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The Spatial Differences of Modernisation in Hungary At the Beginning of the 20th Century

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1 Introduction

Hungary, during its history, has made several attempts to catch up with the Western European countries, the so-called ‘modern world’. In most cases ‘history’ has doomed these efforts to failure, and with this, modernisation (i.e. the catch up process) was determined to stop for decades and even for centuries.

At the time of the establishment of the Hungarian Kingdom (in about 1000 AD.) the Western countries had already built up their feudal regime. Hungary showed its willingness to join the West European civilisation by joining to the West European Christian Church, by the adoption of feudal law and order, and also by dynastic relations (our first king married a Bavarian princess). However, it took a long time for the social and the economic system to become similar – but not identical – to the Western world. In the 15th century, the catch up process had been or at least had nearly been completed, but all this has been hindered by the *restructuring of the European social-economical regions* (The ‘core area of modernisation’ moved from Northern Italy to the Atlantic region, consequently Central-Europe became peripheral and feudalism stabilised there) and *the rise of the Ottoman Empire* (the Turks invaded Hungary's central area, half of its territory, at the beginning of the 16th century, and founded a feudal duchy in *Transylvania*). The country became a war-devastated area for one and a half century. After chasing out the Turks (in the 1680's and 90’s) it was the firmly established feudal conditions and the country's peripheral position (within Europe and within the *Habsburg Empire* to which Hungary belonged since 1526) that prevented the restart of the Hungarian catch up process. It was possible only by the elimination of feudal circumstances, and by the establishment of civil laws and order, the passing of proprietorship acts in 1848.

At this time, however, the modernisation with harmonisation process with Western industrial societies progressed at an increased speed. This process showed a significant improvement at the turn of the century and in the period before World War I. Yet, the 'catch up' process within Hungary was characterised by significant spatial differences.

This essay is an attempt for the assessment of these spatial differences in Hungary, which became significant by the turn of the 19th and 20th century.

2 Theoretical and methodological problems

Although there is a massive collection of literature on the historical, philosophical and sociological aspects of modernisation and historical statistics provides a large amount of relevant data for the assessment of the spatial differences of modernisation in Hungary in the early 1900s, there are some methodological problems in figuring out quantitative indicators for the different regions. At first, modernisation theories highly emphasised the importance of *expansion and catch up elements. Daniel Lerner* considers *a constant spatial expansion of modernity* as the essence of modernisation.[1] By considering *S. N. Eisenstad's* view stating that modernisation is …'a simple reproduction of the Western European and North American capitalist systems in the less developed countries one can think that the mapping of the spatial differences of modernisation might be free of problems.[1] But even geographers should accept that modernisation is not simply a 'catch-up' process – this statement may only be a slogan for the modernisation of the less developed 'lagging behind' regions.

Zsolt Papp, a Hungarian expert of this problem, has formulated his theory on the issue as follows: ' the theoretical and practical experts using the terms of 'postmodernism' are seeking for such new practical-moral, aesthetic-expressive, human-ecological expressions and sensitivities that cannot be described by the traditional conceptual elements of modernisation.' Modernisation ' …– apart from its descriptive function – has often a political evaluation content. What makes it work so? *Claus Offe* says that all the normative concepts and projects have been integrated in the Western world that had been formulated during the English industrial revolution, the French revolution and the German idealism. In this sense '…the liberation of the ratio and human subjectivity are the final products of modernisation.'[2]

The extremely rich collection of 'modernisation literature' standing 'between' the above-mentioned opinion and the simple catch-up theories provides alternatives for geographers as well.

According to *R. Dahrendorf's* frequently quoted statement '…the essence of modernisation is losing ligatures – obligations – and gaining options – alternatives'. This special terminology carries a clear message: modernisation means the

[1] Lerner, Daniel: *The Passing of Traditional Society*. Modernizing the Middle East. – New York, 1958.

[2] Quoted by Farkas, János from his paper 'Theories on the modernisation of societies' Valóság, 1985/9. Andorka, Rudolf a leading Hungarian sociologist said something similar: '... the word modernisation is used to be understood as an ability of the economy and society to catch up with more developed ones... By this interpretation the paradigm of modernisation is strongly related to the core – periphery paradigm'.

improvement of living conditions in sociological aspects but these improvements depend on the combination of options and ligatures. *Dahrendorf* and his followers state that ligatures are social obligations, which secure the survival of traditions or at least slow down the disappearance of these traditions and even resist the tendencies and the spatial expansion of modernisation. Ligatures are composed not only from abstract behaviour, customs and habits, concepts of the universal ideologies, religion, moral-ethic norms, taste, unwritten law, scale of values, etc. – but also from such 'material' factors as illiteracy. Regarding the possibilities of the scaling of *ligatures,* modernisation theorists show some uncertainty. Although, *Dahrendorf* anticipates that, for the definition of the level of modernisation, it would be essential to measure the level of ligatures: to assess the intensity of human, group, social position, and age ligatures. *'Options* – '... are endless variations of human behaviour and alternatives, therefore, they can be evaluated easier.

The above-mentioned Zsolt Papp supports this opinion. 'Maybe they can be transferred into a single dimension: The gross social product and the per capita income? Mobility indicators? They may be the final indicators of the above-mentioned options.[3] If these options and ligatures could be numerically be interpreted on regional level the process of modernisation and its regional differences could be expressed by figures as a combination of ligatures and options, as it is spectacularly demonstrated by *Figure 1.*

As an addition to this historical philosophical interpretation of modernisation I would like to remark that although obligations (ligatures) are regarded as the 'slowing-down' elements of modernisation they are indispensable for the functioning of the society. The absence of ligatures ends up in social chaos; modernisation will be a self-destruction process, even if individuals seem to have abundant choice options.

Although the statistical data of Hungary of the early 1900s provide a relevant background for the measurement of the regional differences of modernisation for the support of this theoretical concept care should be taken for the following facts:

(1) Despite the above-mentioned hopes it is unlikely that a single index may be a relevant indicator for the current state modernisation or option 'level'. The reliability of the above-mentioned indicators – average income, migration, gross social product etc. – to serve as a single measure unit of modernisation is rather dubious. Neither because their high contingency nor because that – except migration – no relevant data are available from that period. The problem with them is that they express only a certain state of development but tell nothing about the

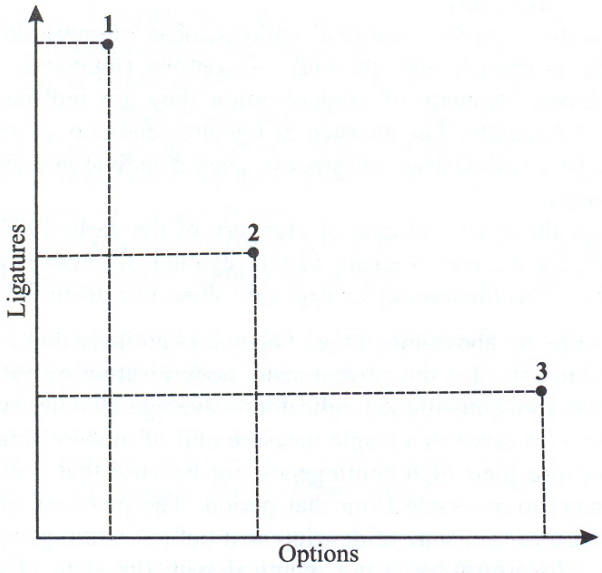
[3] Papp, Zs.: Whither modernisation? – *Világosság*, 1987/10.

level of modernisation. Modernisation is not identical with the state of development for the following reasons:

- Some elements of the 'development' cannot be regarded as integral parts of 'modernity'. For instance, some agricultural regions may provide high-income due to their optimal environmental conditions, to the division of landed property, and to high production activity, even if they use very traditional methods. Modernisation in agriculture may be measured by the use of fertilisers, 'development' may be described by good crop indicators but may also be 'the result of' high-quality soil or the use of 'natural' fertilisers etc.
- The indices of personal property – such as 'housing' or 'traditional' farming may surpass the data of modernising regions. A traditional burghers' town housing, which is far from modernisation, may be of a higher standard than of a town undergoing a rapid development process.
- Some effects of modernisation may diminish 'the level of development': the diffusion of manufacturing industry plants – the most significant phenomenon of modernisation – revives the proletariats, whose housing estates of 19th century were very far from being 'modern'.

Figure 1

The levels of modernisation determined by options and ligatures



Key: 1 – Traditional stage; 2 – The take-off stage of modernisation; 3 – Mature stage of modernisation (with ligatures of structuring force).

Source: Edited by the Author.

(2) The high ratio of contingency in the spatial expansion of the 'elements' of modernisation works against the 'one-dimensional' approach; migration considered to be a reliable indicator through Western Europe – based on the assumption that people are migrating to economically prosperous, developed regions – showed a different tendency in Hungary even in the 19th century. The Hungarians' migration to the Hungarian Plain was not motivated by modernisation: a large number of families just went to settle down on the areas having been abandoned during the Ottoman invasion. There were some other, special reasons for the migration between regions with ethnic minorities (e.g. very few Croatians came over the border to settle down in Hungary but a large number of Hungarians migrated to Croatia[4]. However, this positive migration balance on the Croatian side has no correlation with modernisation.)

[4] Croatia was a semi-autonomous part of the Hungarian Kingdom between 1868–1918.

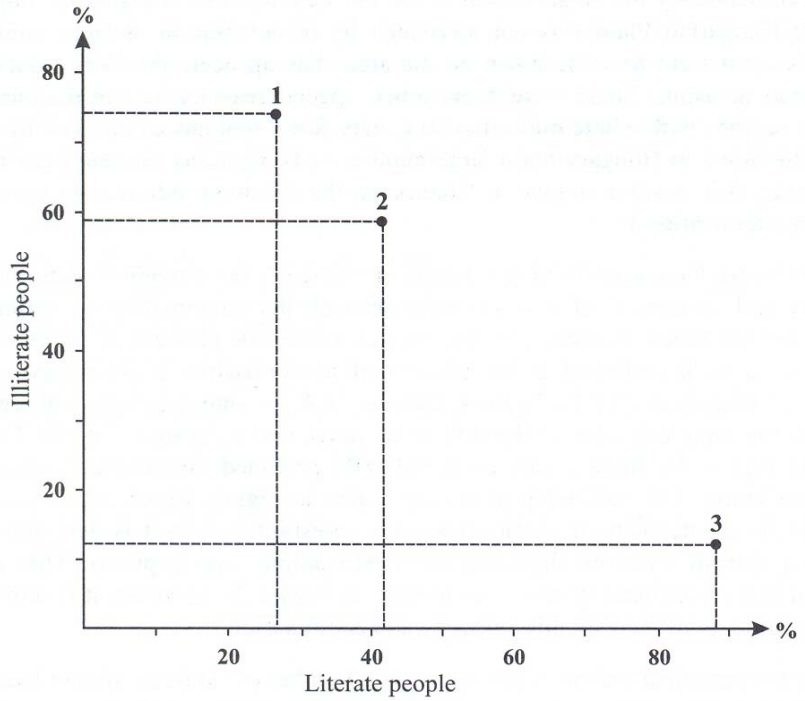
(3) As we have seen from the details of 'indices', the attempt to determine the degree and 'structure' of modernisation through the combination of options and ligatures has failed. Illiteracy, as the most characteristic element of *ligatures,* may emerge as an impediment in the process of modernisation (Lika-Krbava county 74.9%, Máramaros 73.2 %, Szolnok-Doboka 71.4% – among people with age over 6)[2] but the same indicator on the side of the range was an *option* – in' the Transdanubian region the literacy rate exceeded 80% provided favourable condition for modernisation. The ownership of money is also an option, which can be evaluated by the saving deposits of credit banks. The question is how it is definable when modest deposit amounts (ligature) turns into ample ones (option). This can be shown in a co-ordinate system (like literacy in *Figure 2),* however, it is impossible to give an overall view by this analogue and combination.

(4) By statistical-technical reasons a large number of 'indices' should have been disregarded for analysis. Just because the dissemination of data series was too small to show significant correlation with modernisation tendencies. It is a well-known fact that the classic theorists of 'modernisation concepts' divide the process of modernisation into different stages. For example, *W.W. Rostow* describes 5 stages (see *Figure 3*).[3] The first one is the so-called '*traditional phase;*' This 'peaceful' period lacks significant differences among regions; any emerging differences (quality or development level) are due to other from modernisation factors – such as the availability of natural resources for example. *In the period of emerging preconditions* modernisation indices still seem unchanged (e.g. the passing of the Public Education Act, the establishment of the primary school system showed their effects on literacy only at a later phase) and still are unsuitable for a precise evaluation of the process of modernisation. It is only the '*take*

Figure 2

Figure 2

Literacy as option and ligature



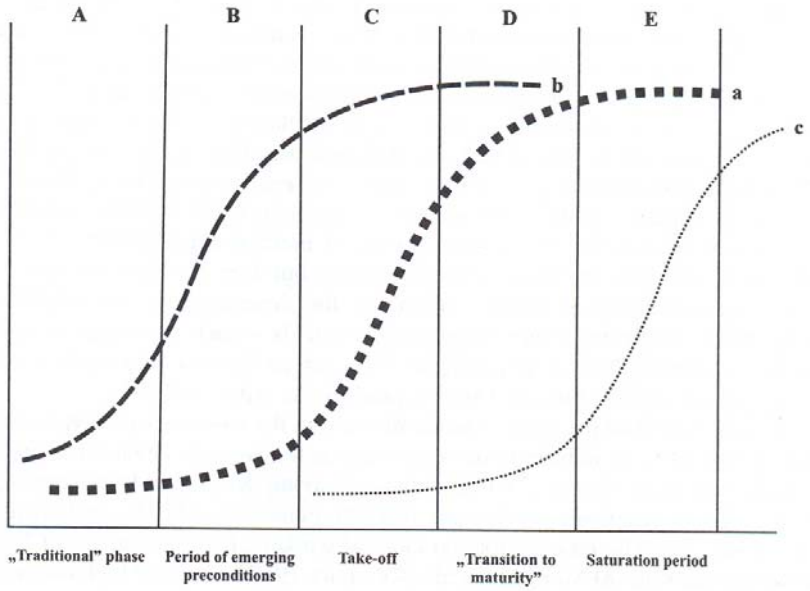
Key: 1 – Máramaros county; 2 – Szilágy county; 3 – Moson county.
Source: Census returns of year 1910. Hungarian Statistical Publications, Vol. 64, Budapest, 1921.

off' period when regional differences grow into an appropriate level for a further investigation from the perspective of regional differences. The next two, the *transition to maturity* and *saturation periods* (having been described by 'high level of consumption') ease regional differences again. As the different elements of modernisation occur in different times within these five periods and the length of these periods varies, the way these indices seem to fit for the measurement of regional differences differs from phase to phase. The numbers that are available for us at the turn of the century in Hungary do not fit into the evaluation criteria of

regional differences. For example the evaluation of such indices as *distributed telegrams per capita, per year* (one single person sent only one telegram in every two years – on the average and differences were too small among county indicators), the proportion *of divorced people* (in the counties it was about 0,1% or 0,2% – at the age over 15, it was 0.9% only in Budapest) was a failure, even if they seemed to be the most suitable indices of traditions – the 'ligature' seeming the most difficult to express in figures. (In Hungary the Civil Marriage Act enabling divorcement procedures was passed in the end of the 19th century).

Figure 3

The 'running' of the modernisation process (by W. W. Rostow)



Source: Edited by the Author.

(5) Even a draft evaluation of these 'indices' verifies that in several cases the spatial expansion of modernisation follows a hierarchical model. The first settlements having been reached by modernisation were on the top of settlement hierarchy. These places had the highest indices of modernisation in almost all categories. However, some other indices of modernisation were in sharp contrast between cities of advanced development and 'rural areas' almost completely missing the ele-

ments of modernity. Urban development indices had no direct relationship with their hinterland. Local legislative power was provided to big cities only. The growth in the number of telephone stations was a typical example for this phenomenon. *Table 1* shows the number of telephone stations per 100 thousand inhabitants in municipal cities. As the figures of *Table 1* illustrate, telephone supply indicators had no correlation with the state of development of the surrounding area of cities. Zágráb (Zagreb), situated in the 'underdeveloped' area of Croatia, had better indicators of telephone supply than Pozsony (Bratislava) or Sopron, located in more prosperous economic areas. Even the indicators of Kolozsvár (Cluj-Napoca) cannot be explained by the city's 'regional' development. Thus, several counties had better 'modernisation indicators' due to their cities. Although a region's urbanisation level and the presence of its centres are very important factors of a region's overall economic development, the modernisation indicators of regions with booming centres, being in a striking contrast with the underdeveloped economy of their environment, (as the example of the city of Zagreb with Croatia may show it) should be interpreted in a different way from those that consist not only of urban development poles (cities) but of modernised 'rural areas' as well.

I used a simplistic mode to summarise the 'elements (indices) of modernisation. My aim was to describe the advanced state of modernisation, which means the summary of the different levels of modernisation but does not mean the definition of the 'regional types of modernisation' by the description of the relationship among these 'elements'. More complicated methods – such as cluster analysis – could have been applied for this purpose. However, as these two divergent methods are in good correlation, they are likely to produce the same results.

Hence, I described the level of modernisation in the counties by using a kind of point system. (The 12 indicators surveyed were as follows: (1) The ratio of literacy, (2) Corpses seen by doctor, (3) The volume of saving deposits in banks per capita, (4) The ratio of telephone stations per 100,000, inhabitants (5) The ratio of industrial workers, (6) The ratio of non-agricultural workers, (7) The amount of fire insurance per person, (8) Mortgage credit per capita, (9) The ratio of high elementary public school students, (10) Hospital beds per 100,000, inhabitants (11) Urbanisation level based on population data in high-rank settlements, (12) Urbanisation level based on population data of other urban settlements. The summary has been made by the 'ranking order' method, though, it did not differ much from the results of the aforementioned procedure.) The *different zones (regions) of modernisation in Hungary* have been set up on the basis of these indicators. While generalising, I took into account the relationship between the principal cities of urban hierarchy and their environment (the centres of modernisation have been marked in less developed areas). Counties at the same

modernisation level have been amalgamated into one large region, in some cases we eliminated county borders (e.g. in case of Vas county being on an 'average' level of modernisation, the northern part with Szombathely, a county seat featuring with the most developed economic and built in environment, were added to the most developed zone of the West-Hungarian region). The microregional level and structure of modernisation could not be identified, though this level had several characteristic features and combinations regarding the different elements of modernisation.

Table 1

The number of telephone stations per 100,000 inhabitants in 1911

City	Number of telephone stations per 100,000
1. Fiume (Rijeka)	3,337.8
2. Budapest	2,502.6
3. Zágráb (Zagreb)	2,214.0
4. Nagyvárad (Oradea)	2,165.4
5. Kolozsvár (Cluj-Napoca)	2,000.1
6. Temesvár (Timisoara)	1,892.4
7. Pozsony (Bratislava)	1,801.2
8. Eszék (Osijek)	1,762.5
9. Arad	1,564.0
10. Pécs	1,518,8
11. Győr	1,459.6
12. Kassa (Kosice)	1,430.8
13. Sopron	1,330.4
14. Debrecen	1,239.2

3 Results: Spatial differences among some 'elements' of modernisation

(1) *Literacy* has a primary role in modernisation. At the turn of the century *literacy* was in the take-off process: the percentage of literate people in 1880 there were 41.8% (age above 6) in Hungary together with the Croatian-Slavic Country. This figure increased to 66,7% by 1910 In the so-called municipal cities (big towns) this figure went up to 85.4%, while in counties (in the Hungarian countryside) the indicator was only 64.9%. The spread of literacy showed wide regional differences. The majority of adults could read and write in the Northern-

West counties (the level of literacy was over 80% in Moson-Sopron, Győr, Veszprém, Esztergom, Vas counties), while in other counties one third of the population (among people whose age was above 6) could read and write (e.g. in Croatia Lika-Krbava County 25.4%, in Northeast Hungary: Máramaros 26.8%, Szolnok-Doboka 28.6% etc.) (See *Table 3 and 4*) These regional differences describe the process of development with data but the meaning behind them reveals that, on the one hand, in the modernisation of the society and the economy there was a lot to do with literacy (due to joining to modern market, the requirement of some occupations [trades], using modern gadgets in production), on the other hand, literacy was the result of 'modernisation'.

Table 2

The percentage of literacy among the total population (aged over 6), between 1880–1910

Area	Percentage of literacy (%)			
	1880	1890	1900	1910
1. The Hungarian Empire*	41.8	50.6	59.5	66.7
2. Hungary	43.5	53.2	61.8	68.7
3. Counties	39.2	48.6	56.8	64.9
4. Municipal cities	64.2	72.1	79.6	85.4

* Hungary with Croatia-Slavonia

Table 3

Counties with high percentage of literacy between 1880–1910

Area	Percentage of literacy (%)			
	1880	1890	1900	1910
1. Moson	76.4	83.1	85.9	88.9
2. Sopron	71.0	80.8	85.9	88.7
3. Győr	64.9	75.5	81.1	85.4
4. Veszprém	63.5	72.5	79.5	83.9
5. Esztergom	58.2	71.2	77.4	83.9
6. Vas	61.4	72.2	77.2	83.6

Table 4

Counties with high percentage of illiteracy between 1880–1910

Area	Percentage of literacy (%)

	1880	1890	1900	1910
1. Lika-Krbava	11.8	13.8	21.3	25.4
2. Máramaros	12.3	17.6	21.8	26.8
3. Szolnok-Doboka	10.7	15.7	21.6	28.6
4. Hunyad	15.0	15.8	24.9	33.9
5. Torda-Aranyos	15.0	21.6	27.1	37.3
6. Modrus-Rijeka	18.0	24.5	34.8	43.2

Regarding the *spatial differences of literacy* Hungary was divided into three different regions in 1910 (see *Figure 4).*

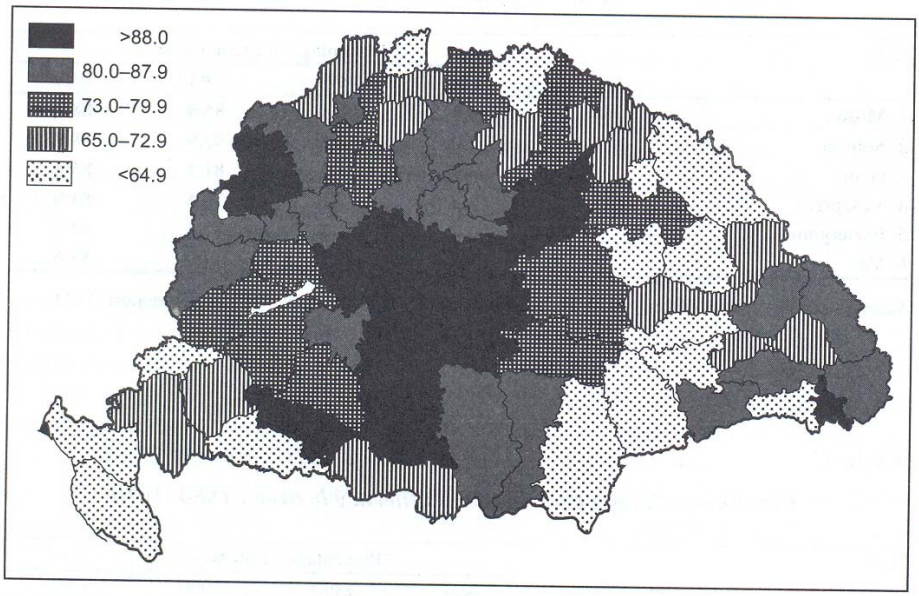
a) The areas situated westward from Sáros, Zemplén, Szabolcs, Bihar, Arad, Torontál counties, show a huge rate of literacy (right above the average) while moving eastward the indicators of literacy gradually decrease, but in Southern and Southeast Transylvania – due to some ethnic reasons – they go beyond the average again. This shows an almost symmetric pattern in the spread of modernisation: due to its entry from westwards and following the flow of River Danube, the Transdanubian regions show a fair amount of literacy. However, – even the Hungarian experts were surprised to discover that the Great Hungarian Plain, having been considered a disadvantageous area, is also among the well literate regions (reasons are shown below), and the western and the central parts of Upper North-Hungary is also among the highly modernised regions.

b) There is a huge modernisation gap between West and East Hungary, marking a clear line for *modernisation stage*. The existence of the gap is due to the diffused spread of modernisation, to the interaction of the different elements of modernisation, and also to the variety of ethnic groups. In the year 1910 there were significant differences in the literacy of ethnic minorities living in Hungary (see *Table 5*). Trans-Carpathian Ukrainians and Romanians showing a high rate of illiteracy were in a disadvantageous situation. The reading and writing abilities of the Transylvanian Saxon (German speaking) population (Szeben, Brassó, Nagy-Küküllő) and the Hungarian inhabitants of 'Székelyland' were far beyond the average of the Transylvanian region. Naturally, this raises the theoretical-methodological issue that all of our researches are based on 'regional' – county, regional, city – data and the observed phenomena are the results of several natural factors (regional records of economic history, natural resources, traffic patterns, urbanisation level etc.) or the 'modernisation' attitude of the local population having been born in a diverse ethnic, religious demographic, behaviour and value preference environment. Naturally, the literacy of ethnic groups depends on several factors: their cultural level is based on the ethnic group's position within the country's social and economic system, on their clerical position, on their share

from the total urban population, on their professional structure, value preferences etc.

Figure 4

The proportion of literacy from the age 6 in each county, 1910



Source: Census returns of year 1910.

Table 5

Literacy among the ethnic groups of Hungary in the year of 1910

Native language	Percentage of literacy (%)	
	1900	1910
1. German	62.5	70.4
2. Hungarian	60.9	67.0
3. Slovak	50.0	58.0
4. Croatian	39.4	47.0
5. Serbian	32.7	40.4

6. Romanian	20.4	28.2
7. Russian	14.8	22.7

c) River Dráva, between Hungary and Croatia, was not only a constitutional border (between the Hungarian and Croatian population but was also a sharp separation marker in the spread of modernisation.

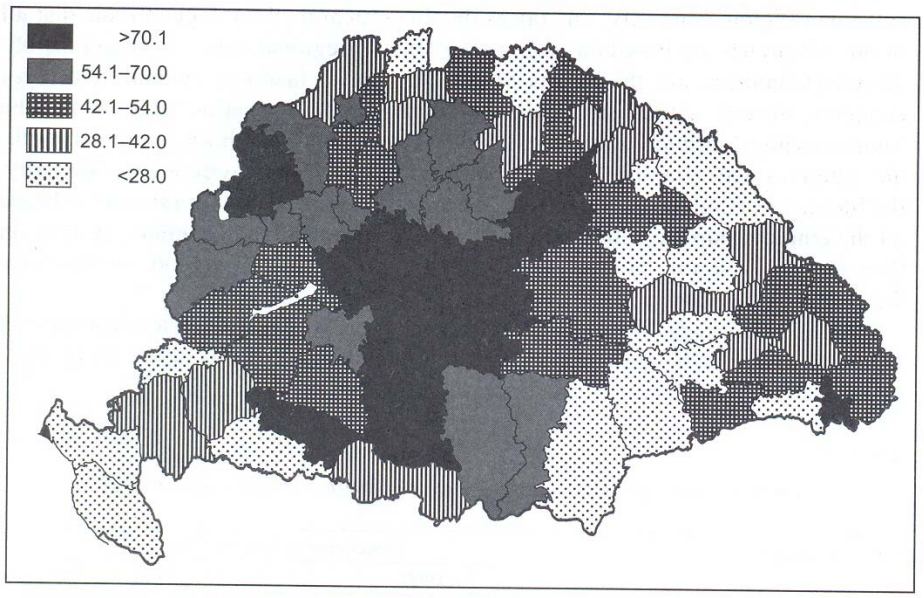
(2) The county-level *'corpses seen by doctor'* indicators show some correlation with the spatial pattern of literacy in the years 1910/11 (see *Figure 5*). There are statistical records on the share of people having received medical treatment in their lives compared to the total number of deaths. Large regional differences may be observed in professional medical treatment, an element (indicator) of modernisation, at the time of the take-off period. On overall level half of the total population (50.2%) received medical treatment in their lives but this percentage was far less in counties such as Lika-Krbava 9.8%, Szolnok-Doboka 14.9%, Árva 13.6%, and far more in Békés 92.2%, Csanád 88.3% and Hajdú 87,4% counties. At the same time the 'corpses seen by doctors' indicators reflect the social scale of values, financial situation, the culture of everyday life, the availability of medical treatment, which latter one depended on settlement network features, urbanization level, the system of medical and transport facilities etc. The 'sensitivity' of our indicators may be illustrated by the fact that in counties with low level of health service indicators, the share of children having received medical treatment was smaller than the share of grown ups. In the county of Lika-Krbava out of children died under the age of 7 only 3.4% (!) were seen by doctor, while this figure was 14.3% in the elder generation. These pairs of figures were 9.3 and 14.2% in Szolnok-Doboka, 15.4 and 29.5% in Modus-Fiume, 8.7 and 37.1% in Pozsega counties, and so on. In the civilised (?) counties of high medical treatment usage an opposing trend has been observed: the percentage of children having been seen by doctor was higher than the share of grown ups. (The percentage pairs are 94.4 and 89.9% in Békés, 88.8 and 80.2% in Moson, 69.6 and 50.4% in Vas counties, and so on). This phenomenon undoubtedly traces back a change in value preferences and shows the rise of a bourgeois society.

From the point of medical culture and institutions we can observe that *West Hungarian counties* (Moson, Sopron, Vas, Győr, Pozsony, Komárom, Nyitra, Esztergom (though in small villages the availability of doctors was insufficient) as well as the *Great Hungarian Plain* were again in the frontline of modernisation. This pattern is similar to the pattern of literacy. These results may verify the assumption that high values are due to the features of settlement system: the majority of population lived in agricultural towns and in 'giant villages' where the easy access to medical services increased their potential use. The indicators on the use of

medical services in some Transdanubian counties (Zala, Somogy, Veszprém, Baranya) were only an average level, while Upper North Hungary has better results than of literacy tendencies. On the area from Upper North Hungary to Krassó-Szörény the situation seems 'unchanged', though Temesköz (Bánát, the side area of river Timisu) is in a better situation and the indicators of Southeast-Transylvania – Saxony and Székelyland – follow the 'Transdanubian pattern'. The modernisation in Croatia and Slavonia did not go beyond the 'traditional' level. Only 27.9% of the total population received medical treatment (regarding children this rate was only 15.3%!). In Croatia the modernisation of medical treatment followed a 'hierarchical' model: in Zagreb 80.6% of population received medical treatment, whereas in the county of Zagreb this figure was only 22.7%.

Figure 5

The percentage of medically treated persons from the total deceased, 1910 ('corpses seen by doctors')



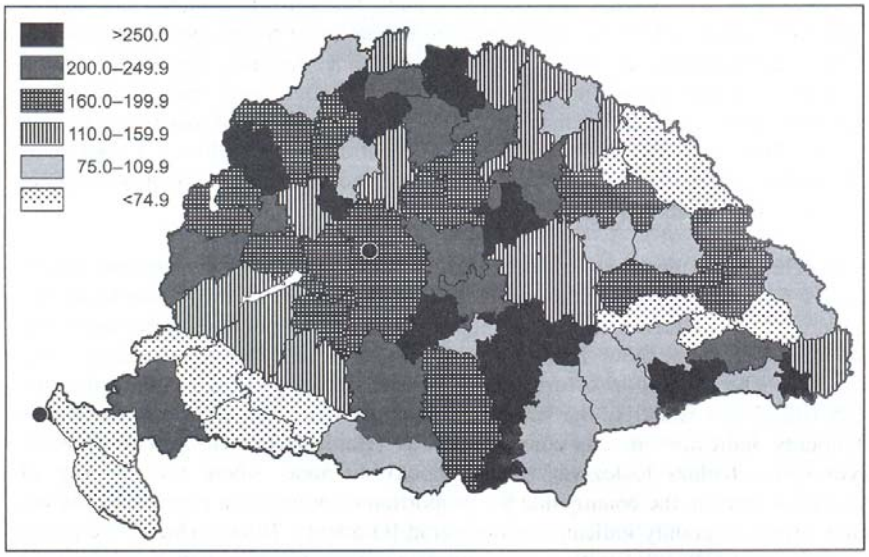
Source: Demographical trends in the Counrtries of the Hungarian Kingdom, in years 1909, 1910, 1911 and 1912. Hungarian Statistical Publications, Vol. 50, Budapest, 1916.

(3) The spatial distribution of the *saving deposits per capita indicator* (1911) *(Figure 6)* is not easy to be interpreted. The predominance of the *hierarchical pattern of spread* is clearly visible. The biggest cities and the counties of economically

'prosperous' cities show high values (Hajdú, Arad, Temes, Csongrád, and Pozsony). The proportion of urban population compared to their county has primary role in this situation: the larger of urban population the higher are the values of county indicators in city/county pairs as (Hajdú-Debrecen, Brassó–Brasow, Győr–Győr, Kolozs–Kolozsvár (Cluj-Napoca). In areas where the majority of population lives in the countryside the proportion of urban/rural population has not much effect on county indicators (Nagyvárad (Oradea) – Bihar). Due to the *urban* functions of banking activities no 'corrections' (e.g. the elimination of cities or high rank cities from the counties' data in the comparison) should be made during the analysis.[4] This map provides some 'unexpected' details: the significance of the volume of saving deposits in the central part of Upper North-Hungary is remarkable. Túrócszentmárton (Martin) and Rózsahely (Ružomberok) are the central places of Slovak 'national banks' (Tatra-Bank, Rózsahegyi Hitelbank). In Zólyom and Gömör counties the large number of industrial plants stimulated banking facilities. Ethnic relations with the location pattern of ethnic groups had some influence on banking. The Saxons were powerful in banking their money was saved in the banks of Nagyszeben (Sibiu) and Brassó (Brasov) and 'Romanian' banks were working in the same two cities. The accumulated (excess) money of Crotia was saved in the banks of Zagreb.

Figure 6

The total of bank deposits in each county (including municipal cities, excluding Budapest and Fiume [Rijeka]) 1911, crowns per head



Source: Credit banks in the Counrtries of the Hungarian Kingdom between 1894–1909. Hungarian Statistical Publications, Vol. 35, Budapest, 1913.

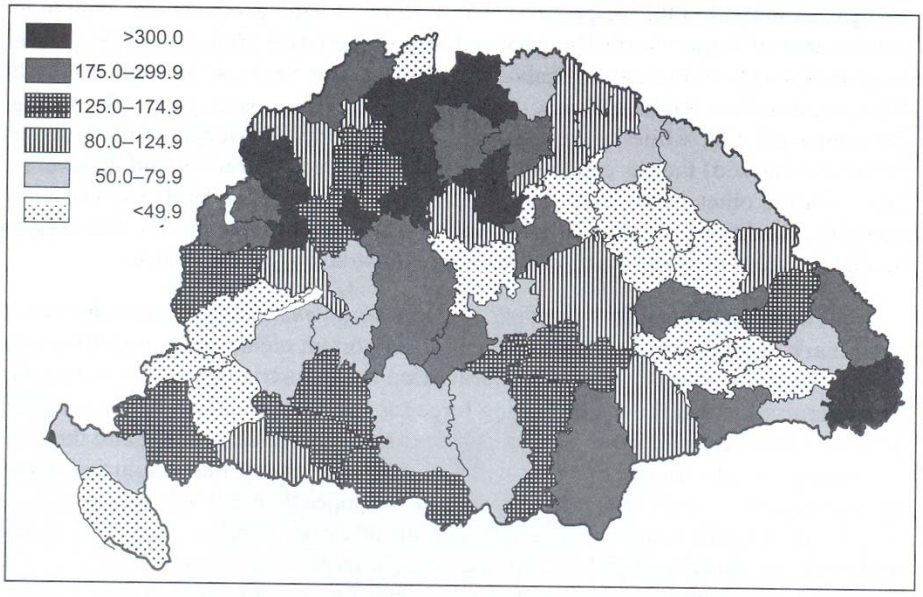
Taking these figures into account, we can point out that in the central and western regions of Hungary savings volume indicators were above the average. The South-Transdanubian indicators showed differed values from the Central and West Hungarian indices in this respect too. The volume of bank accounts was high in the central area of Upper North-Hungary and also in the Great Hungarian Plain – even in counties with no big cities (Szabolcs, Jász-Nagykun-Szolnok, and Békés). In the East, regions from Sáros to Krassó-Szörény, bank accounts were below the average per capita amount, while in the 'Saxon' counties (Brassó, Szeben, Nagy-Küküllő, Beszterce-Naszód) the per capita values were registered at a far beyond the average level. On the other hand, from this point of view the 'Székelyland' showed unfavourable conditions. Croatia's 'massive' disadvantageous position – the lagging behind progress of modernisation – is clearly illustrated by these indices.

(4) The presence and the growing importance of *manufactural industry* was a clear mark or more precisely, one of the most important elements of modernisation.

Researchers of Central European modernisation see industrialisation as the flagship of modernisation and the major driving force for the other elements of the catch–up process. However, here we should emphasise again that modernisation and the state of development do not refer to the same things. The spread of manufacturing industry (see *Figure 7*) (industrial plants with a staff of more than 20) was influenced not only by the factors being in close relationship of modernisation (available capital resources, urbanisation level, the formation of a large-scale consumer market, the establishment of modern transport infrastructure) but also by other special factors, such as the spatial pattern of available mineral and raw material resources. Thus, industry appeared in areas not having been affected with general modernisation before (mining and metallurgy in Krassó-Szörény and Hunyad, timbering in Trencsén and Székelyland). Industrialisation is an important element of modernisation but has only a week correlation with other indices of the spatial expansion of modernisation. The 'industrialisation level' of municipal cities depends on several factors, such as the degree of urbanisation, the presence of large cities, the general level of modernisation, the availability of natural resources etc. The 'modernisation wedge' spreading from the west Hungarian border to Budapest (Bratislava, Moson, Sopron, Vas Győr, Komárom, Esztergom counties), the gravity force of cities on industry (the dominance of Csongrád, Hajdú counties on the Hungarian Plain, the advantageous position of Kolozs and Maros-Torda counties due to the economic prosperity of Kolozsvár [Cluj-Napoca] and Marosvásárhely [Tirgu Mureş]), the impact of raw material resources on industrialisation (large industrial districts in Central Upper North-Hungary – from Liptó to Borsod and from Nógrád to Túróc counties – the manufacturing industry in Krassó-Szörény County, the timber industry based on the forests of Háromszék and Csík counties) are all clearly seen on the map.

Figure 7

The number of factory workers per 10,000 heads, 1910



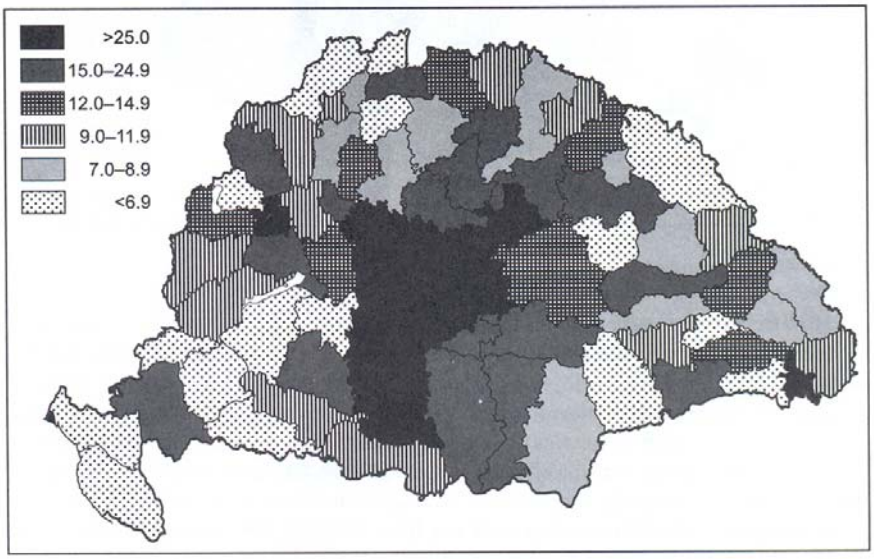
Source: Census returns of year 1910. Hungarian Statistical Publications, Vol. 64, Budapest, 1921.

(5) The spatial distribution of *urbanisation* (the share of urban population) hardly meets the criteria of Hungarian experts and even the general public. This is true both in regional aspects regarding the share of urban population on the Great Hungarian Plain, the Partium, an area between the Hungarian Plain and Transylvania and Bánát, the area between river Maros and the South-Hungarian border, Torontál and Temes counties, the plain areas of Krassó-Szörény county) and in settlement aspects regarding either the population of '*major cities'* or the *principal cities of urban hierarchy (Figure 8)* or the *full range of functional cities (Figure 9).* In some counties of the Great Hungarian Plain 50–60 per cent of the total population lived in urban settlements. The urban settlements of the Great Hungarian Plain ('market towns' or agricultural towns) were special elements in the Hungarian settlement network. The majority of urban residents worked in agriculture (in 1900 67.6% of Hódmezővásárhely (a city with 60 thousand total population) 58% of Kecskemét (a city with 58 thousand total population) 74.4% of Kiskunhalas (a city with 20 thousand total population) 78.3% of Hajdúböszörmény (a city with 25

thousand total population) lived on agriculture). Some (25–40 per cent!) residents lived in scattered farms ('tanya') in the neighbourhood of these market towns. These towns had a low level of technical urbanisation, small hinterland, and even their 'city rank' was questioned. But the spatial differences of the aforementioned elements are in strong correlation with the urbanisation level on the Hungarian Plain. The result is evident: high ratio of urban residents produces high schooling, health service and bank account indicators. This surely contributed to the spread of other 'modernisation' phenomena.

Figure 8

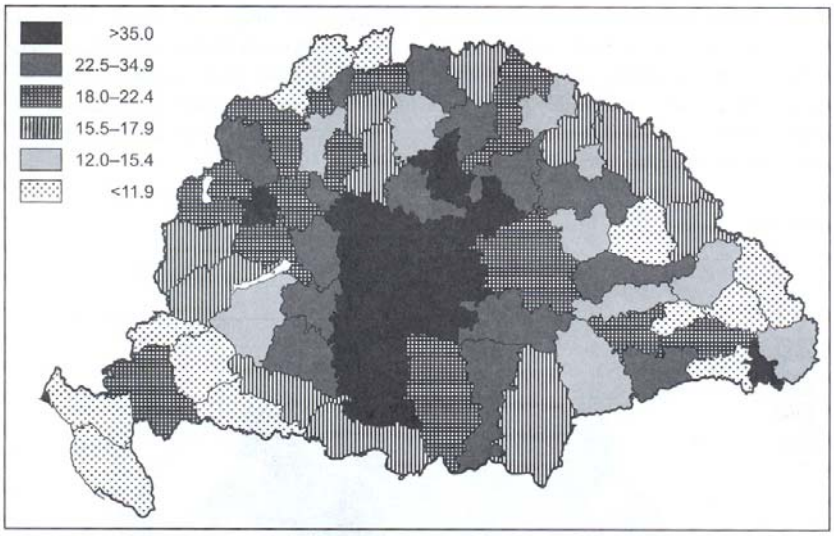
The level of urbanisation with regard to principal cities of urban hierarchy



Source: Author's calculation.

Figure 9

The share of urban residents living in functional cities



Source: Author's calculation.

(6) The ratio of *non-agricultural wage-earners* is an important indicator of modernisation, though agriculture itself may also undergo a modernisation process (resulting less agricultural jobs, higher intensity of production, creating services required by modern agricultural economy and increasing the importance of commerce and processing industries) but changes in the ratio of non-agricultural jobs may result from other, non-modernisation factors. In Hungary, at the beginning of the 20th century due to the predominance of agricultural sector in economy non-agricultural jobs had rather small proportion from the total jobs with an overall level of 31.6% (33.5% in the territory of Hungary, 18% in the territory of Croatia-Slavonia *(see Table 6).* Thus the difference among spatial (county) indicators was very low *(Figure 10).* It is quite surprising that the county indicators of the Great Hungarian Plain, an area of typical agricultural activities, are around the national average. Only the indicator of Szabolcs County (24.3%) is far below the average level. On the Great Hungarian Plain the non-agricultural workers were employed, instead of manufacturing and mining mainly in handicraft industry or as daily workers, while in the other parts of Hungary manufacturing and mining were the non-agricultural jobs. Although the ratio of non-agricultural workers was also high in the 'core areas' of Upper North-Hungary (46.6% in Szepes, 41.2% in Gömör

and Kishont, 36.7% in Liptó counties), this is not the 'product' of modernisation but rather of poor agricultural economy and due to the overpopulation of agricultural workers, forcing people to undertake itinerant trading, handicraft or delivery services or even to work as domestic servants in cities. The indicators of Southern-Transdanubia, the eastern regions and mainly Croatia show that modernisation had a slow progress in these areas. The ratio of non-agricultural jobs was only 6.2% (!) in Varazdin, 7.4% in Lika-Krbava and 11.1% in Belovár-Kőrös counties).

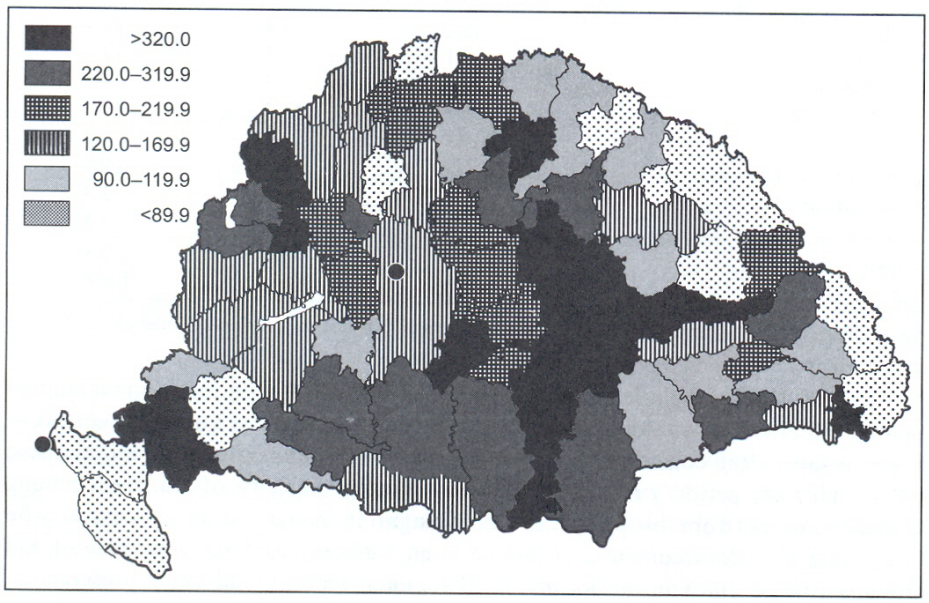
Table 6

The employment structure of the Hungarian population in 1900

Employment sector	Percentage of the total population		
	Hungary	Croatia-Slavonia	Total
1. Agricultural farming	66.5	82.0	68.4
2. Mining and industry	15.2	8.4	14.4
Commerce and credit	3.1	1.5	2.9
Transport	2.4	1.4	2.3
Total industrial	20.7	11.3	19.6
3. Civil service	3.1	2.0	3.0
4. Military, defence	0.8	0.8	0.8
5. Day labourer	3.6	1.4	3.3
6. Domestic servant	2.4	0.9	2.2
7. Other	2.9	1.6	2.7
Total	100.0	100.0	100.0

Figure 10

Telephone stations per 100,000 (1911)



Source: Author's calculation on the basis of the Hungarian Statistical Yearbook, 1910. Budapest, 1911.

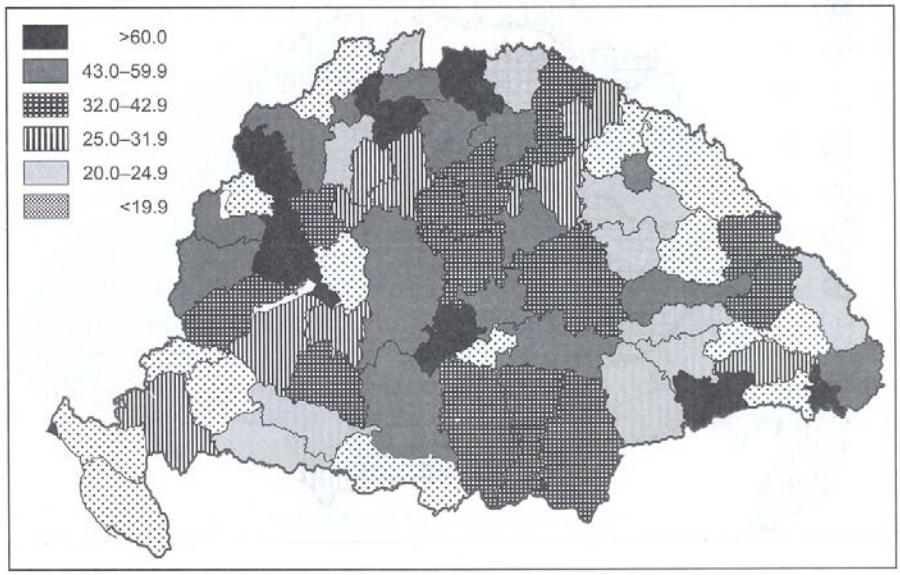
Though the spatial indicators of the next two elements ('indices') of modernisation do not verify the aforementioned trends in all of their details, but they truly illustrate the actual situation, thus their elimination would produce false final results.

(7) The *'density' of telephone stations* does not match with the aforementioned spatial pattern. This is explained by the intensive hierarchical top-down spread of modernisation (the construction of telephone networks was only in the initial phase of its 'take-off period') resulting an overwhelming majority of Budapest among telephone users (from this perspective the Hungarian modernisation process may be simplified to a development contrast between Budapest and the countryside) and the key role of cities in the formation of regional identity and value preferences. Thus, due to the urbanised culture of Debrecen, Nagyvárad (Oradea), Arad, Temesvár (Timişoara) it was the counties of the Partium (Western-Transylvania) that reached a 'critical level' in the spread of telephone stations but they were followed by several other counties – Szabolcs, Csongrád Békés, Csanád and Szolnok. The

existence of the West Hungarian 'modernisation zone' is verified by the high number of telephone subscribers (Bratislava, Moson, Sopron, Győr, Komárom, Esztergom have above the average indicators) and by other trends of modernisation. They are shown on the map of telephone supply. Apart from Baranya County with Pécs, the county seat, the modernisation indicators of Southern Transdanubia are below the average. Some counties of Upper North Hungary show some extraordinary values again. Túróc, Liptó, Zólyom, Szepes and Abaúj Torna (this latter is due to Kassa [Košice], the county seat). The northeast part of Upper North Hungary was excluded from modernisation processes. Regarding telephone supply indicators Transylvania was a homogenous area but the counties of Székelyland were 'underdeveloped'. (The indicators of Maros-Torda were 'raised' by the city indicators of Marosvásárhely [Tirgu Mureş]). Naturally, this raises the dilemma, whether hierarchically spreading modernisation may give way to 'spatial modernisation' or city indicators should be included in county indicators or not *(Figure 11).*

Figure 11

High Elementary Schoolchildren per 10,000 (1910)



Source: Hungarian Statistical Yearbook, 1910. Budapest, 1911.

(8) The role of education in modernisation was measured by the ratio of *high elementary public school students*. The volume of secondary school students was

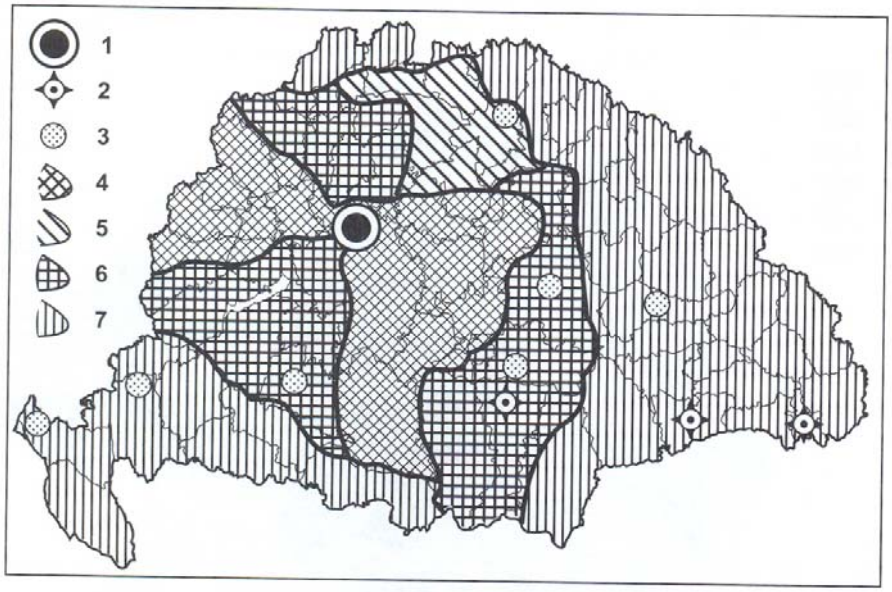
influenced by the fact that the secondary school system was established in the 17th century – mainly by monastic orders – within a feudal system. This is still reflected in the spatial distribution of secondary schools of the early 20th century. Though the high elementary class system was new at that time but it was quite popular to be used as a modernisation indicator. The density indicators of high elementary class students (*Figure 11*) include some extraordinary values, such as the figures of Fejér, Moson and Csanád counties falling into the lowest category or the high position of Ugocsa, Háromszék, Zólyom counties in the ranking system (*Figure 12*).

4 The regions of modernisation in Hungary at the beginning of the 20th century

The regions of modernisation in the country were specified as we outlined earlier *(Figure 13).* Regarding the territorial units, we should implement only a few remarks emphasising that the regions of modernisation were specified along with the *level of Hungarian modernisation* (should be understood in this relation!).

Figure 12

Modernisation zones in Hungary at the beginning of the 20th century



Key: 1 – Budapest, the bridgehead of modernisation; 2 – modernisation centres with significant 'outward radiation'; 3 – modernisation centres; 4 – zones with significant intensity of modernisation; 5 – zone undergoing through modernisation; 6 – zone at the initial phase of modernisation; 7 – 'traditional' regions (see text for the meaning of numbers on the map).
Source: Author's calculation.

Some 'elements of modernisation' had reached their 'take-off period' in the early 1900s (the expansion of manufacturing industries, the restructuring of job structure, the construction of telephone networks, the rise of banking activities etc. started in that period*). The predominance of the hierarchical top-down spread of modernisation* resulted *a sharp development contrast between cities and their environment* and a weak interaction of cities with their hinterland. Budapest – the capital city – was in a privileged position from this aspect too. In the beginning of the 20th century (on a smaller than the present area) Budapest was surrounded by suburban cities forming an agglomeration supplier zone. The rise of the agglomeration zone was simultaneous with the organisation of suburban transport system

and with the spread of manufacturing industries aiming to sell off their products in the local
markets of Budapest. At the initial phase of modernisation some ‘randomly generated’ factors also played a role in the shaping of regional differences. For example, the availability of mineral resources was a major factor in the spread of industry and was opposed to other factors, such as the available capital and human resources or market related demands.

Figure 13

Counties, municipal cities and regions in Hungary, 1910

Kexy: 1 – counties; 2 – municipal cities; 3 – regions
Source: Edited by the Author.

The distribution of the ethnic population of Hungary had a special impact *on the spread of modernisation*. (In 1910 only 54.6% of the population living on Hungary's historical territory (without Croatia-Slavonia) were native Hungarians. 16,2% were Romanian, 10.7% were Slovak, 10.4% were German. This assumption may be verified not only by the 'classical' indicators of literacy, the culturally and socially determined traditions of medical treatment or schooling level but also by the regional level indicators of the intensity of banking activities.

Table 8 shows some data of the regions of modernisation. For a general overview, the historical administrative map illustrates the location of counties and municipal cities *(Figure 14)*.

a) North and Eastern parts of Upper North-Hungary and the 'Partium'

b) Transylvania with Krassó-Szörény County

The 'early stage' of modernisation may be the reason for *the significance of Budapest* in Hungarian modernisation during the time of dualism.

4.1 Budapest – the bridgehead of modernisation

In the middle of the 19th century there was a large gap between Hungary and Western Europe regarding economical, technical development, urbanisation and social development level. When the conditions for "catching up" were secured, the difference between the two "poles" generated large-scale and fast modernisation process for Hungary. The coincidence of the preconditions and driving forces of modernisation also granted a faster pace for the catch up process:

Table 7

A summary on the major indices of the regions of 'modernisation'

Regions	Population in 1910 (1000 people)	Territory km^2	The average value of 'ranking'	Average score value	Percentag maximun valu
I Budapest	880	194	1,0	72.0	100
II 1 West Hungary	1 703	20 400	13.0	59.3	82
2 Great Hungarian Plain	3 282	42 000	10.6	59.1	82
3 Central Upper North-Hungary	1 109	15 600	18.8	54.0	75
III 1 West Upper North-Hungary	1 165	17 600	35.8	44.6	61
2 Central and Southern Transdanubia	2 042	30 900	31.7	45.6	63
3. Transitional area between the Great Hungarian Plain and Transylvania	2 642	40 500	28.2	49.6	68

IV 1	East Hungary[a)]	2 248	42 800	55.3	27.1	37
2	East Hungary[b)]	3 143	68 900	48.0	33.3	46
3	Croatia-Slavonia	2 622	42 500	59.8	23.9	33

In Hungary the periods starting in 1848 and 1867 were characterised by the following trends:

- The *emergence of the social, political and legal background for the development of capitalist system* (the fall of the feudalist system) and the fact that the establishment of the legal and organisational framework of a capitalist society had been finished before the actual capitalisation and 'modernisation' of the economy and society took place. The previously established frames encouraged their 'acceptance'.
- The international conditions were benevolent for economic development; In Europe the surplus of capital resources and the rising demands of industrialisation-urbanisation for food and raw material brought agricultural prosperity for Europe in the mid–1800s.
- The claims of capitalist economy motivated technical-technological ('industrial') revolution in Europe; *Modern technical devices* (railway, telegraph, agricultural machines) in Hungary appeared simultaneously with the rise of a capitalist society (modernisation).
- Hungary regained its (limited) national sovereignty almost at the same time when the rise of capitalist economy started (through a 'compromise' with the Habsburg emperor after the fall of the 1848–49 Hungarian national revolution, giving a way to the establishment of the Austro–Hungarian Monarchy in 1867). This assured an opportunity for Hungary to implement an independent economic policy, 'railway construction policy' and to win a state support for the development of Budapest into a capital city of equal rank with Vienna.

The above-mentioned processes of modernisation 'intersected' in Budapest (The regain of national sovereignty, made Budapest a national centre; Budapest became Hungary's transport centre due to the traffic "revolution" and the national railway policy. Beyond these, agricultural prosperity made Budapest the centre of crop-trade, milling industry[5] and the contest of Budapest with Vienna was based on this national sovereignty-filled spirit etc.). Otherwise, in the first run, modernisation makes its 'assault' chiefly against one or two larger centres; the next

[5] Budapest was the largest milling industry centre of the world until Minneapolis (USA) took its position in the 1890s.

turn targeted against the country or regions follows after securing its bridgehead position.

Budapest was *the bridgehead of the modernisation process* in the Carpathian Basin (Historical Hungary). The number and 'development stage' of modernisation sub-centres were very low at the beginning of the century. Thus, the 'extraordinarily big importance' of the capital is originated not from the Trianon Peace Treaty, resulted the loss of 2/3 of Hungary's territory, having been declared in 1920. At the turn of the century, in Budapest, compared to the number of inhabitants, modernisation indicators, showed multiple values than in other parts of Hungary *(Table 3),* and resulted 'qualitative' differences; at the turn of the century Budapest was the only place where the civil society was in full blossoming. This bridgehead position produced *a rapid increase in the number of population* (in 1851: 173,000, in 1910: 880,000), the city's quick restructuring and expansion, a sudden emergence of the technical innovations (in 1878: electrified public lighting, 1881: telephone stations, 1887: tramway, 1896: underground railway, etc.). At the beginning of the century, besides the foreign capital, technical improvement, and innovation, Budapest became the centre of new social ideas, and artistic trends. (Budapest was not only the 'recipient' of new things but was the 'birth place' of numerous innovations, such as transformer, carburator, electrical engine, etc.)

Table 8

*The share of Budapest within the country, 1910**

Indicator	Absolute value		The share of Budapest (%)
	In Hungary	In Budapest	
1. Population	18,064,533	880,371	3.8
2. Telephone calls x 1000	171,951	71,396	41.5
3. Saving deposits, thousand crowns	3,861,277	768,496	19.9
4. Telegrams sent x 1000	9,209	2,427	26.4
5. Mortgage loan on buildings x 1000 crowns	1,196,376	733,373	61.3
6. Workers in industrial plants with staff over 20	392,939	128,358	32.7
7. Traders	278,104	64,881	23.3
8. The number of university and college students	14,021	8,675	61.9

* Without Croatia-Slavonia.

4.2 Regions characterised by notable modernisation

(1) Pozsony, Moson, Sopron, Győr, Komárom, Esztergom Counties with the Northern part of Vas and Veszprém counties belonged to *the 'modernisation zone' of West Hungary* with a population of 1,700,000 and territory of 20,500 sq. kilometres. The area's 'top quality features' are evident. Since the foundation of the Hungarian State the region has had an excellent *traffic position*. Not only the proximity of Vienna – the Viennese market in the era of feudalism urged the agricultural production and the modernisation of agriculture – due to the establishment of traffic corridor on both banks of river Danube between Vienna and Budapest, but also the water transportation facilities, the agricultural exports, mainly after grain corps exportation and before railroad construction had contributed to the formation of modern cities with corn traders and entrepreneurs. Very soon, before 1848, this situation launched the so-called 'harmonised' process of modernisation. Besides the modernisation of agriculture (the production of industrial plants, modern technologies, motorization, food industry, etc.) and the urbanisation (the formation of regional centres [Pozsony, Győr], 'developed' county seats (Szombathely, Sopron], strong medium-sized towns [Komárom, Esztergom] and county microcenters with various function) the modernisation process had an impact on industrialisation and through them on the property status and general culture of population and the winding up of the ligatures (in 1910 Moson, Sopron, Győr, Vas, Veszprém, Esztergom counties were among first ten regarding literacy). The lower indicators in some counties of the region are due to some methodological limitations. In Moson County, for example, the absence of large cities resulted a low level of urbanisation and this is the reason of low secondary education and hospital bed indicators. However the proximity of Bratislava, Sopron, Győr and even Vienna granted a good provision of urban goods and services for the county in question.

(2) The classification of the *Great Hungarian Plain* as a 'respectively modernised' region differs from the traditional Hungarian opinion (the region is considered to be rather 'undeveloped'). Pest-Pilis-Solt-Kiskun, Bács-Bodrog, Csongrád, Békés, Jász-Nagykun-Szolnok, Hajdú counties and the southern part of Heves and Borsod counties belonged to this 'undeveloped' region. Its territory was over 42,000 sq. kilometres with a population of 3,300,000. in 1910.

According to indicators, the good 'ranking' of the Hungarian Great Plain is indisputable. Regarding the aforementioned elements of modernisation, the counties of the Great Hungarian Plain – apart from the indicators of industrialisation – achieved the highest positions on the ranking list. (This is true even with the exclusion of Budapest, surrounded by Pest-Pilis-Solt-Kiskun County). The average

ranking of all the counties of the Great Hungarian Plain (among from the total 73 counties of Hungary) was 10.6. This value is better than the indicators of the West Hungarian counties. Several counties (Békés, Jász-Nagykun, Szolnok, Bács, Bodrog, and Pest-Pilis-Solt-Kiskun) were left without large cities (regional centres) to 'raise' their general indicators of modernisation. The 'most trustworthy' indicators of modernisation may also illustrate the good position of the Hungarian Plain. According to 'corpses seen by doctor' indicators Békés County achieved the 2nd place (to follow the winner Fiume [Rijeka] a city with special legal status on the Adriatic Sea). Hajdú County achieved the 4th, Csongrád the 6th, Jász-Nagykun-Szolnok the 7th and Pest-Pilis-Solt-Kiskun (excluding Budapest) the 8th, position in the national ranking of counties. The only question is why? The role of some elements is obvious:

- The *special* (market town and large village based) *settlement structure* of the Great Hungarian Plain resulting a high level of urbanisation at the beginning of the 20th century should be mentioned first. 65.2 per cent of the total population of the Great Hungarian Plain lived in the top-ranked cities of settlement hierarchy in Csongrád County. This figure is 58.4% in Pest-Pilis-Solt, 47.6% in Hajdú and 38.5% in Békés counties. Regarding the share of the population of municipal towns the counties of the Great Hungarian Plain were among the first ten counties of Hungary. The ratio of total urban residents exceeded 50 per cent in five counties (Bács-Bodrog county was the only exception with 40% but here 69.3% of the total population lived in settlements having more than 5 thousand residents). These figures increase the level of urbanisation – which may be regarded as an indicator of modernisation as well. The backward features of the (market) towns in the Great Hungarian plain have already been mentioned: the high proportion of agricultural workers, the low proportion of workers employed in tertiary sector, the rather rural type townscape of settlements, the low level of technical infrastructure, the special position in the spatial division of labour (towns without hinterlands), the high proportion of residents in the rural outskirts of cities etc. However, this type of settlement structure received, applied and distributed innovations and elements of modernisation in a more flexible way than the traditional hierarchical city-village structure, especially in a period when – for example – only 11.1% of the Transdanubian population lived in cities and the linkages between cities and villages were very week.
- The fact that the high percentage of population lived in large, urban-sized and urban-type settlements encouraged the expansion of innovations and modernisation; the 'corpses seen by doctors', the expansion of literacy (school system), and the development of telephone system are the typical examples.

- Due to these facts and the local traditions of the cities in the Great Hungarian Plain (local self-governing abilities) the population of the Great Hungarian Plain had larger inclination to modernisation than the residents of small villages (having once been feudal settlements). This is clearly seen in the development of rural economy – the formation of groups specialised on various agricultural activities – and in several areas: the majority of villages situated in the Great Hungarian Plain had local reading societies, associations but the organisation of agrarian socialist political organisations, wheat harvesting strikes may also be mentioned as characteristic features of the social life of the Great Hungarian Plain. The name 'Viharsarok' (Corner of Storms) given to an area in the southeastern part of the Great Hungarian Plain commemorates these events. Agricultural industry had a vital role in the modernisation and economic development of the second half of the 19th century (by the demands for railway construction, riverbed fortifications, against flood, and by the rise of food processing into the most rapidly developing industry). Hence, the vast majority of agricultural production concentrated on the area of the Great Hungarian Plain (resulting a large amount of agricultural surplus).

It is also a piece of truth that the economic boom of the Great Hungarian Plain was collapsing in the end of the 19th century. This is explained on the one hand, by the recession of the once prosperous agricultural sector, on the other hand by the 'key role' of industrial sector in modernisation beginning at the end of the 19th century. The social structure of market towns also turned into an unfavourable direction (by the growth of the urban poor). The end of the 19th century was the period when the construction of modern infrastructure started. In this aspect of modernisation the settlements of the Great Hungarian Plain were in a lagging behind situation compared to the Transdanubian regions.

3. The modernisation indices of the *central part of Upper North-Hungary* (Túróc, Liptó, Szepes, Gömör, Kishont, Abaúj-Torna counties) were *above the average* granting *the second tier* following West-Hungary and the Great Hungarian Plain regions on the modernisation ranking scale of Hungary. In the year 1910 this region had approximately 1,1 million population on a territory of 15,600 sq. kilometres. In most counties the expansion of the manufacturing industry was the driving engine of the modernisation. Regarding the numbers of workers in the manufacturing industries in 1910, Liptó County achieved the 3rd (607 workers per 10,000 heads), Turóc county the 4th (448 workers), Szepes the 6th (422 workers) and Borsod the 7th (413 workers) position.

The relatively high level of industrialisation had attracted the additional elements of modernisation and ensured not only a higher proportion of workers on these territories but stimulated the activities of financial institutions (among counties Turóc took the 2th place, Szepes 10th and Liptó the 21st place), secondary

education, literacy, the expansion of modern technologies (telephones), etc. Nevertheless, the modernisation processes of several counties were unbalanced. On regional level, in the case of the central part of Upper North-Hungary, we should emphasise the difference between modernisation and 'development' for e.g. the limitation of personal careers (the existence of strong ligatures among the chances provided by industrialisation).

The existence of Kassa (Košice) and Miskolc, the two major cities of the region, 'improved' the general position of the central area of Upper North-Hungary.

4.3 Regions with average modernisation

(1) The modernisation indices of the 5 counties (Nyitra, Bars, Hont, Nógrád, Zólyom; with territory of approximately 17,600 sq. kilometres with a population of the number of population 1,650,000 in 1910) of *West Upper North-Hungary* are quite similar, the 'internal structure' of modernisation was unstable and considering the range of the modernisation this region is clearly isolated from West-Hungary and Central part of Upper North-Hungary. The 'social indicators' – literacy, corpses seen by doctors, and the volume of total of deposits – were better than the average of the country; in counties such as Zólyom and Nógrád the manufacturing industry was rather developed (Zólyom county had one of the most advanced manufacturing industries in Hungary at that time). The level of urbanisation was rather low, no regional centres had been established in the region, and the percentage of city-dwellers was low, the value of the elements of modernisation associated with cities was poor. Western part of Upper North-Hungary *belonged to the group of regions with average modernisation.*

(2) The general indices of *Central and Southern Transdanubia*, to which belonged Zala, Somogy, Baranya, Tolna, Fejér counties, the southern two-third part of Veszprém county and a part of Vas county along the border of Zala county, on the territory of 31,000 sq. kilometres together with 2 million citizens, were 'below' the expectations. The Transdanubian region is considered to be on 'advanced' level but this categorisation is not relevant both for the past and the present. Considering the pure 'indices' of Central and Southern Transdanubia, at the beginning of the 20th century the modernisation level of these areas was lagging behind the other regions – horribile dictu even behind the Great Hungarian Plain; in the ranking of the counties Zala takes the 49th position, Somogy the 39th while the average ranking of the counties of the Great Hungarian Plain was 10,6 (!) this value was approached by none of the Transdanubian counties. Due to the city of Pécs, Baranya was the only county which achieved an above the average position. The indices of

the Transdanubian counties were mostly on average or below average level. As a result, the evaluation of the level of modernisation in the county was rather moderate. Only the level of literacy and in some counties the number of 'corpses seen by doctors' was high. (The ligatures of society were dissolving the range of options was very limited).

The disadvantaged nature of the transport system may be one reason for the "relative backwardness" of the South Transdanubian region. The transport system of the South Transdanubian region was disadvantageous for a long time (the situation improved only after the construction of railway system), the level of agricultural production was moderate and the expansion of manufacturing industries was unimportant (Pécs and Baranya county were the only exceptions). As a result, the level of urbanization was low (according to the proportion of urban residents in the principal cities of urban hierarchy, Tolna County was on the 63th, Somogy the 59th, Zala in the 42th position in the general ranking of counties). At the turn of the century, Zala, Somogy, Tolna, and South-Fejér counties had no major urban centres. The absence of cities restrained the process of modernisation in the same way as the small village structure restrained the modernisation of rural areas.

(3) Between regions of advanced modernisation – the Great Hungarian Plain, the central part of Upper North-Hungary – and the undeveloped part of the Eastern Hungary there was a *large 'intermediary' (transitional) zone of the territory east of the River Tisza* (40,5000 sq. kilometres, 2 million population) starting from Szabolcs county and going through Bihar and Arad towards the southern border of Temes county. Regarding the industrial and settlement history, the nationality and religion structure of residents and the natural conditions this area was rather heterogeneous. There was no inward cohesion within the region. The correlation among the 'elements of modernisation' within the region was insignificant. Some large cities as Nagyvárad (Oradea), Arad, Temesvár (Timişoara) belonged to this region with fast development and rapid modernisation, but their very poor environment lagging behind modernisation increased the disharmony of the general situation (in 1910 in Bihar county the percentage of illiterates above the age of 6 was 56.4%). It must be mentioned that the ethnic structure of population – particularly in Temes and Torontál counties – was rather mixed and always in change. Various nationalities lived together – Romanian, Germans, Serbs, Hungarians, etc. – but the 'modernisation' of these nationalities was also very diverse. Some micro-regions were among the leaders of modernisation – as for example Temes or Arad counties – but others were rather on the level of poorly developed East-Hungarian regions (the mountainous area of Bihar County). In the present territory of Hungary Szabolcs-Szatmár county was the most underdeveloped area in the second half of the 20th century. However, this county was not standing 'on the bottom' of regional

competition in the early 1900s. In 1910 Szabolcs held the 31st position in the modernisation ranking of Hungarian counties but the indices of modernisation showed an unbalanced situation; fairly good in 'corpses seen by doctors', bank deposit volume, telephone supply and urbanisation level indices, an average level of literacy but poor indicators of manufacturing industry (65th position among the total 72 counties of Hungary!) employment structure and the volume of educational and health organisations.

4.4 'Traditional' (least modernised) regions

The 'traditional' ('lagging') areas of Hungary are divided into two coherent zones:

(1) *The East-Hungarian region* (Northeast Upper North-Hungary, Transylvania, Krassó-Szörény County) consisted of the northern and northeastern areas of Hungary and the territory of Transylvania on a total area of 112,000 sq. kilometres and a population of 5,390,000.

Within this area the northeastern part of Upper North-Hungary, the northern foreground of Transylvania, and the Transylvanian territory itself may be regarded as separate units. Not regarding the indicators of Croatia, the eastern part of Upper North-Hungary and the Sub-Carpathian region are the least modernised, 'underdeveloped' regions. This is verified by social aspects – (e.g. in Máramaros county the percentage of illiteracy was 77%, only in the Croatian Lika-Krbava county had a higher indicator. 18.7% of the dead were medically treated by' doctors – but in Árva county this figure was only 13.6%(!); Árva county was the last in the ranking of per capita volumes of bank deposits as well) – economic indicators, (e .g. on the basis of the manufacturing industry Szilágy County took the 71th position, the last before the worst, Ugocsa the 69th, Árva the 68th, Szatmár the 61th etc.) and urbanisation indices. Szilágy County achieved its best 49th position on the basis of the mortgage loan values; considering the proportion of non-agricultural earners (resulting from unfavourable agricultural circumstances) Máramaros County was on the 48th place. After summing up all the indices Árva county took the 66th, Máramaros the 65th, Szilágy the 63rd, Trencsén the 56th and Ung the 54th place. The average ranking of the regions in the county on the list of the total 72 Hungarian counties is 55.3 (the average of the counties of Croatia Slavonia is 59.8). There is really long list of reasons (e.g. natural conditions, low production, moderate urbanisation, poor and uneducated citizens, ethnic structure – the Ukrainian being the largest ethnic group living here at that time as the most hobbled nation within the 'ligatures' of Hungary – the emigration of local population turning from outcome into a driving force, etc.)

Although *Transylvania* was considered as the 'fortress' of traditionalism in Hungary, regarding to the 'backwardness' of this region was not homogenous. Here the difference between the modernisation and the state of development should be emphasised again, because for e.g. the 'developed' and relatively developed territories endeavour to maintain local privileges and traditions (Székelyland, Saxony). Beyond the divided terrain, the long-term preservation of legal status (the isolation of Székelyland, Saxony, the border guard areas and 'counties') the economic history, ethnic structure resulted large differences behind the average trends of modernisation. From the total 16 counties of Transylvania – including Krassó-Szörény – 7 belonged to the most disadvantageous Hungarian counties (Hunyad, Alsó-Fehér, Torda-Aranyos, Kis-Küküllő, Fogaras, Udvarhely, and Szolnok-Doboka). The modernisation indices of Beszterce-Naszód, Maros-Torda, Csík, Nagy-Küküllő counties were also below the average in some cases with extremely low values (in Szolnok-Doboka the proportion of illiteracy was 74.7% (enough for the 70th position) in TordaAranyos 67,7% (the 67th position), in Hunyad 70,2% (the 69th position]; the situation is almost the same with the corpses seen by doctors indices: 11.9% were treated by doctors in Szolnok-Doboka, 16.2% in Torda-Aranyos etc.). As a sharp contrast, the modernisation in Brassó and Szeben counties with the Saxon population, despite of the aforementioned 'Saxon conservatism' – was more developed than in other territories of Transylvania. The average ranking of Brassó County was 7.3, and on the basis of general indices it was among the first ten counties. Kolozsvár (Cluj-Napoca) was a principal city in the Hungarian urban hierarchy – just behind Zágráb (Zagreb) and Pozsony (Bratislava) – but this ranking was still insufficient to raise the position of its county. This was a relevant sign that the rural territories of the county were in a similar situation to that of the neighbouring Torda-Aranyos or Szolnok-Doboka counties. After all, Transylvania was categorised into the group of the so-called traditional regions, with significant modernisation centres as Kolozsvár (Cluj-Napoca], Brassó (Braşov], Nagyszeben (Sibiu) and with a certain ethnic division (Saxonian-Hungarian-Rumanian).

(2) River Dráva was not only a constitutional border between the two countries of the Hungarian Empire, not only a border in a sense of nationality and language but also was a strong gap in the spread of modernisation. *Croatia-Slavonia* was the least modernised region in the Carpathian basin, characterised by low 'general indices' – compared even to the Hungarian situation – *explicitly strong ligatures* (e.g. in 1910 the percentage of illiterates was 78.9%, the percentage of the 'corpses seen by doctors' was below 10 % in Lika-Krbava etc.) and by the *scarcity of options*. Although Zagreb was a modern 'provincial' city with a similar position to Budapest in Hungary but had only a low 'radiation' (spreading) effect (just like our

'highly-modernised' city of Fiume [Rijeka]). The advantageous indices of Zagreb County resulted only from the mechanical averaging of city and county values.

5 Summary

An integrated spatial structure, a homogenous national economy, transport system and urban network evolved in the Carpathian Basin (Hungarian Kingdom) in the second half of the 19th century. However modernization itself resulted in sharp regional disparities. The regional differences of modernization may well be represented and illustrated by statistical data. The existence of the hypothetic west-east modernization gap within the Carpathian Basin is true only in a rough dimension; the Central region of Hungary – the Great Hungarian Plain, which is considered as backward – had good modernization indices, while in Transdanubia a modernization slope is observed between its northern and southern areas. Transylvania, the far-eastern region of Hungary also had modernizing areas, primarily on the areas of Saxon population. From this point North-Eastern Hungary had the worst indicators and the progress of modernization was also slow in Croatia-Slavonia, Hungary's southern 'partner country'. Regional differences show a close correlation with the spatial distribution of ethnic minorities (45.4% of Hungary's total population were not Hungarians[6] in year 1910). It was the Russian–Ukrainian territories that were in the most disadvantageous situation). The hierarchical urban model – distinguishing large cities sharply from their hinterland – had crucial role in the regional spread of modernization. This is the reason why Budapest had an outstanding position within the settlement network of the Carpathian Basin (4.8% of Hungary's total population lived in Budapest, 19.9% of savings accounts were opened in Budapest, 61.9% of students of higher education studied in Budapest and 61.3% of mortgage loans were taken out for buildings in Budapest etc.).

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[6] Excluding the territory of Croatia-Slavonia.

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4=9.0–11.9%; 5=7.0–8.9%; 6=>6.9%

Figure 9. The share of urban residents living in functional cities

The share of urban residents: 1=35.0%<; 2=22.5–34.9%; 3=18.0–22.4%; 4=9.0–11.9%; 5=7.0–8.9%; 6=>6.9%

Figure 10. The share of non-agricultural workers, 1910

Figure 11. Telephone stations per 100,000, 1911

1=320.0<; 2=220.0–319.9; 3=170.0–219.9;
4=120.0–169.9; 5=90.0–119.9; 6=>89.9

Figure 12. High Elementary Schoolchildren per 10,000 , 1910

1=60<; 2=43.0–59.9; 3=32.0–42.9; 4=25.0–31.9; 5=20.0–24.9; 6=>19.9

Figure 13. Modernisation zones in Hungary at the beginning of the 20th century

1= Budapest, the bridgehead of modernisation; 2= modernisation centres with significant 'outward radiation'; 3=modernisation centres; 4= zones with significant intensity of modernisation; 5=zone undergoing through modernisation; 6=zone at the initial phase of modernisation; 7='traditional' regions (see text for the meaning of numbers on the map)

Figure 14. Counties, municipal cities and regions in Hungary, 1910

1=counties; 2=municipal cities; 3=regions