

GEOGRAPHICAL TYPES OF RURAL TRANSFORMATION ON SOUTH HUNGARIAN PLAIN (SOUTH-ALFÖLD)

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During the last two decades in addition to the urbanization and development of industry the greatest changes considering their social proportions were possibly in villages, in rural spaces. Social (occupational) and settlement hierarchical setness of the rural system almost entirely without horizontal and vertical connections which was moveless for centuries ceased on the influence of the rapid economical and social development. We can see the widening of the economic and social functions of villages, and the changing of the inner organization of the rural space.

Rural transformation is a very complex process and hardly can it be meant as the only outcome of the urban effects, areally extended as well. Undoubtedly the only effective dynamical elements of the modern economy and society are connected to the cities but the characteristics of the rural development convince us about the fact, too, that rural spaces, too, have such inner sources which stimulate the development of rural space increase its vitality. These inner sources are mainly economic functions, but we can rank good traffic-geographical situation, tourist potential, administrative, educational, cultural, health service functions etc. as factors increasing vitality, all progressive factors that have functional effect. An essential condition of rural development is that certain functions would become steady and become determining functions. Consequently, the future of rural spaces depends not only on the new functions but on the vitality of the old ones as well.

Methodological considerations

Defining the geographical types of rural transformation can essentially be solved by the synthesis of the results of a multielemental basic examination. It is reasonable to take two conditions into consideration. On the one hand there are more and more special characteristics in the development of the settlements, they can be grouped harder and harder on the basis of concrete indexnumbers, static informations. On the other hand those effects have to be examined which are signed by the more general tendencies of the transformation characteristics of the examined area and which play a decisive role in the formation of the settlement, spaces. Consequently — I think — it is right to concentrate on the processes, phenomenon deriving from the transformation itself, among which the basic spaceprocesses of the transformation and the movements of the regional connections play a decisive role. On this approach consequently the basic examination doesn't need a monographical completeness, but makes such examinations necessary which make it possible to discover inner, deeper connections.

For the sake of this it is necessary to examine the levelchanges of the economic functions, the main tendencies, areal differences of the main tendencies of transformation in demography, society and living conditions; labour turnover inside the rural space; mainly of the economic, administrative connectionsystems, effects deriving from the traffic-geographical situation of the settlements in a longer period — with the present examination it is between 1970 and 1980 and sometimes between 1960 and 1980 — on level of settlements (what is more with the economic functions on factory level).

The processes of rural transformation revealed in this way can be meant as settlementforming processes, too, and the settlements can be ranked into types on basis of the similarities. It seemed to be reasonable to define areal types on basis of economic, social factors and the process of transformation during the basic examination, too. Typifying was carried on by several methods. I defined the changes of occupation structure, changes of areal mobility of population and their relations; the leveltypes of rural industry, and the characteristics of administrative connection-systems with the simpler means of statistical dataanalysis (with indices made from the inner ratios). The economic levelchanges of agriculture, the changes in living conditions, as well as defining the traffic — geographical situation of settlements were revealed by clusterizational procedures based on factoranalysis (the first two with complete linkage, the last with single linkage).

The data-basis and the timelimit of the examination showed up the possibility of certain methodological innovation, too. We built a new examinational element (step) into the generally known programme of the cluster analysis hierarchical complete linkage. The essence of this is that after the dendogram was ready, we, with the help of a new program, formed the average and the dispersion of the clusters on the given level for each index on several levels (around middle level) of the dendogram. After analysis and representation on maps we chose that level the clusters of which fitted our aims best, namely that there would be enough clusters, and each cluster contains enough objects and the dispersion value in a cluster wouldn't be too big. For during examination we normalized the variables, we can define the average of South-Alföld as 0, and the total dispersion as 1.

Consequently the negative values are below average, the positive ones are above average; categories can be separated empirically on basis of received values. With this method we made the examination for several years, so a possibility opened to follow the temporal overstructuralization in several respects:

- we could analyse the inner and the areal structure of clusters and settlement compared with the average of the basic year;
- we could follow the whole inner and areal movement dynamics, changes of indices, averages and areal relations of these, as well as the "moving" of settlements between clusters concerning the examined period, and
- we could analyse the changes compared with the basic year too.

In this way, essentially every settlement in South-Alföld became characterizable with some category of the type showing the changes of the analysed factors. After this as background analysis I tried to state the characteristic of the space processes and certain space structural characteristics of each type. The types were described by using these informations with the aim of possible complexity, concentrating on the essential characteristics.

Main tendencies of rural transformation

The following main tendencies of the South-Alföld rural transformation can be discovered with the help of the basic examination:

1. In South-Alföld rural space the basic economic factor is still agriculture but important areal differences of the structure of economy and those of the level development draws our attentions to the fact that the agricultural effects on the rural transformation have to be analysed in the relation of the areal differencies. Undoubtadly agriculture is not the only condition of the development of rural space, but it cannot be denied that the dinamically developing agriculture with the joining household plots and small farms is an element mostly stabilizing the vitality of the villages. Dinamical agriculture characterizes one main tendency of the rural development (Fig. 1.) The effect of the structural transformation of the agricultural space is not of less importance. New agricultural and settlement space connections developing during the areal concentration make the inner integration of the earlier mosaiclike rural space more rapid, and make an entirely new type of rural development.

In a rural space like this

- the regional rearrangement is important in the sowing structure after the concentration
- moving of the agricultural products inside the moving region is characterized by centralizing tendency.
- the government of the economy became centralized, too.,
- the agricultural labour force moves independently from the dwelling place in the whole agricultural space.
- the regional system of institutions of the state administration and service industries adjusts to the economic spacesystem.

Quantitative and qualitative changes in the development of the large-scale farming brought about the regional connections of agriculture and formed them into a complicated system. The essential characteristic of the regional connections is that they form a continually changing structure, so contributing to that the earlier moveless rural spaces would turn into a mobile space structural system.

2. A feature of the rural transformation characteristic of South-Alföld as well is the rapid development of the new economic funstions, of which we can regard industry as having the greatest effect. But rural industry cannot be restricted to the socialist industry of the village. To my mind all industial activities in rural space are part of rural industry functionally.

It is interesting that though rural industry in the region has developed considerably areally and quantitative it has a decisive economic function only in a narrow area because of the areal concentration of the industry. But on the other hand industry in rural space is of decisive importance in the local occupational regrouping and it strengthens the regional connections of villages with new elements (industrial product flow, comapny organizational connections, labour force drawing). A highly characteristic South-Alföld feature of the rural socialist industry is the strong areal dispersity, the high ratio (over 50%) of women workers and the low technical level as a whole.

It is typical that at settlement level the number of women is falling with the increase of employment. Development of rural industry proves that there is a close connection between the number of population of the settlement and the level of

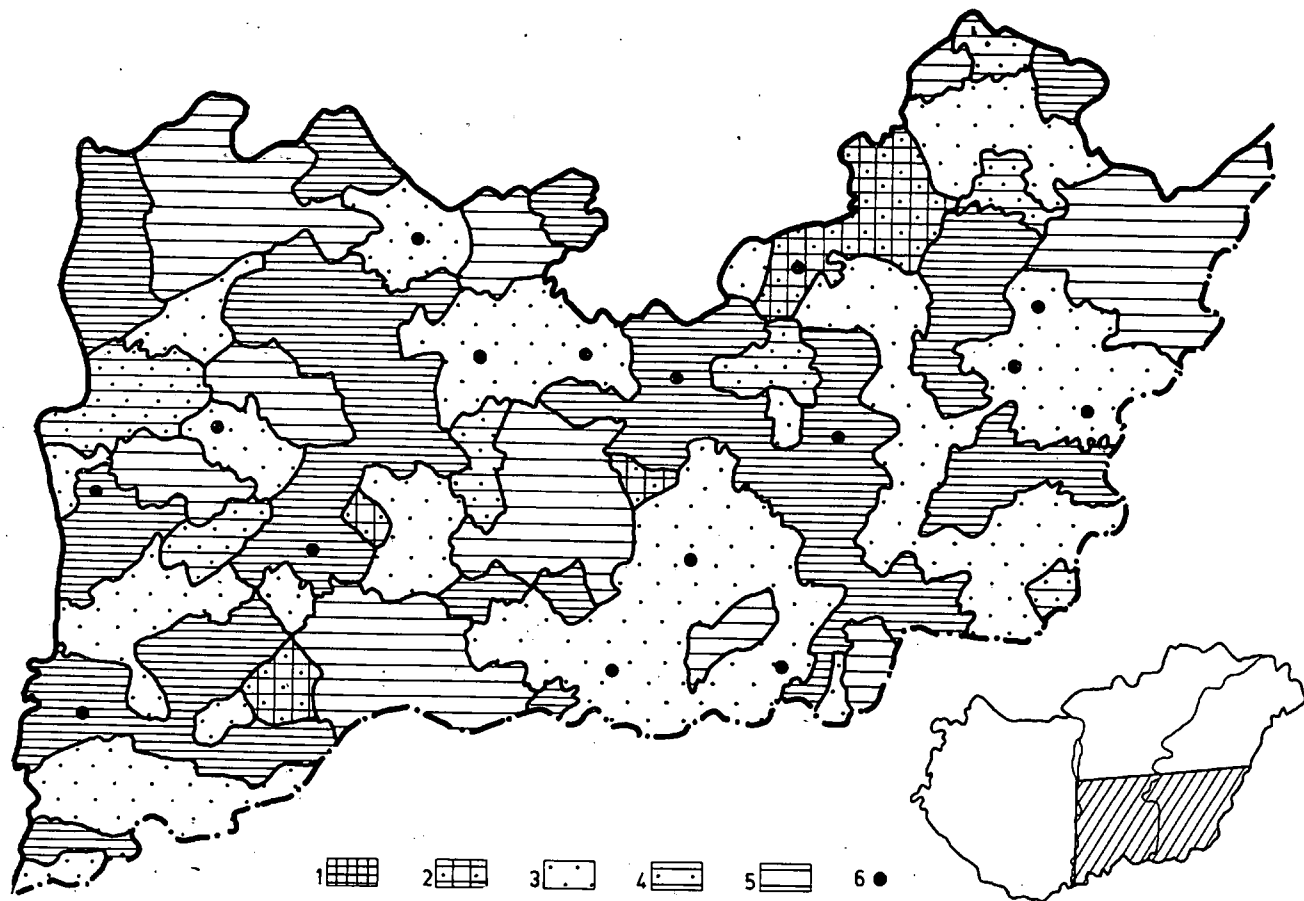


Fig. 1. The regional types of the developing level of agriculture 1: above the average (dynamic) 2: average (with danymic character) 3: average 4: average (with character under the average) 5: under the average 6: town

state of industrialization. It is worth taking note of the fact that 21 settlements without central role have industry (mainly at a low level) too, what is more it is similar with the partial lower-grade centres. This strong areal and level dispersion is by all means uneconomical. Strengthening the functional importance of rural socialist industry can be achieved presumably only by a reasonable sectoral and areal concentration.

It seems that from the point of view of rural development rather the industrial activity of the agricultural large-scale estates has greater importance. The industrial sideline activity is not alien from the large-scale farming, what is more is a form more and more connecting with that. It is worth taking note of the fact that besides free labour force capacity, the lack of small company characteristic of our industrial structure had an important role not only in the development of the rural socialist industry but in the agricultural industrial activity as well. These two factors are mutual, and connected national economic interests to a certain extent. These conditions will be probable in the future, too, what is more newer phenomena strengthening the existence of the agricultural industrial activity can be discovered. It is presumable that having industrial activity the agricultural organization which has widened due to concentration would develop into an integrated rural space in which the agricultural large-scale estate by means of its industrial activity becomes an important factor in satisfying the service and provisional claims of the population in addition to satisfying the agricultural needs, and it connects of the producing of the large scale company sphere, too.

3. Areal differences of level of industrial services and that of the social infrastructure influencing living conditions, defects of their hierarchical organization, and their slower development rate compared with the development of the society are tendencies that make space proportional development of rural settlement network slower.

4. Very important phenomenon can be discovered in changes of demographical processes. The total change of number of population on South-Alföld between 1960 and 1980 became of slightly increasing tendency after a longer decreasing phase. But this sort of direction of changing covers important areal differences in the relationship both of city-village and the individual hierarchical levels, what is more inside these, too. Increase upward from the middle grade centres is tendentious. Positive turn (with a direction towards growth) in the change of population number of the partial middle-grade centres is remarkable. Decreasing tendency of population on lower levels is unchanged, but it does not mean homogeneity at all. (we can see the lessening of population-decrease and stagnation of it, what is more increase of population-number, too.).

In the decade between 1960 and 1970 changes of population-number were due to the migration difference in this region, too. After 1970 the effect of natural increase on the population growth in the demographic process on "higher" hierarchic levels became stronger and immigration lessened. But on "lower" levels negative migration difference is still high.

It is interesting that upward from the middle-grade-centres the value of migration difference is below the country average, while on lower levels it overdoes it and is contrary to it in tendency. Examinations on the destination of migration show that in the last seven years dwelling-place changing inside the region become stronger

among movings, rate of emigration to the city lowered, but rural immigration is high.

It can be stated based on the forming of migration and natural increase that process characteristic of the last decade hardly decreased: sources of population — growth essentially are to be found among villages without any role and partial lowergrade centres still.

5. One of the most strongly marked process of rural transformation is the changing of social, employment structure. In this process the effects of development inside the rural space play more and more important role. Two well separable phase in the changing of employment structure can be discovered. One of them is typical of the 60-ies, when regrouping didn't go together with the important changes of working place, sectional structure of villages. The other phase is typical of today: employment, sectoral structure of villages is widening, which gives local employment possibility for a boarder scale of employment structure. This process is well signed by the changes in direction of labour force moving:

- effects of towns on drawing labour force are more and more widening areally
- strengthening of local employment of labour-force refers to a general space economic development of the region
- appearance of focus drawing rural labourforce is a very important new phenomenon in the development of rural spaces.

The directions of labour-force moving are not essentially independent on the main directions of changes of employment structure. That is why it is expedient to bring into relationship the changes of regrouping with the changes of areal moving of labour force. So the following types of regrouping process can be known: agricultural (stagnating); agricultural (changing); agricultural (industrializing); transitional (agricultural-industrial); transitional (differenciating) and industrial. Geographical position of the types signs well the process of regrouping which is very differentiated even areally. Number of villages belonging to the first type is few, but number of settlements of the second type is surprisingly high. It is characteristic that on the one hand are of periferical position, on the other hand they are on the urban drawing area. Industrializing feature is a definite direction of development. There are few villages, too, which can be ranked as definitely industrial as for the employment structure. It can be stated that changes of space economic ratisss of the region, modifications of areal mobility of population and that of the areal differences of the employment regrouping form essentially a new areal structure, too, the characteristic of which is the increasing of number of main points inside rural spaces (Fig. 2.).

6. Traffic-geographical situation of settlements is a factor that connects closely to the economy. Economic state of development and hierarchical order of the settlements essentially defines the main directions of traffic network, areal expansion of traffic sphere of operation. In consequence of this on the hand centres of higher rank in the hierarchical order oplay greater role in the forming of the traffic-geographical situation, on the other hand settlement with no or hardly any role at all belong to more drawing spheres at the same time. So traffic-geographical situation signs a sort of qualitative level of regional connections. It is characteristic of South-Alföld, too, that there is strong relationship between the traffic geographical situation and the changes and mobility of population number of settlements.

7. Due to the increasing of dinamical points of economic space structure outside tiices new directions form in the rural regional connections, too. Developing of rural

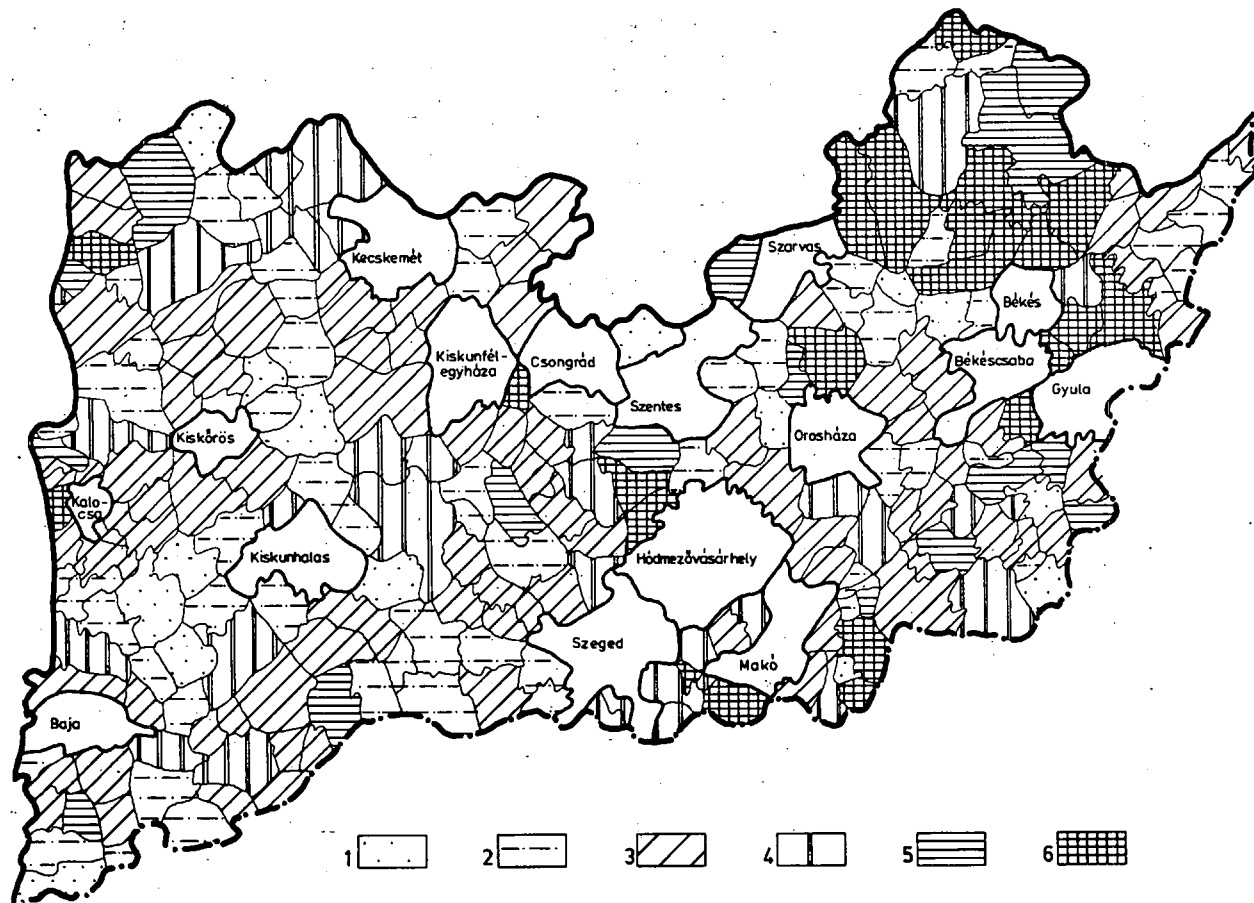


Fig. 2. The changing of employment structure (1960—1980) 1: agricultural (stagnating) 2: agricultural (changing) 3: agricultural (industrializing) 4: transitional (agricultural-industrial) 5: transitionas (differentiating) 6: industrial

regional connections is due to the functional and hierarchical enrichment of rural space, is a phenomenon deriving mainly from the rural space, which strengthens multilateral functional connections of rural spaces in addition to the integration of rural and urban spaces.

8. So the essence of rural transformation can be summarized this way: due to the functional strengthening and widening of horizontal and vertical connections rural spaces earlier close to each other mosaiclike connect more and more and form new formal and content fields of social and settlement development.

Geographical types of rural transformation

Based on the above circumscribed conception and method I ranked rural settlements of South-Alföld into 5 basic types and 7 subtypes inside this (Fig. 3.)

1. Villages with little population, without inner sources of development, mainly declining

The most undeveloped, essentially unable for development, 75 rural settlement of South-Alföld belongs to this type, where 13% of rural population lived in 1980. Their economic function is almost exclusively agricultural, but only a few can be characterized by dynamic development of economy. Employment structure, too, reflects agricultural feature, its changing tendency is slow, industrializing feature can be discovered on some places is not due to widening of local economic functions. Strengthening of population keeping ability which can be seen recently is the result on the one hand of the old age structure, on the other hand of the growing areal drawing of one of the settlements with higher role of the environment. These villages are these settlements of the labour force moving inside the rural space which gives significant masses of labour force. Their institution network is very incomplete as compared to the rural settlements of South-Alföld. Development of basic supply is occasional, too, inner sources for widening this are available restrictively or not at all. The feature of the inner territory is generally formed by the differences in personal incomes. To my mind condition of their stabilization is strengthening the centre feature of the more developed villages in their surroundings and bettering the traffic conditions towards it.

Two subtypes can be limited in this type:

a) Little villages. 10% of the rural settlements on South-Alföld can be marked as little village. Their average population number is 680 so (statistically they are not little villages but they are in South-Alföld relationship). Their processes of population decrease are of "demographic erosion" feature, with the exception of a few villages connecting closely to the urban space. Their regional connections are formed by their environments. Essentially their existence depends on their environments, too. Declining is tendentious in those little villages which do not connect to a city or rural centres with dynamically developing agriculture and region organizing functions. Their existence is not sure, their survival is doubtful.

b) Villages with detached farms of little population with agricultural function. essentially only differences in measure and the somewhat higher level of economic function and supply differs these from the former subtype. The power of their settlement forming processes is formed by their traffic-geographical situation to a great extent.

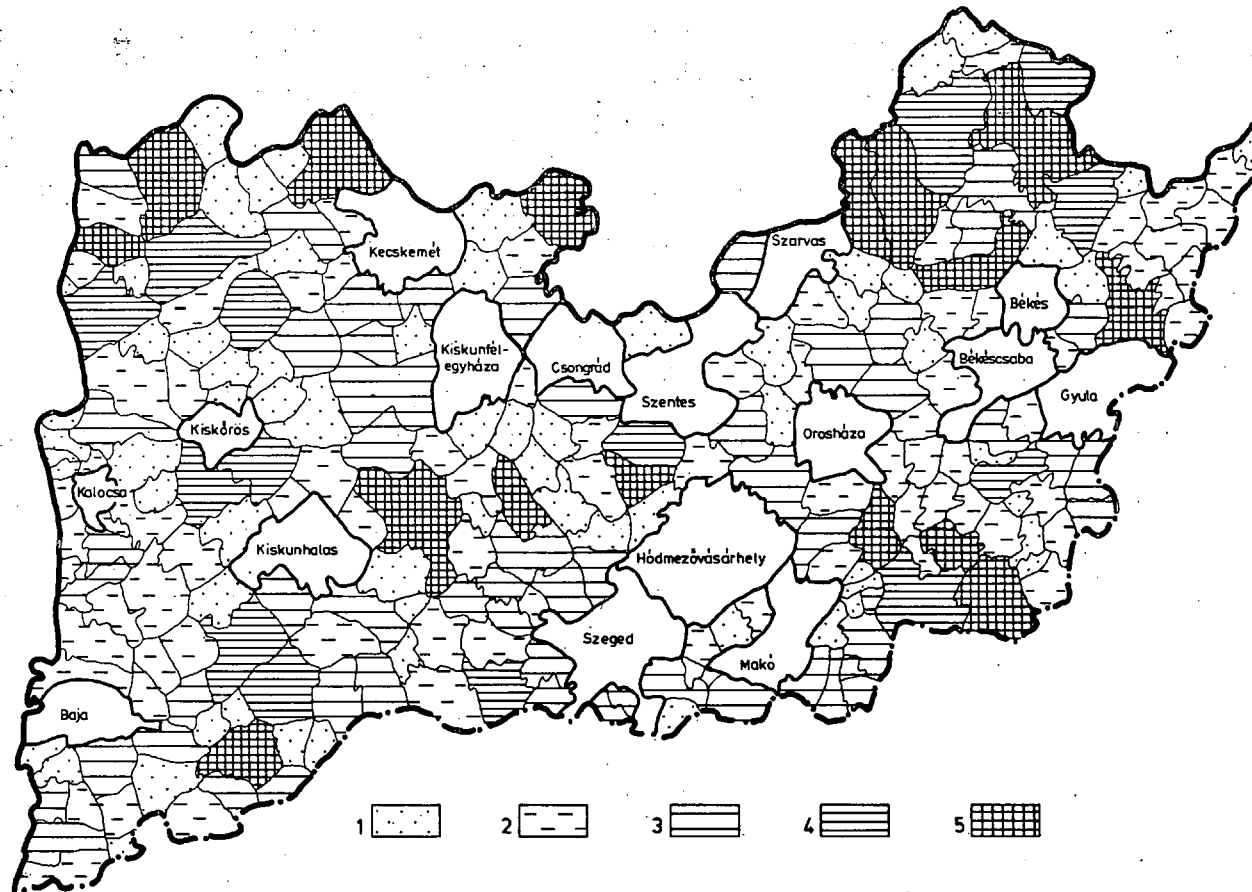


Fig. 3. Basic types of rural development 1: villages with little population, without inner sources of development, declining mainly 2: slowly developing agricultural villages with rapidly decreasing population 3: middle populated villages capable of development with stabil inner sources 4: rural centres of great population with balanced development 5: rural centres of great population with dynamical development

Stabilization of dwelling-place function can be seen in the little villages with good traffic-geographical situation (their rate of population increasing is lowering though it did not go under 15% during the last 5 years).

Little vi lages with bad traffic-geographical situation are typical of the settlements with detached farms on sandy areas of South-Alföld. Declining phenomena (old age structure, weak, stagnating economic functions, undeveloped, more exactly out-of-date institution network, detached farm population strongly becoming old) can be perceived in their settlement forming processes.

Inner integration of agricultural space of settlement of this subtype was realised essentially, it can be characterized by one village — one agricultural large-scale estate. But since development of economic level of agriculture is of a rate below average mainly, agriculture is not able to be the catalizator of the settlement developing. Presumably changes of local factors can develop, new directions in their further development, due to which characteristics (developing, stagnating, or declining) may strengthen, due to which characteristics (developing, stagnating, or declining) may strengthen.

2. Slowly developing agricultural villages with rapidly decreasing population

Settlement-historical past of these 71 settlements belonging to this type (with 26% of rural population) is very different. Traditional rural settlements, detached farm villages, formed after World War II., former dwellings, villages of settlers equally can be found among them. But a lot of similar features can be recognized in their settlement forming processes formed in the last period that make it reasonable to rank them in one type. Though strong decreasing of their population number does not make their existence doubtful but it causes such demographical deformation on some places which lessens their stability. It cannot be stated in spite of great development of their institution network that they have the whole range of basic supply. Their hierarchical differentiation is by no means of such proportions functionally that can be concluded from their classification (lower-grade, partial lower-grade centres and other settlement equally can be found among them). The differences of rank is essentially only differences of number of population. But utilization of their inner sources of development. — though of different level — is not satisfactory. Predominance of those industrial activities that do not connect to the basic activity in the industrial activity of their agricultural large-scale estates is typical. Quickening of rate of settlement development can be observed only on areas that connect closely to the urban space as well as on areas of the dinamically developing agriculture. Here regional connections based on economic function strengthen seemingly the vitality of the settlement (bettering of traffic possibilities, increasing of emigration, increasing of the number of newly built flats, two directional moving of labour force, commuting to and from).

Two subtypes can be formed among the settlements of thos type:

a) Villages with strong settlement function, connecting closely to the urban space.

These villages are characterized by specific twofold character which followed their settlement-historical past. Though each of them is traditionally agriculturally

developed, the characteristics of development of the city in their surrounding can be well observed in the changes of their functional character.

Occupational regrouping and commuting is stronger in villages that connect to urban space with dynamical industrial development. The effects of agriculture on the development of the villages is more indirect. Stability, direction and rate of development of these settlements depend on urban effects. They may become part of the urban space in the future. Rural settlements that connect to a less dynamical urban space have much more traditional rural characteristics and modern rural characteristics develop slowly in these.

b) Slowly developing agricultural villages. Practically the spaces between Baja and Kalocsa and around Kiskőrös, sand region in county Csongrád, the space without cities in middle-Békés as well as most rural settlements of Sárrét belong to this subtype. Their characteristic feature is slow economic and settlement development, which can be characterized by stagnating marks, too. Continuous strengthening of population keeping ability can be observed only on areas of dynamically developing agriculture. On other places emigration is still strong for commuting can be solved with difficulty because of the great distances of centres. Their regional connections hardly widen. The development of settlements around Kiskőrös as well as of those in Sárrét is slowed significantly by the fact that a lot of elements (agriculture, moving of labour force, certain elements of supplier establishment network) of their regional connections connect to one another and these connections do not have dynamizing power. Quickening of development processes depends significantly on the development dynamism space economic environment. In this regard possibilities of this types of villages of middle-Békés space are the best. On other areas of the region villages belonging to this type do not have outer sources.

3. Middle-populated villages capable of development with stabil inner sources

This type combines villages of South-Alföld with average level and average rate of development (55 settlements with 26% of rural population). Their settlement developing processes are rich in individual features. Nature of their inner sources are formed by their geographical environment and geographical situation to a great extent. There are a lot of traditional rural marks in their living conditions, but generally they have some of the more important elements of modern rural institutions (bank, shops with special type, nursery). Their economic functions are widening, mainly industrial activity connecting to agriculture strengthens the stability of the village (building industrial services, possibility of employment). Stirring effect of dynamically developing agriculture on rural development can be proved definitely. Process of population decrease is becoming slow in this type, but it can be observed that its rate depends on the strength of economic power and on traffic-geographical situation. These settlements are typically lower-grade centres (there is only one advantaged lower-grade centre and four is without sphere of action)¹ but their central sphere of action extends essentially only on their own administrative area (exceptions are the lower-grade centres of regions with little villages in this regard). Important stabilization can be observed in their regional connections and strengthening of the inner organizational transformation and functional connecting of rural space.

a) Villages with dynamically developing agriculture and strong central function. In these settlements the new type of agricultural organization which is a result of regional concentration (comprehends the agrospace of several settlements) is the primary catalizator of rural development. Settlements in rural space are characterized by close functional connections. The seat settlement of the co-operatives fills central functions even if it has not any hierarchical rank. But if the two coincide exercise of space organizing functions undisturbed, and it strengthens the continuousness of development.

b) Villages near towns with dynamically developing agriculture.

Economic function securing the stability of the village is agriculture even if its employment structure is not of agricultural character. Changing of occupational structure (its differentiating character) reflects urban effects, often urban rates, but differentiation is in close connection with the growth of commuting rate. But it cannot be left out of consideration that number of people with two occupations is very high and there are a lot of small farms in these settlements. This, too, proves the strong presence of agricultural function. Urban elements can be recognized in their living conditions, but they do not have the whole circle of modern rural institutions. Presumably the functional connections to towns first of all of villages of this type around Szeged strengthens.

c) Agrarian villages mainly with detached farm settlement structure.

Development rate of their settlement forming processes slows down. They can be characterized by permanently strong emigration because of the limited number or lack of possibilities of employment besides agriculture. But emigration is not yet at such rate that it would essentially effect the demographic structure or endanger their stability. Development of living conditions, infrastructure, institution network is constant. Differences connected with this level of development have a connection with the periphery relations, rates. A general characteristic is that the transformation of detached farms settlement structure is slow (especially on territories with unfavourable natural endowment). It is expectable that differences in their development strengthen and development of some of them — mainly with the help of their dynamic agriculture — becomes quicker (first of all settlements belonging to here on the middle and north part of Bács-county). In my opinion securing of development stability of all of the settlements belonging to this type would be reasonable for the sake of proportional regional development of rural settlement network in South-Alföld.

4. *Rural centres of great population with balanced development*

15% of rural population of South-Alföld live in 14 settlements of this type. Basic factor of their development level above the average and their balanced development is the great number of inhabitants. Their economic functions widen in spite of this, their ability of retaining population is only of average strength. and regarding its tendency it is stagnating. They have a wide circle of modern rural institutions (saving cooperative, small department store, polyclinic, service houses etc.). These are settlements at their peak of hierarchic development and their further development can be characterized not by the strengthening of centre nature but a higher level of stage of supply. Essentially areal expansion of their central functions is limited even today due to their geographical situation (almost all of them are situated right next to a dynamically developing rural centre).

They can be important settlements for preservation of proportional regional system of rural settlement network: rural centres that can strengthen their ability of retaining population of their environment with satisfying service and certain infrastructural aims of their environment.

5. Rural centres of great population with dynamical development

16 settlements belonging to this type with one-fifth of rural population in South-Alföld rise high above the rural settlements due to the general development level, the dynamics of the settlementforming processes and functional richness of regional connections. Their economic functions are varied and strong. Though they can be characterized only partly by dynamically developing agriculture, the volume of agricultural production is an important element of the economic role. Their industrial, infrastructural development started already in the last decade but it became quicker in this decade. They have some elements of middle — grade institutions. An essential feature of their development processes is that their multifunctional character is stable. Two main directions can be observed in their settlement-historical development. Apart of them have a "regular" rural past and turned to new development directions -of urban type- only in the last 10—15 years. The rest is rich in individual features and have a past of country-town type which was functionally more differentiated earlier, too. Owing to the deformed geographical situation of the town network in South-Alföld disproportions came into existence in the regional system of dynamically developing rural centres, too.

Only a few of these rural settlements developed in a traditional rural space without any centre (without towns) To my mind Kiskőrös, recently established as a town, too, can be placed in this type. (which is situated still in a typical rural space).

Position of the dynamically developing rural centres in north and middle-Békés is very specific. I think that they are in a rural space considering the economic historical development of the area but based on the recent characteristics of the region they can be described as urbanizing settlements of an urbanizational zone developing along the traffic lines. As a result here we can speak about the space conflict of central role of towns and centre villages and the tendency of limitation of regional role of rural central functions. But the decisive question is not this. This geographical situation helps precisely the development of rural spaces for urbanizing development of rural centres belonging to the urbanizational zone results in a closer integration of urban and rural spaces of the region and gives one possibility for the dynamical development of rural space.

Balanced and dynamically developing rural centres well circumscribe the regions with dynamical inner and outer sources, of South-Alföld rural development: middle-, north-, and south-Békés spaces, rural space of Tisza valley and northern territories of Bács-Kiskun county. Rural settlements of these spaces presumably continue to be the strong action centres of the rural development in South-Alföld, in the future, too. It needs to be stressed that owing to exactly the rural space becoming mobile these regional types are loose groups, the essential characteristic of which is the possibility of rearrangement. Though it is probable that basic changes do not occur in the tendencies become characteristic in the examined period, present rural space structure will be the frame of development further on; we cannot exclude after all the possibility

of the fact that regional differentiation of rural transformation strengthen further on and rearrangement occurs in the geographical types, too, under the influence of newer regional and local factors.

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