife, and according to "tradition," the youngest son and his wife lived with him in the same household.[88] Molnár provided no textual references that would allow for the identification of other classification criteria. The family members described as type IV lived in a house with a tiled roof measuring 14 × 8 × 3 meters, and they had several outbuildings on their property. We cannot determine the age of the farmer from Molnár's essay. He probably belonged to an older age group, as his sons were the ones who cultivated the fields.[89] He consumed 25 liters of wine at home each year, and he drank about four liters in the pub annually.

The value of the goods produced on their land amounted to a total of 314 *pengő*. Of the crops, wheat was produced in the largest quantity, 15 quintals valued at 17 *pengő* each, amounting to a total value of 225 *pengő* (71.7 percent), of which six quintals were sold (104 *pengő*). In comparison, the garden vegetables represented a low amount, with the total for vegetables such as green beans, dry beans, peas, cucumbers, red onions, and garlic amounting to 6.05 *pengő*, and this produce was used by the landowner in the household.

The landowner was only engaged in fishing on a piecework basis. According to Molnár, he devoted 864 hours a year to fishing, which Molnár valued at 140 *pengő*, calculating it based on 70 days at a rate of 2 *pengő* per day.[90] The family's total income was 586 *pengő*, of which 53.6 percent was the value of goods produced in kind, and 46.4 percent was the amount received in cash.

Food items produced and consumed within the household (wheat, corn, fish, potatoes, chicken, eggs and pork) amounted to a value of 297.65 *pengő*,

88 In the discussion of the next group, it did become clear that the younger couple had two children. Molnár, "Pusztaszakállas gazdaság-formái," 40.

89 Ibid., 35.

90 Ibid., 36.

of which wheat accounted for 119 *pengő* (40 percent). The landowner spent 27.27 *pengő* at the spice shop over the course of the year, for example, 4.2 *pengő* for sugar and twelve *pengő* for 30 kg of salt. In the list of expenses, Molnár noted that the farmer did not allocate much for clothing, which amounted to the purchase of only two new garments per year: a shirt worth 3.5 *pengő* and a winter coat worth 70 *pengő*.[91] Among the other costs, taxes were also highlighted, but only the church tax was specifically mentioned, valued at 8.2 *pengő*, while all other taxes amounted to a total of 80 *pengő*.[92] The landlord owed 150 *pengő* to the local savings cooperative, which required him to pay 18 *pengő* annually as "interest."

In the end, regarding the revenues received in cash, it was possible to report 272 *pengő* (144 *pengő* from fishing; 104 *pengő* from wheat; 24 *pengő* from poultry), while on the expenditure side, the final amount was similar, 276.44 *pengő*. Among the cash expenses, the two largest items were taxes, amounting to 95.7 *pengő* altogether (34.6 percent), and the aforementioned money spent on clothing, which totaled 73.5 *pengő* (26.6 percent)[93] (Table 6).

Table 6. The balance of household cash flow of the older members ("grandparents") of two-generation cohabiting couples in 1932

Revenues	**Value *(pengő)***	**Rate (percent)**
Income from fishing	144	52.9
Plant cultivation	104	38.3
Animal husbandry	24	8.8
Total	**272**	**100**

Expenses	**Value *(pengő)***	**Rate (percent)**
Clothing	73.5	29.8
Taxes	95.7	38.9
Spice shop	24.24	9.8
Buying a pig	23	9.3
Interest on debt	18	7.3
Radio fee	12	4.9
Total	**246.44**	**100**

Source: Molnár, "Pusztaszakállas gazdaság-formái."

91 Ibid., 37.

92 They also calculated the house insurance at 4.5 *pengő* and the chimney sweeping fee at a value of three *pengő*.

93 Molnár, "Pusztaszakállas gazdaság-formái," 38.

Nuclear Families Formed by Young Married Couples (Type V)

Type V was represented by a 20-year-old farmer who had two daughters. The farmer was the son of a man described as belonging to the type IV family. Molnár referred to the young age of the farmer twice, so we may assume this was the main aspect of classification.[94] He lived with his family in a room measuring 5 × 4 × 2.5 meters, where there was a bed, a mess, and a sofa, but there was no room left for a chair. Molnár noted that their way of life was characterized by "satisfactory hygiene," as they bathed every day, and in the summer, they swam in the Tisza River. Molnár noted that "they change their underwear weekly."[95] In summer, they ate three times a day, in winter, twice, having some kind of cooked food at noon and bread with bacon in the evening for dinner. They rarely ate fruit. If they did so, it was watermelon that made its way to the table in the summer. The farmer consumed 22 liters of wine in the tavern over the course of the year, along with two liters of brandy. He smoked two packs (at a cost of 0.11 *pengő* per pack) of tobacco a week. Culture was absent from their lives because "they did not read books or newspapers."[96]

In terms of the annual number of hours spent working, the farmer spent 183 hours harvesting, 1200 hours fishing, and 370 hours pressing straw, totaling 1,753 hours of work.[97] Molnár specifically noted that from November to March, he engaged in fishing for 112 days and in straw threshing for 42 days, from which he earned 132.8 *pengő* and 25.2 *pengő*, respectively. For the work done during the harvest, payment was made in kind, amounting to 5.3 quintals of wheat (valued at 90.1 *pengő*), 0.24 quintals of barley (3.84 *pengő*), eight quintals of corn (112 *pengő*), and 1.5 quintals of potatoes (27 *pengő*), totaling 232.94 *pengő* in cash.[98] The quantity of cereals was not sufficient for the family, as the farmer had to ask his father-in-law for an additional 270 kilograms of wheat before the harvest. Molnár distinguished the "revenue from livestock" section, where he recorded 30 chickens valued at 60 *pengő*. Although two lines earlier he noted that some 80–90 chicks had hatched, he only recorded the value in cash for 30. (The

94 "This almost child-like person type is the most common in the village." Molnár, "Pusztaszakállas gazdaság-formái," 45.

95 Ibid., 40.

96 Ibid., 41.

97 Ibid.

98 Ibid.

remainder were probably consumed by the household). The price was listed as 215 eggs (17.2 *pengő*), and an additional 300 eggs were used in the household.

The cash income from animal husbandry was 77.2 *pengő* (the total from selling 215 eggs and 30 chickens at a price of two *pengő* each). From the garden vegetables (from beans to lettuce), a total value of 23.03 *pengő* was produced, of which the largest item was one and a half quintals of potatoes, worth 12 *pengő*.[99] A value of 407.83 *pengő* (for food, such as flour, fat, eggs, bacon, etc.) was consumed (everything was produced on the farm, and he received only 12 kg of fish as a gift). The cost of the feed for the livestock was assessed at 68.88 *pengő*. In the case of the data provided by Molnár, I would like to point out that the difference between the value of the harvesting wage (232.94 *pengő*) received in kind and the value of items produced and consumed within the household (407.83 *pengő*) is represented by the vegetables produced in the garden worth 23.03 *pengő*, as well as the chicken and eggs consumed, which were worth 141.44 *pengő*.

In the end, there was a cash income of 248.4 *pengő* (77.2 *pengő* from poultry farming; 13.2 *pengő* from two carts of pumpkins; 132.8 *pengő* from fishing; and 25.2 *pengő* from straw pressing). On the expenditure side, a total of 239.2 *pengő* was spent on spices, clothing, tobacco (13.52 *pengő*), wine, brandy, and the purchase of a pig (Table 7). At the spice shop, 65.64 *pengő* was spent, the largest item of which was 30 liters of kerosene, valued at 10.86 *pengő*.[100] The clothing cost a total of 110 *pengő* in 1931.

Table 7. Annual cash flow of a young married couple (*pengő*).

Revenues	**Value *(pengő)***	**Rate (percent)**
Daily wage	158	63.6
Animal husbandry	77.2	31.1
Plant cultivation	13.2	5.3
Total	**248.4**	**100**

Expenses	**Value *(pengő)***	**Rate (percent)**
Clothing	110	45.9
Spice shop	65.64	27.4
Buying a pig	31	13
Other	32.72	13.7
Total	**239.36**	**100**

Source: Molnár, "Pusztaszakállas gazdaság-formái."

99 Ibid., 42.
100 Ibid., 43.

The apparent positive balance is overshadowed by the fact that the farmer owed money to the church (because of the church tax), the amount of which was not even specified. It can be suspected that this amount was higher than the difference between the expenditure and revenue sides of the balance sheet. Despite this, the biggest burden for him was the borrowed wheat he had requested from his father-in-law. As Molnár wrote, "he would want to work more, but job opportunities are quite scarce. … He is generally in a better position than the other poor people in the village, because he knows about fishing and earns quite a bit with it!"[101] But Molnár still included the following sobering observation: "They live on a tight budget and rely on parental support."[102]

Modern Nuclear Family, Produce Made for the Market (Type VI)

We do not know the age of the farmer described as type VI, only that he participated in World War I and that his son was 18 years old. Molnár stated that he "follows the modern trend," meaning his goal was to "produce as much as possible in a small space."[103] He began his gardening activities by renting a three-acre floodplain, which he intended to use to grow melons, while planting red onions along the roadside. In the end, it was the onions that brought him profit, which is why he turned to gardening. He was able to start his horticultural business in 1929 by renting eight cadastral acres, and by 1932, he was growing peppers, winter radishes, cabbage, vegetables, and spring onions in hotbeds, where he also implemented motorized irrigation. The family lived a dual life, with the father and son on the land rented on the banks of the Tisza River (in a building they themselves had constructed from clay with a thatched roof), while the female members of the family lived six kilometers away in the village. In Pusztaszakállas, they were essentially the only smallholder family making a profit from farming. According to Molnár, they managed their annual budget data related to horticulture almost perfectly, and this data indicate that they were able to achieve a profit of nearly 2,000 *pengő*[104] (Table 8).

101 Ibid., 45.
102 Ibid.
103 Ibid., 46.
104 The data were collected in January 1933.

Table 8. The budget of a vegetable producer in Pusztaszakállas in 1932 *(pengő)*

Expenses

Item	Unit price	Amount
8 cad. acres lease	68	544
irrigation machine		800
glass jars (hotbeds)		154
100 litters of gasoline	0.24	42
8 allocations	6	48
80 kg onion	0.5	40
seedlings		22
105 transportation	3	315
700 casual work	0.8	560
Total		**2,525**

Income

Item	Unit price	Amount
80 q onion	5.3	424
10 carts of cabbage	15	150
1 cart of radishes		80
1 cart of vegetables		35
85 carts of peppers	45	3,825
Total		**4,514**

Source: Molnár, "Pusztaszakállas gazdaság-formái."

Reviewing the cash flow of the family farm, Molnár noted the costs of transportation (which he estimates to be nearly 400 *pengő*) and found them high based on the farmer's account. The irrigation machine represented a greater financial burden, but it was noted that he had three years to pay back the 2,400 *pengő* expense; and it is likely that this amount had already been paid in the months preceding the data collection. The lease of the land (544 *pengő*) and the wages of the day laborers also represented significant costs. As a fee, the family paid 0.8 *pengő* per day. Molnár described this work an easy task that even young girls could handle.[105]

They made transportation cost-effective by purchasing two horses and transporting their goods to the train station by cart, from where the paprika was sent to Budapest. The vehicle used for transportation was impossible to modify, so they could not even measure how much a shipment weighed. Molnár put it at roughly ten quintals. The family's success in gardening inspired others in the village, so three people started growing red onions, even though among the vegetable products mentioned so far, onions were the most problematic (for example, harvesting them was considered slow).

The gardener involved in the investigation did not believe that he had to fulfil all his tax obligations, even though he had an annual profit of 2,000 *pengő*. He chose to declare his activity as arable farming instead of gardening to lower the tax rate.

105 Molnár, "Pusztaszakállas gazdaság-formái," 49.

Summary

How accurate were the data presented by Molnár in his essay? In the 1930s, sociologist Mihály Kerék also dealt with the living conditions of the Hungarian agrarian population. Based on the 96 families living in twelve predominantly lowland working communities he examined in 1932, he found that it was very difficult to make precise determinations concerning their financial situations. The debts were mostly kept track of by the housewives, who were ashamed to declare everything, especially the smaller debts, such as the claims from the grocers. Generally, in the case of occasional jobs as well as for the purchase or sale of smaller items (such as eggs), by the end of the year, they no longer remembered the exact quantities that had been spent.[106]

Molnár mentions numerous goods (and their monetary values), of which only the price of salt was the same for every family (0.4 *pengő* per kg). For certain agricultural produce, such as wheat, nearly identical values have been reported (15–18 *pengő* per quintal). However, there were a few crops or produce items for which the price differences were greater. Barley was valued at 11 *pengő* per quintal for the Type I family, 7 *pengő* per quintal for the Type III family, and 16 *pengő* per quintal for the Type V family. These values were likely determined based on the memories/assessments of the affected families, or there may have been other factors unknown to us. We cannot prove the reasons, but in the case of the mentioned figures, it seems that if someone received half or a third of the crop, its price appears to be low (the mentioned price of barley is 7 *pengő* per quintal), while the price of the crop received for labour during the harvest seems higher (16 *pengő* per quintal for barley). For the head of the Type V family, every crop was considered at a high price when he received his payment in kind for his harvesting work: the ear corn was charged at a price of 14 *pengő* per quintal, and the potatoes at 18 *pengő* per quintal (the latter, for example, should have cost between five and ten *pengő*). So there was a great discrepancy between nominal prices and real prices. The difference in the price of red onions is striking: the Type VI family, which produced for the market, received just over 0.05 *pengő* for each kilogram (this was the wholesale market price, as they were able to sell 80 quintals), while in the case of the Type I family, the more than one quintal produced for personal use was valued at 0.28 *pengő* per kg (estimated price).

106 Kerék, "Adatok a magyar mezőgazdasági munkáscsaládok," 593–94.

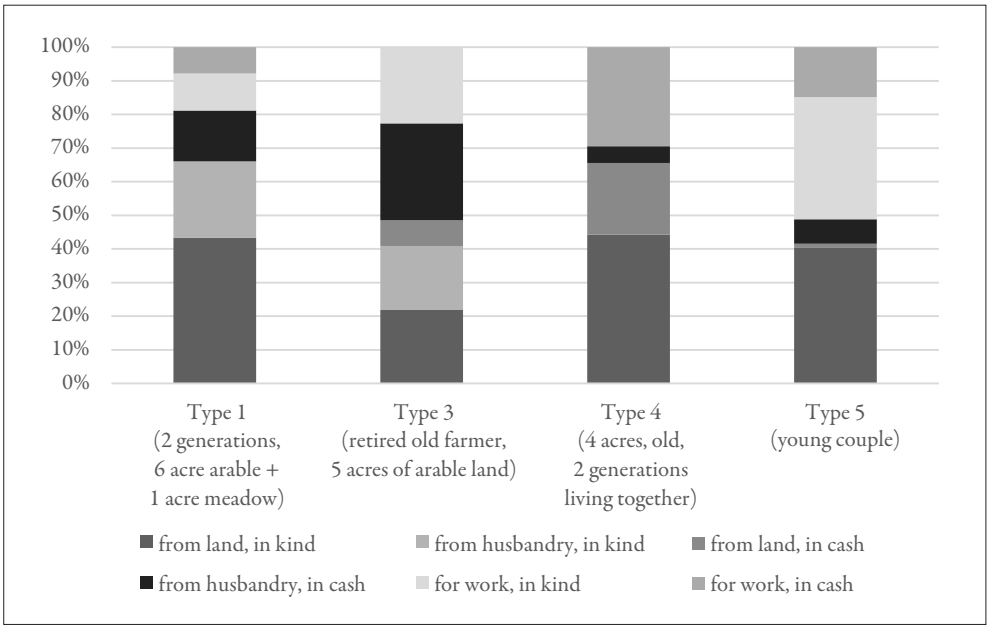

Figure 1. Incomes of different family types in Pusztaszakállas in 1932, as a percentage

In the case of Type I–V families, according to the data, a significant portion of the goods produced was consumed, essentially serving as an example of the independent peasant economy described by Chayanov. If the family's financial situation required it, they also took on day labor for wages or for a share of the harvest. In the case of the vegetable gardener presented as a Type VI family, there was no mention of the garden vegetables that might have been grown by the family within the area of the settlement, nor was there any mention of what animals they might have kept. For a farm or farmstead producing for the markets, the value of bacon or fat consumed is likely irrelevant. Accordingly, only the costs necessary for the production of vegetables sold at the market have been included on the expenditure side too. The revenue mentioned also included the income made from the sale of vegetables. It is also true that they did not calculate the depreciation of machines and equipment when they calculated profits.

The families presented differed not only according to Laslett's typology but also according to the sources of income, despite the similarity in field size. Two families earned wages as the main source of income, but there were also differences between them, whether in-kind or cash revenues dominated. In two other types of families (one multi-generational, the other with an elderly head of household), the work outside the farm played a subordinate role. Here, income

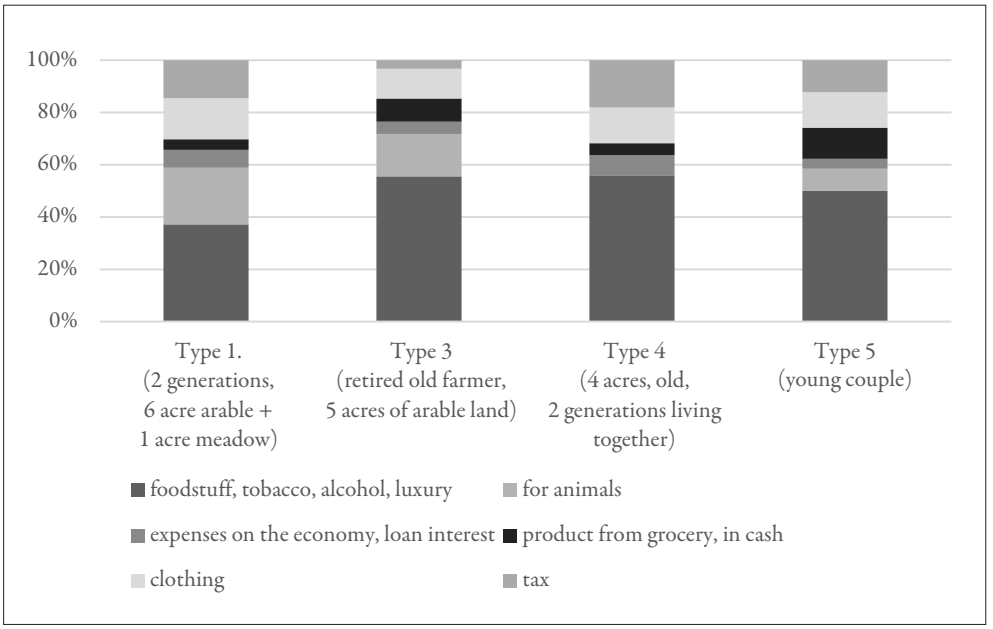

Figure 2. Expenses of different family types in Pusztaszakállas in 1932, as a percentage (in kind and in cash expenditures merged)

from livestock or revenues from public goods (fishing) accounted for 30 percent of total income, indicating a major deficit in Hungarian statistics (the general lack of livestock censuses at the settlement level before 1930). The share of income from arable land (whether cash or in-kind) varied between 20 and 60 percent.

The expenditure side (both monetary expenditure and consumption in kind) showed less diversity. Despite the obvious tax evasion (and the significant tax arrears), taxes fluctuated between twelve and 20 percent of expenditures (and income), clothing accounted for a stable ten to 15 percent, while expenditure in grocery shops remained below ten percent, as did economic investments (building maintenance, livestock or land purchase). Self-catering accounted for half of expenditures. This, together with livestock, reached 60 percent for all four families (with complete data sets). Cash income (i.e. the value of products sold) did not exceed 33 percent of the income, and cash expenditure (items bought in addition to consumption produced by the peasant economy) accounted for 38 percent of expenditures. In general, the cash needs of self-sustaining farms not producing for the markets were higher than the annual cash income actually available, often due to rolling tax arrears or loan repayments.

The description of demographic aspects and characteristics in Molnár's unpublished thesis, which proved significant factors in defining different types

of families, has somewhat taken a back seat (unlike in the writings by other villager researchers). The descriptions of the financial circumstances of the families, although not discussed with the depth of public economics (finance-accounting), sought to avoid omitting even a single item (income, expenses, consumption goods produced within the framework of self-sufficiency, and even gifts), assigning a monetary value to each of them. If we look at his work through the lens of economics, then in comparison, the economist-statistician Mátyás Matolcsy considered the same factors as Molnár when determining Hungary's national income in the 1930s, with one exception: Matolcsy tried to express the value of household work as well, ultimately calculating a total of 350 million workdays nationwide per year.[107]

The families introduced lived in modest, simple circumstances. Even the expenses of the sixth family presented did not reflect the high annual profit of 2,000 *pengő*. It is likely that the families presented by Molnár were in a better situation than the 96 families of the lowland working-class community examined by Kerék. The families presented by Kerék had an average of one or two cadastral acres of smallholdings, but Kerék considered the declining presence of pig farming as a sign of material "deterioration," as only about one-fifth of the households were involved in raising pigs.[108] In Pusztaszakállas, however, every family was engaged in pig farming.

Molnár dealt with taxes in the case of each family, whether as their highest expense to cover in cash or an amount they owed in arrears. Among the taxes, the church tax was a matter of customary law (there was no written law regarding it), but the local population accepted it. In Törökszentmiklós, the church and the local leadership agreed that the local apparatus would collect this tax for a five percent commission, but this amount was left in the hands of the church as a donation.[109]

In the interwar period, taxes had to be paid based on numerous bases. There were about nine types of state direct taxes (such as the land tax and the house tax), which, on country average, could have accounted for approximately 60 percent of the total tax burden, while local taxes and surtaxes made up the remaining

107 In the case of dependent married women, half a day was considered daily, for employed married women, at most a quarter of a day, while for household employees, a full day was taken into account. Household work accounted for 5.49 percent of the national income. Among modern economic indicators, GDP is similar to Károly Molnár's method of calculation, as it does not take into account household work. Matolcsy and Varga, *Magyarország nemzeti jövedelme,* 52–53 and 64.

108 Kerék, "Adatok a magyar mezőgazdasági munkáscsaládok," 609.

109 Szakál, "Törökszentmiklós története 1932-től 1938-ig," 17.

40 percent.[110] According to calculations done at the end of the 1930s, out of the annual direct tax burden of 513 million *pengő*, approximately 192.5 million *pengő* (37.5 percent) was allocated to agriculture, which amounted to roughly twelve *pengő* per cadastral acre.[111] However, local conditions could have significantly altered this value. The payable taxes increased further if a municipality raised the burden with an additional surtax in order to increase its revenues for the sake of budgetary balance. We previously mentioned that Törökszentmiklós had a debt of more than a year's revenue in the 1930s (debt was over one million *pengő*), so it is no coincidence that supplementary taxes began to rise as well.

Table 9. The theoretical tax burden of smallholders with five cadastral acres in the 1930s *(pengő)*

	Type of tax	**Above five cadastral acres**
	Average landowner net income (gold crown/landowner acre)	13.5
	Total net income of all categories (gold crown)	67.5
	Total net income (*pengő*)	78.3
1	Land tax (20 percent)	15.66
2	Householder tax (14 percent)	10
3	Income tax (1–1,2 percent)	0
4	Wealth tax (1‰)	0
5	Extra allowance	0
6	Disability support tax	0.51
7	Public sick leave and childcare allowance supplementary tax	4.11
8	Road tax (10 percent)	2.57
9	Public work redemption	3.7
10	Agricultural Chamber fee	1.03
11	Water regulation fee	2
12	County supplementary tax (32 percent)	8.21
13	Municipal supplementary tax (75 percent)	19.25
14	Dog tax	2
15	Mix tax	6.06
16	Church tax (10 percent)	2.57
	Total	**77.67**
	Land tax reimbursement	-15.66
	Net tax burden	62.01
	A gross tax per cadastal acre (*pengő*)	15.53
	Net tax burden as a percentage of the net income of the cadastral acres (percent)	**79.2**

Source: My compilation of data provided by Béla Bojkó.[112]

110 Bojkó, *Magyar adórendszer és adópolitika,* 26–27.

111 Ibid., 27.

112 Ibid., 45.

Béla Bojkó calculated his data on the share of tax from total incomes for several estate sizes, but he noted that he considered minimum values. If we compare the theoretical values of smallholders who owned five hectares of land (Table 9) with the tax burdens of families classified in Type I by Molnár (Table 3), it can be stated that the actual tax burden was higher in Törökszentmiklós.[113] The land tax and house tax together amounted to 85 *pengő*, rounded off, while Bojkó's calculations only came to roughly 25 *pengő*. The church tax was also much higher than the theoretical value in the case of the family in Pusztaszakállas (2.5 *pengő* versus 24 *pengő*), which may have been due to the higher number of children. In the case of the family in Pusztaszakállas, the amount to be paid for the exemption from public work was also higher. (3.7 *pengő* versus 24 *pengő*). The income tax indicated by Molnár for the Type I family in Pusztaszakállas was 19 *pengő*, while Bojkó did not take such an item into account at all.

If the result of a "sampling" is that five out of six families had trouble paying their taxes and the sixth, although it was in a much more favorable situation than the others, intentionally reported an incorrect tax base for the sake of more favorable taxation, then this can hardly been seen as a coincidence. According to Lajos Juhos, the problem with agriculture in the interwar period was that a farmer received loans at an interest rate of around ten percent, while the maximum profit that could be made in agriculture was about five percent. The outcome was indebtedness.[114] The simplest method of compensating for this was tax evasion. If the farmer did not take out a loan, then an opportunity for modernization was missed, and the farm was self-sufficient at best. In the existing financial condition, it was not obvious for the average farmer that it was worth investing or even possible to invest in modernization.

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113 The Type I family owned six cadastral acres of land.

114 Juhos, "Dunántúli kisgazdaságok jövedelmi helyzete," 285.

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At the turn of the eighteenth and nineteenth centuries, drawing inspiration from his contemporaries, Thomas Malthus introduced the notion of impending population catastrophe, a notion that would not only seem to become a reality over the course of the next century but would also be seen as an ominous threat by the leading powers of his time. Indeed, it was seen as such a threat that a country's potential and power were generally understood as depending first and foremost on the growth of the population within its borders, and deliberate policies were introduced to further population growth. In the eighteenth century, Habsburg leaders began to feel that they were gradually losing their place as a world power. Instead of attempting to expand their territories, they turned their focus inwards, to questions of domestic policy. They began to see the peoples of their empire more and more as quantifiable subjects. How many did they number? What was their status? How much did they pay in taxes? How many of them were women, children, or Jews? How could their numbers be increased? The volume under review, which was written and edited by Lilla Krász and prepared with the active cooperative work of ethnographer Zita Deáky, examines this exciting transformation, focusing broadly on the period between the mid-sixteenth century and the mid-twentieth century and more narrowly on the time span between the last half of the eighteenth century and the first third of the twentieth. The book weaves an intricate web by exploring the relevance to this transformation of questions of memory and forgetting, money, and knowledge. It offers penetrating analysis of a rich array of sources in a vibrant, highly readable tone.

The book reminds us, perhaps first and foremost, that while the past may sometimes seem distant, it is nonetheless only a few generations removed from today. This "visible" past, which is still largely within the perimeters of family memory, primarily conjures the memory of a community in which, in accordance with inherited social roles (and also tradition and custom), the rituals, practices, and beliefs surrounding childbirth, which was understood as the guarantee of survival, were cultivated and preserved. In seven chapters divided into 23 sub-chapters, the book offers vivid descriptions of the agonies and joys of mothers

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of the past centuries, both those whose names have survived and those who remain anonymous, and also of the fates of women who were unable to conceive and babies who were born prematurely, late, or stillborn. It also touches on the roles of men and the fears and accusations surrounding healthy births and births that ended in tragedy. Importantly, the book also pays tribute to Ignác Semmelweis (1818–1865), who unquestionably merits international fame, and Vilmos Tauffer (1851–1934), who was a doctor and surgeon of international renown, as well as to the many doctors and surgeons who actively fought for the development of health care in Hungary and Central Europe, especially in obstetrics and gynecology, and to the many trained or untrained midwives who did their work outstandingly well or, in many cases, devastatingly badly.

But this book undertakes to do far more than that. It also presents customs, practices, beliefs, and ideas which have since been forgotten or which our society today might well find strange. It goes beyond a simple presentation of these beliefs from the perspective of Max Weber's notion of disenchantment and shows how the price of the leaps forward that have been made in the world of health care has been almost incalculable. How could one possibly calculate, after all, the precise costs and benefits in situations in which, because of high mortality rates, people decided simply not to have children at all? The world of people who lived alongside and indeed even felt a close attachment to the holy images on Gothic panels, in wooden churches, or in the stone churches built out of communal resolve is arguably gone, much as the humble fear of cosmic forces that was embodied in the idea of humoral pathology is also gone. The book conjures this world with its vivid descriptions and in-depth analyses of familiar, even famous and also less familiar or entirely unfamiliar images. The numerous illustrations (almost 170) include, alongside those mentioned above, an impressive array of family photographs, photographs of works of art, engravings from books on specialized subjects, and documents that are valuable as primary sources. The reader also finds 27 tables which offer clear illustrations of the many ideas and also serve as source information. It might have been useful to have included a map with table 25 (which gives information concerning institutions where midwives were trained in the Kingdom of Hungary and Transylvania in 1770–1918), and some of the tables should perhaps have included (or been replaced by) diagrams (table 16, for instance, which presents data gathered by István Hatvani on infant mortality in Debrecen, or table 27, which provides information concerning surgeons and midwives who obtained their degrees in Hungary), but tables are unquestionably the most appropriate solution for a comparison of the textbook

texts or documents which fall under other designations. Various excerpts from the book, such as the interpolated explanations, textbook excerpts, and case studies, can be integrated into university and, under special circumstances, secondary school education to further a nuanced understanding of the relevant demographic, social, and even economic chapters. They also help further a grasp of the darker side of the subject, which includes rampant infanticide, ill will that led to the death of a child, or the death of a child as a consequence of unprofessionalism, ignorance, carelessness, or indifference (vivid historical examples of this include the cruelty of midwives who rushed births, infants being prematurely pulled from their mothers' wombs, etc.). Another practice which has only rarely been submitted to serious scholarly study was the use of wetnurses to provide breast milk for infants. This practice led to literally innumerable deaths, as the alleged causes of these deaths provided in the record books were conditions such as "congenital infirmity," "convulsions," "inflation of the intestines," etc.

The gradual transformation of the practice of providing health care into a specialized procession also led to the expansion of an emerging market. This meant both the invention and dissemination of new tools and the addition of new customers to the market network, as well as an increasingly strong demand for health care and a marketplace attitude which has shaped the profession and practice of health care for the past two centuries. The book offers a detailed presentation of the most important implements used during various moments of this history, including, for instance, the belts and cinctures that were used in the early modern period to facilitate the birth process. The so-called belt of Saint Margaret, the use of which only the upper classes could afford, and the belt-cord used by peasant women and worn by their husbands offer extreme examples of the tools used to facilitate childbirth (which, after all, put women less than an arm's reach from death, as it were). The evolution of these tools is made easy to understand by the book, however, if we consider the example of the changes which took place in the contents of the midwife's bag. The four columns of Table 10 summarize the stages of development over a century, in the course of which the birth stool, for example, fell out of use, while by 1882, soap, which certainly had not been in use in 1823, was also found alongside the metal tools. The periodical *Bába-Kalauz* (The Midwives' Guide) kept midwives informed of the newer implements available for use in obstetrics equipment, which was part of overall developments in the pharmaceutical industry (as exemplified by the improvement in the quality of the pharmacy containers presented on pages

24–25 of the book). While the book provides nothing in the way of specific calculations, it offers a thorough and circumspect look at the training and educational opportunities midwives had (and the related costs), which became increasingly important from the mid-eighteenth century onwards, as midwives found themselves more and more compelled to acquire documents which certified their abilities. This strikes me as just as essential to any understanding of the process of professionalization as the repeated emphasis on the fact that a midwife, who was put under more and more expectations by the state and the professional world, was first and foremost an employee of the community in which she worked and, given the intimate nature of her work, was also often a very influential member of this community with an array of responsibilities and was sometimes even one of its informal leaders.

Finally, the book presents the process of medicalization through a series of emphatic contrasts over 350 pages (concluding with a bibliography, a list of illustrations, an index of personal names, and acknowledgements). These contrasts include, for instance, the stark difference between the narrow medical and surgical community on the one hand, which consisted entirely of men, and midwives on the other, who were all women and who were found all over the country. One could also mention the issue of birth control, which, although as ancient as humankind itself, cannot be said to have been part of conscious family planning before modernization, apart from the practice widespread in some parts of Hungary of having only one child (specifically the so-called Ormánság and Sárköz regions). Similarly, one finds the opposition between the largely academic theoretical knowledge concerning childbirth and predominantly empirical, practical knowledge. One could also mention the contrast between the fear of doctors and surgeons on the one hand and the trust and confidence in midwives (often due to their vulnerability), as well as the narrow social world of doctor and surgeon in contrast with the broad social circles of midwives, and so on. The book (which is a hefty tome and therefore is perhaps not ideal as something one would browse in bed) is a particularly engaging read in part because it raises a fascinating general question: how did the customs, rituals, and practices surrounding birth, which was fundamentally a family affair, move from this intimate, narrow sphere to the more public, regulated world of the hospital? Or rather, how did birth move *for the most part* to the hospital, since it is worth noting that, since the publication of the first version of the book, laws in Hungary have changed and home births are now permitted, if under strict restrictions. This alone would not have justified the republication of the book

after almost two decades, but the constantly expanding national and international specialized literature on the subject does. The book has grown, and changes have been made to the illustrations and design to ensure that the work as a whole better meets expectations today. The publication of the new volume in the "Family – Histories" series was funded by the research project *Hungarian Family History before Modernity: Childhood and Mosaic Families in the Sixteenth to Nineteenth Centuries*, led by Gabriella Erdélyi, and published by the Research Centre for the Humanities Institute of History. The book continues to capture the interests of readers, as is most eloquently proven, perhaps, by a comment posted in May 2023 (four months before the launch of the new edition) to *Moly.hu*: "I would like to note, this book is well-nigh impossible to get. I myself, after having pre-ordered it two years ago on Bookline (where it is still unavailable), finally bought it on Vatera. So… make no mistake about it: anyone who gets a copy will not give it away easily." I am sure this reader will not be disappointed to get a copy of the new edition.

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The Shadow of the Empress: Fairy-Tale Opera and the End of the Habsburg Monarchy. By Larry Wolff. Stanford: Stanford University Press, 2023. 435 pp.

"Sometimes I get up in the middle of the night and leave the clocks all, all stand. But you do not have to be afraid of her either. She too is the creature of the Father who created us all." These words about time are sung by the *Marchallin* in *Der Rosenkavalier,* the 1911 opera by Richard Strauss and the Viennese poet Hugo von Hofmannsthal. They seemingly represent the lamentations of a middle-aged woman over the passing of time, but they can be also understood as the dilemmas of the Habsburg regime, which had to recognize and adapt to the necessities posed by political and social modernity. This interpretation is supported by the fact that the character in the opera is called Marie Thérèse, the name of the most popular Habsburg ruler. The next major collaborative work by Strauss and Hofmannsthal, *Die Frau ohne Schatten*, was written and composed during World War I. It is less often discussed than *Rosenkavalier*, although it is full of similar subtleties. It is a welcome development, then, that *Die Frau ohne Schatten* is in the center of Larry Wolff's remarkable work, which provides a total intellectual history of this fairytale opera.

For Wolff, who has published several landmark monographs on Central European history in recent decades, this work was evidently a "passion project," not only because it was his "pandemic book" but also because of the homage the work pays to the author's grandparents, who were born in the Habsburg Empire. In a similar manner as in some of his other works, *Die Frau ohne Schatten* is only the "small place" where Wolff studies his "bigger questions:" twentieth-century Vienna and the ways in which the perception of cultural modernity changed as a result of the war. In parallel, we follow the life story of the empress, who had to leave the political scene in the very same year as the fairytale empress walked onto the stage for the first time: Zita, wife of Austrian Emperor and Hungarian King Karl.

The book consists of three parts. The first discusses the two main stories from the turn of the century up to World War I. The second presents the period of the war, and the third examines the afterlife of the opera and Zita's long widowhood. The structure of the book has an exciting dramatical character, as the different stories run parallel and even the plot of the opera is explored gradually. In all three parts, Wolff provides his readers with meticulous analyses of the opera's different social, cultural, and political contexts, as well as

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a profound reading of the opera's complex symbolism and musical language. The refinement of the contextualization is, in my view, the greatest merit of the book, which is comparable to Moritz Csáky's masterpiece on Viennese operetta.

Wolff follows the creative process of Strauss and Hofmannsthal through their letters, which suggest that Hofmannsthal was the more erratic of the two, while Strauss comes off as more serene. In the letters written in the first days of the war and the crises leading up to it, one finds few if any allusions to the contemporary events. However, the plot of the opera takes discernibly darker turns. During the war, Strauss' perception of his creative path changed. He declared that *Die Frau ohne Schatten* would be the last romantic opera he would write, as in the face of European Armageddon, one had to break from the Wagnerian tradition which had dominated his musical language until then. This shows already in the opera itself, as during the dramatic climax, when the fairytale emperor turns into stone, the empress loses her ability to sing and expresses the terror she feels in spoken words. Additionally, Wolff situates the opera in its musical context: Mozart's *The Magic Flute* was clearly a constant reference point for the creators, as was Engelbert Humperdinck's *Hänsel und Gretel*, but several other standard works of Austrian and German music are also mentioned. Here, perhaps, it might have been worth putting slightly more emphasis on the connection to Wagner's *Parsifal*, as compassion is a key element in the empress' journey to becoming human, just as it was crucial for the *reine Tor*.

Wolff also shows how contemporary experiences of the Habsburg Empire made their way into the plot of the opera. The treason of the Nurse, for instance, is reminiscent of the infamous case of the officer Alfred Redl, who was a spy for the Russian Army, and the chaotic human world of the opera into which the empress and the nurse descend in the first act can be interpreted as analogous to Vienna's chaotic *fin-de-siècle* mass politics as well as the prevailing circumstances in Galicia, where Hofmannsthal was stationed as a soldier. Wolff also contemplates what might come to mind for the first audiences immediately after the war while listening to parts of the opera such as the chorus of unborn children or the gorgeous third act duet of the separated wife and husband. His splendid analyses of the music are illustrated by extracts from the score, which are of tremendous use to the reader (provided he or she can read sheet music).

The section titled "Postwar" presents in detail the different casts and conductors performing the opera over the course of the century. Readers who are passionate admirers of twentieth-century conductors and opera singers (as this reviewer is) will greatly appreciate this part. The postwar life of the real-life

empress is also presented in detail. During the interwar period, Zita still held on to the prospect of Habsburg restoration, which became definitively impossible with the *Anschluss*. However, the one-time empress eventually found another passion with the prospect of the sainthood of her late husband. The process of Zita's own sainthood is where her life story collides with that of the author, as Wolff was asked to participate in the process of her beatification as a scholar of Zita's life in North America. There is also a symbolic collision of *Die Frau ohne Schatten* and Zita's death. The Viennese Boys Choir sang at the funeral of the late empress in Vienna. The choir also sang in Sir Georg Solti's luminous recording of the work, which was made during the same period.

The Shadow of the Empress is an entrancing read. Wolff's intimate knowledge and genuine love of culture are impressive and captivating, and he shows a passionate devotion to his subject that is rivaled only by such outstanding scholars and cultural historians as Carl E. Schorske or Moritz Csáky. This "pandemic book" is also itself an example of how true scholarship can prevail in times of crisis.

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Re/imaginations of Disability in State Socialism: Visions, Promises, Frustrations. Edited by Kateřina Kolářová and Martina Winkler. Frankfurt/New York: Campus Verlag, 2021. 319 pp.

Compared to race, gender, sexuality, and class, disability remains a rather undiscovered area of research in social sciences and humanities. However, a growing number of historians have convincingly argued that disability provides a novel angle for a more nuanced understanding of social and political systems of the past. *Re/imaginations of Disability in State Socialism. Visions, Promises, Frustrations* seeks to contribute to this knowledge building by putting the focus on the former Eastern Bloc, suggesting that the complexities posed by understandings of dis/abilities of bodies and minds accentuate the many challenges faced by the Soviet socialist project, particularly these complexities overlapped with various categories of "otherness."

The purpose of the multiauthor volume, which consists of an in-depth introduction and nine chapters, is precisely to argue for the close analysis of these very challenges and to complicate the picture of state socialist attitudes towards disability. Therefore, one of the key points of the book is to show how state socialist regimes attempted to strike a balance between theory (socialist utopia) and practice (social engineering).

The egalitarian principles of socialist ideology and the exclusionary nature of state-defined normalcy concepts present an apparent paradox, which is addressed in several chapters of the volume. For instance, the notion of defectology, defined as an influential epistemological framework which spread across East Central Europe from the USSR, was initially meant to be a state-controlled emancipatory process. In practice, however, it led to the creation of hierarchies of "defects" based on the limits of these supposed defects to "correctability." Explained at length in the chapter *Work as a Form of Emancipation: The Emergence of Czechoslovak Defectology*, by Marek Fapšo and Jan Randák, defectology became a powerful domestic discipline in Stalinist Czechoslovakia under the scientific supervision of Miloš Sovák. Later, it acquired new meanings in accordance with socialist economic interests and state-defined standards of productivity. The chapter *Engineering Socialist Integration in the Age of Normalisation: Roma and People with Disabilities as Objects of Care in Socialist Czechoslovakia,* coauthored by Kateřina Kolářová and Filip Herza, examines how disability, race, and ethnicity were viewed in the framework of this discipline, also concluding that the overly normative nature of defectology led to the failed integration of those with

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purportedly unchangeable defects, who were persistently labeled as "useless" members of socialist societies.

Work indeed played a quintessential role in the collective effort to build socialism. Since disabled bodies and minds were perceived less productive than abled ones, individual bodily or mental difference was, again, a major source of tension under socialist regimes. In the chapter *Disability Assessment under State Socialism*, Theodor Mladenov discusses socialist disability assessment, a classification mechanism based on medically determined work capacity. Mladenov draws attention to the ways in which disability assessment was used by the Bulgarian Communist Party as part of a broader state socialist biopolitical project which aimed to construct a constantly improving socialist ideal and, within that, the new Bulgarian Soviet personality type. Underpinned by allegedly scientific foundations, this "medical-productivist" (p.92, 112) model of disability assessment therefore served as the ultimate control over disabled citizens, regulating their access both to work and support and expertly advising (or rather imposing) ways of personal improvement aligned closely with notions of socialist morality.

The distinctive soviet disabled identity is also a salient point in the chapter by Claire Shaw, titled *"Just Like It Is at Home!" Soviet Deafness and Socialist Internationalism during the Cold War*. In this study, Shaw analyzes transnational socialist relationships through the first International Symposium of Societies and Unions of the Deaf Socialist Countries, which was held in Moscow in 1968. This event was dedicated to the creation of the ideal socialist deaf person, who in principle would have a sense of shared identity and belonging with other deaf people (and other ideal socialist types of actors) across the Eastern Bloc. This chapter also illustrates how deafness seemed to be a "correctible" and a widely acceptable condition under state socialism. This ties into the argument presented by Fapšo and Randák, who point out how strongly Sovák believed in the emancipation of deaf and mute children through defectology (p.70).

Childhood, which was also a concept coopted and manipulated by socialist ideology, is another recurring theme in the volume. Both Martina Winkler, author of the chapter *Disability and Childhood in Socialist Czechoslovakia*, and Natalia Pamula, whose chapter is titled *Out of Place, Out of Time: Intellectual Disability in Late Socialist Polish Young Adult Literature*, use children's stories and media as well as young adult literature to explore how childhood and disability were (symbolically) connected for pedagogical purposes. Winkler argues that the study of overlapping discourses on childhood and disability sheds light on

certain transformations within the Czechoslovak political propaganda, which was initially centered around the concept of overcoming and correction in the 1950s and then shifted towards "the construction of a strongly normative social consensus with inclusive features" (p.287) through the Czechoslovak new wave movies in the 1960s. On the other hand, *The Formation of "Disability": Expert Discourses on Children's Sexuality, "Behavioural Defectivity"* by Frank Henschel, and *"Bad Families" in Socialist Czechoslovakia (1950s–1970s)*, and *Discourses of Prevention, Risk and Responsibility in the Women's Magazine Vlasta (1950s–1980s)* by Maria-Lena Faßig † demonstrate that state narratives routinely placed the blame on families, claiming that the responsibility for "defective" children lay with destructive parental influence, neglect, or certain stigmatized health-related issues, such as substance abuse or addiction. With this in mind, Faßig presented the gendered aspects of this mechanism by analyzing Czechoslovak propagandistic content directed to mothers, who faced intense pressure to raise useful children for the state. In contrast, the chapter *"We as parents must be helped." State–Parent Interactions on Care Facilities for Children with "Mental Disabilities" in the GDR* by Pia Schmüser unveils the complicated "state-citizen interactions" (p.250) between parents and the authorities in the GDR. Schmüser calls attention to the inherent tension between the "individual" and the "collective" by showing parent-state negotiations concerning whose responsibility it was to raise disabled children.

While the volume presents a multitude of theoretical frameworks, discourse analysis is the key methodology used by most of the authors. Although named and defined only by Faßig (p.150), the cultural model of disability also seems to be a collectively accepted approach among the contributors, considering that all chapters intend to reflect on shifts in understandings of and approaches to disability under different regimes, in different cultural contexts, and at different points of historical time. However, the sources used by the authors vary. For instance, Mladenov studies official documents of the Soviet and Bulgarian authorities (p.94). Henschel (p.120), Kolářová and Herza (p.168), and Fapšo and Randák (p.64) analyze expert narratives and state socialist discourses of science regarding defectology. As mentioned above, Winkler (p.260) and Pamula (p.295) use Czechoslovak and Polish children's and young adult literature and films. Faßig (p.149) relied on a propagandistic Czechoslovak women's magazine, Shaw (p.30) and Schmüser (p.239) both investigate archival materials of state narratives, combined with personal accounts, such as letters and petitions.

To locate the volume in the context of broader methodological debates, it is worth mentioning the categorization of sources in disability history set up

by Elizabeth Bredberg, which is cited as an important reference point in the journal article "State of the Field: Disability History" by Daniel Blackie and Alexia Moncrieff, published in *History* in 2022. For Bredberg, there are three main types of sources: institutional (official documents, such as state, medical, and various other expert records); vernacular (lay representations of disability in the media, literature, or art); and experimental (egodocuments and interviews). This categorization is highly important, as it calls attention to the relevance of experimental sources in historical disability research and underscores that institutional and vernacular sources mainly originate from nondisabled actors. Without explicitly discussing this categorization, this book seems to challenge it. Given that most of the vernacular sources used by the authors, such as films, literature, and newspapers were under state control (a women's magazine, children's literature, and movies were in fact analyzed to highlight their propagandistic and/or pedagogical values in communicating socialist values), the question arises whether there is a need to reevaluate existing methodological concepts of disability history that have been formulated primarily from Western perspectives in order to discover how expert and lay narratives of disability under socialist regimes actually differed, as well as how alternative ideas were regulated or even banned from public discussion.

As for the closer analysis of the types of sources used in the volume, two issues seem to deserve further discussion. First, the number of sources documenting lived experiences of disability under state socialism (such as interviews, letters, personal accounts, diaries, or memoirs) is strikingly limited, especially in contrast with the thorough study of sources offering examples of expert and state rhetoric presented in the volume. As pointed out earlier, political and medical records alone prove inadequate if we seek to understand how the grand narratives trickled down into everyday life, as is indeed problematized by some of the authors of the book (e.g., Mladenov, p.94), if, however, left unresolved. Second, the lack of references to the material and design culture of state socialism (which would be most relevant for chapters focusing on work or socialist modernization) leaves many questions unanswered. As historians Katherine Ott and Bess Williamson argue in *The Oxford Handbook of Disability History* (edited by Rembis, M., Kudlick, C., and Nielsen, K. E.), disability history, viewed through the lens of non-textual sources, urges us to understand the imposed normativity of objects and spaces that remain woefully exclusionary to many. While the reviewed book touches (rightfully) on the connection between the visions of disability emancipation and socialist technological utopia (e.g.,

Kolářová & Herza, pp.182–83), it does not observe material culture, architecture, or design, and this leaves room for further material investigations that could complement the text-based and visual sources presented.

To conclude, the editors and contributors of *Re/imaginations of Disability in State Socialism. Visions, Promises, Frustrations* intend to address gaps in Eastern European disability history. The book puts forward the proposition that sate socialist attitudes towards dis/abilities of bodies and minds had many facets, so the authors call for a new focus that points towards the varied ways in which the political regimes in postwar East Central Europe envisioned, constructed, and dealt with notions of "disability" and "normality." Although Czechoslovakian *visions, promises*, and *frustrations* are undeniably overrepresented in the volume (with the remaining chapters studying the USSR, Poland, Bulgaria, and the GDR), the authors succeeded in equipping readers with a more comprehensive view on this difficult topic, adding vitally important scholarship to both disability history and area studies. Thus, *Re/imaginations of Disability in State Socialism. Visions, Promises, Frustrations* will be well-suited for researchers from different academic levels and backgrounds who are looking to carry out comparative case studies in disability history. The volume will also certainly influence further methodological considerations in the field.

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László Borhi: Survival Under Dictatorships. Life and Death in Nazi and Communist Regimes. Budapest–Vienna–New York: Central European University Press, 2024. 374 pp.

This is an outstanding book by an outstanding historian. What does a historian need to become an outstanding scholar who produces outstanding works? The factors shaping this process include a combination of a curious personality capable of putting individual and family experiences into a broader context and a well-defined research question that is challenging both for the author and his/her professional circle and also of interest to the wider public. Furthermore, in order to compose a major contribution to the field, a historian must have access to essential sources, skills in source criticism, and institutions that are supportive both in terms of funding research and helping with the process of publication.

Since the beginning of his career during the late 1980s (he graduated from Eötvös Loránd University in Budapest in 1986), Hungarian historian László Borhi has been trying to understand and help his readers understand the historical factors that shaped Hungary's fate after World War II. These factors included the impacts of fascism, national socialism, communism and Stalinism, the making of the Soviet Bloc, and policies of Western Europe and the US towards the dictatorships in Eastern and Central Europe. These issues were not just academic problems for him. They were, rather, personal questions, as he had grown up in this world. He sought to arrive at a more subtle grasp of Hungary's place in the conflicts between the competing superpowers. Personal as these questions might have been, it is a task of the scholar to turn them into research projects, and Borhi did and is doing this with impressive efficiency. His work was strongly supported by the Institute of History of the Hungarian Academy of Sciences, which around the turn of the twentieth and twenty-first centuries initiated a large-scale research project titled *Hungary in the Soviet Bloc and the Regime Change 1945–1990*. This project included the publication of chronologies, source publications, and monographs, and Borhi excelled in each of these genres. He began with a chronology (*Az Egyesült Államok és a szovjet zóna. 1945-1990*, Budapest, 1994), continued with a thick volume of sources on US-Hungarian relations between 1945 and 1990 (*Magyar-amerikai kapcsolatok 1945–1990. Források,* Budapest, 2009) and then wrote three monographs (*Hungary in the Cold War 1945–1956. Between the United States and the Soviet Union*, Budapest and New York, 2004; *Nagyhatalmi érdekek hálójában. Az Egyesült Államok és Magyarország kapcsolata a második világháborútól a rendszerváltásig*, Budapest, 2015; and *Dealing with*

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Dictators: The United States, Hungary and East Central Europe, 1942–1989, Indiana University Press, 2017). Based on a very extensive source exploration of a vast array of sources, he compared the policies of the dictatorial Soviet Union and those of the democratic United States towards Hungary during and after World War II. In this series of books, Borhi makes a persuasive argument in support of the idea that Hungary's history was determined by the conflicting interests of the rulers of the Cold War world.

After decades of research dedicated to the history of international relations, Borhi shifted his interest towards a different aspect of the history of dictatorships. From the top, he moved to the bottom, which is to say that he began looking for sources that shed light on the survival strategies used by various layers of Hungarian society from 1944 to 1953. His motivations were again personal and professional. His family mourned a grandfather and an uncle who never returned from Buchenwald. But his mother and grandmother survived in part because they followed the advice of an Arrow Cross man. The history of dictatorships includes many such complex events. Survival frequently depended on a decision taken within seconds. How do people behave in such extremely tense situations? How do systems shape the individual and how do individuals shape the system? Borhi also poses the question in a less scholarly way: do "shitty" people make "shitty" times or do "shitty" times make "shitty" people? These are general questions that can be asked in connection with numerous other historical situations as well. This book presents a series of powerful case studies trying to answer these difficult questions. It analyses a time span of less than eight years. Under consolidated circumstances, a period of eight years means continuity. A child can turn into a young adult by graduating from high school, for instance. Another eight years can bear witness to the start of a great career and the start of a family. Between 1944 and 1953, circumstances were changing at an incredibly fast pace in Hungary and the book focuses on three subperiods: the deportation and murder of Hungarian Jews in Nazi work and death camps (April 1944 to the liberation of these camps in early 1945), the terrorist reign of the Arrow Cross people (the Hungarian Nazis) in Budapest from mid-October 1944 to early February 1945, and the Hungarian experience of Stalinism from about mid-1948 to the spring of 1953. The book does not give a comprehensive history of Hungary over the course of these eight years. Still, it might have been interesting to look at the survival strategies used by various layers of Hungarian society during the roughly three years of a limited pluralism between about mid-1945 to

about mid-1948 as well. That, however, would have definitely called for different methods and different sources.

The most important novelty of the book is the focus on survival strategies when investigating the functioning of Nazi and Stalinist dictatorships. Borhi defines survival strategies as a neglected, grey area between collaboration and resistance. The concept also helps him take sides concerning the top-down and bottom-up models of Stalinism. He argues that the two models of Stalinism "in the Hungarian case are not mutually exclusive but mutually complementary. Survival as a concept is a bridge between the two narratives" (p.359). Indeed, this is a useful analytical concept that can be applied to victims, perpetrators, and onlookers alike, since, as circumstances changed, as they did at an extremely rapid pace during the period discussed by Borhi, former victims might take revenge and turn into perpetrators and some former perpetrators became their victims. Willingly or unwillingly, former onlookers often found themselves in the position of either victim or perpetrator. The basic frame of the well-structured presentation of the carefully selected numerous case studies is the oppressive role of the state and the relationship between the state and the various groups of survivors. This is a logical and properly substantiated approach from the perspective of the real and potential victims. Still, as the book points out, during the second subperiod, the Arrow Cross terror in Budapest, the collapse of the Hungarian central state power allowed for the most violent and often only loosely coordinated acts of cruelty by of smaller Arrow Cross gangs targeting defenseless Jews. Borhi argues that under these circumstances, survival was a collaborative effort, whereas in the Nazi work and death camps survival was determined more by individual efforts. In this uncontrolled environment, various patterns of behavior could take the most extreme forms, including empathic solidarity and extreme sadism. Perpetrators were driven by greed, ideologies, and ethnic and social prejudices. The case studies show how these factors, either individually or mixed, could generate the most violent agency. During the two other subperiods, when the Hungarian state was able to function properly, highly centralized brutality and cruelty set more limits to individual choices. This is how in about seven weeks starting mid-April 1944, 437,000 Hungarian Jews could be deported to concentration camps. The Stalinist state developed perhaps the most sophisticated mechanism of terror, where truly no one (including top level leaders) could feel safe. This takes us to the other key concept in the book: fear which, together with anxiety, permeates all social layers in dictatorships, and Hungary was no exception. Fear determines not only the mindset of victims

but also drives perpetrators, because they frequently assume that if they do not destroy their real or assumed enemies, they will be defeated by them. Stalinist systems take this view to the most dramatic extreme. As Borhi argues, "[i]f Hitler had had his way, Germany would have rid itself of its 'enemies' by deporting or killing them all. In Stalinist systems, where the constant intensification of terror was enshrined as a law, the supply of enemies was unending" (p.276). Borhi integrates the concept of hope into his analysis as well, however, arguing that it was hope that sustained the will to survive the Nazi and Stalinist machineries of oppression. For some people, hope was sustained by the prospect of liberation by foreign armies. For others, it was kept alive by the notion that there was a better world on the other side of the Iron Curtain.

Borhi draws on an array of sources, including interviews with Holocaust survivors conducted in the immediate aftermath of the war, court documents of trials against perpetrators, letters, diaries, and even works of art and literature. He takes sides in the debate concerning the reliability of interviews with survivors. He agrees with Gábor Gyáni, who points out that "the history of the Holocaust can be explained rationally but it cannot be comprehended. This not only allows but requires us to place the human voice and human experience on an equal footing with the insights of the historian if the scholar of the past seeks to narrate an event of the magnitude of the Holocaust." (p.8). The cases reconstructed on the basis of these sources offer narratives which might well bear comparison with pointillist paintings. In a pointillist painting, the many small dots created a unified image when viewed from the proper perspective, and this is similar to the experience of the reader who consults the interviews with survivors. Another strength of the book is that it persuasively shows, by drawing on numerous examples, how hatreds can transcend political systems and also how deeply rooted individual and group passions can connect to more abstract state involving ideologies of hatred driven by centralized power.

Borhi argues that no comparable book is available in the extremely rich secondary literature on the history of these dictatorships. I think that at least two works very well known and appreciated by Borhi have to be mentioned here as a comparison. The first is Timothy Snyders *Bloodlands* (Borhi wrote an extensive review on it in the third issue of this journal in 2014), which admittedly puts greater emphasis on the forms of destruction but which, like Borhi's book, also considers the motivations of the perpetrators. Borhi accepts Snyder's point that Stalin's war was not a crusade against tyranny but a life and death struggle for the survival of his regime and targeted both class enemies

and ethnic minorities. Where Borhi substantially disagrees with Snyder is that Stalin's murderous policies were not comprehensible simply in terms of an ideologically determined class struggle. For Snyder the Soviet Union was not guided by ideology. Borhi, however, convincingly argues that in the Soviet Union and in countries of the Soviet Bloc, the societies were permeated with the basic tenets of communist ideology: a strong belief in the historical necessity of overcoming the retrograde imperialist powers by all possible means. Borhi does not accept Snyder's notion of "Ersatz victory," i.e., the idea that, when the plans for a transformative utopia of the dictatorship of the proletariat failed, a policy of mass murder was proclaimed as a kind of "substitute victory." The deaths of millions of victims were not, Borhi argues, simply collateral damage or events of secondary significance. On the contrary, for Hitler and Stalin, these deaths were their primary goal. These problems are essential in the interpretation of the numerous case studies in the book. Borhi strongly disagrees with the view that a blind belief in a radical ideology can absolve perpetrators of their individual responsibility. This is perhaps the most important message of the book: "The events described in the book were not guided by invisible historical sources or cogwheels in a machine. They were determined by people who were capable of unspeakable atrocities or selfless deeds of good. Human decency was a choice even in the hardest of times" (p.360).

The other historian whose work merits comparison with Borhi's book is István Deák, in particular his book *Europe on Trial. The Story of Collaboration, Resistance, and Retribution During World War II*. Both in this book (which was, sadly, his last) and in many of his other writings, Deák gives numerous examples of how complex the concepts of collaboration and resistance are. Resistance might bring weaken the enemy, but it might prompt vicious acts of revenge, whereas collaboration might help survival. Deák masterfully explains how the same person or group could play both a hero and enemy role for various socially, ethnically, and religiously differing groups, but this never leads him to bottomless relativism. Some of the cases Borhi presents challenge the wildest images of sadism, but just as Deák does, Borhi always finds counterexamples and shows the complexities. Deák deals more with larger scale events, such as high-level decision-making processes, while Borhi's focus is more on a vast number of micro-stories, but Deák's descending hierarchy of collaboration, cooperation, and accommodation can be applied to these case studies as well. One example presented by Borhi in great detail is that of Oszkár Brenner, tried in the last trial of Arrow Cross criminals in 1971, after having been acquitted by the People's

Tribunal in1947. Brenner was a successful entrepreneur who hired and hid a number of Jews but also joined an Arrow Cross group and participated in the atrocities committed by this group. In his trial, he argued that he had done this to save his business and the Jews under his protection. After citing numerous witness reports concerning the complexity of Brunner's behavior, Borhi summarizes the story as follows: "Was he a war criminal, a rescue angel or some of both? We may never know for sure" (p.187). Another story concerning the complexity of rescue given detailed treatment in the book is about the convent of the Sisters of Divine Love. Only some of the Jewish children hidden in this building could be saved. For the parents of the children who were saved, the nuns were angels. Those whose children were not saved, in contrast, demanded serious punishment of the sisters after the war. Borhi examines the behavior of one of the nurses as a paradigmatic example of a dilemma that many people in crisis situations had to face: unwillingness to lie due to their Christian faith, but at the same time, this faith motivated them to help. Borhi devotes considerable attention to denunciations and points out that, whereas in democracies respect for the law serves as the glue which holds society together, "[u]nder National Socialist or communist rule, obeying the law may not always have been a virtue. Citizens who break the law may be more virtuous than those who obey laws requiring denunciation and persecution" (p.273). This is a point that is relevant to an understanding of all types of authoritarian systems. We often consider respect for the rule of law a pillar of democracy but, the rule of inhuman laws can challenge basic moral norms. Both Deák and Borhi observe that none of the available sources suggest that guards and other persons who worked in the service of oppressive regimes were punished when they were lenient in their treatment of prisoners or members of persecuted groups. Group psychology, however, confirms that people can turn into unwilling perpetrators when they do not want to lose the sympathy or support of their comrades. The atmosphere of a community spirit might be a more effective tool with which to enforce discipline than the prospect of punishment.

The analysis of levels of cruelty and possible motivations behind acts of cruelty helps Borhi paint a picture of many shades. Orders can be followed loosely or strictly, and victims can sometimes be better put to use if they are treated decently. Belief in a cause that offers the promise of redemption and the fear that if we do not destroy the declared enemy the enemy may destroy us are hatreds that can drive violent aggression.

How could we point out the most important scholarly achievements of this truly outstanding book? Drawing on a vast array of primary sources concerning the history of three Hungarian dictatorial systems, László Borhi approaches the functioning of totalitarian dictatorships from the deep layers of society. The secondary literature will certainly use his numerous case studies for comparative investigations. His investigation of the Arrow Cross terror in Budapest in particular, which rests on Hungarian sources which have hardly been used and which are not accessible to anyone who does not read Hungarian, offers penetrating insights into the very deep levels of the human condition. It describes intersections of individual and institutional evil. As I have already mentioned, an investigation of survival strategies during the period of limited political pluralism between 1945 and 1948 could be an interesting avenue for the continuation of the survival strategies project, and in the longer run, the same applies to the early Kádár period. Borhi presents a plethora of complex situations, but his conclusions are always straightforward. He rejects the notion that dictatorships were also built on a deal between perpetrators and victims. Still, he admits that many average people living under dictatorial systems could fall under the spell of totalitarian ideologies, and even some inmates in the Nazi concentration camps internalized Nazi ideology. The book is an emotionally challenging read, as the reader must confront numerous stories of extreme cruelty, but its ultimate message is optimistic: even in the most critical situations, there were always some people who found the ways and means to avoid complicity.

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