Changes in the Social Distribution of Ownership of Large Landed Properties on the Trianon Territory of Hungary, 1893 - 1935 *

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I. Introduction

It is difficult to imagine a more turbulent and eventful period in Hungarian history than that between the fall of the Kálmán Tisza government in 1890 and the beginning of the Second World War. Within a half century, the country experienced the establishment of the gold standard (more or less) [1], tariff wars with both Romania and Serbia, the 1896 Millenium celebration and its associated boom, the Bosnian crisis, the First World War, dismemberment at Trianon, the Soviet Republic, hyperinflation, the Great Depression, the coming of fascism, the Vienna Awards, and the outbreak of war again.

In less than two generations everything turned topsy-turvy more than once, and the ordinary man in the street was profoundly buffeted by the forces of world politics and international economics. Was everyone so hard hit? Was the man in the manor, for example, able to insulate himself from these forces of the maelstrom? [2]

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[1] Austria-Hungary would only buy gold, not sell it, at the announced price, but since the Crown threatened to appreciate against gold, this made little practical difference. See Ludwig von Mises, "The Foreign Exchange Policy of the Austro-Hungarian Bank", *Economic Journal*, vol. XIX, no. 2 (June, 1909), pp. 201-202.

[2] An influential English book described the situation in interwar Hungary as follows: "Industrialism imposed on a feudal structure preserved the large property and prevented the peasant from acquiring holdings. Extreme rural poverty does not in itself break up big farms, unless there is no other demand for the land". DOREEN WARRINER, *The Economics of Peasant Farming* (London, 1939), p. 23.

The data for a partial, but nevertheless illuminating answer to these questions have long stood at our disposal, but only recently have developments in computer technology made it economic to analyze these data, contained in two *Directories of Landowners* for 1893 and 1935.[3]

Making comparisons between pre-and post-1918 Hungary is a task that has long frustrated historians because radical changes in the country's frontiers altered administrative divisions, and therefore statistical reporting units.[4] Because the directories of landowners locate each property by village, we could extract the territory of post-Trianon Hungary from the 1893 data; we emphasize that our analysis is, therefore, for exactly the same geographical area in the two years examined.

For the external borders and internal administrative divisions of Trianon Hungary we took the 1926 *Gazetteer of Hungary*[5] to be definitive; it lists not only places within the new borders, but all the detached communities as well. An atlas of counties in interwar Hungary[6] provided confirmation. Except for those very few cases where the new frontier bisected a municipality (the city of Komárom was the most important of these), the delineation by community perfectly encompasses the territory of Trianon Hungary.[7]

[3] 1893: Bellusi Baross Károly [Charles Baross de Bellus], *Magyarország Földbirtokosai* [The Landowners of Hungary] (Budapest: Hungária, 1893). 1935: Központi Statisztikai Hivatal [Central Statistical Bureau], *Magyarország földbirtokosai és földbérlöi. Gazdacimtár* [The Landowners and Lessors of Hungary. A Directory] (Budapest: KSH, 1937).

[4] The Treaty of Trianon awarded about 70 per cent of the territory of Hungary to six other countries: Austria, Czechoslovakia, Italy, Poland, Romania, and Yugoslavia.

[5] Magyar Királyi Központi Statisztikai Hivatal [Royal Hungarian Central Statistical Bureau], *Magyarország Helységnévtára 1926* [Gazetteer of Hungary 1926] (Budapest: Kókai, 1926).

[6] Magyar Királyi Állami Térképészet [Royal Hungarian State Cartography], *Csonka-Magyarország vármegyei atlasza* [Atlas of the Counties of Truncated Hungary] (Budapest: Kókai, n.d. [ca. 1927]).

[7] Only two properties larger than 100 *hold* lay within the boundaries of Komárom in 1893. One, representing 39.1% of the territory of the two, was assigned to Hungary. In general, we assigned properties to Hungary in proportion (as close as possible) to the total area assigned to Hungary from a divided municipality, since it would have been prohibitively expensive to try to find the location of each individual property within these communities.

In what follows we describe changes in the ownership of properties larger than 100 *hold* (57.5 hectares or 142.2 acres) in size, focussing on distribution by owner, but adding also distribution by size and by configuration of the properties according to the kinds of land which they contained. Since the underlying question is one of wealth, we would have preferred distributions by value, but such data were not available. We have had to content ourselves with area — an imperfect substitute, but one which carries the advantage of making our study comparable with earlier work. [8]

II. The Basic Data

Both physical and non-physical legal persons [9] owned land in Hungary. We assigned physical persons to two categories, aristocrats and non-aristocrats: An aristocrat, for our purposes, is any person with a title of royalty or nobility, from Emperor on down to baron or knight [lovag]; persons without noble titles fell to the other category. [10] Any social definition of the aristocracy in Hungary would of course include some untitled nobles, non-nobles, and Church officials, but they were neither so numerous, nor their property holdings so extensive, that our analyses would be significantly affected. Moreover, the holdings of religious bodies form their own separate category. Our simple, and we believe defensible, criterion also permits later comparison with other countries.

Among non-physical legal persons we originally defined seven categories, but later amalgamated them to five: (1) Religious bodies (primarily the Roman Catholic Church), (2) the State, (3)

[8] The difference between distributions by area and by value may be minuscule, however, as is suggested in Scott M. Eddie, «The distribution of landed properties by value and area: A methodological essay based on Prussian data, 1886-1913», unpublished MS.

[9] We regarded entails as properties of the individual to whom they were ascribed.

[10] We could not simply use nobility = aristocracy, for in late-XIXth century Hungary one in every 25 persons was noble *[nemes]*. The vast majority were not aristocrats in any sense of the word; indeed, the expression *"bocskoros nemes"* [sandalled noble] described persons whose economic status and life style were no different from those of their peasant neighbours.

communities *[község or közösség]* (county, city or village property) or communal property *[közbirtokosság]*), (4) banks and corporations, and (5) "other". This last included such things as flood control societies, secular educational foundations, and — in 1935 — the local pasturage societies.

III. Changes in distributions, 1893 to 1935

A. Changes in distribution by ownership category

1. Changes in the area of large properties

Examining Table 1 and Graphs 1A - 1E, it is immediately apparent that the area in properties larger than 100 *hold* owned by individuals declined, while that in properties owned by non-physical legal persons increased. The only exception was in community-owned property, but that appears to be a statistical artifact arising from our coding scheme: Local pasturage societies, which did not exist in 1893, were classed as "other" rather than "community;" these appear to have replaced some categories of communal owners from 1893. Amalgamating "community" and "other" would thus remove this exception.

The over-100 *hold* properties of physical persons shrank by nearly 1.9 million *hold* between 1893 and 1935. Aristocrats and non-aristocrats suffered roughly equal proportional reductions: 28 per cent and 31 per cent, respectively.[11] The modest Hungarian land reform could at most account for a third of that loss,[12] but if Kerék's

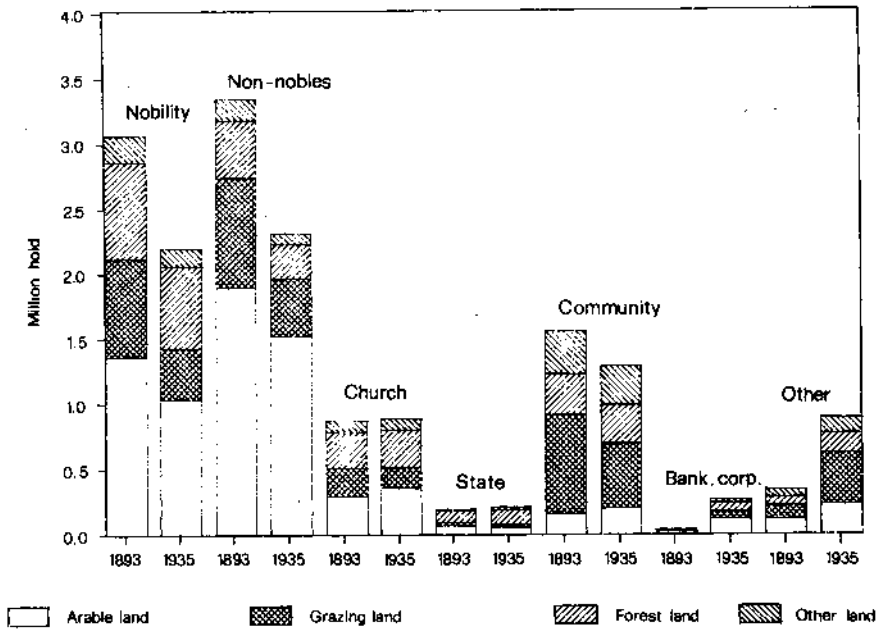
[11] They may not actually have lost this land; much of it may merely have been subdivided into smaller holdings. Lack of data on the social distribution of ownership of properties smaller than 100 *hold* precludes any answer to this question. We have nevertheless been able to show (at the bottom of Tables 1 and 2) the share of properties over 100 *hold* in the *total* area of agricultural and forest land in Trianon Hungary for both years. This will be in error for 1893 only to the extent that land had been brought into, or taken out of, agricultural or forestry use between 1893 and 1935.

[12] Up to 1939 the land reform had expropriated 632,000 *hold* from large properties, and 948,682 *hold* in total. Mihály Kerék, *A magyar földkérdés* [The Hungarian Land Question] (Budapest: Mefhosz, 1939), pp. 199-201.

Table 1
TOTAL AREA IN PROPERTIES LARGER THAN 100 *HOLD* BY REGION ON THE TRIANON TERRITORY OF HUNGARY ACCORDING TO OWNER CATEGORY IN THOUSAND *HOLD*

Owner category	Transdanubia		Great Plain		North		Hungary	
	1893	1935	1893	1935	1893	1935	1893	1935
Nobility	1640.1	1301.1	1045.5	632.0	376.3	267.3	3061.9	2200.3
"Bourgeois"	933.8	675.7	1814.1	1192.5	603.4	446.0	3351.4	2314.3
Church	447.6	449.2	225.6	256.2	196.2	179.8	869.3	885.2
State	22.3	43.3	115.0	102.4	57.4	73.0	194.7	218.6
Community*	532.8	418.7	809.4	680.4	213.3	188.7	1555.5	1287.7
Bank, Corp.	5.4	120.5	8.1	75.0	23.7	71.4	37.1	266.9
Other	132.4	369.9	195.9	395.3	22.9	133.6	351.2	898.8
Total	3714.3	3378.4	4213.6	3333.8	1493.2	1359.7	9421.2	8071.9
				(in per cent)				
Nobility	44.2%	38.5%	24.8%	19.0%	25.2%	19.7%	32.5%	27.3%
"Bourgeois"	25.1%	20.0%	43.1%	35.8%	40.4%	32.8%	35.6%	28.7%
Church	12.0%	13.3%	5.4%	7.7%	13.1%	13.2%	9.2%	11.0%
State	0.6%	1.3%	2.7%	3.1%	3.8%	5.4%	2.1%	2.7%
Community*	14.3%	12.4%	19.2%	20.4%	14.3%	13.9%	16.5%	16.0%
Bank, Corp.	0.1%	3.6%	0.2%	2.2%	1.6%	5.3%	0.4%	3.3%
Other	3.6%	10.9%	4.6%	11.9%	1.5%	9.8%	3.7%	11.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total area**		6413.8		7317.7		2441.0		16172.6
Percentage***	57.9%	52.7%	57.6%	45.6%	61.2%	55.7%	58.3%	49.9%

* County, city, village, commune.
** Total agricultural area (*Hungarian Statistical Yearbook 1935*, p. 83)
*** Total area of properties larger than 100 *hold*/total area in 1935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Nobility
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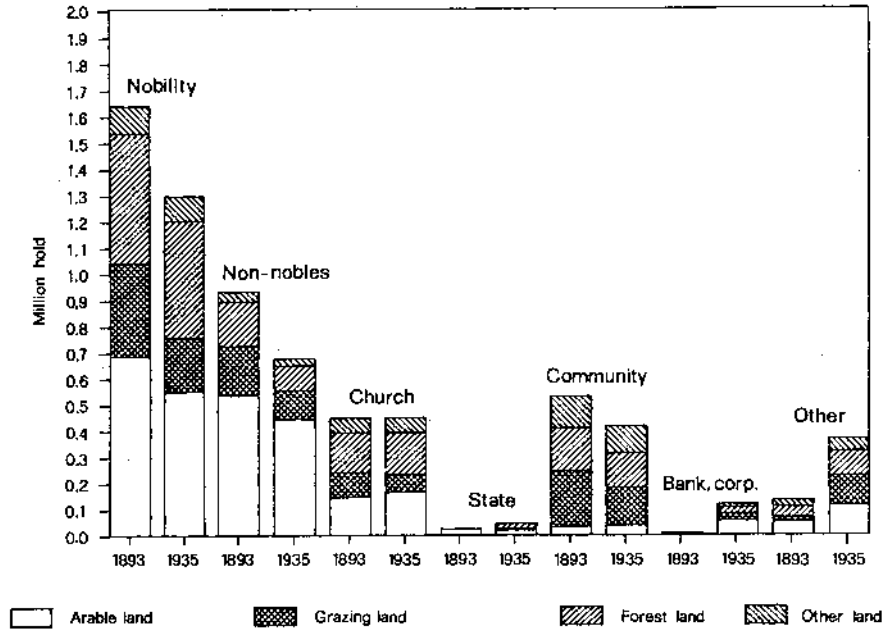
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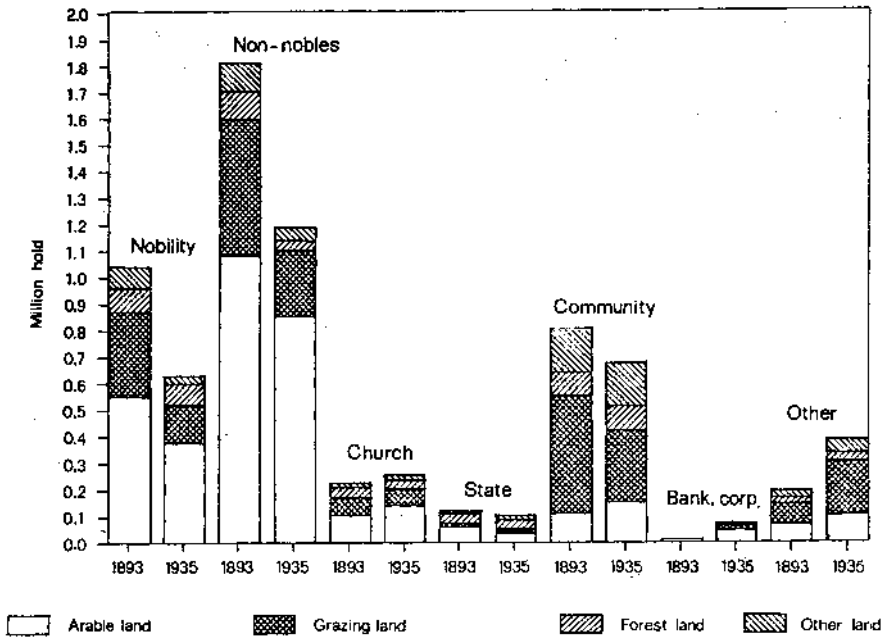
Arable land
Grazing land
Forest land
Other land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Forest land
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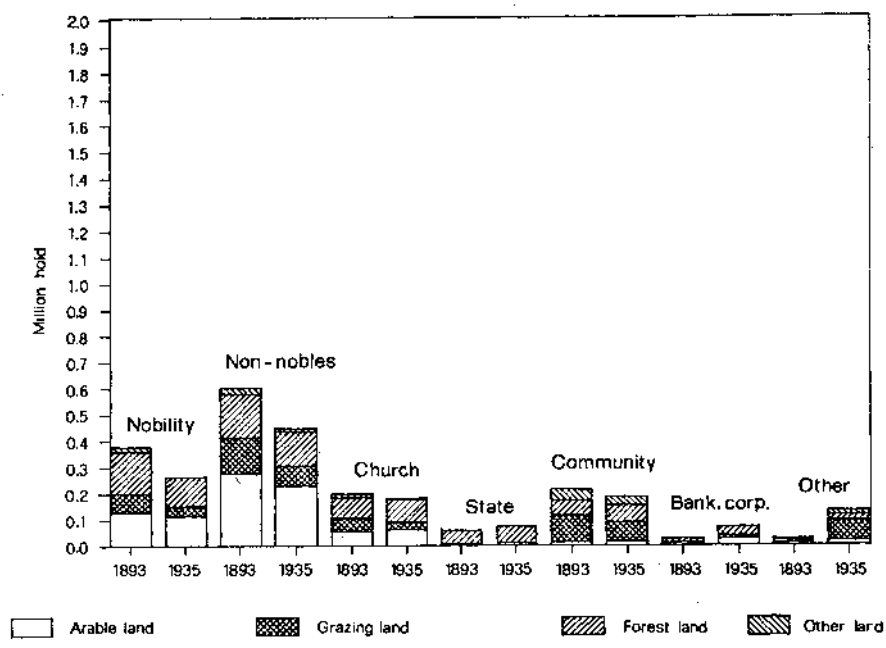
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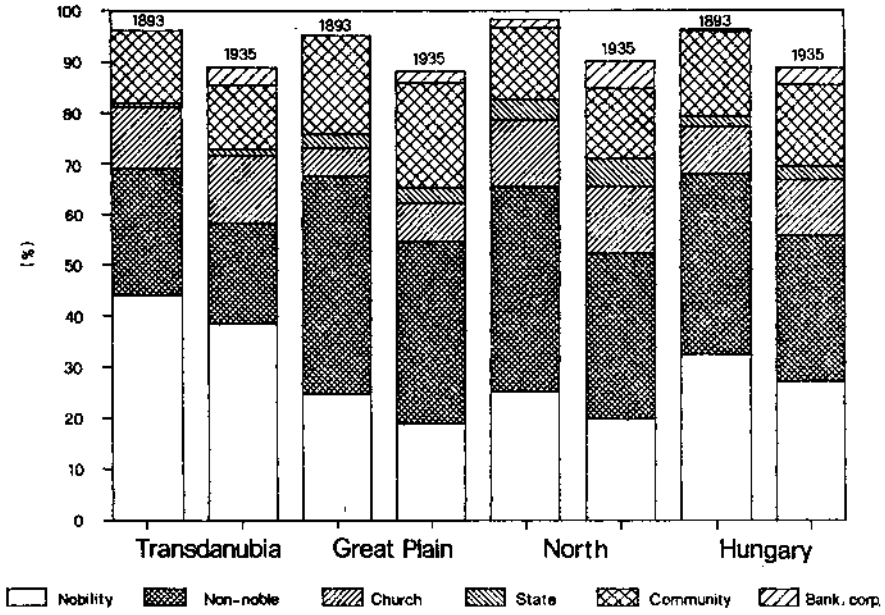


figures for 1921 are correct, most of the shrinkage had occurred by then, so the land reform might have accounted for nearly all of the loss of individual property in the over-100 *hold* category between 1921 and 1935. [13] Here the question of timing, to which this paper can give no answer, is of the essence. That the land reform was solely responsible for the decline in area of large properties after its passage is doubtful: Had it been, the trend toward intensification of large properties (see discussion in III.A.2 below) would not likely have been so strong for individual owners, since the reform took little forest or pasture, compared to cultivated land.

Individuals' loss was greater than the gain of legal entities, so total area in these larger properties declined, even though their overall

[13] According to Table 1 properties over 100 *hold* in size suffered a loss of 8.4% of the total territory of Trianon Hungary, but the data do not tell us when these losses occurred. If we can believe Kerék's data (he does not cite the source), 53.5 % of the territory of Hungary was occupied by properties over 100 *hold* in size in 1921. Thus about five percentage points of the loss would have occurred in the 28 years between 1893 and 1921, and the rest in the 14 years from 1921 to 1935. Kerék, *Land Question* ..., p. 201.

number in fact increased.[14] Thus a trend toward smaller size complemented the trends toward intensification and increase in the role of non-physical legal entities.

The legendary dominance of the high nobility among individual landowners is evident only in Transdanubia,[15] where they owned roughly two-fifths of the land in large properties, and between a quarter and a fifth of all land, in both years. Despite this dominance of the nobility in one region, the share of all individual owners — aristocrat and non-aristocrat taken together — varied only slightly across regions: In 1893, from 66% in the North to just over 69% in Transdanubia; in 1935, from 53% to 59%. As we saw above, aristocratic and non-aristocratic landowners suffered nearly equivalent losses as a group, but this still leaves open the question whether the great magnates were better able to cope with economic adversity than the lesser nobility, to which we turn in a later section.

Among the legal entities, all groups gained land except the communities. This may be merely a statistical or legal artifact, as pointed out above. In the case of a transfer of land from a communal group to a local pasturage society, although the legal title of ownership may have changed, the locus of control over the use of the land would have remained the same, i.e. within the peasantry residing in the given village. Among legal entities, banks and corporations gained relatively the most: a seven-fold increase in the area of their properties and an eight-fold increase in their share of the total in the over-100 *hold* category. But their absolute holdings were small; in 1935 they still accounted for only 3.3% of the area of larger properties and just half that percentage of total farm and forest land.

[14] The increase in numbers for each size category was almost completely confined to properties owned by non-physical legal persons. Individuals, whether titled or not, owned fewer properties in virtually every size category in 1935 than in 1893.

[15] This can be traced back to the Habsburg reconquest of Hungary from the Turks. See Scott M. Eddie, "Junkers and Magnates: The Social Distribution of Landed Wealth in Prussia and Hungary. A Case Study of Pomerania and Transdanubia, 1893", unpublished MS.

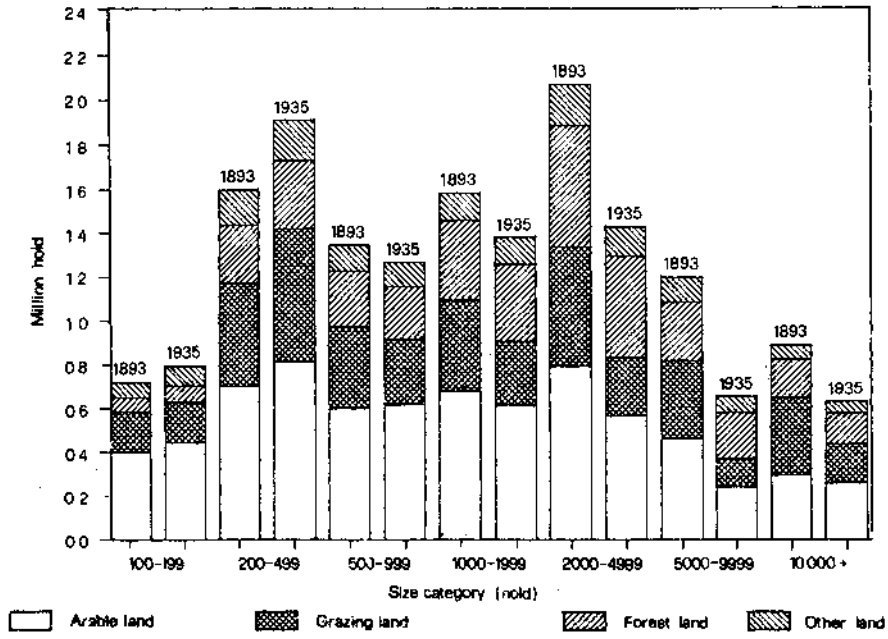
2. Changes in the average makeup of large properties

To examine changes in the configurations of large properties we group land types according to their economic function within the enterprise: arable agriculture uses the cultivated land (ploughland, garden, vineyard), animal husbandry the meadow and pasture, and forestry the forests. The fourth category, other land, consists of reedland and all forms of untaxed land (roads, pathways, and canals; building sites, farmyard, and unproductive land), and can be regarded as contributing to all three major activities.

In Graphs 2A — 2D one first notices the very different average composition of properties by owner group: Community-owned properties had high shares of pasture and "other" land with correspondingly low shares of cultivated land; state properties were high in forest, low in grazing land; and non-aristocratic individuals owned properties with a markedly higher proportion of cultivated land, and a markedly lower proportion of forest, than did their titled counterparts. Thus non-aristocratic individuals devoted a much larger share of their (much smaller, on average) properties to arable agriculture than did aristocrats. This may be partly explained by the non-aristocrats' having access to community-owned pasture and woodland, partly by alleged economies of scale in forest production and the aristocrats' strong preferences for hunting.

Marked changes in composition of properties by land type also occurred over time: The average aristocratic property reduced its grazing land and increased both cultivated and forest land. Non-aristocratic individuals intensified their operations yet more, as the already high proportion of cultivated land jumped sharply, at the expense of both grazing land and forest. [16] The increase in the share of cultivated land in church properties came entirely at the expense of grazing land, while banks and corporations increased the share of all

[16] A decline in grazing land does not necessarily imply a decline in animal husbandry, since either a trend toward more stall-feeding of animals or a shift from horned cattle to pigbreeding, for example, would reduce the requirements for meadow and pasture.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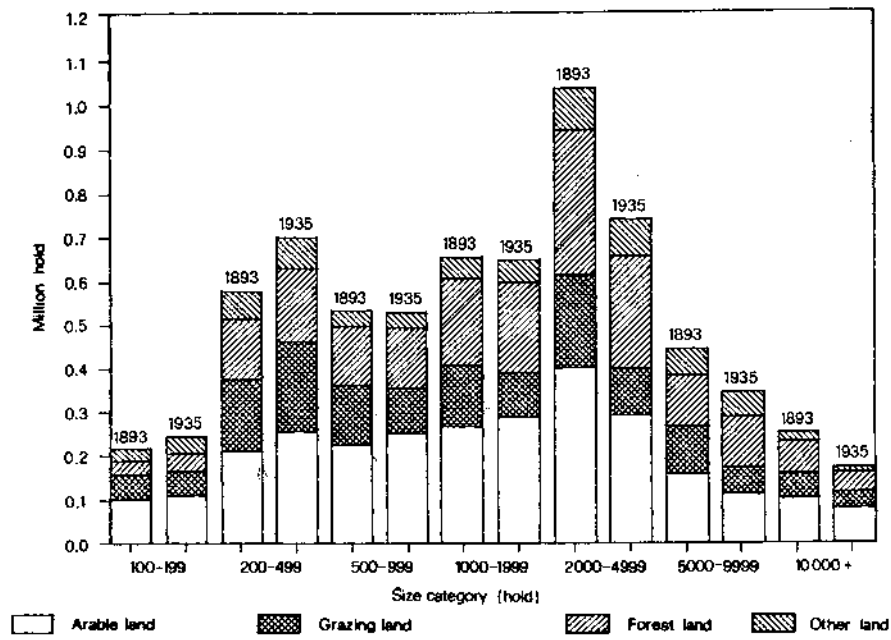
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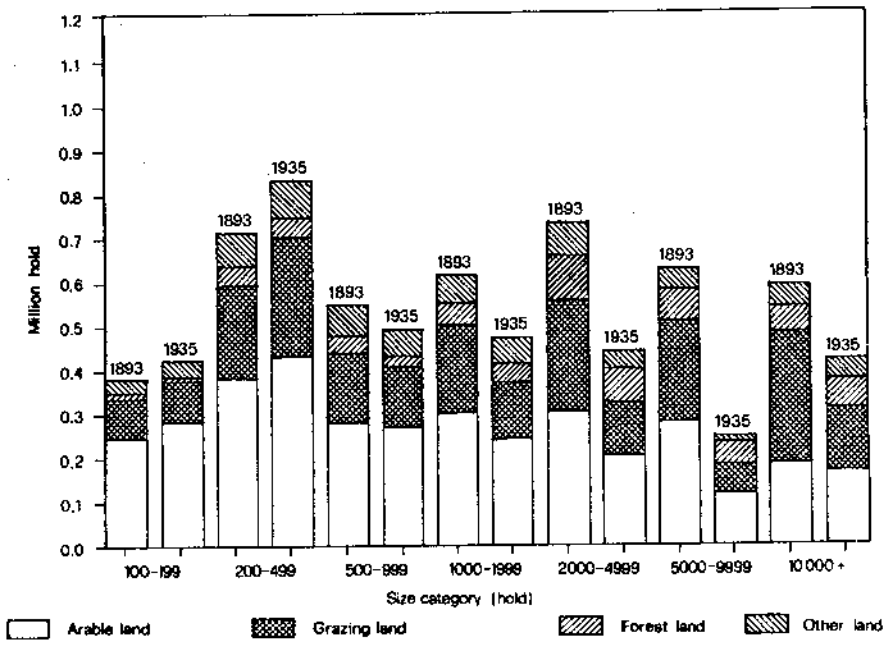
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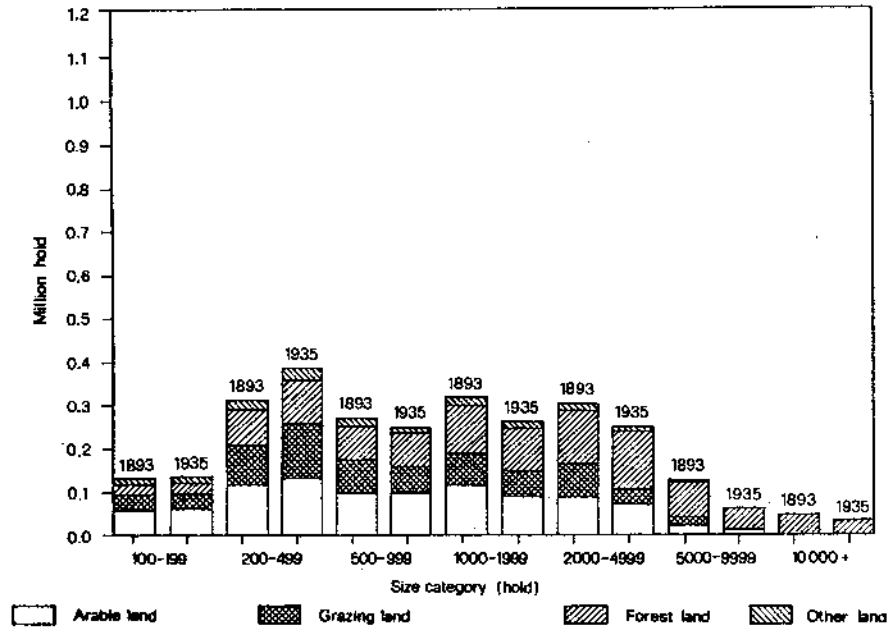
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2000-4999
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10 000+
Size category (hold)
Arable land
Grazing land
Forest land
Other land

other types of land at the expense of forest. Since they owned such a minuscule share of total large properties in 1893, there is little significance in this change, which in any case is dominated by the change in character of their acquisitions in the North region. [17]

Only for the State did the share of forest increase at the expense of cultivated land. The changes in the properties of communities and other owners approximately offset each other, and are probably almost entirely the result of the establishment of the pasturage societies out of former communal lands.

B. Changes in distribution by size category

1. Changes in the area of large properties

The trend toward decreasing size of individual property appears in different form in Table 2 and Graph 2E: Properties between 100 and 500 *hold* in size gained in both numbers and territory whilst all other size categories showed declines. In Table 2 the share of the 500-1000 and 1000-2000 *hold* categories in the total area of larger properties rose or remained the same, even though their absolute area declined (as did their share in the total number of over-100 *hold* estates). Therefore the larger properties (those above 2000 *hold*) declined more strongly than the group as a whole. The size category 5000-10000 *hold* shows the steepest decline, losing 46% of its 1893 area. Individuals felt the decline most keenly: By 1935 the titled nobility had lost over half of the area it had held in properties of this size in 1893, while non-noble individuals were able to retain a mere 8% of their 1893 total in this size category. [18] As the importance of this

[17] In Transdanubia and the Great Plain, the proportion of forest in properties of banks and corporations actually increased (see Graphs 2A and 2B).

[18] Because of possible different definitions of a property in the two *Directories of Landowners,* one should avoid jumping to conclusions based on changes within size categories. It is unlikely, however, that changes of this magnitude arose solely from such a difference in definition.

category declined, the importance of non-physical legal persons as owners within it increased.

The trend toward smaller properties had therefore two major components: an absolute shrinkage of area, and within the remaining large properties a much greater weight for the smaller size categories.

2. *Changes in the average make-up of large properties*

Averages can obscure as well as illuminate: for example, in the country as a whole the share of forest land stayed the same or rose for all size categories, but this appears to be the result solely of the dominant weight of the North region. There was very little change in the proportion of forest in Transdanubia between 1893 and 1935, except in the largest size categories (above 2000 *hold*), whereas in the

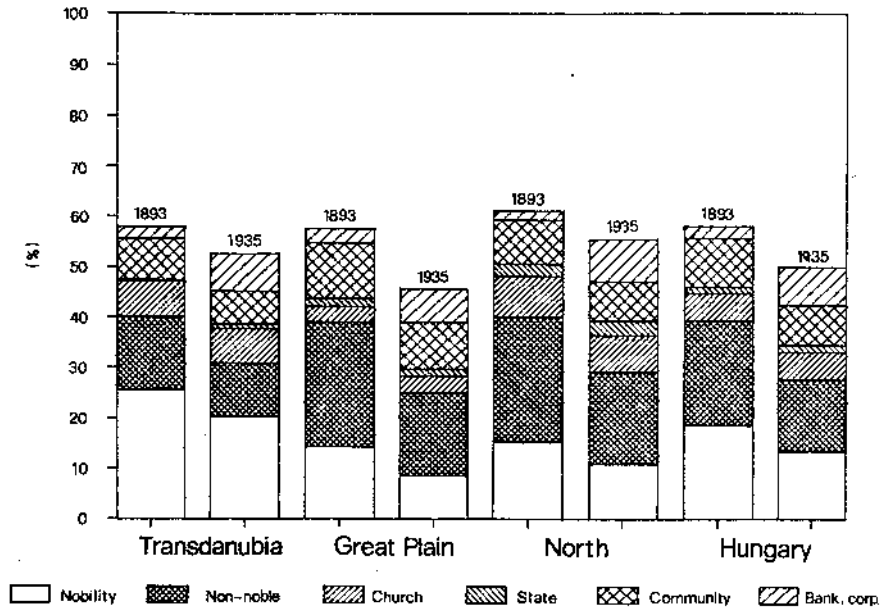

Table 2
TOTAL AREA IN PROPERTIES LARGER THAN 100 *HOLD* BY REGION ON THE TRIANON TERRITORY OF HUNGARY ACCORDING TO SIZE CATEGORY IN THOUSAND *HOLD*

Size (hold)	Transdanubia		Great Plain		North		Hungary	
	1893	1935	1893	1935	1893	1935	1893	1935
100-199	217.6	244.5	381.3	424.6	127.6	132.6	726.6	801.7
200-499	577.7	698.6	713.7	834.7	310.3	381.8	1601.6	1915.0
500-999	531.6	528.8	547.8	492.1	267.2	247.7	1346.6	1268.2
1000-1999	654.7	647.8	615.8	472.5	313.5	258.4	1584.0	1378.7
2000-4999	1037.0	740.2	734.3	442.3	301.1	247.0	2072.4	1429.4
5000-999	444.3	345.4	629.4	246.3	125.9	60.0	1199.6	651.7
10 000 +	251.4	173.5	591.3	421.3	47.7	32.3	890.4	627.1
Total	3714.3	3378.4	4213.6	3333.8	1493.2	1359.7	9421.2	8071.9
				(in per cent)				
100-199	5.9%	7.2%	9.0%	12.7%	8.5%	9.7%	7.7%	9.9%
200-499	15.6%	20.7%	16.9%	25.0%	20.8%	28.1%	17.0%	23.7%
500-999	14.3%	15.6%	13.0%	14.8%	17.9%	18.2%	14.3%	15.7%
1000-1999	17.6%	19.2%	14.6%	14.2%	21.0%	19.0%	16.8%	17.1%
2000-4999	27.9%	21.9%	17.4%	13.3%	20.2%	18.2%	22.0%	17.7%
5000-999	12.0%	10.2%	14.9%	7.4%	8.4%	4.4%	12.7%	8.1%
10 000 +	6.8%	5.1%	14.0%	12.6%	3.2%	2.4%	9.5%	7.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total area**		6413.8		7317.7		2441.0		16172.6
Percentage***	57.9%	52.7%	57.6%	45.6%	61.2%	55.7%	58.3%	49.9%

* County, city, village, commune.
** Total agricultural area (*Hungarian Statistical Yearbook 1935*, p. 83)
*** Total area of properties larger than 100 *hold*/total area in 1935

Great Plain the proportion of forest land in properties under 1000 *hold* fell, in the 1000-2000 *hold* category remained steady, and in the over-2000 *hold* categories increased. The share of cultivated land shows rather small variations between 1893 and 1935 for Hungary as a whole because the variations in individual size categories in the three regions tended to offset each other.

The share of cultivated land, with some exceptions, showed an increase for all size categories and regions, while meadow and pasture land either declined less or actually increased in the smaller size categories. We therefore observe not only a general intensification of the agriculture practised on larger properties, but also more specialization by size, including especially a shift of animal husbandry to smaller non-aristocratic properties. [19]

IV. The decline of the latifundia

The great latifundia (estates over 10000 *hold*) declined dramatically: Compared to 47 such domains on the territory of Trianon Hungary in 1893, we find only 26 in 1935. Is this merely illusion, because parts of an estate entered as a single property in 1893 were counted as separate properties in 1935, or was there a genuine and marked reduction in the very largest category of properties?

As a first step toward an answer, we compared individual latifundia from each year's data set, finding 19 obvious pairs. Two of these "pairs" consisted of three properties: in one, two latifundia of 1893 became one giant latifundium in 1935; in the other exactly the reverse was the case. Thus six latifundia from 1935 and 27 from 1893 remained unpaired.

[19] This may be the continuation of a trend evident before the First World War. See Scott M. Eddie, "The Changing Pattern of Landownership in Hungary, 1867-1914", *Economic History Review* XX (August 1967), esp. p. 302.

A. Transdanubia as a case study.

For a detailed search of the data, we chose Transdanubia, where two unpaired latifundia from 1935 and nine from 1893 stood exactly in the same proportion as for the country as a whole. In the counties which contained at least one of these properties we found:

1. Baranya county. In 1935, the "heirs of Archduke Friedrich" owned an estate of 12,432 *hold* (7,154 ha.) at Kölked in Mohcs riding, which appears to have been an acquisition since 1893: In 1893 all members of the royal family owned less than 7,000 *hold* in Mohács riding, and a total of 13,442 *hold* in those parts of the county which remained within the Trianon frontiers of Hungary, while the heirs of the Archduke owned 18,000 *hold* in Mohács riding alone in 1935.

2. Fejér county. The 18,319-*hold* (10,542 ha.) estate of the wife of Count Gyözö Vimpfen (Wimpffen) at Érd in Adony riding appears not only to have been divided into at least five separate parcels, almost certainly by inheritance, but more than half of it passed out of family hands.

Count Nándor Zichy's 10,658 *hold* (6,133 ha.) at Pusztaszabolcs, also in Adony riding, appears to have been both broken up and sold out of the family. Count János Zichy's estate at Nagyláng in Székesfehérvár riding, encompassing 10,686 *hold* in 1893, shrank to a mere 3,658 *hold* by 1935. It is not clear who came to own the rest, but no other Zichy are found among large landowners at Nagyláng in 1935. The decline of the Zichy family as land owners in Fejér county was dramatic: Various counts Zichy owned 35,418 *hold* in Székesfehérvár riding in 1893, but only 10,048 *hold* in 1935; in the county as a whole they went from over 86,000 *hold* in 1893 to only 38,803 by 1935.

3. Somogy county. Count Ferenc Széchenyi, who had an estate of 14,161 *hold* (8,149 ha.) at Somogytarnóca in Barcs riding in 1893, owned only 2,597 *hold* there in 1935, and is listed nowhere else in the county. We can safely conclude that his property was sub-divided, but we cannot tell from the data whether the rest remained in the hands of other family members, since an estate of that size could have crossed the boundary into a different riding.

Count Tasziló Festetich appears twice in the 1893 list as owner of a latifundium, once for 10,380 *hold* (5,973 ha.) at Szenta in Surgó riding, and again for another 10,274 *hold* at Balatonkeresztúr in Marcal riding. These estates appear to have been broken up and in large part to have passed out of the hands of the family. The apparent heir, Prince György Festetich, possessed "only" 36,571 *hold* in larger properties in Somogy county in 1935, whereas Count Tasziló Festetich had owned over 68,000 *hold* there in 1893.

4. Sopron county. Prince Miklós Esterházy, Hungary's largest landowner, was also the largest landowner in Sopron county. While his estate at Kapuvár passed to his heir, his estate at Csorna, which covered 10,118 *hold* in 1893, does not appear as such in the 1935 data. This could be a case where the one property in 1893 is counted as two or more in 1935, but merely from a comparison of the two surveys it is impossible to tell. In 24 properties of over 100 *hold* in Sopron county, Prince Miklós Esterházy owned just under 57,000 *hold* in 1893, whereas in 1935 Prince Pál Esterházy had 51,394 *hold* in 21 properties over 100 *hold* in size.

5. Veszprém county. Here two unpaired latifundia appear in 1893, one of 11,956 *hold* (of which, 7,390 *hold* in forest) belonging to the "Todesco heirs" at Nagyvázsony in Veszprém riding, and the other of 16,751 *hold* (of which 15,755 were forest) belonging to the "communal owners *[közbirtokosság]* of Szent Gál" in the town of the same name, also in Veszprém riding. The greater part of the former (8,447 *hold* in total, and 6,643 *hold* of the forest land) was owned by Count Pál Zichy in 1935; the communal property, on the other hand, seems to have been subdivided into many smaller parcels: In Szentgál (as it is now written) there were only two over properties larger than 100 *hold* in 1893, and they came only to 279 *hold* in all, whereas in 1935 there were 45 such holdings in Szentgál totalling 10,143 *hold*. Much of the 15,755 *hold* of forest seems to have passed into the hands of other classes of owners, since those 45 properties contained only 4,884 *hold* of forest.

6. Zala county. In 1935, Prince György Festetich' estate at Keszthely measured 10,386 *hold* , where his father's estate was just

short of 10,000 *hold* (9065) in 1893. This might be either a case of some accretion to the inherited estate through purchase, or of two parts of a property lying in adjacent communities being counted separately in 1893 and together in 1935. In all, Prince György Festetich owned over 26,000 *hold* in the riding of Keszthely, and over 32,000 *hold* in Zala county, where his father had held about 36,000 *hold* and over 41,000, respectively. The Festetich fortunes had declined in Zala, just as in Somogy.

What does the above tell us? The "statistical artifact" thesis is not supported, although we could not rule it out in two of the individual cases. Both these 1935 latifundia may be the result of amalgamation through purchase of smaller properties, but it is only likely in one case and the possible increment to the other was small. In general we see the parcelization, through inheritance or sale, of the very largest landed properties in Hungary. A reduction of nearly 45 per cent in their number, and of nearly a third in the area they comprised, is not the result of differing concepts of what counts as a property in the two Directories of Landowners.

B. Hungary as a whole.

Of the 19 "pairs" of latifundia — those that clearly were the same basic property in both 1893 and 1935 — twelve shrank in area, four grew, and three remained essentially unchanged in size. Only one appears to have passed out of the hands of its 1893 owner; all the rest stayed in the same hands or at least in the same family: The estate of Baron Puthon at Kisszállás in Bács-Bodrog county, minus about 2300 *hold* of mostly meadow and pasture, had passed by 1935 to Princess Boncompagni and Count San Martino. Of the 18 remaining pairs of over-10,000-*hold* latifundia, one was a royal family property, two were owned by the state, four by cities (including the three largest holdings of all in 1935), and three by various organs of the Roman Catholic church. The other eight were the property of titled noblemen (one, Count László Semsey, had received his title sometime between the

two dates). Since both the Puthon and Boncompagni families had noble titles, ten of these nineteen latifundia were owned by the royalty or the high nobility, and the rest by various legal persons.

The great latifundia which remained essentially intact were clearly not the province of the *nouveaux riches*. Besides government bodies and the church, the roster of owners includes almost exclusively old and famous names: Habsburg, Esterházy, Boncompagni, Festetich, Pallavicini, and Saxe-Coburg-Gotha. Only Count László Semsey might be regarded as an interloper in this crowd.[20]

But the latifundia which disappeared also counted old and famous families among their owners: Wimpffen, Zichy, Széchenyi, Festetich, Esterházy, Károlyi, Saxe-Coburg-Gotha, Wenckheim, Almássy. Of the 1893 latifundia which no longer appeared in the 1935 statistics, eight had been owned by communities or communal groups; these were essentially peasant properties. Thus the decline in the latifundia was a phenomenon which affected both the top and the bottom end of the social scale. We should be wary of drawing any conclusions about the peasantry on this basis, however, since the division of communal properties likely was into the hands of the former communal owners, or of other peasants. Moreover, peasants bought some of the parcels of other estates which were subdivided, just as nobles bought up some peasant land. How the peasants fared overall in the restructuring of Hungarian landownership obviously cannot be established by looking only at the upper end of the property size scale to which this paper limits itself.

We can, however, say something about the titled nobility. Elsewhere in this paper[21] we see that the largest noble landowners held only a tiny fraction of their land in properties under 100 *hold* in size. Thus the general shrinkage of the holdings of aristocrats in the over 100 *hold* category, and the subdivision of noble latifundia, implies an absolute reduction in the amount of land owned by persons

[20] But he already was listed as the owner of an estate of more than 11,000 *hold* in the 1893 *Directory of Landowners*.

[21] See section V below on overall holdings of the largest landowners.

of noble rank. We can state unequivocally that the titled nobility declined in importance as landowners, both relatively and absolutely, between 1893 and 1935.

V. The fifty largest landowners

In the previous section we discussed the largest properties; in Table 3 we look at the fifty biggest property-owners. The strict comparability of the data for the two years should again be emphasized: They include only properties located within the 1935 frontiers of Hungary and which, individually, were each larger than 100 *hold.* [22]

The amount of land owned, and therefore also the share of the fifty largest landowners in total land, fell between 1893 and 1935. They lost an eighth of their land, and more toward the lower end of the scale: the "top twenty" lost only 7.5 per cent. Earlier we saw a tendency for individual properties to shrink in size; here we see an apparent tendency for total *hold* ings per owner also to decline, at least for the very largest landowners. [23]

Patterns varied, however: aristocrats among the top 50

[22] The 1935 survey listed separately, in order of size of their total holdings, all landowners with more than 500 *hold* in properties of *all* sizes, including those under 100 *hold.* Since the 1893 *Directory of Landowners* did not include such a list, we had to construct it. To make the two lists comparable, we subtracted from the 1935 totals all properties smaller than 100 *hold,* hence our data show lesser amounts for 1935 in some cases than are found in the source. This procedure affected the relative ranking in only one case, and the size of the subtractions ranged from zero to only 241 *hold,* except in two cases (Prince Pál Esterhzáy and the Országos Földhitelintézet [National Land Credit Institute]; only for the latter did the deduction exceed 1000 *hold).* See Magyar Királyi Központi Statisztikai Hivatal [Royal Hungarian Central Statistical Bureau], *Magyar Statisztikai Közlemények,* új sorozat, 99. kotet [Hungarian Statistical Reports, new series, vol. 99] (Budapest: Stephaneum, 1936), pp. 376-394.

[23] Naturally, without following *all* owners we cannot determine if this was a general trend. The 1893 data do not permit such a search, so the extent of this putative trend must remain an open question.

Table 3
THE FIFTY LARGEST LANDOWNERS IN 1893 AND 1935 (TOTAL HOLDINGS IN HOLD) (ONLY PROPERTIES LARGER THAN 100 HOLD AND LOCATED WITHIN THE 1935 FRONTIERS OF HUNGARY HAVE BEEN INCLUDED IN EACH TOTAL)

1893		1893		1935	Rank in 1893
Rank	OWNER	Total	OWNER	TOTAL	
1	Esterházy Miklós prince	203178	Esterházy Pál prince	222340	1
2	Festetich Tasziò count	121278	Debrecen city	90894	3
3	Debrecen city	91603	Royal religious foundation	87166	9
4	Esterházy Mór count	80049	Festetics György prince	69182	2
5	Crown property	76978	Szeged city	69061	6
6	Szeged city	71987	Eger R.C. chapter	67423	13
7	Esterházy Pál prince	71641	Royal forestry treasury	61474	12
8	Kalocsa R.C. archbishopric	70862	Benedictine order, Pannonhalma	60157	36
9	Royal religious foundation	69083	Kalocsa R.C. archbishopric	59114	8
10	Veszprém R.C. bishopric	63419	Esterházy Moric count	56014	4?
11	Coburg duke	61884	Royal crown treasury	55738	5
12	Royal treasury	59288	National Land Credit Institute	48623	
13	Eger R.C. chapter	57974	Pallavicini Alfonz Károly margrave	50665	14
14	Pallavicini Sándor margrave	56429	Veszprém R.C. bishopric	50457	10
15	Veszprém R.C. chapter	53919	Cistercian order, Zirc	49833	17
16	Széchenyi Dénes & Imre counts	51668	State stud farms	48162	19
17	Cistercian order, Zirc	48663	Veszprém R.C. chapter	47678	15
18	Royal public foundation	46433	Esterházy Tamas count	47295	
19	State stud farms	46311	Kecskemét city	45281	23
20	Royal family estate	45884	Károly László count heirs	44303	31?
21	Almásy Kálmán count	42345	Frigyes crown prince heirs	42595	28?
22	Esterházy Miklós count	41704	Szasz-Coburg-Gotha prince	41118	11
23	Kecskemét city	41518	Eger R.C. archbishopric	38077	24
24	Eger R.C. archbishopric	41481	Esztergom R.C. archbishopric	36008	45
25	Zichy János count	40783	Royal family estate	35687	20
26	Wenckheim Frigyesné countess	39609	Rgyal catholic studies foundation	28657	51
27	Karolyi Gyula count	37872	Hunyandy József count	28563	30
28	Albrecht archduke	33871	Hungarian Piarist teaching order	26319	40
29	Festetich Pál count	31728	Royal defence treasury	25750	
30	Hunyady Imre count	30781	Festetics Sándor count	24729	
31	Szatmá R.C. bishopric	29816	Esterházy Ferenc count	23639	
32	Károlyi Alajos count	29533	Erdody Sndor count	23370	43
33	Zichy Nandor count	29331	Vc R.C. bishopric	22207	34
34	Vac R.C. bishopric	26946	Szatmar R.C. bishopric	21749	31
35	Vimpfen Gyozoné countess	26877	Pécs R.C. bishopric	21747	37
36	Benedictine order, Pannonhalma	26783	Széchenyi Andor Pál count	20770	54?
37	Pécs R.C. bishopric	26378	Semsey László count	20774	76
38	Károlyi Viktor count	25959	Esztergom R.C. chapter	19816	53
39	Károlyi László count	25368	Esteráhzy Pál Jr. count	18730	55
40	Piarist order	25321	Batthyány-Strattmann László prince	18085	59
41	Nagyvárad R.C. chapter	25317	Andrássy Sándor count	18083	44
42	K-Szt-Miklós commune	24464	Pécs R.C. chapter	18206	52
43	Erdödy Ferenc count	24333	Boncompagni princess & San Martino count	17966	
44	Andrássy Aladrné countess	24076	Hungarian Academy of Sciences	17707	
45	Esztergom R.C. archbishopric	23675	Krolyi Istvn count	17691	
46	Kalocsa R.C. chapter	23481	Montenuovo Nndor prince	17055	48
47	Karczag commune	23463	Nagyvárad R.C. chapter	16936	41
48	Montenuovo Alfred prince	23192	Metternich-Sàndor Klementina princess	16744	
49	Széchenyi Bela count	23123	Kalocsa R.C. chapter	16373	46
50	Vigyázó Sándorné	22495	Hohenlohe-Oehringen Agost prince	16273	
	GRAND TOTAL	2340154	GRAND TOTAL	2042284	
	avg. size of total ownership	46803	avg. size of total ownership	40845.6	

landowners in 1935 held only 74 per cent of the amount of land that their 1893 counterparts had had, while organs of the Roman Catholic Church had 7.5 per cent more land, and cities and communes apparently some 7.7 per cent less. Membership in the top 50 changed only slightly, however, as the following list shows:

Fifty largest landowners, by category

Owner Group	1893	1935
Aristocrats	25 incl. royal family	23 incl. royal family
Non-aristocrats	1	0
Religious bodies	15 incl. one foundation	18 incl. two foundations
Organs of the State	3	4
Communal groups	2	0
Cities	3	3
Banks, corporations	0	1 (credit institute)
"Other"	1 (Educational foundation)	1 (Academy of Science)

Aristocrats accounted for exactly half of the 50 largest landowners in 1893, and for 51.9 per cent of the total area owned, shares which fell to 46 and 43.7 per cent, respectively, by 1935. The Church share rose from 26.4 to 32.3 per cent of area, while that of communities (including cities) fell slightly, from 10.9 to 10.0 per cent, owing to the disappearance of the communal ownership groups of Kún-Szent-Miklós (#42 in 1893) and Karczag (#47), leaving only the three cities of Debrecen, Szeged, and Kecskemét to represent community landownership among the top 50 in 1935.

Membership among the "top ten" changed even less: in 1893 three Esterházy and one Festetich represented the aristocrats in a group that included two cities, two organs of the Church, one religious foundation, and one organ of the State. In 1935 a third organ of the Church replaced one of the Esterházy, otherwise the composition remained as it had been.

VI. Concluding remarks

We have attempted to provide a detailed quantitative picture of changes in the ownership patterns of properties larger than 100 *hold* on the Trianon territory of Hungary. As one would expect, the picture is complex and sometimes unclear, but some definite conclusions have nevertheless emerged:

1. There were large and important regional differences in the basic patterns of land ownership as well as in the pattern of changes over time. These changes reflect not only different geography but different historical experience, in particular in the way the land was retaken and redistributed after the Turkish occupation.

2. To a considerable extent, different types of landowners concentrated their holdings in particular areas of economic activity: individuals, the Church, and banks and corporations engaged in mixed agriculture with the emphasis on cultivation, whereas the state properties emphasized forestry and communal properties, pasturage.

3. Over time, the degree of this specialization by function increased, and the agriculture practiced on larger properties became, in general, more intensified.

4. There was a strong tendency for properties to become smaller, which showed up as both a reduction in the numbers and area of the largest properties and an increase in numbers and area of the smallest size categories of properties included in this study.

5. Hungary's very modest effort at land reform could not account for the decline in the area of large properties owned by individuals.

6. Between the two dates that are the foci of this paper, individuals became less important, and legal entities more important, as owners of larger landed properties.

7. In both years non-aristocratic individuals owned more land in properties larger than 100 *hold* than did aristocrats. The titled nobility, therfore, did not "own the country," even in 1893. Their position as large landowners, concentrated heavily in Transdanubia, deteriorated over the period. There was no evidence that they as

a group were any better able to weather the economic storms of the period than were non-aristocratic landowners, whose position also deteriorated in almost the same proportion.

8. Banks and corporations were unimportant as landowners, even though their holdings grew relatively most rapidly between 1893 and 1935.

9. Despite the relative and absolute decline in noble ownership of large estates, virtually no *nouveaux riches* joined the ranks of the largest landholders.

Appendix A: The methodological background of the data base

The present investigation is part of a larger project on the social distribution of landownership in Central Europe ca. 1880 - ca. 1935. Since we intend to make our data available to other researchers, we here elaborate in considerable detail, with examples where the issues are rather complex, the construction of this database. The discussion covers the following points:

1. the coding system,
2. technical problems, including reconstruction of missing or aggregated data,
3. delineating the Trianon territory of Hungary in the earlier data.

Some of the discussion and examples for 1893 necessarily refer to areas located *outside* the 1935 frontiers of Hungary. In such cases we indicate the relevance or importance to the area remaining inside the frontiers.

VII. Data processing considerations

A. A typical record

Source	Location	Owner	Code	Area	Plough	Garden	Meadow
35102	110510	Rubido-Zichy Iván br.	1610	721	153	4	10

Vine	Pasture	Forest	Reeds	Untaxed	KTJ*	Serial	Notes
11	10	501	0	32	2465	17094	

Explanation: The source listed this property on page 351, line 02; it was located in the 11th county (Zala), 5th riding of that county (Letenye), 10th

community of that riding (Csörnyefold). The owner, Baron Iván Rubido-Zichy, is coded as 1 (aristocrat), 6 (rank of baron), 1 (single owner), and 0 for the number of tenants on this property. Areas (total and of various kinds of land) are in cadastral *hold* (1 hold = 0.575 ha. or 1.42 acres). KTJ*, the cadastral net income (assessed value for tax), is 2,465 gold crowns, and this record was the 17,094th record in the 1935 Directory of Landowners. There were no special notes to add to this record.

B. Location and owner codes

1. *The location codes*

This system, based on the 1910 population census of Hungary, was first used in examining the 1911 Directory of Landowners.[24] It assigns a unique six-digit number to each community (settlement): the first two identify the county, the third and fourth digits the riding, and the last two the settlement. We coded cities with separate status, not included in any riding, as separate ridings within the county where they were located; for example, Esztergom county (number 14) had only two ridings, so the independent city of Esztergom was coded 140300.[25]

a. *Irregular cases*

Administrative divisions in 1910 differed from those of 1893 or 1935 if settlements were merged, divided or attached to another settlement; if they received city status, or their names were changed. Because the reference year, 1910, fell between the two years here under examination, exactly opposite procedures had to be applied to the years 1893 and 1935:

(1) *Change in status of a settlement*

Some communities were elevated to town status: in 1893, Fogaras was a community in Fogaras riding, Fogaras county. By 1910, it had become an independent town, so for 1893 it received its town code number (530500).

[24] A detailed description of the 1911 coding system can be found in Julianna Puskás, Scott Eddie, and Margit Lánc, "Adatbázis az 1911. évi gazdacimtár adataiból a gazdaság- és társadalomtörténeti kutatások számára" (A database from the data of the 1911 landowners' register for economic and social history research), published in *Történeti Szemle* [Historical Review] 1977, no. 2, pp. 315-328.

[25] Small country-towns *(mezőváros)* were coded as communities, since administratively they did fall within a riding.

A community raised to town status between 1910 and 1935 kept its 1910 community code.

(2) *Two settlements, one location code*

Two or more 1893 settlements amalgamated into one by 1910, or two or more 1935 settlements resulting from dividing a single 1910 settlement, received the single 1910 location code.

(3) *One settlement, two location codes*

If two or more 1910 location codes referred to the same place, e.g., a single 1893 settlement divided by 1910, or separate 1910 settlements merged or annexed to a nearby city by 1935, we adopted the following rules:

1) if one settlement was the «Post Office» in the 1911 Directory of Landowners, we assigned its code to the 1893 community.

2) if neither was the post office in 1911, we used the code of the one with the larger population in 1910.

3) if neither of the above rules applied, we used the code with the smaller (smallest) numerical value.

4) if parts of a divided community became settlements in different ridings (or counties), we allocated the properties according to the ratio of population in the new settlements (if identical or missing, in equal shares) in assigning them location codes.

b. *More than 99 settlements in a riding*

Two digits sufficed for counties and ridings, but some ridings had more than a hundred settlements. In such cases we used decimal fraction-codes: the 100th settlement became 99.100, then 99.101, 99.102 etc.

c. *Other cases*

Smaller settlements listed as "farmstead," "cloister," "grange," and the like ere usually assigned the code of the settlements immediately preceding them in the register, on the assumption that if they appeared out of the alphabetical order used in the register they must belong administratively to the community with which they were listed. Hence we had to refer to gazetteers only in the few cases when they appeared in proper alphabetical order.

2. *The owner-codes*

The first digit of the four-digit code identifies the type of owner (both physical and legal persons), the second stands for groups within the main types, and the third represents subgroups set up primarily with a view to communal ownership forms. The fourth figure was reserved for showing the number of

tenants in later stages of this project. The fundamentals of the system are listed in Appendix B; problems of insufficient information or unclear categories were dealt with as follows:

a. *Insufficient information*

Where the denomination was not listed, we assumed a church was Roman Catholic. "Jakab és Társa" [Jakab and associate] or "Jakab and Pollák" may refer to some kind of business association, but, having no documentary evidence, we considered them physical persons and assigned them to the category of non-aristocratic joint properties (203X).

b. *Unclear categories*

If two types of landowners jointly owned a single property (e.g., a community and another legal entity, or an aristocrat and a non-aristocrat), we coded the property as if owned by only the first-listed of the joint owners. We assigned "bankrupt's estate" (appearing only in 1935) to "other legal entities." Such cases were so rare, however, that whatever convention we adopted would have had no material effect on our results.

C. **Other data-processing conventions**

1. *Source and serial numbers*

Besides location codes and owner codes, each record has a source number and a serial number. The source number enables anyone to check the record in the original source, since the first three digits identify the page on which the record appears, the fourth and fifth give the line number on the page. The serial number starts from 00001, designating the first property of the first community in the first riding of the first county in the given register, and provides both an easy way to calculate the number of properties in a given riding or county and a check for records omitted in later processing work.

2. *Inconsistent data*

a. *Inconsistencies within a given record*

If the source recorded a total territory of a given property that was not equal to the sum of its parts, we checked and corrected the data according to the following rules: [26]

[26] If the error[s] could not be identified, the *sum of the parts,* not the listed total, was arbitrarily taken to be correct.

(1) If the difference fell within the limits of rounding or truncation used in the source or within our pre-determined margins of tolerable error (based mostly on cost of correction considerations) [27], we ignored it. If not, then

(2) we examined the original record again for possible errors made in the editing, publishing or printing process, including miscalculations, transpositions, etc.; if we could not account for errors this way, then

(3) we checked the basic data (i.e., the areas of the different types of land in the property) against additional sources if available; if not available, then

(4) we assessed their probability (checking for greater discrepancies, marked structural deviation from the environment, and types of land use uncommon in the region). (See following section for details).

When, after these steps, a limited number of unexplainable errors remained, we noted them for possible later correction. In such cases, we considered less processed data more likely to be correct. Hence we had to accept the calculated total area as correct and regard the reported total area as incorrect.

We consider our assumption justifiable. Firstly, manual processing was a potential source of error in the totals. Secondly, no simple, general rule could be made for correcting the areas of parts of properties according to land use, and use of average or typical structure of some set of properties would likely have introduced more errors than it eliminated. Thirdly, modification of the data of parts of properties would affect the supposed reliability of more data points than would modification of reported totals. Finally, the chosen procedure makes the computerized data processing simpler and easier to follow.

b. *Typographical errors*

We found errors resulting from

(a) displacement of single data points or whole ranges,

(b) records erroneously repeated,

(c) the shifting of place values, and

(d) digits transposed, left out, or even substituted with digits which look or sound (!) similar.

Spotting such errors mainly called for a mathematical and logical analysis but sometimes required plenty of empathy with the work of our late colleagues. This part of our work emphasizes again that both the original data and today's computerized processing are based on a chain of human activities, and without understanding these activities and the intentions behind them, researcher(s) risk perpetrating, or perpetuating, gross errors.

[27] The number of land-use categories in the two sources was 8, so we took a limit of tolerance of $\pm$ 8 *hold*. (Note that it is an absolute value, as opposed to the relative value — an arbitrary 5% — accepted originally in the case of the 1911 landowners' directory).

While errors resulting from inclusion of uncommon land types or an unusual structure, or the vertical shifting of single numbers or whole blocks of data, were relatively easy to detect, horizontal shifting of a single digit (e.g., consecutive figures of 231 and 952 printed as 2319 and 52, respectively) was more difficult. There were even more complicated cases, however. In the register of 1935, on page 320, in lines 24 - 26 we found the following:

Total	Plough	Garden	Meadow	Vine	Pasture	Woodland	Reed	Untaxed	Sum	Discrepancy
959	249	—	—	—	386	401	—	38	1074	−115
327	103	6	2	5	276	16	—	—	159	146
114	134	—	8	—	—	—	—	3	145	− 31

Since the sum of the "discrepancies" is zero, permutation of data in one of the categories is the likely cause, since permutations of the totals would not eliminate the discrepancies. By a simple process of elimination of categories too small to account for the differences, ploughland emerges as the most likely permutee, as in the following table:

Ploughland (original)	Ploughland (corrected)	Difference (original)	Difference (new)
249	134	−115	0
103	249	146	0
134	103	− 31	0

VIII. **Data reconstruction**

Missing data can be reconstructed either by drawing on other sources or by purely mathematical methods. Although data reconstructed from another source may still be used to compare individual properties, those reconstructed by purely mathematical methods do not provide any new information, so they must be used with great caution. We therefore flagged all reconstructed data in our database and detailed the basis and method of reconstruction in each case. Data were missing from Gömör and Moson counties; we reconstructed them as follows:

A. **Gömör county 1893**

1. *The problem*

The 1893 landowners' register for Gomor county contains the following footnote (p. 235):

"As a result of error in the records submitted, landowners' properties located in several settlements or another riding were not separately listed by community but rather combined [as if they were a single property]. See references under the heading «Notes»."

Thus every landowner with more than one property larger than 100 *hold* in the county was assigned a single combined, fictional property that replaced one of his actual properties, leaving all other records blank.

For example, the very first record of Gömör county: the only large landowner of Borosznok, Nagyröszke riding, was "Rudolf and Frigyes Latinák". But the rest of this record is empty, and the "Notes" column says "see settlement Ploszkó". In the community of Fillér, we again find "Latinák brothers"[28] as owners, but again all data are missing and the same note included. Altogether seven such empty records can be found under the same name, six of them in the same riding. The eighth record, in the community of Ploszkó, contains the following data, which are the totals for all eight properties:

Owner	Plough-	Garden	Meadow	Pasture	Wood-	Vine-	Reed-	Untaxed	Total
Latinák R & F	93	6	106	681	2595	—	—	—	3504

There were forty-five landowners in the county[29] whose properties, totalling nearly 250,000 *hold* and comprising 215 records, were similarly aggregated. In most cases only two or three properties were combined but the entail of Duke Philip of Coburg comprised 59 properties totaling 110,000 *hold,* and Count Dénes Andrssy had an entail of 24 properties.[30]

[28] As landowners' names were not always consistently used — some, mostly legal entities, appeared in more than ten versions — this could pose problems. To solve these problems we either added a manual phase to identify names or we had to "teach" the computer to identify the most common versions. In the present case, the combined registration itself established that "Rudolf and Frigyes Latinák" and "Latinák brothers" were the same owners. But in some cases it was very difficult to identify rather common names which were not consistently entered.

[29] Within this, the combined lands of the Roman Catholic episcopacy of Rozsnyó were registered at two different places, fortunately without overlapping. The situation became more complicated: For several owners we found properly registered individual properties as well as the combined properties and the empty records; thus the "mistake" was not consistently made.

[30] Only a small part of Gömör county remained within the borders of Hungary after the Trianon Treaty — 6.8% of the whole territory and 10.2% of the properties of the original county, according to the 1893 register. For the post-Trianon territory, our reconstructions produced a mere 16 properties containing 11,000 *hold* (10.8% of the number of properties and 37.3% of their area in that small region). Although the bulk of the reconstruction referred to territory outside the post-Trianon borders, we do not know whether this is an over- or understatement, since some components of combined properties on each side of the frontier may have wound up on the other side.

2. *The method of reconstruction*

We first examined the data of the landowners' register of 1911. Although the register based on the 1895 agricultural census stands temporally much closer to 1893, its data were unsuitable for our purpose: The 1895 register took the farm, not the property, as its basic unit; moreover, it omitted completely several classes of properties which would have appeared in either of the other Directories of Landowners.[31]

From the 1911 register we filled the gaps, in so far as possible.[32] If the combined area of properties in 1911 was not equal to the 1893 combined area, or if only some of the missing properties could be found in the additional source, mathematical methods were also required. We mark these below as I. corr, II. corr; a type III mathematical reconstruction indicates we had no data at all to use from the 1911 register. In such a case we simply apportioned the areas equally among the properties in question, creating thereby fictitious properties of essentially identical size and composition. There were three other possible situations:

A. Data for some, but not all, of the individual properties were available from another source, but the total area fell short of the 1893 total.

B. Same as A but the total area exceeded the 1893 total.

C. We had information about all the individual properties from another source, but there was a difference between the combined areas.

[31] The 1895 Landowners' Directory, derived from the census included *farms* of 100 cadastral *hold* or larger. Moreover, state or community land which was not rented out was not registered unless used for an explicitly agricultural activity. Crown or community woodlands, pastures, reedlands or areas not brought into cultivation were omitted, as were communal or public foundations' pastures and wooded properties. As in the agricultural census itself, in this landowners' register the main emphasis was on the "exploitation" — the production unit, not the ownership unit. Földmivelésugyi Magyar Királyi Miniszter, *Magyar Korona Országai Mezögazdasági Statisztikája,* II. kötet, *Gazdaczimtár.* [Royal Hungarian Minister of Agriculture, The Agricultural Statistics of the Lands of the Hungarian Crown, Vol. II, Landowners' Directory] (Budapest: Pesti Nyomda Rt. [Pest Press Inc.], 1897), Foreword, p. III.

[32] In cases where it was not obvious that the 1893 property was identical to the one in 1911, we relied mainly on identity of family names or any information implying possible heirs, or in the case of legal persons identical premises or similar scope of activities. If no such information could be found under the names of the settlements under investigation, we checked the Registries of Place Names for names that had been changed. Because of cost considerations, we did not try to track down individual properties in the archives.

We present the solutions to each of these three types with the help of some examples: [33]

a. *Fewer individual properties, and too little area*

Table A-3 contains the data of the combined properties of Baron Henrik Luzsénszky, together with the data of his actual properties as recorded in the landowners' register of 1911. The overall shortfall is 384 *hold,* while the breakdown by land use results in both excesses and shortfalls. There is a deficit of 560 *hold* in woodland, but a surplus of 197 *hold* of ploughland, compared to the combined data of 1893.

The excess amounts were subtracted in equal parts from the corresponding data of the 1911 records; the remainders were finally subtracted from the data of the first — i.e. the largest — property, while shortfalls were also divided in equal shares to form the data of the missing properties (here the remainders were added to the values of the first missing property). After the reconstruction, in all cases we carried the value of "Calc Sum". The value of "Difference" in the table shows the degree of reconstruction indirectly. So the structure of the first three properties remained similar to the 1911 structure, whereas the last two reconstructed records do not include ploughland because there already was an excess amount. The majority of the area was woodland.

Although there is little likelihood that these properties had this exact structure in 1893, we nevertheless consider this procedure reasonably correct: By this method we attempted to preserve as much authentic information as possible from the two sources concerning the state of the Luzsénszky properties, rather than merely resort to equal allocation, as in the cases of no data. Further refinement would have been too costly to justify.

b. *Fewer individual properties, but too much area*

The Type "B" problem (fewer properties, but larger total area in 1911 than in 1893) was in principle the most difficult. Since there was only one Type "B" case, namely Count Dénes Andrássy's entail consisting of 24 properties, we first

[33] In all cases of mathematical reconstruction, we adhered to the following principles:

— only non-negative whole numbers were used;
— the process should neither add a new type of land use nor eliminate an existing use (i.e., neither change an existing zero value to a positive one, nor change an existing positive value to zero);
— the remainders from divisions and the difference remaining after a limited number of cycles were added to or subtracted from the corresponding categories of the largest property. If that could not be done because it conflicted with one of the above principles, we went to the corresponding category of the next largest property, and so forth.

Table A-3 Baron Henrik Luzsénszky

Serial number	Location	Plough-land	Garden	Meadow	Pasture	Wood land	Vine yard	Reed-land	Untaxed	Total-	Sum	Diff.	Notes
Combined data from Directory of Landowners													
24206	310624	1030	18	455	32	3391	6	—	21	4953			
FIRST PASS:						Data from 1911 Directory of Landowners							
24233	310637	220	6	105	9	1325	2	—	4	1673			
24206	310624	612	13	205	16	610	—	—	18	1477			
24032	310604	395	2	118	3	896	—	—	2	1419			
24139	310618	—	—	—	—	—	—	—	—				
24212	310606	—	—	—	—	—	—	—	—	—			
1911	Total:	1227	21	428	28	2831	2	0	24	4569			
1911 Total - 1893	Total:	197	3	−27	−4	−560	−4	0	3	−384			
Reconstructed records													
24233	310637	153	5	105	9	1325	2	—	3	1673	1602	71	II corr.
24206	310624	547	12	205	16	610	—	—	17	1477	1407	70	II corr.
24032	310604	330	1	118	3	896	—	—	1	1419	1349	70	II corr.
24139	310618	—	—	14	2	280	2	—	—	192	2982	-106	III
24212	310606	—	—	13	2	280	2	—	—	192	297	-105	III
Reconstructed total		1030	18	455	32	3391	6	0	21	4953	4953	0	
Original 1893 total		1030	18	455	32	3391	6	—	21	4953	4953	0	
Final difference		0	0	0	0	0	0	0	0	0	0	0	Cycle 1

subjected it to detailed scrutiny. We found two records to be identical, and these just happened to be the "two" largest properties. "They" were located in adjacent communities; it therefore seemed probable that the same property had been registered twice. Eliminating one of these duplicate records transformed the Andrássy entail into a type "A" problem, described above, and relieved us of having to make a difficult choice.

c. Same individual properties but different area

The data provided by solutions to the Type "C" problems (exactly the same properties, but differences in their total area between the two sources) are probably closest to the original situation. The algorithm used for this class of corrections used all records from the additional source, making larger corrections in larger properties, apportioning the differences by a series of iterations which terminated when division by the number of properties would produce a value less than one *hold*. It is illustrated in Table A-4 by a hypothetical example in which there are ten individual properties.

The table does not contain the initial and intermediate area of the individual parts of properties; only the values subtracted and the residuals of the difference to be distributed are shown.

All data, however reconstructed, were then assigned to their given locations within Gömör county. This made a difference (see below) because the new international frontier of Hungary after World War I passed through Gömör county.

B. **Moson county 1893**

1. The problem

The register omitted from Moson county *all* properties between 100 and 200 *hold* . Unlike in Gömör county, we therefore had no information at all from 1893 concerning the missing properties. In the case of these smaller properties, we considered the actual correspondence between farm and property to be reasonably frequent, and the probability of error introduced by the time gap until 1911 to be very high — hence we decided to reconstruct the missing data on the basis of the 1895 register, despite its using the *farm* as the unit of record. This was a particular problem if a farm cultivated by a single farmer was owned by two or more persons and we had no information on their individual shares. As mentioned before, properties that were entirely forest or entirely pasture were not included in the 1895 register,[34] nor were communal lands unless rented out or used for a specific agricultural enterprise. Hence — and most importantly for the reconstruction here attempted — the communal pastures were also omitted.

[34] Properties of this kind were usually very large, so this presents no particular problem of omission for the reconstruction of the data of the properties between 100-200 *hold*.

Table A-4 Example of Type "C" Correction
(Assuming a difference of 100 *bold* to be subtracted)

Property Nr.	Iteration 1 Step	Iteration 1 Operation	Iteration 2 Step	Iteration 2 Operation	Iteration 3 Step	Iteration 3 Operation	Iteration 4 Step	Iteration 4 Operation	Property Nr.	Total subtraction Amount
1	1	100-(100/10)=90	1	37-(37/10)=34	1	16-(16/10)=15	1	Residual=9	1	10+3+1+9=23
2	2	90-(90/10)=81	2	34-(34/10)=31	2	15-(15/10)=14			1	9+3+1=13
3	3	81-(80/10)=81	3	31-(31/10)=28	3	14-(14/10)=13			3	8+3+1=12
4	4	73-(73/10)=66	4	28-(28/10)=26	4	13-(13/10)=12			4	7+2+1=10
5	5	66-(60/10)=54	5	26-(26/10)=24	5	12-(12/10)=11			5	6+2+1= 9
6	6	54-(54/10)=49	6	24-(24/10)=22	6	11-(11/10)=10			6	6+2+1= 9
7	7	49-(49/10)=45	7	22-(22/10)=20	7	10-(10/10)= 9			7	5+2+1= 8
8	8	45-(45/10)=41	8	20-(20/10)=18					8	4+2=6
9	9	41-(41/10)=37	9	18-(18/10)=17					9	4+1=5
10	10	37-(37/10)=34	10	17-(17/10)=16					10	4+1=5
									Total	100

2. *The method of reconstruction*

a. Cases requiring no change in data

If in a given settlement both registers recorded only properties over 200 *hold*, we took it that there were no properties between 100 and 200 *hold* in size, and left the 1893 data as presented. If the 1895 register listed a farm with only one owner, we included that farm as a property in the 1893 data provided only that the same person was not registered as the owner of another farm or property in the same settlement. This procedure produced 47 properties.

b. One owner-farmer rents from the community

In cases where the farmer rented some land from the community and/or other landowners, we had to estimate the property data by indirect means. In four communities in 1895 farms were jointly owned by a farmer and the community: Miklósfalu and Szolnók in Magyaróvár riding, and Szent Péter and Zurány in Rajka riding (33, 4, 33, and 5 farms, respectively). Using the following method we reconstructed the data of those farms where the only owner besides the community was the farmer himself:

By comparing the data of the two sources, it became obvious that the farmers could only have ploughlands, gardens and meadows rented from the community; pastures, woods and untaxed land were kept for communal purposes. To allocate the communal ploughlands, gardens and meadows to individual renters, we assumed each farmer rented in proportion to his shares of total ploughland, garden and meadow for the group of farmers in question.

Thus a farmer who cultivated 4.8 per cent of the ploughland and 7 per cent of the meadow of the group of farmers in question was assumed to rent 4.8 per cent of the community-owned ploughland and 7 per cent of its meadow, for example. From the area of each farm in this category we then subtracted the hypothetical area of communal lands rented, yielding the estimated size of privately owned land. In this category the farmer himself was the single owner of the privately owned land in the farm, therefore if the estimated size equalled or exceeded 100 *hold*, we added it as a property to the 1893 register; if it was smaller, we left it out. In this fashion we included 32 farms from Miklósfalu, two from Zurány, and one from Szent Péter. Szolnók required a special procedure (see below).

c. Community and two or more private owners

In Szólnók 25 farms included land owned by the community and two or more individuals; in all, 60 farms over 100 *hold* showed multiple private owners. In each case, one of the owners was the farmer himself; the rest of the privately owned land was distributed among 30 persons other than the actual farmers.

Here we started from the hypothesis that the more people he rented from, the smaller the farmer's own share of the land would be. We assumed the share to be given by:

$S = 1 - \frac{(i + m)}{(i + n)}$ where i stands for the number of pr' ate owners other than the farmer, and m and n are arbitrary integer constants ($n > m$).

Furthermore, we also assumed (a) that the rented land was provided by the owners in equal shares, except that (b) all the untaxed land was owned by the farmer himself. (It seems highly improbable that a farmer would have rented unproductive land.) On the basis of our hypotheses a series of iterations on our data produced the most consistent results for values of $m = 0$ and $n = 11$.

In some cases this procedure estimated a property larger than 200 *hold*, permitting a comparison with the original 1893 data: For example, it assigned András Lang 212 *hold* while in the 1893 register he had 211 *hold*, a nearly perfect correspondence; it assigned Pál Lang 221 *hold*. In 1893 Pál Lang had no property over 200 *hold* but in 1911 he owned 196 *hold;* this is a reasonable correspondence. On the other hand, Pál Thullner's reconstructed property was only 50 *hold,* whereas the 1893 register recorded him with 202 *hold*.

In Szolnók this procedure produced 20 farming and 9 non-farming landowners with properties over 100 *hold*. In addition to the above, there were three more with an estimated area over 200 *hold:* József Zwickl, who farmed 313 *hold* and rented from three people including his son, has 246 *hold* attributed to his ownership; János Czellei, from whom 21 farmers rented land in 1895, was assigned 493 *hold* (he had 403 *hold* in the 1911 register); and János Reiter, who rented to nine farmers, shows up with 216 *hold*.

Although our methods were to reconstruct the missing data of properties between 100 and 200 *hold*, the logical consistency of the procedure required us to extend its application to properties estimated over 200 *hold* as well. As a consequence, of the five estimated properties exceeding 200 *hold,* three were included in the 1893 register. In the other two cases we kept the original data. It made no significant difference in the case of András Lang, whereas in the case of Pál Thullner we felt it contravened the logic to *delete* a record from the 1893 data as given.

In order to be able to break down the estimated private lands of farmers by land use, we further assumed that the composition of their private land was the same as that of their whole farm.

On the basis of the results of the above procedures, from the total area of the whole group of farms we subtracted the area of the communal lands, then the private lands of the farmers and the single landowners. We then allocated the remaining land among the nine non-farming landowners, based on the average composition of this residual total. Thus these nine properties have identical percentages of ploughland, meadow, etc.

d. Multiple owners not including the community

There remained 19 farms with multiple owners, but without community-owned land.

Here we followed the same procedure as for Szolnók; it assigned 18 of the 19 farmers "owned properties" of 100 *hold* and over, while none of the other owners listed attained this threshold. These 18 properties were added to the 1893 property data.

In all, the procedures described produced 186 properties with a total area of 25,000 *hold*. [35] Although we made some seemingly arbitrary assumptions during reconstruction, on the whole we believe that our results have increased the reliability of the landowners' register of 1893. A brief comparison of original and revised data for Moson county with the data of other landowners' registers reinforces this belief:

Moson County

Landowners' Directory	All properties/farms over 100 *hold*		Properties/farms between 100 and 200 *hold* in size	
	Number	Area (Thousand *hold*)	Number	Area (Thousand *hold*)
1893 original	145	168	0	0
1893 reconstructed	331	193	186	25
1895 (farms)	(325)	(142)	(225)	(33)
1911	313	170	170	22

As the table shows, there is a striking similarity in the 100-200 *hold* size category between the figures for the 1911 register and for the 1893 revised version, while there are greater differences among the overall data of the original versions. Other factors may also contribute to these disparities: There seemed to be a trend toward shrinking average size of property, affecting the larger properties in particular, as noted in the main body of the paper. Beyond that, some 10 per cent of large properties were apparently omitted from the 1911 register. [36] But since these factors affected mainly properties over 200 *hold*, their effect could be considered insignificant in the above comparison.

On the basis of the location code assigned to each property, we selected the data of those properties from the 1893 register (the reconstructed data of Gömör and Moson counties included) which later remained inside the Hungarian borders in the divided counties after the Trianon Treaty, and ignored the rest.

[35] Because the new international frontier also traversed Moson county, the actual totals for the part of the county left within Trianon Hungary were 105 properties covering 14,400 *hold*.

[36] Kolossa, T., and Puskás, J., "Magyarország 100 kh-on felüli birtokterületének strukturája tulajdonos tipusok és bérleti rendszer szerint 1911-ben" [The structure of landed properties over 100 cadastral *hold* in Hungary, according to type of owner and rental system in 1911], *Agrártörténeti Szemle* [Agrarian History Review], Vol. XX. No. 3-4 (1978), pp. 444-480.

There were some slight adjustments in county boundaries between 1893 and 1935 that changed the statistical reporting region to which a small number of properties belonged. In such cases, we took the 1935 administrative borders as the basis for our comparisons and assigned 1893 properties to the 1935 region to maintain strict comparability. [37]

APPENDIX B: Owner Coding Scheme

First position		Second position		Third position	
1	Nobility	1	Princely entail	1	Single owner
		2	Princely freehold	2	Joint with spouse
		3	Countly entail	3	Several owners
		4	Countly freehold	4	Heirs
		5	Baronial entail	5	Personal foundation
		6	Baronial freehold		
		7	Royal family		
		8	Personal foundation		
		9	Knight		
2	Non-noble person	0	Zero	1	Single owner
				2	Joint with spouse
				3	Several owners
				4	Heirs
				5	Personal Foundation
3	Church	1	Roman Catholic	1	Bishopric, archbishopric
		2	Presbyterian	2	Diocese, chapter, etc.
		3	Greek Orthodox	3	Parish
		4	Greek Catholic	4	School, religious foundation, holy order
		5	Other		
4	State	0	Zero	0	Zero
5	Community	0	Zero	0	Zero
6	Communal group	1	Urbanal group	0	Zero
		2	Other group		
7	County, city	0	Zero	0	Zero
8	Bank, business	1	Financial institution	0	Zero
		2	Corporation		
		3	Savings bank		
9	Other	1	Association	0	Zero
		2	Foundation		
		3	Other legal person		

[37] Because the course of the Danube had slightly changed, the community of Bogyiszló (L-code: 270702), belonging to Tolna county (No.08) in 1893, became part of Pest-Pilis-Solt-Kiskun county (No.27) by 1935 (in fact already by 1910, as the L-code shows). Consequently seven properties in Bogyiszló in 1893, totalling some 5,000 *hold*, were transferred from the Transdanubian region to the Great Plain region.