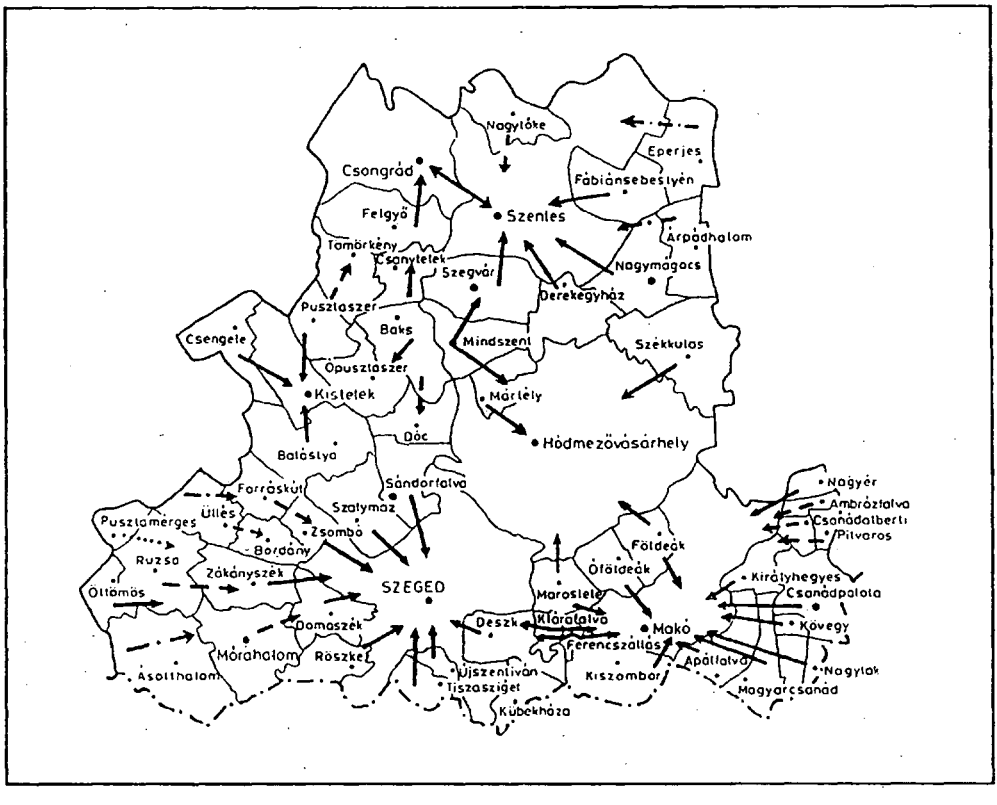
MICRO-REGIONAL DIFFERENTIATION IN CSONGRÁD COUNTY



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This volume contains the most important results of the research made last year in the Department for Economic Geography of the József Attila University at Szeged. The research, supported by the General Assembly Office of Csongrád county, examined the spatial processes of the economy and the society and also their tendencies of changes. The objective was to define and locate basic region units, microregions that can be suitable for the concept of a county regional policy and regional planning, while they were formed on the basis of the real regional differentiation.

MICROREGIONS

Microregion is an expression widely used but not properly defined. Its size and scope is actually determined by the aim of the research. From the geographic aspect, microregion refers to a rather wide size scale. At the bottom of this scale there is the settlement itself, while both the village and the town are spatial establishments with their own inner structure, within which the elements are functionally separated. That is, there is a territorial development within the settlement, so a town or a big village can be defined as a microregion. From a different approach even bigger areas can be defined as microregions; e.g. if we examine the Earth, the whole of Hungary can be a microregion.

The current objective of the microregion approach is to locate real region units within the county, that are suitable for territorial development.

The microregions of the county were located on the basis of the results of the research in two large areas: *town agglomerations* and *the spatial relationships of the village population.* Before we describe these, we have to mention some important circumstances:

1. The configuration, the relationships of the settlements of the county, that is the spatial organisation is basically determined by the five traditional cities. In a territorial development approach, these cities, or any one of them must not be separated from the whole of the county. This kind of approach is an absurdity.
2. The counties, as determined territorial categories, caused the deformity of the territorial organization near their borders, while these borders are set. While the economic and individual relationships have „flown" over the borders, coordination ofthe development ofthese areas was accidental.
3. There was no real attempt to decrease this effect of the two rivers (Tisza and Maros), that interrupt the continuity ofthe terntorial development within the county.
4. The frontier had an impact on the development of the territorial structure of the county a long time ago. Based on the current European tendencies we can say that in a long-term territorial development concept it has to be taken into consideration that, without the modification of the frontiers, a Western European border will be established, and through this, a dynamic microregion development can be expected on both sides of the border.

Attraction zones of the cities

The extent of the territorial role of the cities can be well determined by the *examination of attraction zones.* The most widely used elements of this are: labour, traffic, free market, education and health relationships. With the synthesis of the results of the research of sectional relationships we can locate the agglomeration, where the following connecting levels are necessary to determine:

- those settlements which have all their relationships linked to the centre belong to the *hegemonic attraction zone,*
- if the greatest part of the relationships of the settlements are directed to the centre, the attraction is *dominant,*
- the attraction zone is *transitional,* if two centres have almost the same control over it,
- a temtory is called a *periphery,* if its relationships with the centre are weak.

Labour attraction

The daily commuting of labour between work and place of residence is an important economy-based indicator of the territorial relationships.

Commuting in the past two years has undergone very significant qualitative and quantitative changes. These changes are still going on today.

28 settlements belonged to the labour attraction zone of Szeged, from where at least 5 % of the active earners commuted to the city. These settlements gave 81,3 % of the outside labour force of the city. Further on 300–400 persons commuted to the county seat from Makó and Hódmezővásárhely and cca. another 100 persons altogether from the communities Mindszent, Apátfalva and Magyarcsanád. But this number was only a small part of the local active earners. The case is similar with commuters coming from communities outside the county to Szeged.

Only 12,2 % of the active earners of Hódmezővásárhely comes from outside sources, although this city employs the most of the outside labour force after Szeged. Like in Csongrád, where the proportion of the outside labour force was only 10,9 %, Hódmezővásárhely employs mainly its own population, so the labour attraction zone of both Hódmezővásárhely and Csongrád were narrow. They hardly employed people from outside the county.

In spite of their agricultural activities Szentes and Makó employed a relatively large number of outside labour force (18,4 and 16,6 % respectively). But, due to the relatively high proportion of the agricultural activity, they could not connect the settlements of the former administrative area, the surroundings of the city, completely to the labour attraction.

Commuting is, of course, the most intensive from the settlements adjacent to the city.

It is interesting in the labour attraction of Hódmezővásárhely, that the greatest proportion of its outside labour force comes from the community of Földeák, which, otherwise, shows stronger relationships with Makó. The population of Székkutas, a community established from the former lands of Hódmezővásárhely, remained in the agricultural section: less than 10 % of its active earners work in Vásárhely. The attraction of Orosháza is also not too big, only 3,3 % of the earners go to work to Orosháza.

Szentes and Csongrád employed less than 1/4 of the active earners of the settlements adjacent to the cities, what's more, Eperjes and Árpádhalom could employ their own work force at home. From these two cities Szentes was the one which employed a significant number of workers fiom outside the county. Due to the well-developed agriculture, this economic section remained strong in the surrounding communities and because ofthis the number of commuters was also smaller. At the same time Csongrád could give labour force to other centres.

We must mention the labour force relationships of the two cities, too. Csongrád received 12,2 % of the commuting active earners fiom Szentes, while Szentes received 9,1 % of them from Csongrád.

The labour attraction of Makó shows the underdevelopment of the non-agricultural sections. Hardly more than 1/4 of the active earners living in the settlements adjacent to the city were employed in the centre.

Based on the above mentioned data the labour attraction of Szeged, besides the adjacent communities, is somewhat stretched alongside the main roads. From the settlements of the former Szeged district the greatest part of the labour force works in the county seat. If we go further from the city, the proportion of commuters is smaller. The effect of the micro-centre, Kistelek is evident, but neither Kistelek, nor the other small town, Mórahalom have their own, distinct labour attraction.

Traffic attraction

Traffic helps the connection of the centre and the adjacent communities by moving the population, labour force and the manufactured products. In determining the attraction levels, the product transport was not taken into consideration, while, on one hand, its directions are determined administratively most of the time, and, on the other hand, we do not have clear data on the share of private forwarders and cooperatives in product transport. In determining the attraction levels, we considered two factors of the road public traffic: time of reachability and frequency of bus lines. Although not negligible, we did not consider rail transport, while it reaches only few communities, and these communities have good road contacts with the centre.

A strong relationship can be found between the regular daily commuting, what's more, the temporary movement to the centre and the time zones of reachability. Almost 2/3 of the commuters come to work to Szeged from the 20 communities close to the city. From 22 % of the residences of the commuters it takes less than 45 minutes to reach the centre. Only 10,7 % of the commuting labour force need more than 1 hour to reach the centre. (fig. 1.)

The examination of the fiequency of the daily bus lines indicates both the direction and the strength of the connections. The frequency of the daily bus lines indicates also, that from among the centres the surroundings of Szeged have the best infrastructure, although it is true, that the rail reaches only few communities. On the main roads (Szeged – Baja, Szeged – Kiskunhalas, Szeged – Kiskunfélegyháza) an average of one bus line departs from the communities to the city. The connections of Szentes, Csongrád and Hódmezővásárhely can be considered proper, but the Makó area needs improvement: the line frequencies here does not even reach half of that of the Szeged area. The connections of Ambrózfalva, Csanádalberti and Pitvaros are weak, and they seek contacts with Békés county, with Tótkomlós and Mezőhegyes. Only the line frequency indicates on the Nagylak – Szeged main road, and that of the 3 communities, Óföldeák, Földeák, Maroslelle, where there are bus lines from Hódmezővásárhely as well, can be considered acceptable.

Educational attraction

The educational attraction of the settlement centres can be best shown on the basis of the number of students in secondary schools. The hegemonic and dominant areas are determined by the commuter students of grammar schools and technical secondary schools. The specialized secondary schools, grammar schools and technical secondary schools sometimes have students from the whole county or from the Southern Great Plain. These indicate the transitional zones and the peripheries of the education attraction. In determining the attractions the nation-wide registration faculties and the higher education are negligible.

The education attractions are expressed by the proportion of those students in their age group, who study in the centre. These ratios show the extensive attraction zone of Szeged. This attraction zone completely covers the region of Kistelek.

In the educational relations Hódmezővásárhely is a good co centre: its agricultural and some of its technical secondary schools have students from Szeged, Makó and even from Szentes. It has a joint attraction with Makó for the students of Maroslele and Földeák. Unfortunately Makó is again unable to provide for its own region.

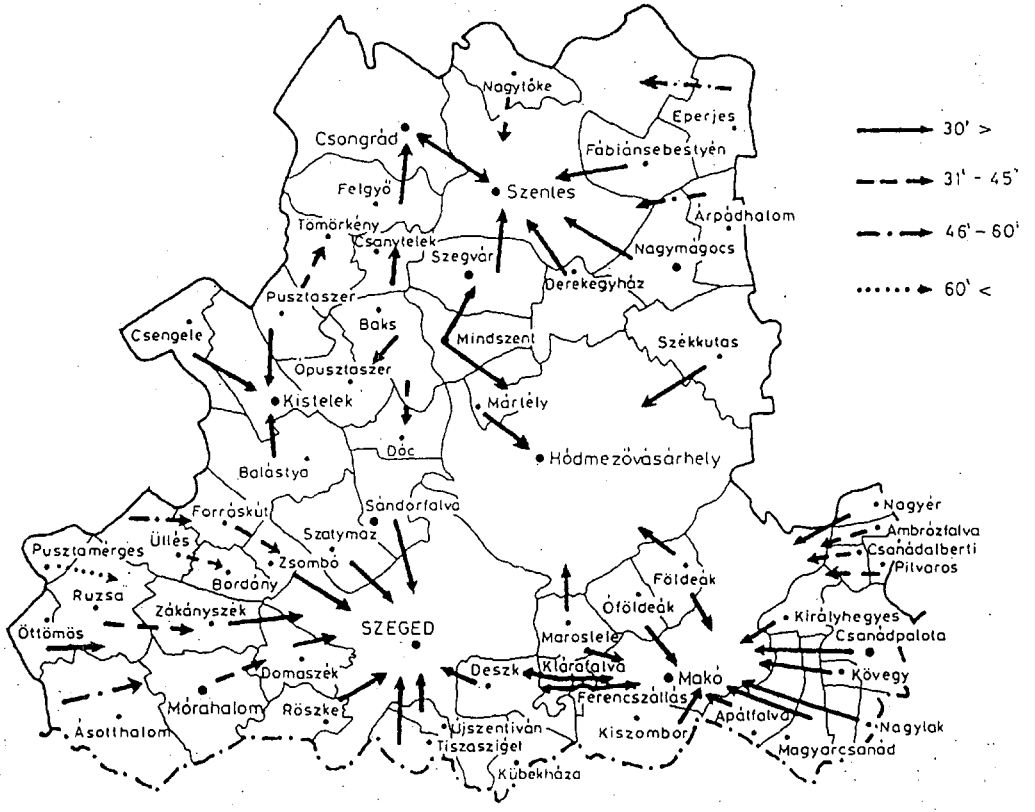

Fig. 1. Lenght of time getting to the centres

The cooperation of Szentes and Csongrád has to be mentioned separately. Both of these cities have an impact on the other's attraction zone, while they have faculties complementing each other. From the two impacts, the Szentes attraction is stronger.

Health service attraction

To determine the health service attraction we examined the annual number of patients in the hospitals of the centres and the clinics of the Szent-Györgyi Albert Medical University. The specialized general practitioners' only show an attraction that is determined administratively.

Talking of the health service attraction the county seat receives patients not only from the county, but from the whole country and even from abroad, as there are outstanding specialists working in the University clinics and in the hospitals. If we examine the closer microregion agglomerate we also find that it oversteps the predetermined region. It includes almost the whole area of the former district.

Besides the patients of the health areas determined administratively, lots of inhabitants of Kiszombor, Apátfalva, Klárafalva, Ferencszállás and Mindszent seek recovery in Szeged. Even the proportions of Csanytelek, Szegvár, Derekegyháza and Fábiánsebestyén exceed 0,5 % of the total number of regional patients.

The other large health care centre of the county is Szentes. Besides its own adjacent communities the Szentes attraction zone includes Csongrád and the adjacent communities of Csongrád. It provides health care to the patients of Mindszent together with Hódmezővásárhely. 26,7 % of the regional patients come from the southern part of Szolnok county. From Békés county the inhabitants of Békésszentandrás, Szarvas and Gádoros often come to the Szentes hospital. The agglomeration of its specialized wards (e.g. urology, surgery, etc.) is extended to the whole of Southern Great Plain.

Hódmezővásárhely provides health care primarily for the patients of its own adjacent communities, only some specialized hospital wards have a wider ttraction. The hospital of Csongrád receives mainly chronic patients, the majority of other patients seek recovery in Szentes. The hospitals and clinics of Szeged help the health care of the Makó hospital. The north-eastern part of the city's attraction zone is forced to be extended to the direction of Békés county.

Free market attraction

The daily free market attraction shows the location of small farmers on one hand, and on the other hand it also reflects which settlements have traditionally strong bonds with their centre. Previously the great market-towns were the natural consumer and market centres of their farmlands and the smaller adjacent communities.

The population of the county seat, Szeged has grown quickly following the industrialization in the 60es. In the villages established from the lands of the city farming remained significant. Due to the demands of the growing city the structure of farming changed, it was modernized, and the production was specialized. The favourable position of the city is reflected in the abundance of goods on the free market, and in the market prices, that are very favourable for the consumers.

The situation of Szeged is different from that of other centres, while the lands currently belonging to the city do not produce the necessary amount of food. The small gardens in the city bring only an insignificant volume of surplus to the market. The smaller turnover on the markets of Makó and Hódmezővásárhely is also due to the fact that there are a lot of farmers in the cities. But Szeged needs the provision of the adjacent communities.

In the Szeged region there are two supply zones. The inner supply zone includes the communities attached to the city and the neighbouring settlements, and also Mórahalom, Üllés and Balástya. Farmers from Domaszék, Mórahalom and Szatymaz, who sell their products on the market, occupy half of the rented tables, and this indicates very intensive daily connections. The outer supply zone includes practically all the other communities of the former Szeged district. Perhaps the relationships of the peripheral communities, Öttömös, Pusztamérges, Csengele and Pusztaszer are not so regular, rather seasonal, and on the other hand, these communities have built connections in other directions. From among the communities outside the county Csólyospálos can be considered part of the supply zone, and the same refers to Ferencszállás, Klárafalva and Kiszombor, although these communities belong to the Makó surroundings.

The only „flaw" of the supply zone is the market of Kiskundorozsma, which disrupts the unity of the zone. The significance of the market of the attached community is decreasing, but a small proportion of the farmers, who come to the market from the villages situated alongside the roads leading to the traffc junction stop here.

In the market attraction of the other centres we cannot find similar to the Szeged area. Farmers living on city lands mainly sell their products in the centre. It also happens that from those parts of the lands far from the city the products are sold on the markets of other cities. Other interesting element of the market attraction is that due to the natural resources, and the differences between farming methods a special „product-valse" begins to develop: often the farmer takes his products to the market of another city that is specialized on another product, e.g. fruits from Csongrád in Szentes, vegetables from the Szentes area in Csongrád, etc. Due to this the inarket zones in the territory east of the river Tisza are difficult to determine. It is especially diffcult to determine the zone in the Makó area, while from here products flow into three directions: the main direction is Szeged, Hódmezővásárhely and the markets in Southern Békés county.

Complex attraction zones of the cities

An examination of the attraction zone with the help of the 5 most basic factors (detailed above) shows that in the settlement network of Csongrád county the centres were formed in the proper places. As a result of their location and supplying activity there are no „out-of the-world" peripheries in the county. The transitory zones are linked to their centre in the county stronger than to any centre outside the county. The majority of the settlements can be considered part of the hegemonic and the dominant agglomerate. Some settlements outside the county are also „attracted" to our county.

The *Szeged attraction zone* is the biggest: it is partly the result of the big distance that the links of Pusztamérges and Öttömös are weaker, so they have to be considered as part of the transitory zone. Although Mórahalom received the title of a town, this was not enough for it to establish its own attraction zone: what's more, the town belongs to the hegemonic attraction zone of Szeged, only its developing retail trade makes some travellers to stop. In the hegemonic attraction zone of Szeged the settlements are traditionally linked very intensively and unilaterally to the centre. Their connections among themselves, their transversal links and their links directed to other settlement centres are weak. It is an important regional organizational necessity to improve the relationships between communities, the transversal links.

The relationships of settlements in the dominant agglomeration zone of Szeged are mainly unilateral. At most, the intensity of the relationships can decrease due to the bigger distance from the city. On the other hand, Kistelek begins to establish its centre role, but because of the few and weak central functions, Kistelek also needs the provision of Szeged.

The transitory zone includes the communities situated at the peripheries of the county, Öttömös, Pusztamérges, Csengele and Pusztaszer.

Although, considering the majority of connections, these communities are linked to Szeged, another centre is also present: in the case of Öttömös and Pusztamérges it is Kiskunhalas, in the case of Csengele there are Kiskunfélegyháza, Kiskunmajsa and Kistelek, and in the case of Pusztaszer there are Kiskunfélegyháza and Csongrád.

The hegemonic attraction zone of *Hódmezővásárhely* includes the farm centres, farms on the great lands and Mártély which emerged from the lands. Mindszent and Székkutas belong to the dominant zone. Mindszent has contacts with Szentes, and Székkutas with Orosháza, too, but the Hódmezővásárhely link is definite. The three settlements between Makó and Hódmezővásárhely belong to the attraction of both cities, and the Maroslele–Szeged link is also very strong, but altogether the Makó attraction is stronger.

The functions which determine the regional organizational strength of *Makó* emerged the latest, due to the depression caused by the close neighbourhood of the county seat and the frontier. So Makó performs its functions in its attraction zone

insufficiently; what's more, the Eastern regions are „attracted" by another county. Nagylak is not part of the hegemonic zone because of its independent industry, nor Kiszombor, because of its relationships with Szeged. All the communities situated east from Makó build relationships with Szeged.

The settlements of the *Szentes* attraction zone are unilaterally linked to Szentes, except for Eperjes and Árpádhalom. But the links are not so strong as in the case of Szeged.

Szentes has a relatively strong impact on the attraction zone of *Csongrád,* but this is only partly true on the other way round.

When we speak about the attraction zones of *Kistelek* and *Mórahalom* the geographic locations of the two towns, the very specific settlement structure of the area (farms) have to be taken into consideration, and also the fact that the development of their central function goes back to a very short period of time in history. The attraction zone of Kistelek includes mainly the villages north of the town, while Mórahalom can be the centre of the villages and farms situated west of it. (fig. 2.)

Spatial connection systems of the village population

Based on the aspect outlined in the introduction and on the research of the agglomerations we can easily evolve two alternative ways of locating microregions.

On one hand, the city attraction zones can be considered as microregions, as they cover the whole territory of the county (fig. 3.). But this solution is not recommendable, because it is too city-centred and it conceals the temtorial formations within the attraction zone. It is advisable to consider the research of attraction zones an essential basic examination in the territorial development process and in locating the microregions.

On the other hand, we can say that every town is an independent microregion. Further, the settlements adjacent to the towns form microregions, according to their geographic locations. Those settlements which cannot be considered part of these microregions, also form a microregion according to their geographic location. According to this we could distinguish 28 microregions in the county. But this solution is still not suitable for territorial development purposes, while these areas mostly belong to the interest sphere of the local settlement policy. (fig. 4.)

But, no doubt, both alternatives contain rational elements for the territorial development concept, but in the end they are not suitable to disclose a more stereoscopic territorial organization.

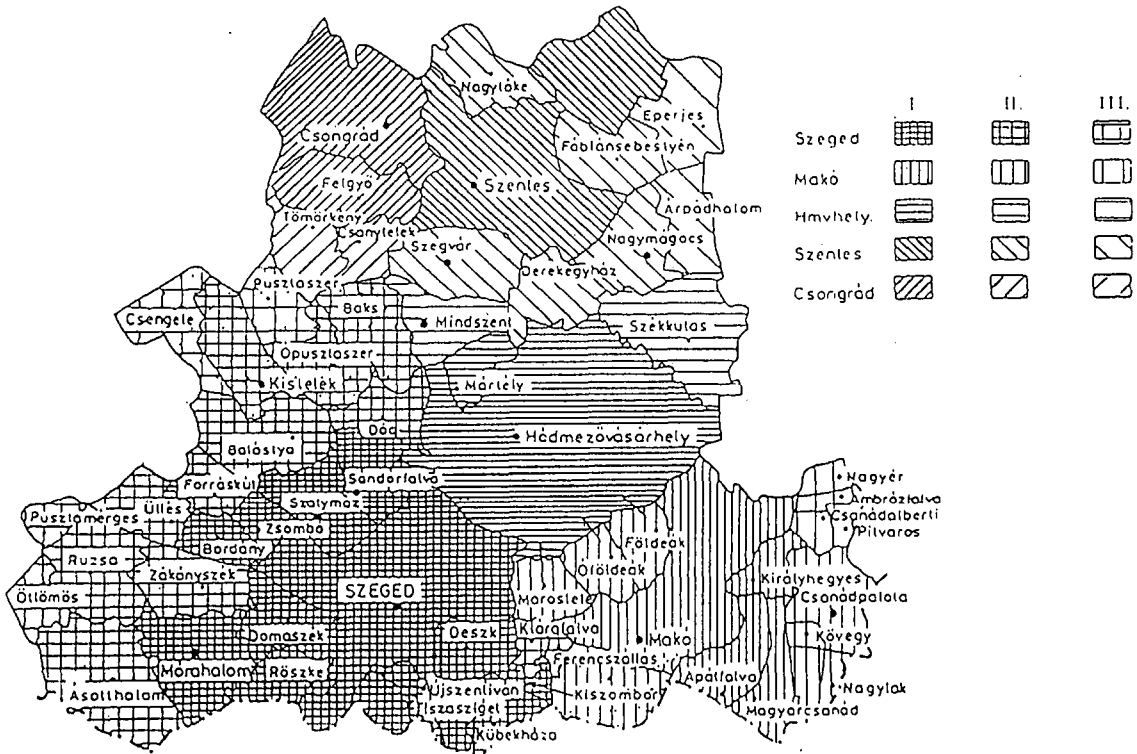

Fig. 2. Centres and their attraction zones

I: hegemon attraction II: dominant attraction

III: transitional attraction

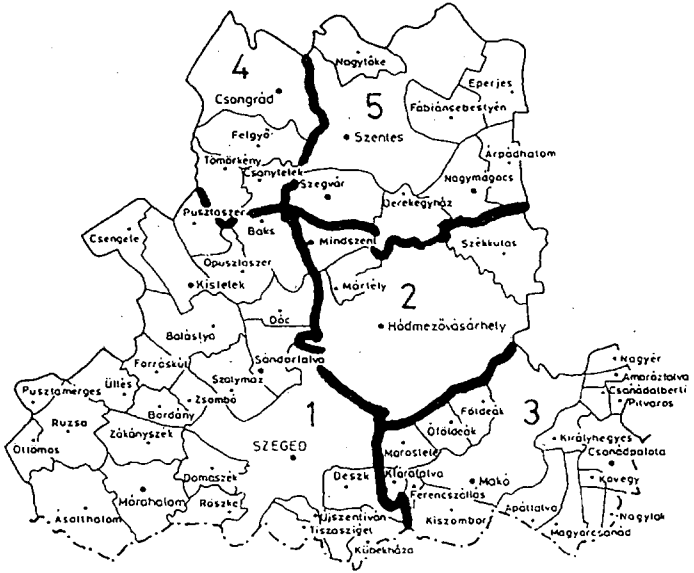

Fig. 3. Microregions of the county (first version)

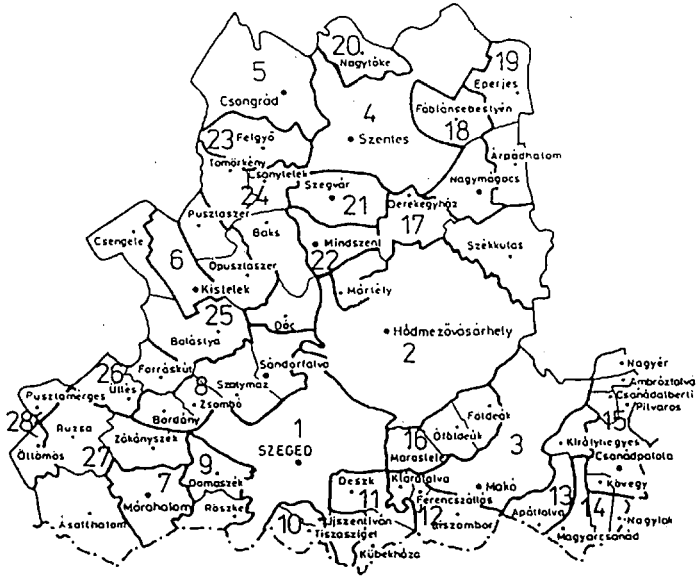

Fig. 4. Microregions of the county (second version)

Disclosing the spatial movements of the village population (the geographical literature calls this), *and the individual relationships among settlements* offer a good opportunity to discover and analyze the actual formation of microregions, the finer integration process. As the official statistics does not disclose these relationships, the task could be solved only through a questionnaire survey. In the arrangement of the survey the mayors and the mayors' offices of the villages offered a great help. More than 12000 persons from the adult village population of the county provided information through the questionnaire. Experiences of the research show that this number of people is enough to be able to disclose the main direction and the characteristic content of the territorial movement, the relationships of the population. The research results of some questions (spatial path) enable us to give a well-founded synthesis. That is, we can determine those territorial organizations necessary for the location of microregions. It is advisable to keep this order in presenting the research results.

Moving in

Interesting directions can be disclosed in the territorial relationships of a settlement with the help of the question: „from where and when did you move to here?" We think that fig. 5. describes three significant processes very well:

- moving from the city to the surrounding villages is very significant (in case of Szeged even further). So there is not only an in-flow to the city, as we know it from other researches, but there is also a reverse process going on. This looks to be permanent, although the big waves of the two processes are separated in time (moving out of the cities seems to have been more dynamic in the past one and a half decade);
- exchange of population between villages is a perceptible process, in which a kind of concentration of the population, growing of village centres can be recognized;
- exchange of population near the county border is also worth mentioning, especially in the north-eastern, eastern, south-western area of the county.

Non-local family relations

Other researches of similar topics also prove that in a village area the non-local family relations basically represent three types of territorial concentration:

- the neighbouring city
- the capital
- the surroundings of the given village

It is the same in Csongrád county. Two circumstances are worth considering:

- the strong links of the settlements of the former Szeged district to Szeged (that also have deeper historical and settlement and territorial development reasons);

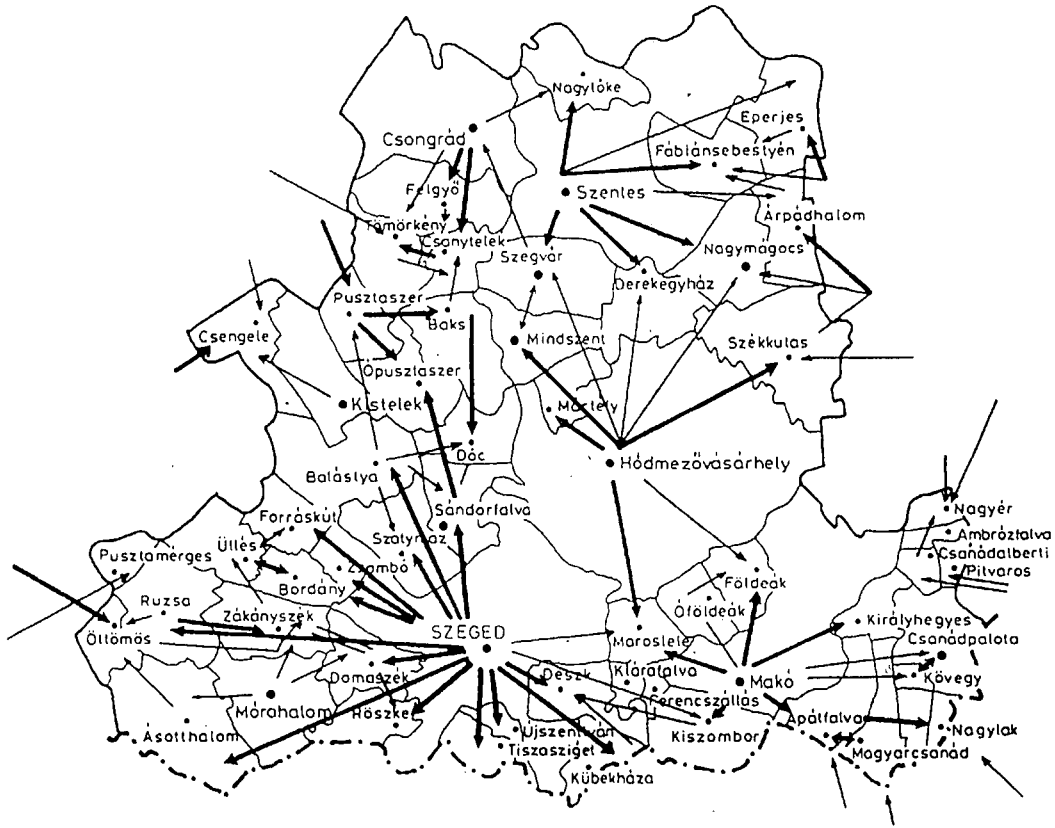

Fig. 5. Moving in

– family links with the neighbouring county in the case of villages near the county border.

These are vivid, regular connections, so a real, individual territorial organization can be recognized here, which is a very important element of the microregion content.

Non-local job

As a result of the transformation of the economic territorial structure in the past period, non-local jobs actually indicate the attraction of the city, from the villages' point of view (as detailed in the previous chapter). We made an attempt to disclose the centres that attract labour force in villages, but due to the small amount of data available, the result has only informative value. We suppose that the labour agglomeration will undergo serious quantitative, qualitative and stereoscopic changes nowadays and in the near future. It is also probable, that the number, age and quality of the available labour force will be more important in the microregions, too.

Settlement more often visited (except for going to work)

This research element provides information that can be interesting from the aspect of territorial development. If we pay attention not only to the target-settlements, but also examine the content and time structure of travellings, we find out the reasons of weekly-monthly in-flows to cities. Namely, the city-oriented supply becomes evident. The majority of travellings are aimed at shopping, health care and, to a smaller extent, at arranging official matters. But at the same time we have to notice the settlement relationships among the inhabitants of villages with the same objectives.

Making phone calls to another settlement

The disclosed directions do not differ significantly from the stereoscopic confguration of the factors examined previously. But the data disclose a startling difference: because the number of phone calls and callers are very low. Perhaps it is not necessary to go into details regarding the well-known defaults of the communications network, but we must emphasize that a necessary micro-regional development cannot be established without a proper communications system.

Opinion of the people on the determining relationships of the settlement

The settlement policy, which says that settlement independence means the weakening of the inter-settlement relations, is mistaken in its approach and concept. Any settlement can live on only in a territorial integration. Research proves it unambiguous-

ly, that every village of the county has numerous individual links to other settlements. So it seemed logical to make an attempt to disclose *the configuration of the spatial relationship feelings of the population.* (fig. 6.) The result is very interesting. Actually we get a more stereoscopic territorial organization than in the case of the previous factors. It is not a contradiction or a catachresis that plasticity in this case means that the connections covering a smaller territory are more characteristic. We could say that there are significant mainly from the aspect of the local territorial policy. Obviously it can be used there, too, but in a county overview it provides important information for the territorial organization evaluations, too, that's why we can consider this an important and relevant factor.

Location and description of microregions

The researches detailed above (analysis aimed at the attraction zones – with the help of the main elements of the economic territorial organization – and the territorial movements of the population) *provides sufficient information to locate the microregion, that can be the territorial organizational basis of a long-term territorial development concept (fig. 7.).* It is advisable to perceive it as a non-stiff bordered frame, which expresses a traditional territory, but which can accept the spatial development of the new economic structures. When we located microregions, we intended to express the following conceptional ideas:

1. *Establishment of categories of the microregions*
   - a. Independent microregion (1,2,3...)
   - b. Adjacent microregion (a,b,c,d)
2. *Defining city groups as microregions*
   - the three cities: Szeged – Hódmezővásárhely – Makó and the two cities: Szentes and Csongrád are independent microregions, that need a coordination-oriented territorial development concept.
3. *Problems emerging near the county border*
   - the cross-attractions need micro-regional territorial development coordination.

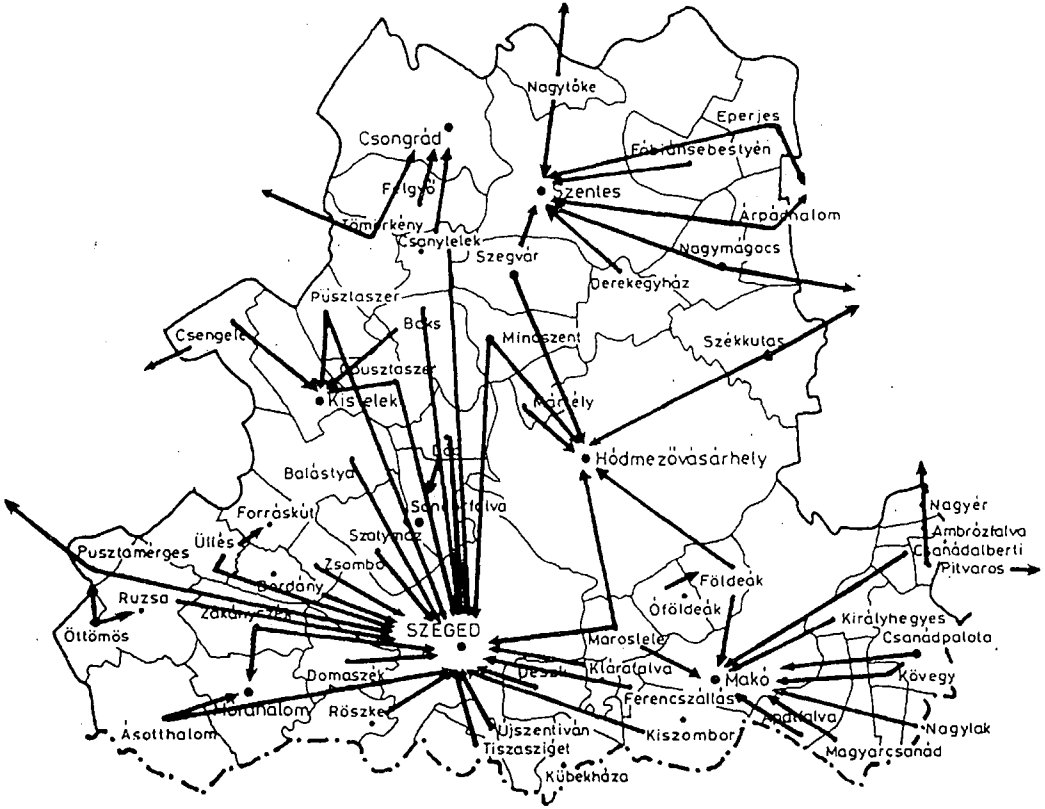

Fig. 6. The two most important settlements in opinion of inhabitants

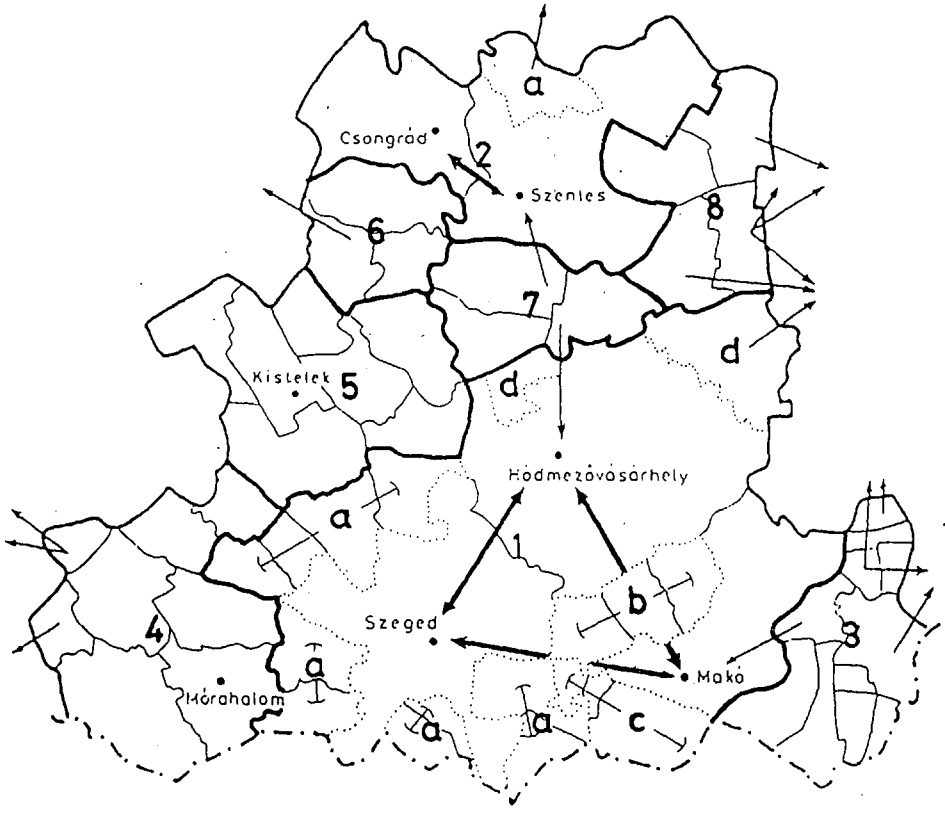

Fig. 7. Microregions of the county (third version)

I. City groups and the adjacent microregions

1. a.b.c.d.*

The city group Szeged–Hódmezővásárhely–Makó is a determining element of the territorial structure of the county. The difference of the relationships of the settlement hierarchy was the source of continuous pressure. The real or imaginary rivalry made the coordination of development impossible for a long time. Such a city group in the industrialized world reaches the level *of conurbation* (urbanized territory with vital cohabitation). It would be desirable to move development to this direction, which would increase the innovative ability of such an urbanized microregion, too. But a development concept established for such a microregion can only be the result of an extensive disclosing operation.

In the internal territory of the city group there are three villages (b). There is no need for abundant explanation of their classifcation as adjacent microregion.

But the area around the city group is differentiated, regarding functions and perspective. The classification ofvillages (a) adjacent to Szeged as „adjacent microregions" is justified not only by the present strong bondage but also by the desirable future prospect: *the question of the necessity of a suburban-type development is raised here.* Perhaps it is worth detailing the interpretation of suburbanity in the case of Szeged. We think that the suburbanity, as it appears in Western-Europe or North America, cannot be adapted.

In our country the economic, social and settlement development allows the presence of the agricultural functions in the city area. What's more, the family houses with gardens, besides their role as family residences, make it possible to have a special commodity producing mini-farm, which, in a whole, is functioning as a downtown agricultural area. The suburban quality can be established by the proper level of transport, supply and communication, so the condition of the surroundings of the place of residence and the possibility for stereoscopic integration will deternzine the process of urban development. The stereoscopic character of suburbanity, in the case of Szeged, is connected with the development of the settlements previously attached to the city (in 1973). That is, Szőreg, Tápé, Algyő, Kiskundorozsma and Gyálarét can form the inner zone of the suburban development, while the neighbouring villages the outer zone.

At the moment, Klárafalva, Ferencszállás, Kiszombor (c) are considered to be the adjacent microregion. But it is possible that through the improvement of the traffic-geographical situation (through the extension of relationships with Roumania) a service zone will develop between Szeged and Makó (perhaps up to Nagylak) with a well-developed infrastructure serving the transit functions.

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* Numbers and letters are used according to the signs of fig. 7.

Mártély (d) represents a territorial development different from the previous ones. Now, it is a settlement very closely linked to Hódmezővásárhely, but also has a regional recreational attraction. Although the natural resources and the surroundings have less impact on the development of the village than it would be desirable, on the long run a strong touristic microregion could be established in the Csongrád – Szentes – Mártély area.

The situation of Székkutas (d) is special, it is strongly linked historically to Hódmezővásárhely, and also on the basis of its present functions, but because of its relatively big distance from the city, it cannot become its suburb. At the same time the relationships with Orosháza also have a significant impact on the stereoscopic situation of Székkutas.

2.a.

There were several attempts for the coordinated development of the cities *Szentes and Csongrád.* The relationships of the two cities are undoubtedly multiple and strong, although they are hardly able to dynamize each others' development. Probably the development plans ofthis microregion should also be based on the results of an extensive research, which would pay special attention to the territorial connections and the internal territorial development.

The only adjacent microregion, Nagytőke (a) is actually not a microregion, but, with its relationships with Szolnok county, it can become an independent microregion.

II. Small towns and their surroundings

4.

There are several circumstances whichjustify the classification of south-western Csongrád county – *with Mórahalom as the centre* – as an independent microregion:

- similarity in settlement structure and functions;
- strong inner relationships, where the centre role of Mórahalom is perceptible;
- characteristic is the attraction to Szeged, which is weakened only by the relationships directed to Bács-Kiskun county in the county border.

The farm structure of settlements, the determinant agricultural function, and the relatively unfavourable traffic-geographical position can slow down the microregional development, although the impact of a new agricultural and ownership structure can be positive, but we cannot make an absolutely sure forecast.

5.

This microregion with *Kistelek as the centre,* situated along side the main road, but strongly linked to Szeged, can draw the special attention of a territorial development concept due to two circumstances:

- The development of Kistelek as a small town is very special. The territorial increase of its scope of authority as a town is limited by Szeged and Kiskunfélegyháza. Its functions as a modern market-town are not properly defined, but its centre role is an absolute necessity for the development of the microregion;
- The Ópusztaszer National Memorial Park complex is situated in this microregion, it has its own development programme, but it is practically independent of the region. This is not the best. The development of the Memorial Park and the functionally linked territory should be approached and carried out with proper coordination.

III. Microregions near the border

3.

The microregion *east of Makó* has two different frontiers: the frontier of the country and the county border. Although the whole microregion is linked to Makó (the centre role of Csanádpalota is weakened), the relationships of the eastern part with Békés county are strong. It is worth mentioning that in the southern part of the microregion Roumanian relationships, although latent only, are evident.

The northern part of the microregion is practically in a shadow considering the transport aspect, its traffic-geographical position is very bad. The area as a whole is underdeveloped. It has strong links with Békés county. *From among the areas near the border in the county this area needs the most a developmentplan coordinated with the neighbouring county.*

The inner relationships o the microregion are differentiated, we can clearly separate characteristic settlement groups:

- Apátfalva – Magyarcsanád
- Csanádpalota – Kövegy
- Pitvaros – Csanádalberti – Ambrózfalva – Nagyér
- Makó – (Rákos) – Királyhegyes

8.

Besides the logical relationships with Szentes, almost all the settlements of the village area *east of Szentes* have strong and long-standing relationships with Békés county, basically with Gádoros, Nagyszénás and Orosháza. The necessity of the coordinated development emerges here, too.

IV. Microregions without centres

6.

This microregion is actually *the attraction zone of Csongrád.* Its strong inner relationships justify its classification as an independent microregion. Tömörkény has significant individual relationships with Bács-Kiskun county, but this does not disrupt the unity of the area.

7.

Szegvár, Mindszent and Derekegyháza form a microregion, that is situated among cities. As a result of this, their connections are divided between Hódmezővásárhely and Szentes, and even Szeged, although to a different extent for each factor. This microregion needs an independent development concept, but also the coordination of the two cities.

POPULATION

Demographic tendencies

Births

In Csongrád county the changes of the number of births in the past 100 years were more or less similar to the national tendency. In spite of the periodic changes of the demographic waves we can experience a strong decline. In the last century very populous age groups were born, and at that time our county was even below the national average. From the turn of the century until World War I the extent of the decrease was smaller and it was not significantly different from the national average. During World War I the low value is understandable, so is the demographic peak after the war, as practically the tendencies of the previous decades dominated. From the 20s the demographic indices of the county became worse than the national average. It is interesting that – contrary to World War II – the birth rate has not decreased, what's more, it has grown (the first years of the war brought economic, commercial upswing for the county).

After World War II the birth rate keeps on declining, which tendency is stopped by the regulations of the 50s, by starting up a new demographic wave. But the birth rates of the county are significantly below the national average (3.2 per thousandth). The demographic wave was up for a few years, then came a very strong decline, and in the 60s the birth rate did not even reach the value of 12 per thousandth. The second demographic peak in the 70s was considerably smaller than the previous one, and of course, it was below the national average *(Table 1)*. In the 80s the number of live births was under 12 per thousandth, and our county had the lowest value after Budapest.

The above detailed tendency of births raises the question whether it *is correct to interfere in the tendency of the birth rates, even by drastic means?*

The forceful start-up of the demographic wave of the 50s proved to be harmful from many aspects, the ban of abortion was accompanied by several tragedies, and it was also unfavourable from the economic point of view, while the society could not prepare itself for the demographic peak. It is far more logical, if the state helps to increase birth rates by indirect means. Today these questions emerged again, as the very low birth rates will create a very unfavourable age structure in the future society, and later the tendency will be more diffcult to reverse. The experiences of the 50s show that the ban is an unacceptable means for the society, but the data of the past 10–15 years prove that the incentives do not bring significant results either. We think that the factors influencing the number of births should be analyzed carefully, and they should be

modified so that the financial incentive should help to maintain the standard of living for the desired family model. But this is true only in general, as the factors influencing the birth rates show significant fluctuation in each area – even within the county –, so in areas of depression separate measures should be taken.

Table 1.

5-year average tendencies of the main data of the natural population changes (per 1000 inhabitants)

					Natural increase	
	Csongrád c.	National	Csongrád c.	National	Csongrád c.	National
1901 – 1905	36,0	36,9	20,2	25,6	15,8	11,3
1906 – 1910	34,8	35,8	23,9	24,0	10,9	11,8
1911 – 1915	32,1	32,1	23,2	22,9	8,9	9,2
1916 – 1920	19,0	21,8	21,0	21,7	-2,0	0,1
1921 – 1925	26,5	29,4	15,4	19,9	11,1	9,5
1926 – 1930	24,2	26,0	17,1	17,0	7,1	9,0
1931 – 1935	20,0	22,4	16,2	15,8	3,8	6,6
1936 – 1940	18,5	19,9	14,6	14,1	3,9	5,8
1941 – 1945	21,3	19,4	14,0	16,4	7,3	3,0
1946 – 1950	17,8	20,4	12,5	12,5	5,3	7,9
1951 – 1955	18,0	21,2	12,1	11,1	5,9	10,1
1956 – 1960	15,7	16,5	10,9	10,3	4,8	6,2
1961 – 1965	11,8	13,2	11,2	10,2	0,6	3,0
1966 – 1970	12,9	14,6	11,9	11,0	1,0	3,6
1971 – 1975	14,2	15,3	12,8	11,7	1,4	3,6
1976 – 1980	14,4	15,3	13,9	13,1	0,5	2,2
1981 – 1985	11,6	12,3	14,4	13,7	-2,8	-1,4
1986 – 1990	11,7	12,0	14,7	13,7	-3,0	-1,7

The birth rates in the county are below the national average, but the periodic changes are the same, so practically the same factors influence and determine these birth rates, but the variance from the average can be explained by local circumstances. These are as follows:

– in the 50s migration from the county was very significant, especially from among the active earners. Migration from villages is still going on today, so strong deformities occurred in the age composition of the population, varying in different areas,

and in lots of places (in the majority of villages and small towns) the high rate of old-aged people unfavourably iniluenced the number of births.

– the conditions of life, the j ob relationships of the village population have changed and in connection with these factors the birth rate in villages became lower than in the cities *(Table 2)*.

Table 2.

Demographic indices of the cities of the county (1980–1990)

	Live births	Deaths	Natural increase	Dead within one year per 1000 live births in 1990
Village total	10,2	15,7	-5,5	1,4
Szeged	13,0	12,6	0,4	1,5
Hódmezővásárhely	12,4	14,2	-1,8	1,7
Csongrád	9,8	16,2	-6,4	0,9
Kistelek	10,2	16,3	-6,1	3,3
Makó	10,3	16,1	-5,8	1,4
Mórahalom	10,6	18,5	-7,9	–
Szentes	11,6	13,1	-1,5	0,7
Cities total	12,2	13,7	-1,5	1,5
County total	11,6	14,3	-2,7	1,5

– The strong decline of the number of population of the district, and the unfavourable changes in the age structure also decreased the birth rates. (In the previous decades the birth rates here were higher than in the villages or even in the cities.)

– Participation of women in production is also a hindrance to the establishment oflarge families. Though not significantly, but the level of employment of women in our county is above the national average, and this justifies the special attention we pay to this factor.

– Between the world wars, in some areas of our country having one child became popular, and unfortunately this was also characteristic in our county. This attitude still exists.

– The state provides a significant support to children up-bringing, but unfortunately this is not at all sufficient and does not eliminate differences in the standards of living dependent on the size of the family. The young generation has a very wide-spread opinion, that first they want to establish a secure position, and they think about family planning only after that.

– With the above mentioned negative circumstances taken into consideration it is favourable, that the proportion of the urban population is far beyond the national average, and this has a positive influence on the rate of births. But this positive impact is spoiled by the unfavourable demographic indices of the small towns, which indicate that the reproduction process of the population in these settlements is strongly deformed.

Regarding the proportion ofbirths, significant territorial differences exist in the county: it is somewhat more favourable in the cities (12,2 ‰), than in the villages (10,2 ‰), but the average conceals significant differerences in both types of settlements. It is above the national average in Szentes, Hódmezővásárhely and Szeged, but in Makó it does not even reach the average of the villages. From among the rural settlements the birth rate is favourable around Szeged (Sándorfalva, Bordány, Forráskút, Újszentiván) and in some settlements farther from cities (Ambrózfalva, Nagyér, Baks). Contrary to that, the birth rates of settlements with disadvantageous transport-geographical position or with a widespread farmland are very low. (fig. 8.)

According to the results of the population census the number of births will somewhat decrease until 1995, and in the following one and a half decade an increase can be expected as a result of the „second" demographic wave of the 70s. The „third" demographic wave – considering the size of the present families – is expected to be significantly lower and stretched in time, lengthened. So, some demographic experts doubt that such a wave will come.

Deaths

The death rate is determined by the standard of living of the population, the level of medical care, and the measures necessary for the healthy way of living. The above mentioned factors change periodically and show significant differences in different areas. Before the turn of the century the death rate in our country was very high, as in the underdeveloped countries, as an effect of the unfavourable circumstances, then it showed a constant decline until the 60s, and reached 10 ‰. In some periods, for example, at the turn of the century, in the world war years death rate in Csongrád county was more favourable than the national average, so, especially after World War

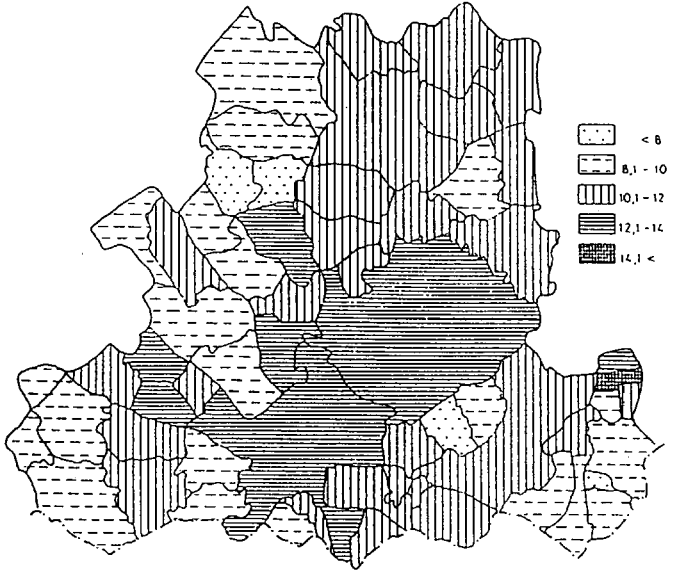


Fig. 8. Birth rate (1980-1989, %)

II the death rate exceeded the national average significantly (generally by 1 per thousandth). From the mid-60s the deáth tendencies changed direction and began to rise. Unfortunately it does not decrease nowadays, so we are among the last ones in Europe.

If we examine the age split of deaths, we find, that in the past decades the biggest increase is characteristic to the age group between 45 and 60, where the proportion doubled, and if we consider the actual numbers, the change is even bigger. The significant difference between deaths of women and men (2,6 per thousandth in 1990) is partly due to the death frequencies of the above mentioned age groups. In these age groups death rate of men is far beyond that of women (more than double). The reasons are well-known, the risk factor in the „dangerous age" is increased to a greater extent, suddenly, and, because of this, heart attack occurs more frequently *(Table 3.)*

From among the special circumstances causing the very high, not too favourable death rate in the county the following factors have to be emphasized:

Due to the migration and the low birth rates the proportion of the old aged population is above the national average, and as a result of this the death rate has to be higher. Further on, the average is also iniluenced by the special situation, that the proportion of suicides is the highest in the country, almost twice as high as the national average. The number of violent deaths and mortal accidents is also too high. In illnesses there is no significant difference within the country, the higher rate of illnesses of the old age is the direct result of the age composition of the population.

There are extremely big differences among the settlements of the county, considering death rates. (The values show strong annual fluctuation, so we calculated with a 10-year average.) Although high in itself, the average death rate of the county is even exceeded the rate in the communities, reaching the incredibly high value of 15,7 ‰; in the cities this value is somewhat more favourable (13,7 ‰), but it is still above the national average, so basically the death index is very bad here, too. The situation became even worse for 1990, death rate in the communities was 17,2 ‰, while in the cities 14,5 ‰.

Among the reasons of the above mentioned differences we can mention the disadvantageous age composition of the population and the insufficient health care, in the first place. The reasons of the differences between cities are the same; Szeged has a relatively favourable position, where the 10-year average death rate is below the national average (12,6 ‰), but at the same time small towns offer a completely different picture: Mórahalom (18,5 ‰), Makó (16,1 ‰), Kistelek (16,3 ‰), Csongrád (16,2 ‰), with a rate that sometimes even exceeds that of rural settlements.

Table 3.

Number of deaths per 1000 people according to age groups

	Male			Female			Total		
	1970	1980	1990	1970	1980	1990	1970	1980	1990
0-9	3,2	2,2	2,3	2,1	2,1	1,7	2,6	2,1	2,0
10-19	0,9	0,7	0,6	0,3	0,3	0,3	0,5	0,4	0,5
20-29	1,4	1,7	2,0	0,5	0,8	0,5	0,9	1,2	1,7
30-34	1,2	3,1	3,0	0,5	1,2	1,4	0,9	2,1	2,2
35-39	2,6	3,5	4,4	1,3	1,6	2,6	2,0	2,6	3,5
40-44	4,2	5,4	6,5	1,4	2,6	2,8	2,8	3,8	4,6
45-49	5,2	9,9	10,4	2,9	5,1	5,0	3,9	7,4	7,6
50-54	7,0	13,4	15,8	3,1	6,3	6,4	4,9	9,7	10,8
55-59	10,5	16,9	23,6	5,5	8,7	9,2	7,8	12,5	15,8
60-69	23,2	37,6	36,6	13,6	19,8	18,5	18,1	27,7	26,4
70-79	56,7	78,0	83,9	44,2	51,4	54,6	49,2	63,5	66,1
80-year old and above	146,4	191,8	183,3	120,6	159,1	155,7	130,1	170,5	165,3
Total	10,3	15,6	16,6	8,8	13,0	14,0	9,5	14,2	15,2

In the majority ofrural settlements the death rate is similar to that of the period between the two world wars, and it is very high in settlements around Makó (in most cases above 18 ‰).

The situation is only better in some villages (fig. 9.).

As we saw it previously the number of live births is low, in spite of this, natural increase is mainly determined by the high number of deaths. This means, that the most urging task is not to increase the number of births, as this will happen in some years' time as the result of the demographic wave; but the most urgent and most important task is to reduce the death rates through the establishment of the conditions of a healthier way of life and through the improvement of health care. In this respect, if we managed to come close to the European average, and to knock down the index below 10 ‰, we could reach the slow increase of the population, despite low birth rates.

Natural increase

Changes of births and deaths are going to the same direction on the long run, but there are special periods, when they move to the opposite directions. In spite of the

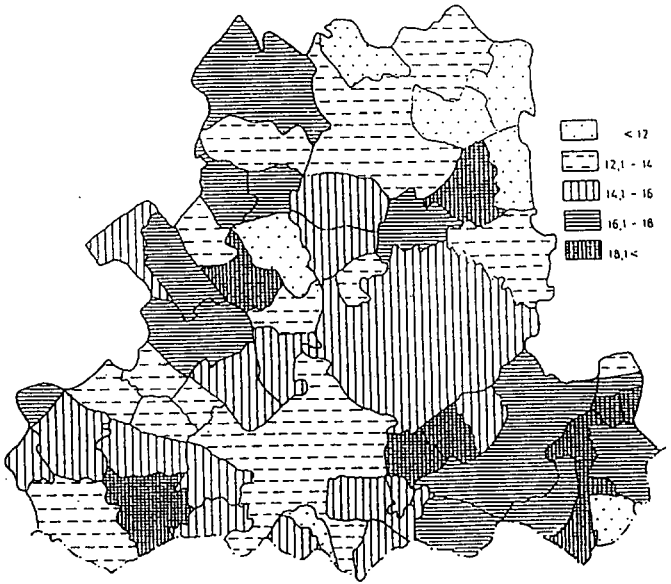


Fig. 9. Death rate (1980-1989, %)

unfavourable death rate, until World War I natural increase remained relatively high, – it was practically the same as the national average – as birth rates were high. During World War I the number of deaths – understandably – grew, and the number of births decreased, so during that short period the population of the county decreased almost by 9000 persons.

During the decades after World War I the previous tendencies remained dominant and the reproduction of the population was relatively balanced. As World War II came nearer, natural increase declined due to the low number of births (3,6 ‰ in 1940), during the war – contrary to the national tendencies – natural increase of the county was up, and afterwards it declined again. In the first half of the 50s the demographic wave – although far below the national average – was well-perceptible in the county, too, which was even more evident, as the death rate was favourable.

From the mid-50s the number of deaths showed a growing tendency until today, and this, together with an extremely low birth rate resulted in the significant decline of the natural increase. During the second demographic peak of the 70s natural increase did not even come near to the value of the first demographic peak, because of the high death rate, although birth rates were also high. In the 80s the death rates stayed at a very high level for a long time, even increased, while the number of births was very low, under the death rate, so natural decrease in the county in the 80s reached –2,7 ‰, and in 1990, –3,5 ‰.

Territorial differences in the natural increase and decrease reflect the territorial differences of demographic indices detailed previously. Natural decrease of the population in the villages of the county during 10 years was 5,5 %, going far beyond that ofcities (1,6 %), but in some cities natural decrease exceeded even the village average (Makó: –5,8 %; Csongrád: –6,4 %; Mórahalom: –8,4 %; Kistelek: –6,1 %).

There was no natural increase in any of the villages, but the extent of the decrease shows very big differences. It is relatively favourable in settlements, where birth rates are above average, while death rates are low. And conversely, where both indices are bad, the natural decrease is also strikingly high. The detailed differences are in compliance with the indices showing the average age of the population, the correlation is extremely strong. (fig. 10.)

Demographic tendencies of the population do not give rise to too much optimism in the county, they are mostly disadvantageous, and the results are grave; partly, the population of the county is heavily decreasing, and partly because the reproduction of the population is getting more and more deformed, so there is little chance for a radical change in the unfavourable tendency. At the end of the 90s the third demographic peak will increase the number of births, however, no significant natural increase will follow, due to the high death rates. In order to ensure suffcient reproduction of the population, as we mentioned previously, death rates should be knocked down, below 10 ‰, approximately.

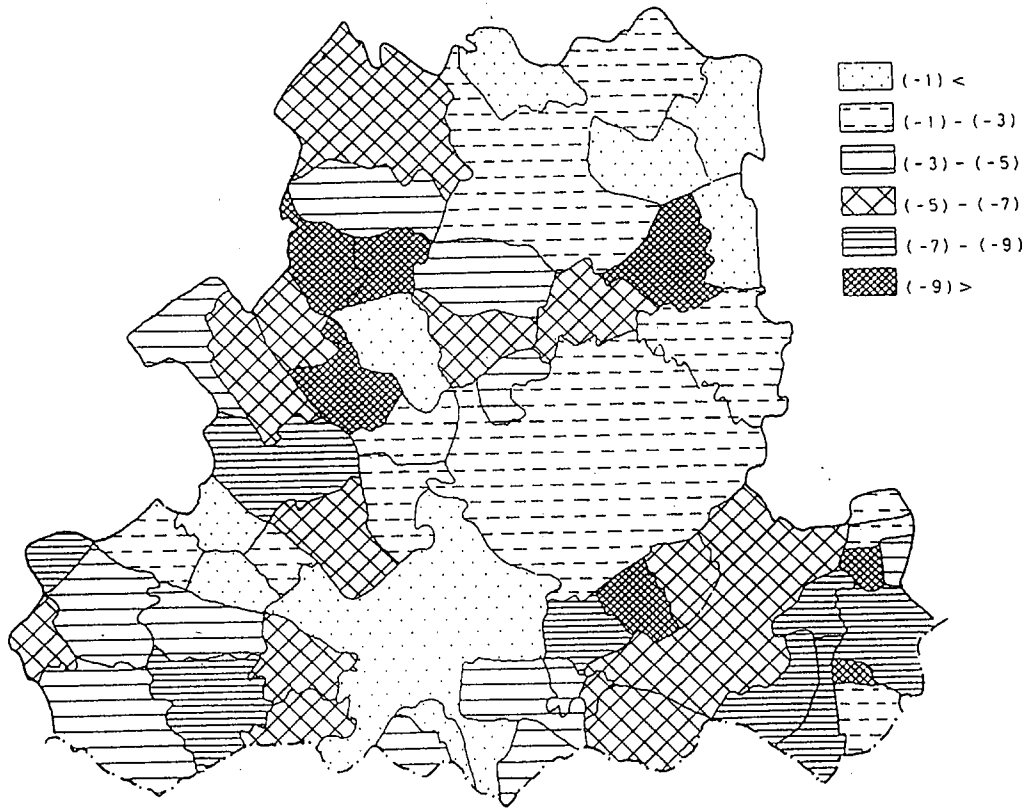


Fig. 10. Natural increase, decrease (1980-1989, %)

Migrations

The size and direction of migration depend mainly on economic and social factors, but its influence on the demographic factors is evident. Transformation of the employment structure is a characteristic tendency of our age, with emphasis on the decrease of employees in agriculture. This tendency directly links to the development and the geographical location of the industry, the movements of these two factors in the past decades were accompanied by significant territorial rearrangement of the population.

Before World War II the county's industry (and agriculture) could not employ the excess labour appearing as a result of the natural increase, so the migration balance was negative even at that time. Industrialization in the 50s favoured primarily the territories that were rich in mineral resources and Budapest. In the country, excess labour, mainly from agriculture, did not find suitable jobs in the weakly industrialized areas, so migration started. In this period a great migration movement developed in the country. Population loss of the county in the 50s was more than 20000 persons.

In the 60s mobility of the population in the county exceeded even the great waves of the previous century, but it had a different impact on our county. As a result of the quick industrialization the county's position became more favourable, and centres were established that absorbed the population, and employed the work force coming from the agricultural section, and also attracted people from the neighbouring counties. The migration balance of Szeged underwent radical changes on the first place, but the losses of other cities were moderated, too. The change is well reflected by the fact, that the migration gain of the 60s almost reached 8500 persons. In the 70s migration strongly decreased, but the balance remained positive.

The extent of migration, of course, has got extremely big territorial differences behind. During four decades – although with a decreasing intensity – constant moving out was characteristic to the majority ofvillages. As a result of this several settlements have lost 30–40 % of their population. *Based on migrations we can identify the following groups in the rural settlements:*

– strong transmigration in the past decades: Nagytőke, Eperjes, Árpádhalom, Felgyő, Ásotthalom, Öttömös (unfavourable transportgeographical position, high proportion of outside population and low number of commuters);

– favourable or improved migration balance: Sándorfalva, Ófóldeák, Zsombó, Nagymágocs, Ópusztaszer, Maroslele, Bordány;

– relative deterioration of the position of the community: Tiszasziget, Derekegyház, Zákányszék, Pusztamérges;

– transmigration moderated stronger than the average: Székkutas, Mártély, Dóc, Nagylak;

– average level of transmigration in the past and present. This is the biggest category. (fig. 11.)

The process was not so clear in the cities: in the 50s Szeged and Hódmezővásárhely had active, while the other cities passive migration balances. In the 60s Szentes joined Szeged, but Hódmezővásárhely suffered a transmigration loss. (This can be explained by the transfer of the county seat to Szeged.) In the 70s all the cities had favourable migration balances.

Due to the liberalization of registrations in the mid-80s statistical data supply, indicating migration, became unreliable. We corrected this unreliability on the basis of the population census so, that we divided the diversions in proportion to the values in statistics. The difference between statistical data supply and reality is not insignificant, because we found out that the migration balance of the county is not active, but to a great extent passive (–5244). As for territorial differences, transmigration from villages decreased significantly (–10380 persons in the 70s, while in the next decade „only" 3642 persons), so their position was almost stabilized, whereas the cities had a loss of 1600 persons, contrary to the previous decades (in 1970–1979 the value of the active balance was 13055 persons). Szeged had an active migration balance with 4000 people, and surprisingly, Mórahalom too.

Mobility of the population has changed radically in the 80s, and this is important for several reasons.

Transmigration dropped all over the country and also in the county, so mobility of the population also decreased.

The main drive ofmigrations in the previous decades was restructurization of employment and the decrease of agricultural employees. In the 80s this tendency practically stopped or rather slowed down to a great extent. From among factors causing migration new job, higher education and family reasons have to be emphasized *(Table 4.)*

– Industrialized areas or industrial centres do not attract people significantly any more.

– In the majority of small towns the force to keep population together, decrease. The age composition ofthose changing their permanent residence became more proportionate, but especially among transmigrants the proportion of young people is very high.

– Changes in the size and geographic location of migration are reflected in the impact of the ever-growing economic crisis, which sometimes reversed previous processes.

– In 1992 the direction of migration changed, all the cities – except for Szeged – suffered migration losses, but the majority of rural settlements had population increase. So the direction of migration was completely reversed, due to the unemployment problems a certain part of the labour force flows back to the villages.

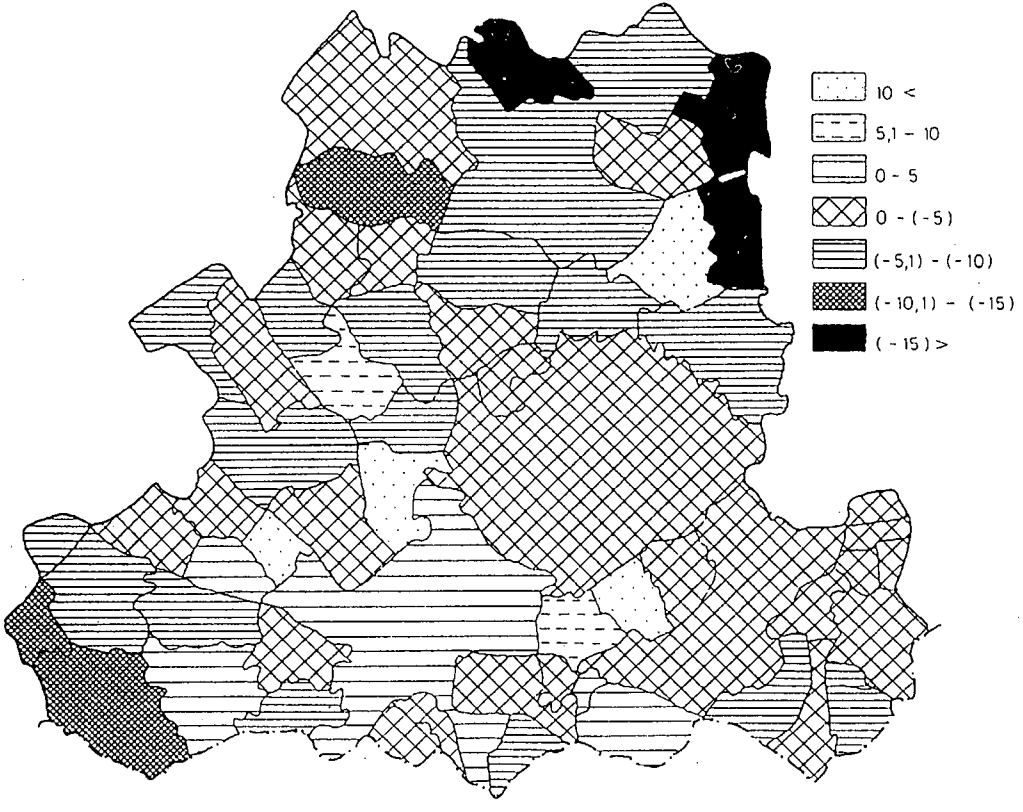


Fig. 11. Migration (1980-1989, %)

Table 4.

Tendencies of transmigration (on the basis of migration objectives, 1989)

Migration	Work	Education	Marriage	Divorce	Moving with the family	Change of flat	Moving into a new flat	Other
Permanent								
to	500	84	671	194	1315	1103	1369	2382
from	516	65	666	182	1303	1056	1300	2389
difference	-16	19	5	12	12	47	69	-7
Temporary								
to	2159	3178	478	259	823	297	454	5387
from	1981	2496	441	231	700	313	454	4817
difference	178	682	37	28	123	-16	0	570
Total								
to	2659	3262	1149	453	2138	1400	1823	7769
from	2497	2561	1107	413	2003	1369	1754	7206
difference	162	701	42	40	135	31	69	563

Territorial differences of migration indicate that trends are different in each type of settlement. As a consequence of this, if we want to determine the trends of migration of the forthcoming years (it is absolutely necessary for a population census), we should separate small towns from villages, and Szeged should also be treated separately. In each of the three groups trends of intensities of migration varied differently in the past decades, and the future trends cannot be the same, either (fig. 12.).

The migration balance of *Szeged* at the beginning of the 90s until the middle of the decade will be negative – according to our calculations –, then, due to the increase of the number of students and the expected economic growth it will increase at a moderate pace. Rural settlements can expect the increase of population until the back-flow from cities stops, and until the relatively high level of agricultural population begins to decrease again. This will happen probably at the turn of the millenary. After this, migration loss can be expected again in the villages – of course with strong differences. And finally, special movement can be found in the migration process of *small towns* (Hódmezővásárhely included). At the beginning of the 80s they suffered a serious population loss, and,. unfortunately, no significant change in their situation can be expected in the 90s, and a somewhat positive balance can be expected only after the turn of the millenary. The industrial crisis affects small towns harder than Szeged, while

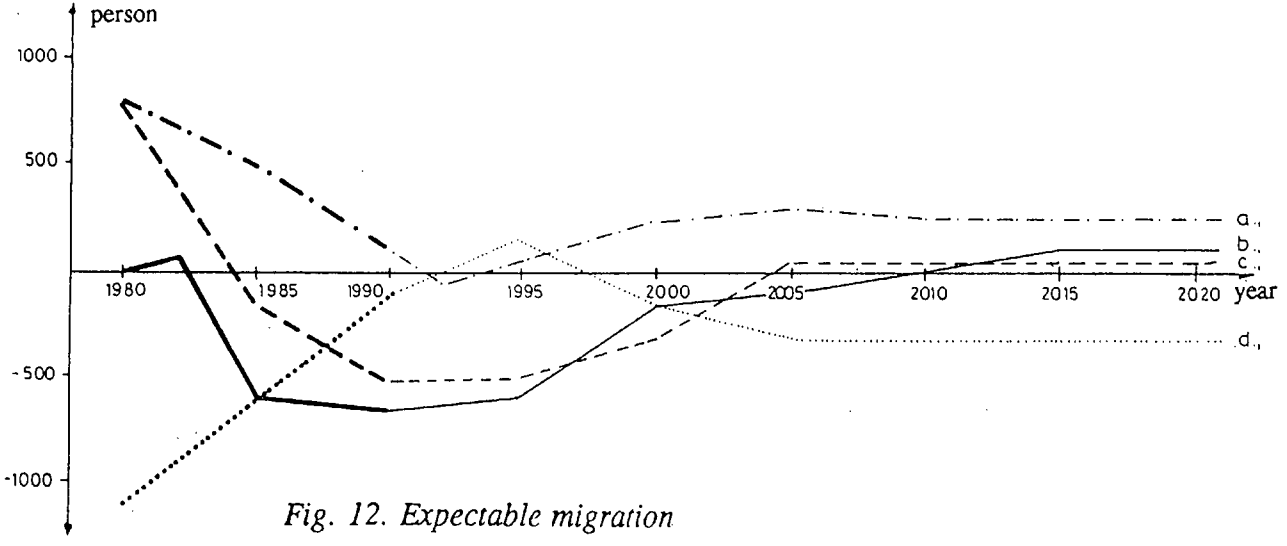


Fig. 12. Expectable migration

a: Szeged b: Csongrád county c: towns (without Szeged)
d: villages

their other functions are weaker, they have few possibilities to compensate the loss they suffered.

If we add up the migration balances of various types of settlements, we can find out that a significant migration loss can be expected in the county in the 90s (an annual average of 7–800 persons). In the next decade migration loss will be considerably less, and the migration balance will be positive again around 2010.

As a consequence of the above said, with the natural increase taken into consideration, the county officials have to count on a great population loss in the next decade.

There was no radical change in the geographic split of migrations in the past 10 years. In 1990 the main directions were represented by Budapest, Békés and Bács-Kiskun counties. Szolnok and Pest counties are also significant. The industrialized areas do not mean a considerable attraction, and it is only in the case of Budapest, where moving out is higher than back-flow. Our county keeps on having a greater attraction to the neighbouring counties. (fig. 13.)

Changes in the number of population

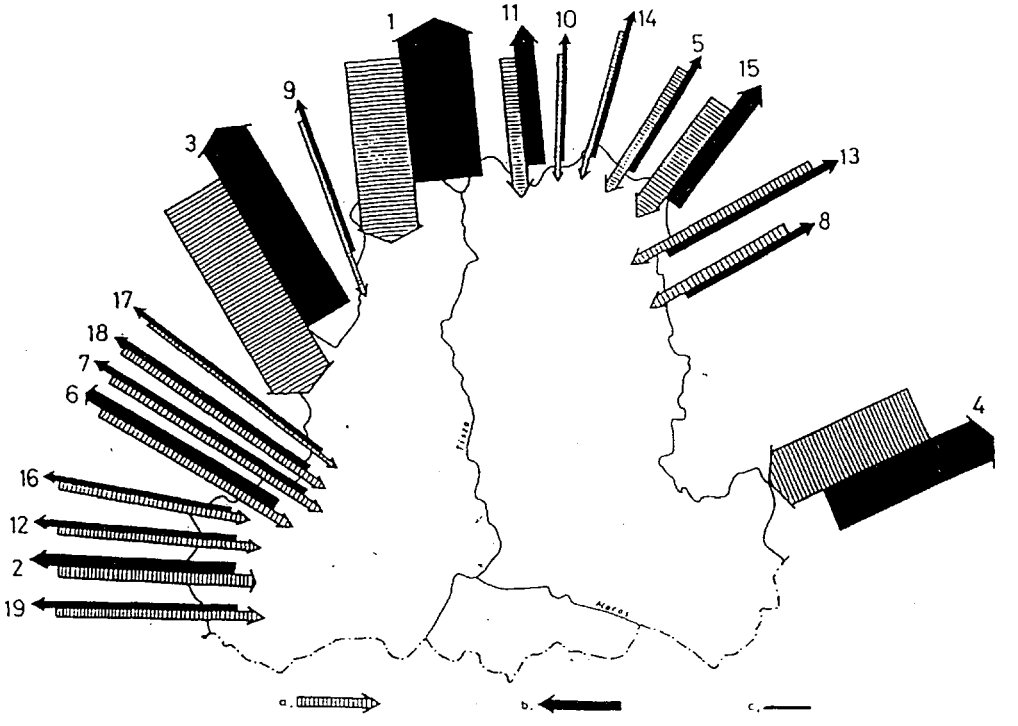
From the turn of the century until the beginning of the 80s the population of the county showed a moderate but constant increase. The pace of the increase was slower than the national average, so the share of the county's population in that of the whole country is decreasing gradually: from 5,3 % to 4,2 %. The losses suffered in World War II caused a significant decrease, but the losses of the county were less, so its national share slightly increased *(Table 5)*.

Table 5.

Development of the present population (1000 persons)

Year	County	National	County as % of national	Density
1900	363,8	6854	5,3	85,4
1910	395,4	7612	5,2	92,8
1920	407,8	7987	5,1	95,7
1930	426,4	8685	4,9	100,0
1941	434,7	9316	4,6	102,0
1949	429,1	9205	4,7	100,7
1960	434,1	9961	4,4	101,8
1970	441,4	10322	4,3	103,6
1980*	456,6	10709	4,3	107,0
1990*	438,3	10354	4,2	103,0

* resident population.



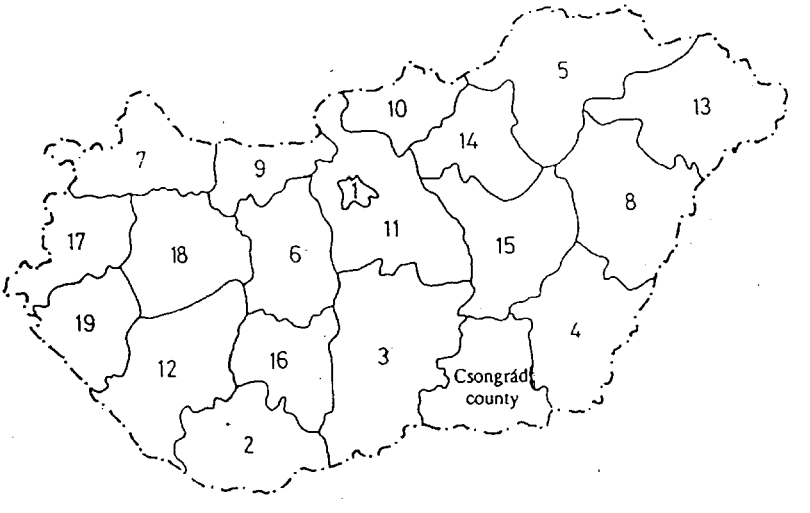


Fig. 13. Directions of migration (1990)

a: in b: out c: 100 person

The background of the increase of the population until the 60s was mainly the natural increase, but in a peculiar way, this role is taken by the migration gain in the 70s. In the 80s both factors, the natural increase and the migration balance, are disadvantageous, so the population of the county began to decline rapidly. (From the 177500 persons 10800 was lost by the villages, 11200, by the small towns, and the population of Szeged increased by 4500 persons.)

From the turn of the century until the 80s the population of the county increased by 93000 persons, which has significant differences in the background. E.g. from 1949 until 1980 the settlements lost 3-5000 persons, the population of the small towns grew by 2500 persons, and Szeged by 60000 persons. So the increase or decrease of the population in the past decades were determined mainly by the changes of the population of Szeged, without the city data the demographic situation of the county are not considerably different from those of the neighbouring counties.

The actual increase and decrease of the population in Csongrád county show significant territorial differences, and in the past decade this changed only to a very small extent (fig. 14.). The figure clearly shows the groups of settlements in unfavourable position: *settlements of the microregion east of Makó, settlements west of Szeged, the Szentes attraction zone settlements south of Csongrád,* and finally *the group of settlements around Kistelek.* Only few rural settlements can show some kind of increase in population.

The direct reasons of the decrease of the population are well-known, the migration during decades has changed the age composition of the population, and this resulted in the decline of the number of births, and at the same time the number of deaths increased. The reproduction of the population has deformed, and occasionally not even a favourable migration balance could hinder this tendency. So the changes of population reflect not only the geographic location of the settlement, but also its economic situation, trends of development, employment opportunities of the population, its financial and supply status, and last, but not least, the level of infrastructure. This is a cogical consequence of the interaction of economic, social and demographic tendencies. The only exceptions are the communities Ófóldeák, Ópusztaszer and Nagymágocs, where the demographic factors show an unfavourable status, despite the favourable migration indices, due to the existence of old people's home.

In the past few years the increase of the population of Szeged stopped, and it has a strong impact on the changes of the county's population. The difference between the factors iniluencing demographic trends for cities and the county is so big, that it has to be taken into consideration when a population census is made.

We can apply various mathematical methods to *determine the expected tendencies of the population of the county,* but it is advisable to set the limits of mistakes in advance. In the soitware we used the number of surviving population was determined by the age shifting method.

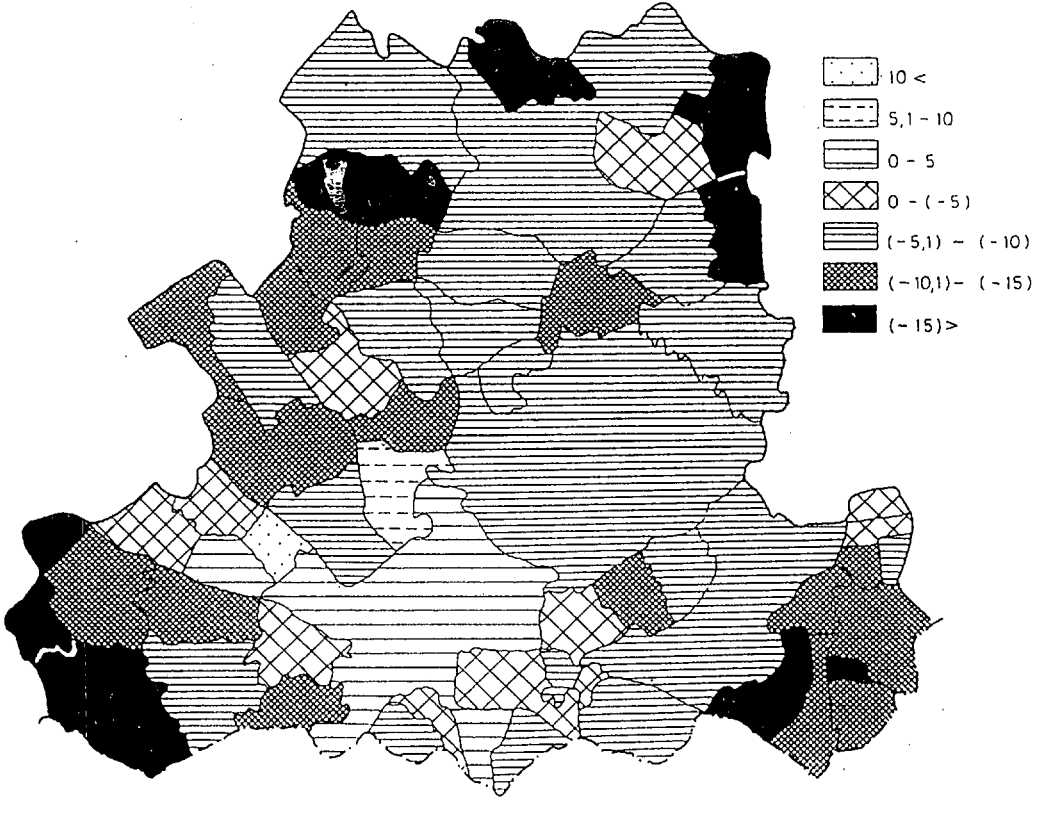


Fig. 14. Real increase, decrease (1980-1989, %)

The formula of age shifting is as follows:

$$P^1_{x+1} = P^0_x \cdot P_x x = 1, 2, ..., 11$$

where x is for age groups.
P^0_x = beginning number of population x age group
P^1_{x+1} = surviving number of population of x age group after 5 years
P_x = 5-year survival probability of x age group (P_x indicates the national proportions, and we consider it constant in time).
We use a separate formula for determining the final age group of the surviving population, as in this case the surviving population of the two age groups is added up, and in the formula it is as follows:

$$P^1_{11} = P^0_{10} \cdot P_{10} + P^0_{11} \cdot P_{11}$$

In the population census migration, as a modifying factor has to be taken into consideration. Calculation of the migration difference was made with the linear trend, based on the tendencies of 1975, 1976, ..., 1979.

Its formula is:

$$V^t = at \cdot b$$

where: a = average change
b = arithmetic average of the data of the time scale
t = −2, −1, 0, 1, 2

So, the formula of age shifting was modified as follows, with the migration movement taken into consideration:

$$P^1_{x+1} = P^0_x \cdot P_x + V_{x+1} \qquad X = 1, 2, ..., 11$$

where: V_x is the expected migration difference of x age group in the period under survey
(The mortality of the population of the migration balance within the age group in question was not taken into consideration.) We have to note, that the migration difference (or migration balance) is the difference between the permanent and temporary migrants coming in and the permanent and temporary migrants moving out during a given period.
In our country migration is a more significant factor of the actual increase, than natural increase.

Further on, our task is *to determine the expected value for the age group 0–4 years, with the previous estimates of the number of births.* The most problematic part of the population census is the estimation of births.

The expected annual number ofbirths can be determined as follows:

$$B = \sum_{x=\omega_1}^{\omega_n} P_x^n \cdot f_x n = 1, 2, ..., 6$$

where ω_1 = the female population of the age group 15–19 years
ω_6 = the female population of the age group 40–49 years
f = frequency of fertility according to age

With regard to the shift of ages of the original age groups during the 5-year survival period, we have to add up the weighed values of the age groups next to each other during the 5-year period:

The formula is:

$$B = \sum_{x=\omega_1}^{\omega_n} (0{,}6P_x^{n,0} + 0{,}4P_x^{n,1}) \cdot f_x n = 1, 2, ..., 6$$

where: $P_x^{n,0}$ = the female population of x age group at the beginning of the 5-year period
$P_x^{n,1}$ = the female population of x age group at the end of the 5-year period
f_x = frequency of fertility according to age.

As the frequency of fertility (f_x) can be significantly different on a national and on the territorial level, we determined the fiequencies of fertility with the help of a linear trend, from the number of live births in the age group of the mother.

Its formula is:

$$P_1^1 = \sum_{y=0}^{4} B\, l_0\, l_1 \ldots l_y + V_1$$

where: l_y = the one-year survival trend of those reaching y year
V_1 = the expected migration difference.

In our calculations the declining tendency of infant mortality was not taken into consideration, that is we considered l_y survival trends constant.

The frequency of births was calculated with a 5-year average, – due to the decrease of the possibilities of mistakes –, and we applied the same for the death rates. In the system, as we mentioned previously, most of the mistakes originate from the calculation of the size of future migration. The trend calculated from the previous period is completely useless, as today's socio-economic transformations influence the migration to a large extent. The old tendencies ceased, and new ones began, but these can be measured only later. So we get a more realistic picture if we separate Szeged from the small towns and from the rural regions, and we try to determine the future on the basis of the new tendency outlines for each type of settlements, and we use the total value

as an input in our programme, divided into 5-year cycles. Through this we can avoid accumulation of eventual statistical mistakes or other mistakes due to misjudgement of the migration balance, so we can also avoid further increase of deformations.

So, in the population census the expected number of births and deaths provide a secure basis, but migration is an uncertain factor. So we prepared the previous calculations in two variations, with and without migration.

Without migration the population of the county will decrease until the turn of the millenary, and in the decade aiter that, as a result of the third demographic wave, there will be a slight increase. Migration, of course modifies the above trend significantly, so the decrease will be rather strong until the year 2000 (20000 persons) and after the turn of the century decrease will stop, mainly due to the favourable migration balance of the cities, and for some decades the resident population of the county remains practically unchanged *(Table 6–7)*.

Table 6.

Population of Csongrád county (without migration)

	1990	1995	2000	2005	2010	2015	2020
Female	229 300	223 078	221 970	224 787	225 388	224 784	224 319
Male	209 542	203 803	202 645	204 658	206 120	206 230	206 013
Total	430 842	426 881	424 615	429 445	431 508	431 014	430 332
Birth							
Female		2 307	2 830	3 330	3 415	3 106	3 019
Male		2 420	2 970	3 494	3 583	3 258	3 168
Total	5 152	4 727	5 800	6 824	6 998	6 364	6 187
in ‰	11,7	11,1	13,7	15,9	16,2	14,8	14,4

Table 7.

Population of Csongrád county (with migration)

	1990	1995	2000	2005	2010	2015	2020
Female	220 300	221 142	218 605	220 349	219 785	216 671	218 191
Male	209 542	202 184	199 838	200 886	201 221	200 756	200 399
Total	430 842	423 326	418 443	421 235	421 006	419 427	418 590
Birth							
Female		2 301	2 790	3 209	3 215	2 924	2 882
Male		2 414	2 927	3 367	3 373	3 067	3 024
Total	5 152	4 715	5 717	6 576	6 588	5 991	5 906
in ‰	11,7	11,1	13,7	15,6	15,6	14,3	14,1

Age composition of the population

Age composition of the population is an important demographic factor, that is determined by the rates of births and deaths and the balance of migration together. At the same time consequential effects on these factors are also very clear. Age composition of the population is absolutely necessary for the population census and for the estimations on the future developments of the labour force.

During the past 50 years changes in the age composition of the population were mainly aimed at one direction. The proportion of young people kept on decreasing, except for some periods, while in 1941 it was 24,6 %, in 1990 it was only 19,5 %. Changes were greater in the proportion of old aged people, in the above mentioned period it almost doubled, rising from 11,5 % to 20,2 %. In accordance with this the proportion of the active population slightly decreased (by 3,6 %) *(Table 8).*

Table 8.

Division of the population according to age groups and gender (1941–1980)

Age group (year)	Division of population (%)					
	1941	1949	1960	1970	1980	1990
0–14	24,6	23,3	23,2	19,2	20,6	19,5
15–39	40,4	37,4	35,2	36,6	35,8	35,4
40–59	23,5	26,0	25,6	24,8	24,6	24,9
60–x	11,5	13,3	16,4	19,4	19,0	20,2
Total	100,0	100,0	100,0	100,0	100,0	100,0
Male						
0–14	25,3	24,7	24,6	20,5	22,0	20,9
15–39	41,5	37,4	35,8	37,7	36,9	36,8
40–59	22,1	25,4	25,2	24,2	24,4	24,9
60–x	11,1	12,5	14,4	17,6	16,7	17,4
Total	100,0	100,0	100,0	100,0	100,0	100,0
Female						
0–14	23,9	22,0	21,9	18,0	19,2	18,2
15–39	39,4	37,3	34,7	35,6	34,7	34,2
40–59	24,7	26,5	25,9	25,3	24,9	24,8
60–x	12,0	14,2	17,5	21,1	21,2	22,8
Total	100,0	100,0	100,0	100,0	100,0	100,0

There is considerable difference between genders, depending on ages, as the proportion ofmales is higher in the younger generation (2,7 %), while the case is the opposite in the older age groups, where the proportion of females significantly exceeds (by 5,4 %), with a growing tendency, the proportion of males. Interesting is, that in 1941 the difference did not reach 1 %.

The proportion of young people is mainly depending on the development of the number of births, in accordance with the demographic peak, with a phase shift, and periodically an increase is seen. The effect of the demographic peak of the 70s became perceptible in the 80s and the years afterwards. The changes indicated in the pre-calculations of the population are occurring according to the mentioned action mechanism, so, in the 90s the proportion of young people reached its lowest value in history (it fluctuates around 17 %) and it will begin to grow again only after the turn of the century. In the old aged group also a slight decrease can be expected, but from 2000 their number will increase again *(Table 9)*.

Table 9.

Division of population according to age groups and gender (in %)

	1970	1980	1990	1995	2000	2005	2010
Male							
0 – 14	20,5	22,0	20,9	17,8	18,2	19,9	22,4
15 – 39	37,7	36,9	36,8	38,2	36,9	36,2	33,9
40 – 60	24,2	24,4	24,9	27,4	28,8	27,3	27,0
60 – x	17,6	16,7	17,4	16,6	16,1	16,6	16,7
	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Female							
0 – 14	18,0	19,2	18,2	16,0	16,4	17,9	20,0
15 – 39	35,6	34,7	34,2	34,4	32,8	31,9	29,9
40 – 55	21,2	18,3	19,1	21,5	22,1	20,4	19,2
55 – x	25,2	27,8	29,5	28,1	28,7	29,8	30,9
	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Total							
0 – 14	19,2	20,6	19,5	16,9	17,2	18,8	21,1
15 – 39	36,6	35,8	35,4	36,2	34,7	34,0	31,8
40 – 55,60	22,7	21,2	21,9	24,3	25,3	23,7	23,0
55,60 – x	21,5	22,4	23,2	22,6	22,8	23,5	24,1
	100,0	100,0	100,0	100,0	100,0	100,0	100,0

The proportion of young people in the county shows significant territorial changes. It reflects the differences existing in the birth rates, but the trend is largely influenced by the communities' migration balance developed throughout previous decades. First of all, there is a considerable difference between cities and villages (1,1 %), but the cities do not show a uniform picture, as the positions of Hódmezővásárhely, Szeged and Szentes are relatively good, but at the same time the proportion of young people is low in Mórahalom, Kistelek, Csongrád and Makó. Primarily migration is a differentiating factor ofvillages, that „determines" the proportion of young people. Several settlements are above the average because of their good geographic location, and because of the good commuting possibilities, migration is less significant. Exceptions to this are Baks, Nagyér, Pitvaros, where the geographic location cannot be considered favourable and the migration balance is not active either, but the rate of births reached an acceptable level during the demographic peak, and as a result of this, the rate of young people exceeds the county average.

In the majority of rural settlements proportion of young people is below the county average, and it is especially low in settlements with disadvantageous location.

The territorial differences in the proportion of old aged people are similar to that of young people, only it has a reciprocal value. That is, where the proportion of young people is high, that of old aged people is generally low. Cities have a better position in these indices, too, but the difference is much bigger (3,7 %) than in the case of young people.

From among the cities Szeged has got a favourable index (17,7 %) where the active migration balance greatly contributed to the establishment of the demographic balance. The other extreme is represented by Mórahalom, Kistelek, Csongrád and Makó, where the proportion of old aged people is very high due to the transmigration of the past few decades.

The villages Csanytelek, Tömörkény, Óföldeák, Csanádalberti, Kövegy, Nagymágocs, Balástya, Pusztamérges, Röszke and Királyhegyes have extremely high proportion of old aged people. Further on, the majority of the settlements of the county has an index high above the county average, only few communities can be considered „young".

The average age of the population of the settlements is added up from the age division of the population. The county average is 38 years, and it grows, understandably (37,5 in 1980). The difference between settlements is 10 years, that indicates a significant spreading. In the youngest settlements demographic balance has been established, young people represent a proportion higher than the average in the population. Among these settlements are Szeged, Hódmezővásárhely, Mártély, Fábiánsebestyén, Nagytőke, Felgyő, Baks, Sándorfalva, Zsombó, Bordány, Forráskút, Újszentiván, Deszk and Kiszombor. Settlements in the close agglomeration of cities have a favourable demographic index, in spite of the high rate of suburban population.

The number of settlements on the opposite side is also high, the unfavourable demographic indices are explained by the disadvantageous location or the high proportion of suburban population (or eventually the existence ofold aged people's home cause the deformity in statistics). The difference between men and women is 3 years in favour of the former ones (who knows whether it is an advantage or a disadvantage!). As every average value, this also conceals territorial differences. In most cases difference is smaller on areas with a high proportion of suburban population – that is 1–2 years, while elsewhere it is 4–5 years.

The age tree offers a clear picture of the relationships outlined previously regarding age composition of the population (fig. 15.)

– The narrow basis of the pyramid always indicates problems in the demographic trends, the „ageing" of the society, the decrease of the labour force, and also the possibility of births of less populous generations in the future.

– Demographic peaks and the depression periods afterwards are clearly outlined. The lack of continuity gives important tasks to experts on both the theoretical and the practical fields. The very large generations born before World War I reached an age when they need regular care. The families are still active, so they cannot undertake this task easily. So, society should provide more help, e.g. through building old aged people's homes organizing provision at home, and medical care, etc.

Ensuring effective employment for the large age groups of 35–40 can be a drive for development. One of the most difficult tasks of today is to create „intelligent", effective jobs and to organize higher education of the growing generation of the second demographic peak, and the housing question in the well-known circumstances is a great problem, too.

According to our calculations the third demographic peak around the turn of the millenary will not be so marked and it will not impose significant diffculties in the changes of generations.

Growing up of age groups with smaller headcounts is not without problems, either, e.g. institutions measured for the demographic peak will not be used up to the full all of a sudden (nursery, Kindergarten, school, etc.) and the specific costs will increase. Most of the time these problems are concentrated on a specific area – in the residential areas.

So, constant increase of the population would simplify the related tasks in many respect.

The age tree shows the female–male proportion. In younger ages males are in majority, but this changes gradually, and from the age 45 the greater number of women, especially in the old age groups becomes „overwhelming".

There was no change in the marital status during the decade, the previous trends continued. The proportion of divorced people increased in both gender (especial-

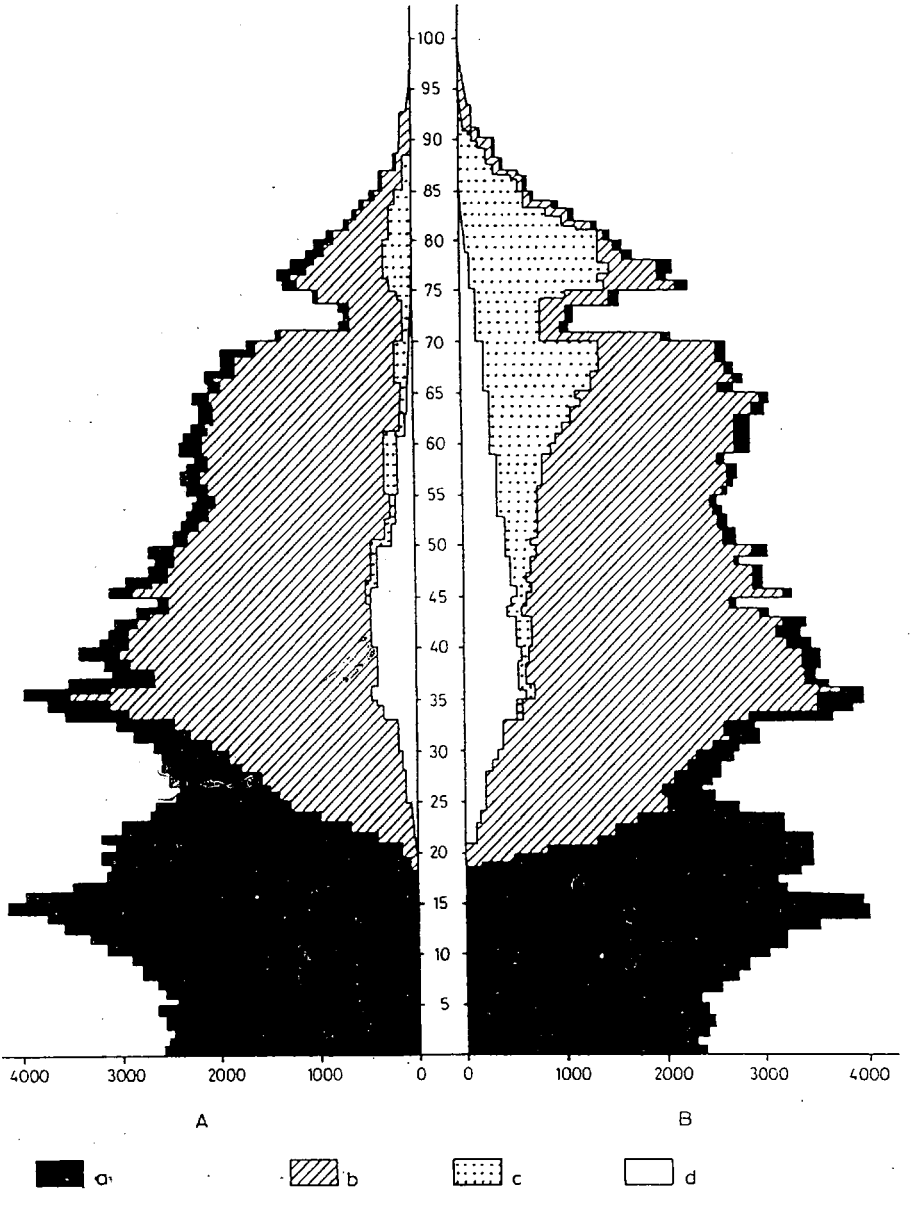


Fig. 15. Age pyramid

A: men B: women

a: unmarried b: married c: widowed d: divorced

ly men), and also the proportion of widows, (especially women) and those getting married also tend to be older.

Population of outskirts

We should briefly describe the population of outskirts, while, as we saw it previously, they have lots of special characteristics, and the average values conceal them. The county is a farmland area, and this factor should be taken into consideration in judging every single economic and social problems.

The population of outskirts is rapidly decreasing, but the extent of the decrease is hard to tell exactly, because statistical data do not reflect reality; e.g. setting of inner territories strongly decreased the number of people living on farms – although the farm structure remained in lots of cases. Transmigration began already in 1930. In the 50s migration from new farms, and from the outside farm area far from the cities became stronger. After the organization of cooperatives migration became very strong, especially from settlements east from Szeged, from settlements around Makó and Hódmezővásárhely.

In 1960–70s the population of outskirts decreased by 40000 persons *(Table 10)* the migrants chose mainly the cities (24–60%) as their new residence, inner areas of villages attracted only 1/3 of the migrants.

Table 10.

Population of outskirts in Csongrád county

	1960	1970	1980	1990	1960	1970	1980	1990
	number				proportion			
Villages	93 614	71 023	43 125	26 736	46,7	38,6	10,0	22,5
Cities	26 756	17 764	13 812	10 678	19,9	13,1	4,2	3,3
County	120 370	88 787	56 937	37 414	35,9	27,6	12,5	8,5

In the 70s migration continued with the same intensity, but its direction has changed and almost 2/3 of migrants preferred the inner areas. In the 80s the number of moving-out decreased, but the natural decrease grew significantly.

According to the data of the population census of 1990 the number of inhabitants living in the suburbs is 37414 persons (8,5 %). The number of inhabitants living in the surroundings of the cities is 10678 persons (3,3 %), the majority of them still live in the village areas. The decrease intensity was the same on both territories, but

if we express it in proportion, the difference is considerable. In the villages proportion dropped from 46,7 % to 22,5 % and in the surroundings of cities, from 19,8 % to 3,3 % during 40 years.

Altogether the loss almost reached 70 %. This tendency radically changed the composition of the farm population and all the demographic trends.

In the composition of the population the proportions of old aged people is very high, 27 %, and that ofyoung people is low, 15,5 %. Interesting is, that the number of women is 1000 behind that of men. The changes in the proportion of active population also indicates the ageing, the number of persons in the age group 15–39 radically dropped, while in the age group 40–59 it grew considerably (fig. 16.) It is understandable, that the death and birth rates are very unfavourable.

According to the territorial division of the population of outskirts the following categories can be distinguished:

– west of Szeged, a slowly developing village core with wide farmlands, where more than half of the population lives. The unity of residential and production functions remained, so it is more resistant to changes of times.

– High proportion of the population of outskirts with a rapidly developing village core: Zsombó, Forráskút, Üllés, etc. The supply is better than that of the previous group, migration is strongly decreasing, they could establish proper work division with their centre. Their demographic indices are also better than those of the previous group.

– In the surroundings of Szentes and south of Csongrád the proportion of the suburban population is relatively high, but the rate of decrease was higher than in the western part of the county. In the 80s migration was the strongest from this region.

– From the settlements around Makó the suburban population practically disappeared, and nowhere reaches 10 %, so migration in the 80s was low. The remaining farms mainly have residential functions. With the privatization we can count on the increase of the number of farms.

– Farm population remained in a smaller degree around cities (except for Kistelek and Mórahalom), they established a special way of life, part of the family is commuting, part of it provides direct supply for the city markets. In this region the real functions make farms viable.

– The employment composition of the suburban population, of course, radically differs from the county averages. The proportion of active earners is lower (40 %) and that of inactive people is much higher (30 %) and there is only a slight difference in the proportion ofdependants (29 %). The differences are more striking in the case of women (e.g. proportion of active earners is Qnly 29 %, inactive: 34 %, dependant: 37 %). 16 % of the active earners work in the industry and, of course, 59 % is employed in agriculture. The proportion of white-collar workers is only 7,5 % (the county average is 31,7 %). (fig. 17.)

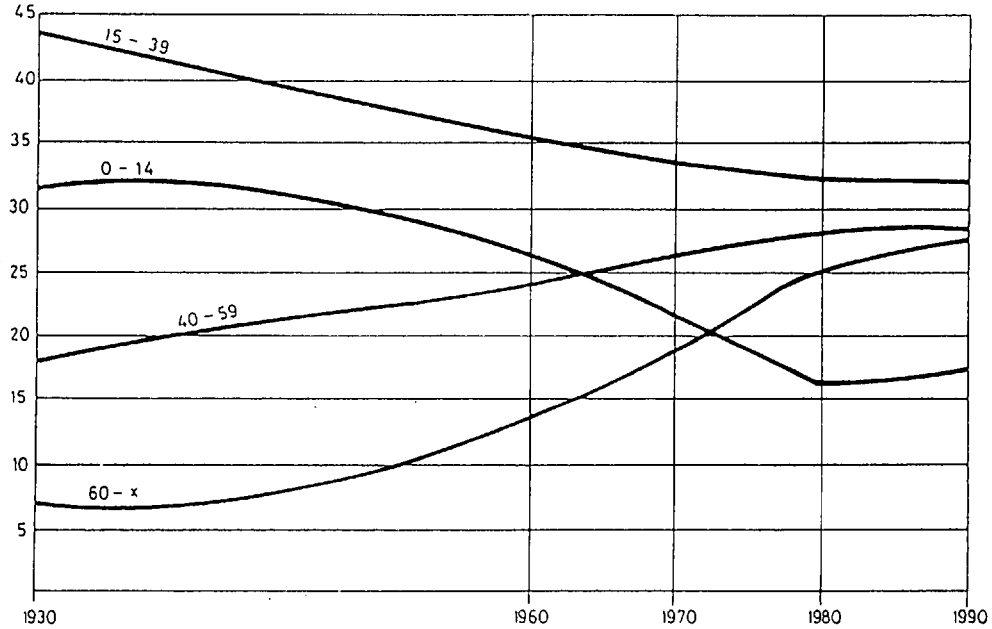


Fig. 16. Population age-group of outskirts

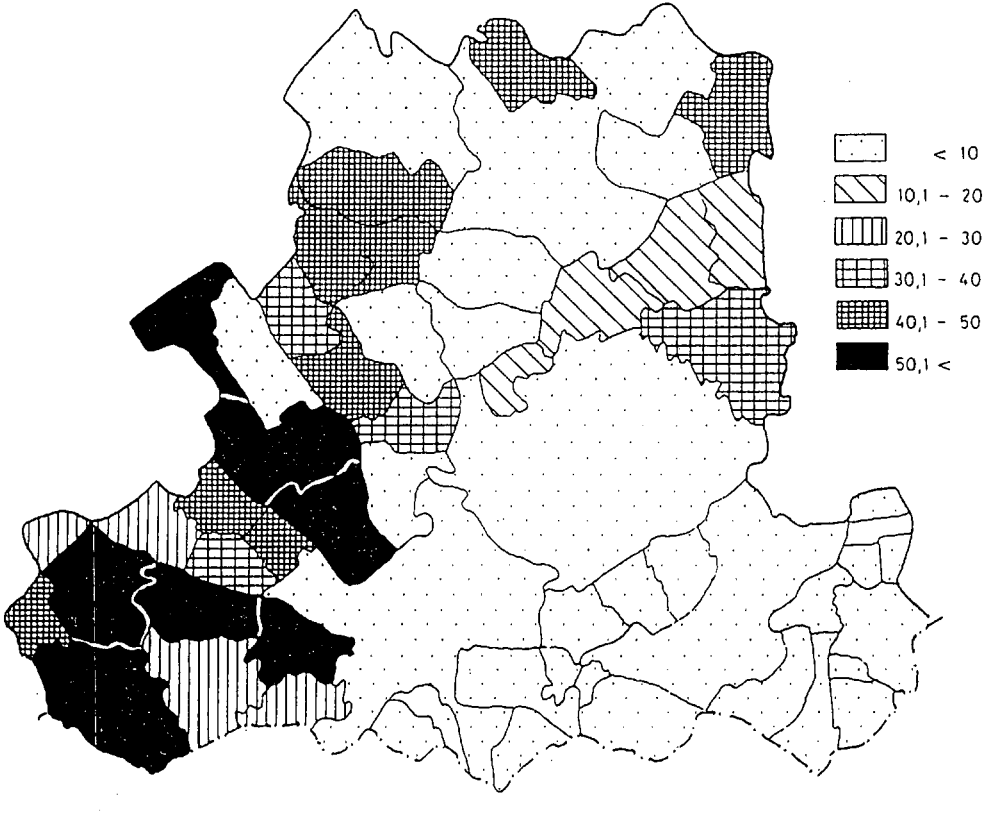


Fig. 17. Percentage of outskirts population

Classification of settlements on the basis of demographic tendencies

Demographic tendencies – births, deaths, natural increase – are closely related to the mobility of the population, the restructurization, the migration, etc. and they depend on each other very much, although in some places they are not in complete harmony, due to the local specialities, they can strengthen each others' effect so they can be added up. In determinirig the settlement types, the individual numerical values of factors referring to each settlement are added up. Based on the results *settlements belong to 6 categories* (fig. 18.). Of course, settlement types express differences between the communities, and they do not represent an absolute value:

1. Szeged and the neighbouring 3 communities belong to a category with *favourable* characteristics, every index (birth, death, migration, actual increase, average age, proportion of industrial workers) is of high value, so they have an outstanding position in the settlement network of Csongrád county.

2. The demographic indices of settlements (11) in *a relatively favourable* position are also good, e.g. the number of daily commuters is high, so the proportion of industrial workers is above the county average, and the demographic indices can also be considered favourable. Hódmezővásárhely and its agglomeration, Mártély and Maroslele belong to this category, and also Fábiánsebestyén from the agglomeration of Szentes, the 6 communities from the agglomeration of Szeged, and interestingly, despite their peripheral location, Nagyér and Ambrózfalva. (2/3 of the active earners is commuter.)

3. The number of average level settlements is low (5). Makó and Szentes belong to here, further on, Mindszent, Nagylak and Üllés. High proportion of the industrial workers somewhat compensate the unfavourable demographic indices in the above settlements.

4. Settlements belonging to the *slightly unfavourable* category (14) do not differ too much from the previous category. The proportion of industrial workers is lower, and the average age is also lower.

5. Settlements with *unfavourable* demographic indices (14) have indices worse than the average in every field, and their transport-geographical location is also unfavourable.

6. Almost every index of the settlements *in very unfavourable* position is the worst (11). That is, death rate is high, birth rate is low, migration is strong, so the number ofpopulation drops, the average age is high, and the proportion of industrial workers is also low.

The traffic–geographical situation is a determining factor in many respects regarding the scope and direction of commuting. Actually the attraction of the centre is accomplished through this, so it reflects its strength and size.

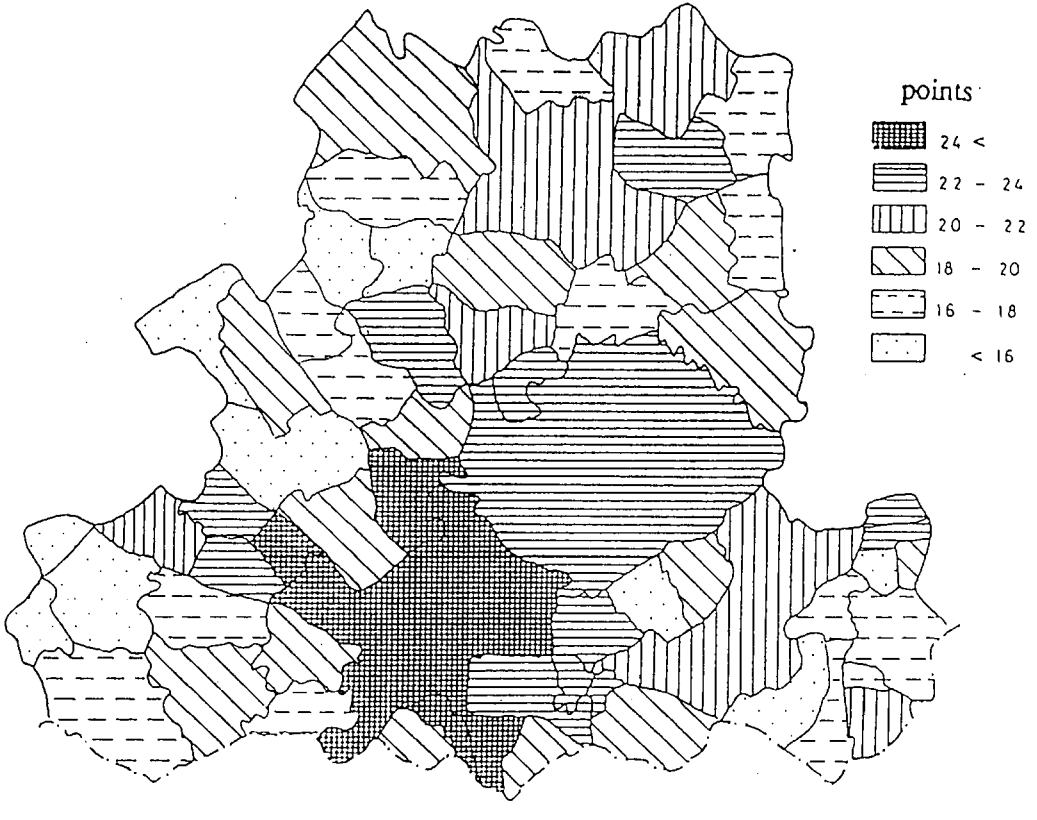


Fig. 18. Settlement-types on the demographic processes

There is a strong correlation between the types of settlements and the proportion of suburban population. Generally the latter factor has an unfavourable influence on the demographic trends.

In determining the types of settlements according to demographic trends, the average age proved to be the strongest factor, its tendency, territorial division, effects influence the other factors, too. But the rate of unemployment is depending on the demographic types of settlements only to a small extent. (We will discuss this issue later.)

Situation of the manpower

Size, composition, direction of change, extent, scope and development characteristics of the socio-economic situation of the county are determined by the demographic relations. In the past decades significant changes occured in the number and composition of the manpower in the county, but there were no sharp changes in the trend.

In 1945–1958 economic development of the county was slow, the frst wave of industrialization did not affect it, but agriculture provided a huge amount of excess labour, so migration became stronger. Characteristic feature of this period is the high proportion of active earners (50 %) and the low level of inactive ones (under 4 %), further on, the proportion of dependants is only slightly below that of the active earners. The latter is due to the demographic peak and to the large number of dependant women.

Characteristic to the branch split of active earners is the low proportion of industrial workers (13 % in 1949), and it increased relatively quickly in the 50s, mainly due to the fact that plants began to work in more shifts. The number and proportion of agricultural workers are high, the restructurization of agriculture accelerated, and as a result of this more and more people left the branch. The proportion of workers of the non-productive sphere showed a slight increase. The cities of the county could not even employ their own excess labour – not even Szeged – so the number of daily commuters was insignificant, and the commuter region included only some communities. The end of the 50s marked an important turning point from the aspect of labour management in Szeged, which later affected almost the whole county.

In 1958–1970, as a result of the industrial development of the countryside, important industrial branches were established in this county, too, and this development period was highly extensive, the number of industrial workers increased by almost 26000 persons, and its proportion reached 32 % by the end of the decade. Agriculture was in a reverse situation, the decrease was stronger and it even reached 35000 persons, and its proportion dropped from 50 % to 34 %. The rapid industrial development resulted

in a more favourable position for Szeged and the other cities, too, and created a labour shortage in the county. Transmigration was followed by a migration gain, and the city agglomerations extended due to the increase of the number of daily commuters. The number of people commuting weekly fiom the county decreased significantly. The number and proportion of active earners did not change significantly, but that of inactives increased rapidly (trebled), while the proportion of dependants dropped (by 8 %).

In 1970–1989 the extensive development opportunities of the industry were gradually exhausted, and intensive development became characteristic to most of the settlements of the county. The number of industrial workers decreased moderately, but at an increasing pace, accordingly, (in the 80s the number of workers of the branch was 10000 less), and although the number of workers in the building industry increased temporarily, but in the last decade that number also dropped. In agriculture the former tendency remained, the number of agricultural workers decreased constantly, year by year, at a decreasing speed, and it dropped to its half in 20 years, and the total loss was 37000 persons. In accordance with the intensive development, the proportion of employees in health care and cultural services doubled and the increase was also significant in transport and trade. The drop in the number of employees is partly due to the modified role of the economic sectors, and partly to the significant decrease of the number of active earners (30000 persons). At the same time the number and proportion of inactive earners almost doubled, and the number of dependants kept on decreasing (by 37000 persons), but its speed sharply decresed in the 80s, as an effect of the second demographic peak, and ás the employment of women was almost complete previously.

Switching over to intensive development did not happen at the same time in all the settlements of the county, in general terms the developed ones were among the first, so, considerable differences emerged in the branch split of active earners, e.g. the number of industrial workers in Szeged decreased by 10000 persons in 20 years, while, at the same time it increased somewhat in Kistelek and Mórahalom and there was no change in the rural settlements. The value is the lowest in the proportion of agricultural workers in Szeged. There was no considerable change in the territorial situation of the work force in the past two decades: although the number of commuters decreased somewhat in the 80s, and its composition also changed, the proportion of the third sector increased but the territorial courses remained almost intact.

The structural change has already begun at the end of the indicated period, and as a result of this labour management underwent a radical change in the last 3 years, and a new period started in almost every respect. The tendencies determinant to the previous decades were changed significantly, some of them ceased, which means that the trends dominant in the past period lost their force, so it is almost impossible to make a forecast on the basis of these. In today's changes there are lots of spontaneous

elements unfortunately, though with strong influence, but we cannot calculate with their long-standing effect. Further on, the evaluation is even more difficult, as the new tendencies, that are very important for the future evaluation, are diffcult to determine exactly and to fully evaluate their consequencies due to the lack of statistical data. So, for example, the increase of the upper age limit of compulsory education to 16 years, the 50–60 % increase of the number of students in higher education, or the modification of the age limit of pension, affected the proportion of active earners, and although the changes can be expressed in numbers, but the plans can be modified from the planning stage until the decision making, so in making a forecast they can be considered only provisionally. It is also very difficult to give a forecast on the effect of privatization on the employment structure. We can work only with estimates also regarding the increase of the number of unemployed workers.

The transformation process has a natural effect on the territorial arrangement of the labour force, unemployment decreases the number of daily commuters, so excess labour force increases in villages and it also changes the commuter regions.

The demographic waves affected and influenced the development of the work force, but its extent was not significant. From 1970 the proportion and number of the population in working age showed a decreasing tendency, this is perceptible especially in the 80s (9000 persons). The more populous age groups of the second demographic peak became active in the first half of the 90s, so the population in working age grows today, the extent of the increase in 5 years was almost 5000 persons. But after 1995 a decreasing tendency will come again, and this will not change in the next 15 years. So tendency will come again, and this will not change in the next 15 years. So the proportion of the population in working age will lose 5 % and will go under 55 %. Parallel to this the proportion of children will reach its lowest value in 1995, and as a result of the third demographic peak, it will show an increase afterwards. In 2010 it will exceed 21 %. The situation is the same with the old aged population, the temporary decrease of the 90s will be followed by an increase, and the proportion will reach 24 % at the end of the examined period *(Table 11.)*

Table 11.

Development of the population according to the source of manpower (1000 persons)

	1970	1980	1990	1995	2000	2005	2010
Male							
Children	44,0	48,5	43,8	36,1	36,3	40,0	45,0
Working age	133,1	134,8	129,4	132,6	131,4	127,7	122,6
Pensioners	37,8	36,7	36,3	33,5	32,1	33,1	33,6
Total	214,9	220,0	209,5	202,2	199,8	200,9	201,2
Female							
Children	41,6	45,4	41,8	35,3	35,8	39,3	43,9
Working age	130,8	125,5	122.1	123,6	120,0	115,3	108,0
Pensioners	57,9	65,4	65,4	62,2	62,8	65,7	67,9
Total	230,3	236,3	229,3	221,1	218,6	220,3	219,8
Total							
Children	85,6	93,9	85,6	71,4	72,1	79,3	88,9
Working age	263,9	260,3	251,5	256,2	251,4	243,0	230,6
Pensioners	95,7	102,1	101,7	95,7	94,9	98,9	101,5
Total	445,2	456,3	438,8	423,3	418,4	421,2	421,0

Division of the population according to their economic activity

From the aspect of the survey on manpower the development of the number of active earners is very important. The number of active earners in the county has changed only to a small extent in the 30s, it increased from 1941 until 1970, then this trend was reversed and it decreased by 29000 persons until 1990, so the change is not in harmony with the development of the population of the county.

There is no significant difference in the territorial division of the active earners among cities, the difference between the lowest value (41,4 %) and the highest one (44,1 %) does not reach 3 %. It is interesting, that in 1960 Mórahalom had an outstanding position with 67 %. During the past decades the proportion of active earners was higher in rural settlements than in cities, but in 1990 cities were the first by 1 %. Contrary to the cities, there are marked territorial differences between rural settlements, regarding the proportion ofactive earners. The lowest level, in Csanádalber-

ti, does not reach 35 %, so it is at least 11 % behind Zsombó, which represents the highest value (46 %).

' The territorial differences reflect the differences in average age, they show the biggest similarity with this factor. The relationship is understandable, as the territorial division of active earners reflect the proportion of the old aged population, while the number of dependants show the proportion of the young population.

The relatively high proportion of the active earners in the suburban population (40,8) is caused by the fact that the number of men is higher than that of women, and the number of active female earners is only the half of that of males. So the difference between the two genders is unusually big, while the proportion of active male earners is 52,6 %, the proportion of female earners hardly exceed 28 %.

The expected changes in the division of the population according to the economic activity was calculated in a different way for each age group, occasionally with the help of trends: so, that we calculated a trend from the employment level data published in the last three population census in the age groups 15–19, 20 and 24 (in these age groups the tendencies are decreasing). In the age groups 25 and 29 years and the older working ages we can consider the average of the three periods as a basis for the pre-calculation, and finally, for active earners above 60 we also used a trend (here the tendency is also sharply decreasing). In the division of the population from the aspect of economic activity we prepared the pre-calculation in two versions. In the first version we reflected the previously described demographic changes, and used the data base received in the pre-calculation, while in the other version the expected government decisions were also taken into consideration, as these decisions will modify the proportions of the categories to a great extent. In 1995 we can count on a smaller increase in the number of students in secondary schools, and a stronger one in higher education. This, with a 50 % increase, will decrease the number of active earners by 980 women and 1070 men, and will increase the number of dependants by the same values. The expected change for 2000 will be bigger, the scheduled new upper limit of primary schools (10 years) will affect the life of 1680 girls and 1930 boys. The increased number of students in secondary schools and in higher education will affect further 1450 women and 1600 men, altogether it will decrease the number of active earners by 6600 persons and increase the number of dependants in the same extent. In 2050 we calculated with further increase in the number of students in secondary schools and in higher education, so we modified the number of active earners by 7630 persons. The proportions will not change further in 2010, so the additional number of people in education will decrease, altogether we calculated with 6180 persons.

The increased pensioner age limit for women will also cause a shift in the proportions of the economic activity of the population. Independently from the schedule of the introduction (that is, at once or gradually, during 5 years) this regulation will increase the number of active earners and decreases that of inactives by the year 2000

by 9970 persons. The same change can be expected in 2005, and peculiarly, in 2010 12700 women will join the production (the number of women in 2005 in the age group 50–55 is 17000).

According to a precalculation based on demographic data only (first version), the number of active earners will significantly increase in 1995, despite the decrease of the population of the county. (In the pre-calculation, unemployed people were considered as active earners, because we can make comparisons to previous decades and calculate trends only this way. So, in the future we always have to deduct the number of the unemployed population.) The reverse trend is understandable, as the populous age groups of the demographic peak of the 70s reach the active age. So, the number of population in this category will not change until 2000, but after that it will sharply decrease. The extent of the change is well reflected by the drop of the proportion, which is lower than in 1990 *(Table 12)*.

Table 12.

Division of population according to economic activity

	1960	1970	1980	1990	1995	2000	2005	2010
Active	219 912	220 110	216 823	194 750*	202 527*	202 140*	194 580*	183 680*
male	138 264	128 864	121 174	108 321	108 796	108 787	104 864	100 390
female	81 648	91 246	95 649	86 429	93 731	93 353	89 716	83 290
Inactive	19 106	59 898	96 244	115 312	109 075	107 936	11 618	114 530
male	9 411	26 922	38 458	43 023	41 249	39 699	40 836	41 200
female	9 695	32 976	57 786	72 289	67 826	68 237	70 782	73 330
Dependant	195 028	165 121	143 233	128 780	111 724	108 368	115 002	122 940
male	61 214	59 114	60 349	58 198	52 175	51 358	55 200	59 768
female	133 814	106 098	82 884	70 582	59 549	57 010	59 802	63 172
				in %				
Active	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
male	62,9	58,6	55,9	55,6	53,7	53,8	53,9	54,6
female	37,1	41,4	44,1	44,4	46,3	46,2	46,1	45,4
Inactive	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
male	49,3	44,9	40,0	37,3	37,8	36,8	36,6	36,0
female	50,7	55,1	60,0	62,7	62,2	63,2	63,4	64,0
Dependant	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
male	31,4	35,8	42,1	45,2	46,7	47,4	48,0	48,6
female	68,6	64,2	57,9	54,8	53,3	52,6	52,0	51,4

* together with the unemployed population

The time modification of the corrected values developed with regard to the expected changes is similar to the first version, the only difference is that they will reach the highest value in 2000, (205450 persons) and a significant change will also occur in the proportion of women – due to the increased age limit of pension – and it will come closer to that of men. (The difference is only 2 %.) The proportion ofmen and women reflects well that women participate in production to a growing extent *(Table 13).*

Table 13.

Division of the population according to economic activity
(corrected with regard to the expected changes)

	1960	1970	1980	1990	1995	2000	2005	2010
Active	219 912	220 110	216 823	194 750*	200 477*	205 450*	196 920*	190 100*
male	138 264	128 864	121 174	108 321	107 726	105 257	100 834	97 070
female	81 648	91 246	95 649	86 429	92 751	100 193	96 086	93 030
Inactive	19 106	59 898	96 244	115 312	109 075	97 966	101 648	101 830
male	9 411	26 922	38 458	43 023	41 249	39 699	40 836	41 200
female	9 695	32 976	57 786	72 289	67 826	58 267	60 812	60 630
Dependant	195 028	165 121	143 233	128 780	113 774	115 028	122 632	129 120
male	61 214	59 114	60 349	58 198	53 245	54 888	59 230	62 988
female	133 814	106 098	82 884	70 582	60 529	60 140	63 402	66 132
				in %				
Active	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
male	62,9	58,6	55,9	55,6	53,8	51,2	51,2	51,1
female	37,1	41,4	44,1	44,4	46,2	48,8	48,8	48,9
Inactive	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
male	49,3	44,9	40,0	37,3	37,8	40,5	40,2	40,5
female	50,7	55,1	60,0	62,7	62,2	59,5	59,8	59,5
Dependant	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
male	31,4	35,8	42,1	45,2	46,8	47,7	48,3	48,8
female	68,6	64,2	57,9	54,8	53,2	52,3	51,7	51,2

* together with the unemployed population

The proportion *of inactive earners* sharply increased in the 60s and 70s (5 times). In 1990 the proportion of 26,3 % can be considered high, so in the next years it will slightly decrease, and after the turn of the century another increase is expected.

Based on the division of inactive earners according to gender we can say that in 1960 the shares of the two genders were almost the same, while today there is a 34,4 % advantage for women. In the future this tendency will moderate, and the proportion of genders will change only to a small extent. The background of the increased proportion of women is the difference between pension limits, on one hand, and on the other hand, further difference between the proportion in older ages.

The higher age limit of pension will modify the gender composition of inactive earners in a way that the proportion of women will clearly decrease, and that of men will increase, so the difference will be around 9 %, that has demographic factors in the background.

The proportion of inactive earners show significant differences among settlements, among cities the lowest is in Szeged, and the highest in Mórahalom. The difference is 5 %. Spreading in rural areas is considerably bigger, e.g. the lowest is 17 % (Kövegy) and the highest is 40 % (Óföldeák), and the difference is already 23 %. The outlined variations are related mostly to the average age of the population (fig.19.).

The proportion of *dependents* show a decrease at a moderating trend and this tendency is expected to remain dominant until 2000, and after that, it will grow again. Contrary to the previous category, here the composition of genders shows a rather high proportion of women in the 50s (more than twice as high as that of men) and this proportion constantly decreases, as more and more women find employment, so by 2010 the difference will be a minimal 3 %. This means, that today the proportion of non-active women is an average of 6–7 %, but it is considerably higher in the older age groups. Women receiving child care benefit also belong to the dependent category. Their number is currently decreasing, but as a result of the third demographic peak, it will grow again on the turn of the century *(Table 14)*. From 1995 the number and proportion of dependants will increase, as well as the index modified with the number of students.

Considering the territorial division of the dependents we find that the number is the highest in Szeged, and the lowest in Mórahalom and Kistelek. So it reflects the dynamism and level of development and the demographic relations of the settlement. It also determines the differences between rural settlements, although, understandably, spreading is very big. (fig. 20.)

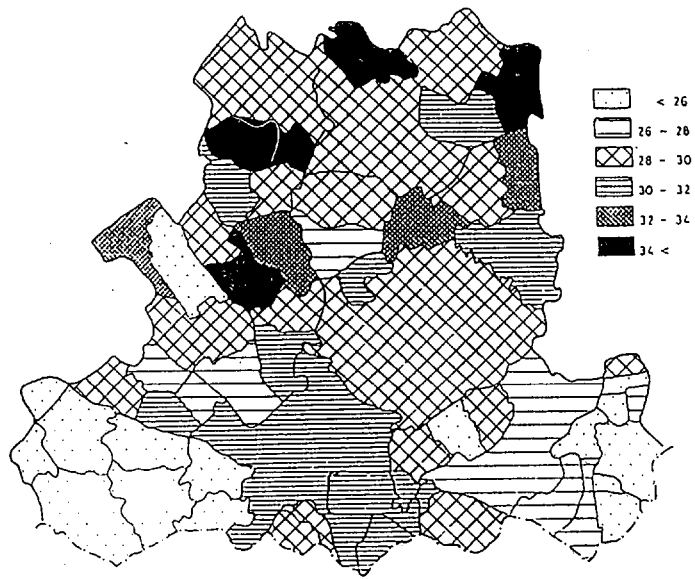


Fig. 19. Percentage of economically inactives

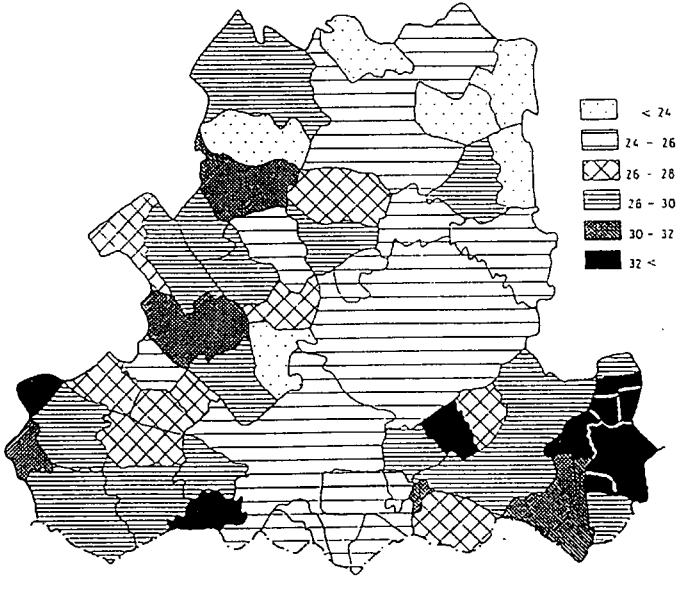


Fig. 20. Percentage of dependents

Table 14.

Active and inactive earners, dependents

Description	Number in 1980 persons	1980 %	Number in 1990 persons	1990 %
Active earners	216 823	47,5	190 561	43,4
Unemployed a)	–	–	4 189	1,0
On child care benefit	11 066	2,4	10 263	2,4
Pensioners, receiving allowance, other inactive earners	85 178	18,7	105 049	23,9
Subtotal – inactive earners	96 244	21,1	115 312	26,3
Children between 0–14, not attending school	44 911	9,8	32 546	7,4
Pupils, students of a college or university	68 931	15,2	79 071	18,0
Other dependents	29 391	6,4	17 163	3,9
Subtotal – Dependents	143 233	31,4	128 780	29,3
Total	456 300	100,0	438 842	100,0

a) total of unemployed, looking for a job and those seeking the first job

Employment

The sectional division of active earners changed periodically, depending on the development, changes, strengthening or weakening of the functions of the settlement. In 1949 the proportion of industrial workers in the county was very low (13,2 %), the majority of the work force was employed in agriculture (56,5 %) and it is understandable, that other economic sections were represented by a very modest rate. As a result of the strong industrialization the employment structure of the county was transformed

in a few decades. By 1980 industry took the lead with almost 30 %, and although its proportion in the past 20 years decreased somewhat it kept its position. Building industry almost doubled its proportion compared to that in 1960, but in the past decade it also showed a decreasing tendency. The proportion of agricultural workers dropped to 1/3 and in 1990 it did not reach 20 %. It is logical, as every other branch attracted the labour force from here *(Table 15., 16.)* In the indicated period transport and trade increased their proportion significantly, almost to the double.

Table 15.

Active earners in economic sections

Description	Division of active earners		
	1970	1980	1990
Industry	32,1	30,7	29,7
Building indusrty	5,9	7,4	6,4
Agriculture and forestry	33,8	24,2	19,5
Transport, post and communications	5,6	7,4	7,9
Trade	6,7	9,2	10,1
Management of water supplies	1,6	2,0	1,9
Other material activities	–	–	0,4
Total material activities	85,7	80,9	75,9
Personal and economic services	2,6	3,5	4,2
Health, social and cultural services	7,8	11,1	14,3
Community, administrative and other services	3,9	4,5	5,6
Total non-material activities	14,3	19,1	24,1
Total	100,0	100,0	100,0

Table 16.

Active earners according to economic sections and genders (1949–1990)

Gender	Total	Ind.	Building ind.	Agricult. forestry	Transp. post, communication	Trade	Mngm. of water suppl.	Other mat. ser.	Personal & econ. service	Health social & cult. service	Comm. adm. & other services
					1949						
male	138922	18497	6198	87040	5458	5952	87	1639		3914	10137
female	59330	7375	87	36051	439	3676	32	4334		3429	3907
total	198252	25872	6285	123091	5897	9628	119	5973		7343	14044
					1960						
male	138264	26098	12007	67235	8709	5836	421	2708		4653	10597
female	81648	18340	569	42456	1536	5290	95	2339		8093	2930
total	219912	44438	12576	109691	10245	11126	516	5047		12746	13527
					1970						
male	128864	36929	11544	48507	9966	5863	2852	2817		5245	5141
female	91246	33822	1484	25944	2441	8861	687	2673		11882	3452
total	220110	70751	13028	74451	12407	14724	3539	5490		17127	8593
					1980						
male	121174	34448	13660	33898	12308	7420	3401	3867		6226	5946
female	95649	32214	2428	18592	3643	12564	1001	3631		17736	3840
total	216823	66662	16088	52490	15951	19984	4402	7498		23962	9786
					1990						
male	105504	30978	10458	26050	10939	6951	2679	448	3608	7056	6337
female	85057	25563	1820	11046	4176	12322	863	256	4342	20418	4251
total	190561	56541	12278	37096	15115	19273	3542	704	7950	27474	10588

The changes were unilateral: growth in the industry and the third sector was not so big as the drop in the number of agricultural workers. As a result of this, the total index of the material branches shows a decreasing tendency, but the non-material branches increased their proportion by almost 10 % in the past 20 years, and within that, health, social and cultural services showed the greatest increase (their proportion

almost doubled). The outlined data reflect not only a change in quantity, but also indicate the development of essential qualitative tendencies. The strong development of medical and cultural services, education and research and the establishment of new institutions are especially welcome. Hopefully the intellectual potential of some cities will be an important factor of development in the future.

The division of active earners according to economic sections and age groups show that the proportion of young people is low in some sections – although for different reasons – e.g. agriculture and management of water supplies are not among the favourite carreers, and the pre-conditions of white-collar employment is the graduation from certain schools. At the same time the proportion of old aged people in agriculture is still the highest. In the latter category a marked rejuvenation occured during the past decades, e.g. the number ofpeople above 55 dropped from 21000 to 3000 in 20 years, while the number ofpeople under 30 dropped from 16000 to 7500. Changes in the age group 30–40 were even less: their number dropped from 14600 to 10900.

The average age in industry and building industry increased – contrary to agriculture –, as the number of young people (under 30) dropped from almost 30000 to 16500 between 1970–90. So the decrease of the number of industrial workers practically happened together with the changes of generations so, that, from the new generations fewer and fewer workers joined the production.

If we examine the composition of *active earners according to the type of employment we* find that the proportion of blue-collar workers decreased by 12 % in the past 20 years (from 74,3 % to 61,1 %), and the fact that the proportion of skilled workers increased from 21,2 % to 30 % and at the same time the proportion of unskilled workers dropped to 1/3, shows an important qualitative change. Also important, that white-collar workers also kept increasing their proportion. We should mention, that the extent of changes show significant differences between genders, so the proportion of female blue-collar workers dropped stronger than that of males (from 70,1 % to 52,2 %). But the number of male skilled workers increased more. Among semi-skilled and unskilled workers there is no significant difference between genders in respect of the direction of changes. Among white-collar workers men could increase their proportion only slightly in the above mentioned period, while the proportion ofwomen increased from 25,6 % to 43,4 %. This means that almost half of the women are white-collar workers. Clearly, their proportion is very high, in the secretarial and administrative jobs. *(Table 17).*

The highest academic qualification of active earners reflects exactly the same tendency that we saw in the previous division according to the type of employment. The generation change means also that the educational level of the new employees is significantly higher than that of the generations reaching inactive age, so the category and the composition according to academic qualifications change year by year *(Table 18).*

Table 17.

Composition of active earners according to type of employment and position, per gender

	Division of active earners %					
	male			female		
	1970	1980	1990	1970	1980	1990
Blue collar workers	77,3	74,5	70,0	70,1	61,5	52,2
skilled	8,2	37,6	41,0	11,3	13,1	16,4
semi-skilled	25,1	27,3	21,6	29,9	34,4	28,6
unskilled	23,4	9,4	7,4	22,2	9,4	6,8
Helping family member of agricultural cooperative worker	0,7	0,3	0,1	6,7	4,7	0,4
White-collar workers	17,2	20,8	21,8	25,6	35,1	43,4
manager, supervisor	–	9,2	9,6	–	4,5	6,5
assistant	–	10,8	11,7	–	19,3	26,8
administrator	–	0,7	0,6	–	11,2	10,1
Independent, helping family member	5,4	4,7	8,1	4,4	3,4	4,4
Total	100,0	100,0	100,0	100,0	100,0	100,0

The proportion of people finishing less than 6 classes of the primary school dropped to a minimum (1,9 %) and the proportion of people only with primary school education also dropped (from 36,4 % to 34,5 % during the decade). It is interesting that there is no significant difference between men and women regarding the direction and extent of changes, but at the same time the proportion of skilled workers shows a strong increase, and here the proportion of women is far behind that of men.

Table 18.

Active earners according to the highest academic qualifications and genders

Description	1980			1990		
	male	female	*total*	male	female	*total*
Less than 6 classes of the primary school	6,6	5,7	6,2	2,3	1,5	1,9
6–7 classes	13,1	14,7	13,8	3,8	3,1	3,5
8 classes	34,6	38,6	36,4	33,7	35,6	34,5
Graduates of technical secondary schools, specialized secondary schools	21,3	11,1	16,8	30,2	17,0	24,3
Grammar scool	16,7	22,8	19,4	19,1	30,2	24,1
Higher education	7,7	7,1	7,4	10,9	12,6	11,7
Total	100,0	100,0	100,0	100,0	100,0	100,0

The proportion of secondary school graduates increased from 19,4 % to. 24,1 % in the past 10 years, but In this category the proportion of women is significantly higher (by 11 %), contrary to the category of skilled workers. This means that after primary school fewer women choose technlcal secondary schools, and more of them prefer other types of secondary education. The proportion of college and university graduates also shows strong growth, but there is only a slight difference between men and women, and while in 1980 the proportion of women was slightly behind that of men, in 1990 it was already 1,7 % higher.

The continuity of changes is very important, as it means that work force in the economic sections becomes more and more qualified, and this, more and more becomes a determining factor, from the future point of view.

If we examine the highest academic qualifications in the types of employment, we also find an increasing proportion of skilled workes and also a higher education level. We would like to emphasize only some relations indicated in the chart *(Table 19)*.

Table 19.

Proportion of highest academic qualifications in the respective types of employment of active earners

Type of employment	Less than 8 classes of primary school		8 classes		Technical secondary school		Grammar school		Higher education	
	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990
Skilled worker	7,2	1,1	32,3	25,5	46,4	54,1	13,9	18,5	0,2	0,8
Semi-skilled w.	33,7	11,9	54,6	68,2	6,6	13,4	5,0	6,3	0,2	0,3
Unskilled w.	46,1	22,8	46,8	64,0	5,3	10,4	1,7	2,6	0,1	0,1
White collar w.	1,5	0,2	16,6	9,8	4,7	6,2	50,5	48,9	26,7	3,5
Blue-collar w. - other	–	–	–	–	–	–	–	–	–	–
Independent, helping family member	44,4	6,8	32,5	34,4	13,5	31,4	7,4	21,9	2,2	5,3
Helping family member of agricultural cooperative w.	54,0	10,3	42,7	73,5	1,9	11,7	1,3	4,5	0,0	–
Total	20,0	5,4	36,4	34,5	16,8	24,3	19,4	24,1	7,4	11,7

In 1980 46 % of unskilled workers did not finish primary school, by 1990 this number dropped to the half (22,8 %). Among agricultural cooperative workers the number dropped from 54 % to 10 %. At the same time the number of primary school graduates increased accordingly. Further on, 10 years ago almost 14 % of the skilled workers passed the final exam of the secondary school, while in 1990, 18,5 %. Its logical that we find the highest proportion of secondary school, college or university graduates among white-collar workers, but cca. 10 % still does not have a secondary school degree.

If we examine the division of active earners according to the type of employment we find that the number and composition of *industrial workers* changed significantly during the decades. In 1949 industry employed just under 13 % of the labour force, but by 1970 this proportion reached 32 % and in the past 20 years it kept decreasing in accordance with the intensive type of development. The slight decrease in the 80s meant e.g. 10000 persons. Today this process has accelerated, and almost 30 %

of the unemployed population comes from this branch, we can say that the number of industrial workers in the county is about 50000.

During the past decades the industrial structure was transformed, the share of heavy industry more than doubled, and at the same time light industry experienced a decrease of 20 %. Despite the rapid development of the heavy industry, food industry could increase its share – only slightly though. So, the industrial structure of the county became far more balanced, several new branches (chemical industry, electric energy industry, manufacturing of electric machinery, metal ware manufacturing, etc.) increased their share significantly. Today the growing economic crisis radically transforms the industrial structure, but it is hard to make any kind of forecast regarding the end of this process, as now, we can see only some of the tendencies. Within the heavy industry crisis hits the machine industry the hardest, so consequently its proportion decreases. In the light industry wood-working industry, textile industry, shoe-making and knitting industry are in a difficult situation. Probably these branches will also loose ground temporarily. The crisis in food industry is only just beginning, so it is hard to see its effect, but probably, from among the exporting branches, meat industry will overcome the difficulties easier than the canning industry, which has problems in finding new markets instead of the lost ones.

In the past few years the development level of the background industry, the service industry and the smaller industries leaves a lot to desire. Today there is an upswing in the above mentioned branches, and this is important and considered favourable from the labour management's point of view.

The majority of private enterpreneurs works in the distribution and does not have the necessary experience, expertise, market knowledge, so the number of bankruptcies is relatively high, but this section employs more and more of the work force. There is a demand for more information, and the information centres to be organized later should care for this.

80 % of the industrial workers concentrates in the cities, and they represent only 20 % in the communities. The proportion of industrial workers in the cities does not automatically mean an urbanization level, as in Makó, Hódmezővásárhely and Csongrád the proportion of industrial workers exceeds that of Szentes and Szeged. The role of industry in urbanization gradually decreases in the process of the intensive type of development, and its role is taken by other functions of the settlements.

Spreading is very signiflcant in rural settlements, too, there is a high proportion in communities where the local industry is strong (Nagylak, Mindszent) or where there are favourable commuting conditions (Sándorfalva, Klárafalva, Magyarcsanád, etc.). The other extreme is represented by settlements with intensive agriculture, mostly with unfavourable commuting conditions and with a high proportion of suburban population (fig. 21.).

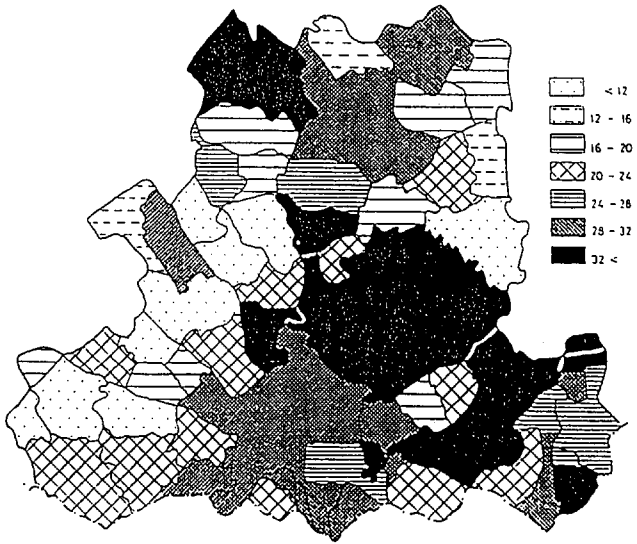


Fig. 21. Percentage of economically actives
(industry)

The proportion of workers in the building industry more than doubled between 1949 and 1980, but in the 80s, similarly to the industrial branch, it lost 1 % (now 6,4 %). After the changes of the system constructions dropped significantly, so the rate of unemployment, compared to the number of workers, is the highest here, so the economic crisis hits the building industry the hardest. In the past few years its organization was also transformed, the number of companies with more than 311 employees decreased, and at the same time, the number of smaller organizations suddenly increased, and they employ 1/3 of the workers. With this transformations the building industry became more flexible and the territorial concentration also decreased. So, the staff decrease was the biggest in this branch, but later the investments related to the Expo '96 and the expected economic upswing will have a favourable impact primarily on this field.

The number of workers in agriculture strongly decreased in the past four decades, their proportion dropped to 1/3 (from 62,1 % to 19,5 %).

Today a back-flow to villages began, although the supporting capacity of the agriculture did not grow, and it cannot employ more workers, and with the termination of extensive farming the number of unemployed agricultural workers will also increase, however, the number of workers employed here, will increase, and it will decrease again only at the end of the decade – if economy reaches stability.

As the proportion of agricultural workers in Szeged is very low, but it is relatively high in small towns (as they have large agricultural areas), it is hardly under the county average. Differences in rural settlements are much bigger, generally they are smaller in settlements with better transport-geographical position, than in peripheral villages with significant suburban population (fig. 22.).

The number and proportion of the workers of the *third sector* increased strongly and continuously in the past few decades, and the current transformation process changes its organizational structure, but an extension can be experienced on the field of trade. Considering the territorial division of the third sector, it shows a close connection with the size and development level of the settlement.

The number of workers in material branches dropped in the past 10 years (the number of active earners also decreased by 16000), but the number and proportion of workers in non-material branches increased considerably, and reached 24 %. This change is reflected in the rapid increase of white-collar workers, too (from 20,7 % to 31,4 % between 1970 and 1990), and parallel to this, in the drop of the proportion of blue-collar workers. Most of the 60000 white-collar workers work in education and health care. The proportion of white-collar workers on technical fields is relatively high, and it is followed by the category of white-collar workers on the field of accounting, financial institutes, finance in general – the past few years experienced the highest growth here.

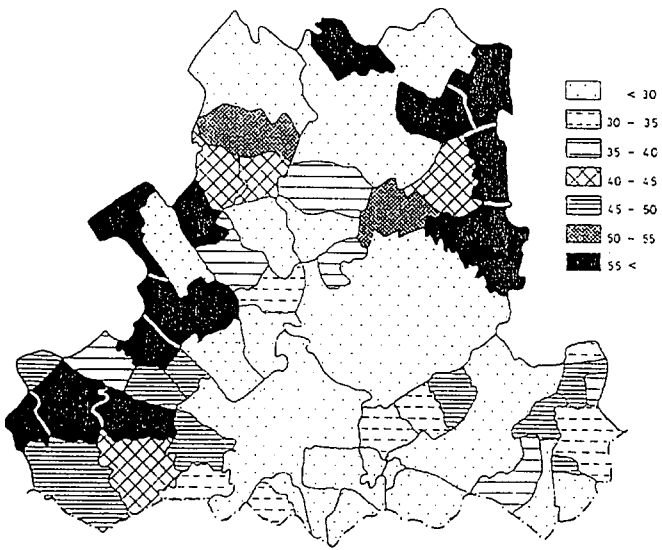


Fig. 22. Percentage of economically actives
(agriculture and forestry)

The proportion of *white-collar workers* is logically the highest in Szeged (42,5 %). 54 % of the intellectual capacity of the county is concentrated here. There is no significant difference between small towns, however, the indices of Kistelek and Mórahalom are hardly higher than the average of rural settlements. The proportion of white-collar workers in rural settlements is fortunately high (17,6 %) and the territorial difference is relatively low. This means that the intellectual class is there in the villages, as well (teachers, doctors, agricultural engineers, etc.), which has a considerable influence on the development of rural settlements (fig. 23.).

We think that the intellectual potential of cities is the most important condition of the future development, and its effect is vital for the material branches. It can give help and serve as a secure intellectual basis for the development of several industrial branches, as e.g. computer technology, biotechnology, chemical industry, food industry, etc. and, of course, it can also support the development of precision engineering and of light industry. We consider the role of Szeged especially important in the organization of the information system of the county and in the use of innovation. Based on experiences the territorial spreading of innovation starts from the centres. Every town in the county, except for Kistelek and Mórahalom is suitable for this role, to a different extent and level.

The development of *the number of the number daily commuters* highly influences the management of the labour force, together with the formation and alterations of labour agglomerations. During the past 10 years the number of commuters is decreased (by 2000), but their proportion practically remained the same (15 %). Almost twice as many men commute daily than women and the number of young commuters is strikingly high (10000 persons under 30), and it seems that above 50 people do not like to travel, as the number of commuters above this age does not reach 4000.

As for the division of daily commuters according to the type of employment, only the proportion of the building industry increases (10,7 %) and the other branches represent almost the same proportion as in the division of active earners according to the type of employment *(Table 20)*.

Unemployment

The growing rate of unemployment and the related problems are serious issues in the life of Csongrád county in the past few years. According to a report dated 20. September 1992. the number of unemployed people was 24275, which is 10,7 % (fig. 24.). This is slightly behind the national average, and fortunately we do not belong to a crisis zone. But this does not mean that we do not have to count on a sharp increase of the rate of unemployment. We think that the rate of unemployment will be around the national average, which means a 16–20 % peak value, due to the industrial structure and the special position of the agriculture.

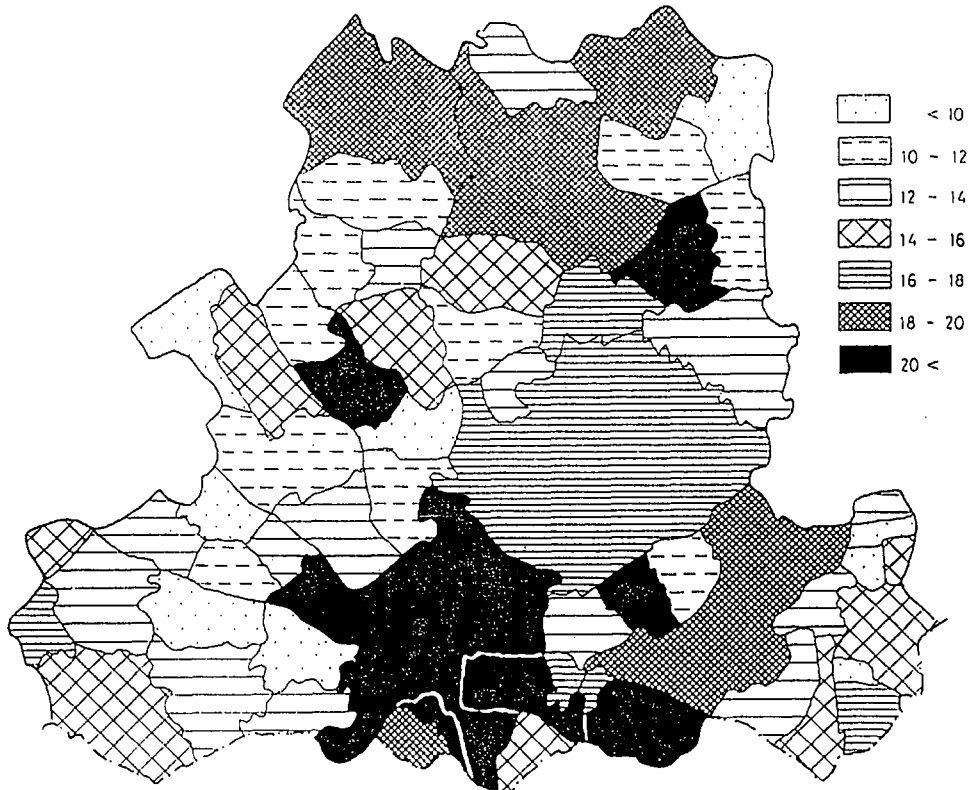


Fig. 23. Percentage of economically actives
(literary activity)

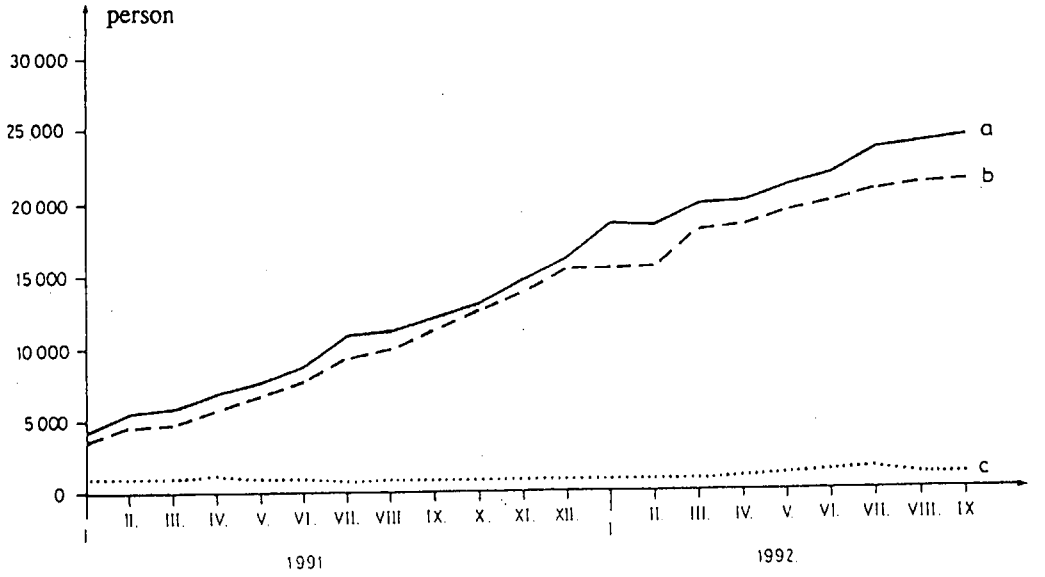


Fig. 24. Change of number of unemployed in 1991-1992

a: unemployed b: supported c: working places

Table 20.

Commuters according to age group and economic branch

Age	1980		1990	
	persons	%	persons	%
14-29	124	41,6	10055	35,2
30-39	6907	23,0	8013	28,1
40-49	5795	19,3	6626	23,2
50-54 female 50-59 male	4344	14,5	3701	13,0
55-X female 60-X male	470	1,6	156	0,5
Total	30015	100,0	28551	100,0
Economic branch				
Industry	9294	31,0	9134	32,0
Building industry	4392	14,6	3048	10,7
Agriculture	5698	19,0	5204	18,2
Transport, post, communication	3685	12,3	3158	1,1
Trade	2484	8,3	2598	9,1
Other	4462	14,9	5409	18,9
Total	30015	100,0	28551	100,0

Considering the territorial division of the unemployed population, there are significant differences, Szeged has the most favourable position among the cities, where, besides the crisis sectors, the city has other function, such as education, that is not affected by the economic crisis so much, what's more, these functions also show a slight increase. In the small towns, especially in Kistelek, Makó, Csongrád the rate of

unemployment is considerably higher, and the difference is expected to remain the same on a long term. Mórahalom has a special position, as the rate of agricultural workers exceeds 40 %, and the rate of industrial workers is hardly higher than 20 %, so the rate of unemployment is understandably low, but as a result of the developing agricultural crisis it will increase rapidly in the next years (fig. 25.).

From among rural settlements those have a more favourable position, where agriculture employs most of the labour force and the commuting opportunities are good, like in Domaszék, Röszke, Fábiánsebestyén, Derekegyház, Székkutas, further on the rate of unemployment is also lower than the county average in settlements with an intensive type of agriculture, e.g. Ásotthalom, Ruzsa, Forráskút, but in settlements far from the centres the rate of unemployment increased more rapidly in the past months, – even if the agriculture is labour intensive –, e.g. in Pusztamérges, Öttömös.

The rate of unemployment is considered to be very unfavourable in settlements where the proportion of commuters is high, local employment opportunities are bad, and the agriculture cannot absorb the labour force.

The division of the unemployed population according to the type of their previous employment shows that in the majority of the cities the number of skilled workers is the highest, except for Kistelek, where the proportion of semi-skilled workers is outstanding.

Generally speaking we can tell that the composition and the educational level of the unemployed population reflects the character of the settlement.

In Szeged the secod place behind skilled workers is occupied by white-collar workers. Here is the highest the number ofunemployed people from this category. In other cities this category represents the lowest level.

The age composition of the unemployed population reflects that the number of young people increased sharply, and especially high is the rate among those just beginning their carreer. The rate of unemployment is four times as high among young people, than among older ones, ifwe compare age groups ofactive earners.

Main demographic characteristics of microregions

Szeged, Hódmezóvásárhely and Makó and the settlements of the hegemonic attraction zone belong to one region, there is no doubt about it. Considering the special characteristics of the three cities a coordinated development would be necessary in the regional development plans. But the administrative division ensures some kind of independence from the county to Szeged and Hódmezővásárhely, but at the same time Makó is under county authority. So in the development plan of the county the influence and effect of the above mentioned settlements should be taken into consideration, but the plan should not be applied for their territory, so we considered them as independent

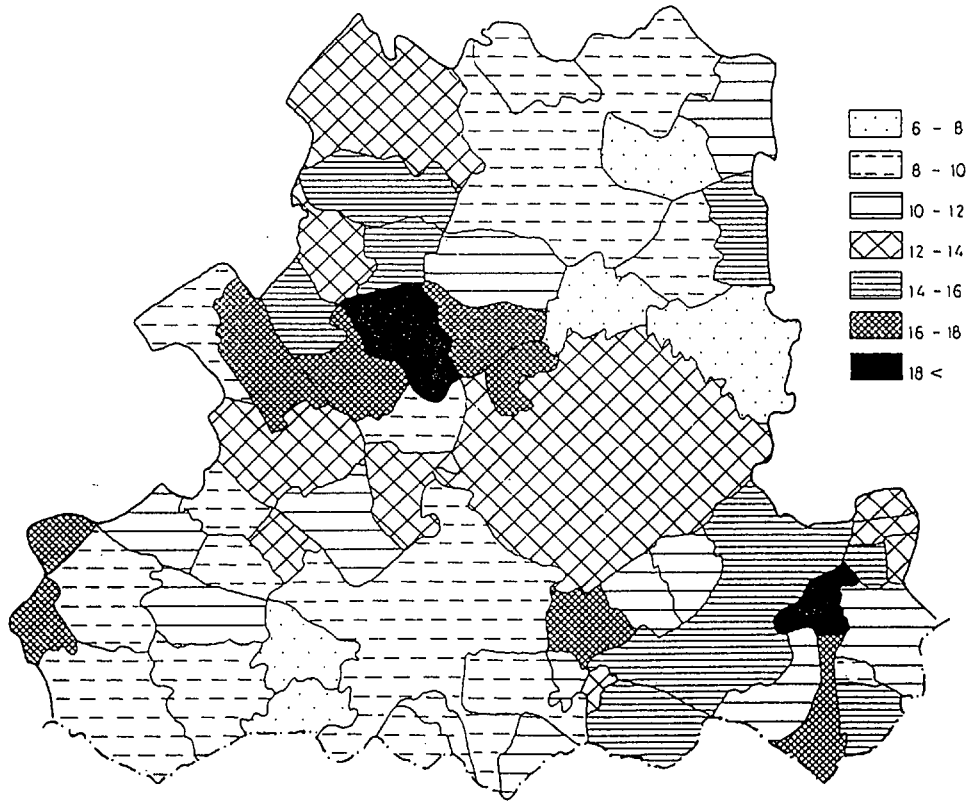


Fig. 25. Percentage of unemployed (20.09.1992.)

units in the evaluation of the demographic characteristics. The situation is similar with Csongrád and Szentes, the two poles of a microregion represent one unit, but eventually there are considerable differences in the demographic indices, so it is advisable to examine them separately. The demographic trends of Kistelek and Mórahalom differ only slightly from their surroundings, so, despite their ranking as towns, they do not need to be treated separately.

Szeged is not only the centre of the county, but also takes regional functions, and has the necessary institutions for this. Consequently, the development opportunities of the city are better than in other cities of Csongrád county. Due to its different economic structure and functions its social structure and its demographic trends are also different. The development of Szeged, the increase of its population was undoubtedly rapid (as for the county, this meant the migration gain for decades), as a result of the active migration balance, the age composition of the population is favourable, it managed to „stay young", so the birth rate is higher than the county average, while the death rate is lower. The higher urbanization level is expressed in the division of active earners according to the type of employment, e.g. the rate of white-collar workers is far beyond the county average, and, similarly, the rate of employees of the third sector is also favourable, while the rate of industrial workers is behind that of other cities.

The influence of the city is very strong, especially in the neighbouring settlements, so it is advisable to treat this *agglomerating zone* also as a separate unit. Based on the demographic trends most of the neighbouring settlements show an integrated picture. Domaszék and Röszke are the only exceptions, mainly because of the high proportion of suburban population, that are difficult to treat in line with the other settlements. From these settlements the number of commuters is very high, more than half of the active earners, so the living conditions are relatively more favourable, their migration loss is small, the age composition, the average age of the population is considered young, so the birth and death rates are better than the county average. The trend of restructurization of the population in the past few decades was very rapid, so the proportion of agricultural workers is relatively low, and contrary to this – as a result of the favourable commuting conditions – the proportions of industrial and especially third-sector workers are much higher than the average ofrural settlements. Based on the demographic trends this area belongs to a relatively favourable category.

The economic development of *Hódmezővásárhely* was slower than that of Szeged, and in the indices it has to be taken into consideration, that the city has a big suburban area, so the data show a deviation, they do not refer purely to the city. The resident population of Hódmezővásárhely slightly increased in the past 30 years, and decreased in the past decade. The migration loss can also be explained by the desolation process in suburban areas. Based on the resident population it is not considered to be a small town. Birth rates are somewhat higher than the county average, while death rates are more favourable, the reproduction process of the population is better than the

county average and does not show strong deviations. From among the settlements connected to the city, Mártély and Székkutas belong to a relatively favourable category – based on the demographic trends –. Maroslele, Földeák, that are partly linked to here, represent the average, and it is difficult to judge the demographic conditions of Óföldeák, because the indices of the small population are sharply deformed by the data of the people treated in the old-aged home. (The migration of the community is active, and the death rate is far the worst in the country.)

The population of *Makó* decreased significantly during four decades especially in the last one, so its loss was 5500. Economic development was not strong enough to be able to stop this disadvantageous process, so the composition of the population is unfavourable, the proportion of young people is low, and that of old people is high. Birth and death rates are bad, so it is quite clear that the reproduction process of the population is strongly deformed. Practically it shows no significant difference from the composition according to the types of employment in small towns. It has a great influence on the neighbouring settlements, but as the town itself has development problems, its favourable effect on the villages east of it is very small. The situation is different in Kiszombor, Ferencszállás and Klárafalva, that have favourable transport-geographic positions, because the influence of Szeged is also very strong. Consequently, based on the demographic trends, we can put them in the relatively favourable category.

From the demographic point of view, the settlements of the microregion *east of Makó* are not homogenous, and in spite of the unfavourable transport-geographic location of the northern settlements, demographic trends as a whole can be considered good. The rate of commuters is very high, and commuting is directed mainly to Békés county. But almost all the demographic indices of Csanádpalota, Kövegy, Királyhegyes, Magyarcsanád and Apátfalva are bad. The population loss of the mentioned settlements in the past 10 years exceeded 10 %. The average age is high, so birth and death rates are unfavourable.

From the demographic aspect *Mórahalom and its surroundings* actually form a homogenous microregion, the rate of the suburban population is very high (mostly above 50 %), and, as a result of this, the demographic indices of these settlements are worse than the rural average. The transport-geographic location of the majority of the settlements is unfavourable, the number of daily commuters is relatively low, the intensive agriculture alone cannot absorb the population, so migration keeps going on, and its proportion exceeds the county average. In the past 10 years the population loss of the area was almost 15 %. The intensive migration, as it is well-known, unfavourably influenced the age composition of the population and the development of demographic indices.

Considering the demographic trends of *Kistelek and its surroundings* this region is a homogenous unity. Except for Baks and Dóc, the demographic indices of almost every settlement are unfavourable. From the mentioned two settlements the rate

of commuters is extremely high (more than 50 % of the active earners), so the positive influence of Szeged affects a large zone, in the direction north. Despite the city title of Kistelek, the demographic indices are rural in character, so its effect on the neighbouring settlements is low, like in the case of Mórahalom. The proportion of the suburban population in the area is high, above 40 %. The extent of migration has decreased in Kistelek, and the migration balance is active in Ópusztaszer (similar to Óföldeák, the statistical data are strongly deformed by the inhabitants of the old aged people's home. The rate of unemployment reaches 18 %, and this proves that due to the compulsory payment of travel costs, companies and institutes dismiss commuter workers first.

The microregion formed by three settlements *south of Csongrád* shows an unfavourable picture from the demographic point of view. The transport-geographic location of the settlements is unfavourable, the rate of commuters reaches 50 % of the active earners only in Felgyő. The rate of suburban population is high, above 40 %. Migration from the region continued even in the past decade, so, except for Felgyő, the average age is high, which has a low birth rate and a high death rate as a consequence. So the population loss of the county in the past 10 years was almost 15 %. From the demographic aspect the microregion belongs to the very disadvantageous territories of the county.

The microregion between *Szentes and Hódmezóvásárhely* is also comprised by three settlements, where, among similarities, we can also find differences. The transport-geographic location of the settlements can be considered average, the rate of commuters exceeds 50 % of the active earners only in Szegvár. The average age in the three settlements is relatively high. The demographic indices are near to the county average, but the population loss during the past 10 years exceeded 10 %, and it was especially big in Kerekegyháza.

East of Szentes four communities form a microregion, and the difference between them, based on the demographic indices, is very big, every index of Eperjes and Ásotthalom is unfavourable, the population loss in 10 years exceeded 15 %, and the average age is high, so the rates of deaths and births are also unfavourable. Based on the demographic trends Fábiánsebestyén and Nagymágocs belong to the average of the relatively favourable category.

From 1949 to 1980 the *population of Szentes* increased by almost 3000, but in the 80s it decreased by 1500. Based on the population gain in previous years and the favourable demographic indices it can be considered as „average" settlement. More exactly this means that the death rate is higher, but the birth rate is somewhat worse than the county average, and the migration loss (above 5 %) is also worse.

As a result of the economic development of the city the proportion of industrial workers is high, the commuter zone is significant, so through this the positive influence on the surrounding settlements is perceptible.

The population of Csongrád has been showing a decreasing tendency since 1949, although in the 70s it increased temporarily, but in the past decade its loss was even more than 2000. The economic potential is small, the development is slow, it cannot even be considered as a commuter centre. Its effect on the neighbouring settlements can be measured only in Felgyő. Based on the demographic trends it can be classified as somewhat unfavourable, which means that the birth and death rates are worse than the city average and the migration increased again, the total loss of natural decrease and migration in the past 10 years was almost 10 %. Despite the high proportion of industrial workers the employment structure cannot be considered favourable, as, compared to the other cities, the proportion of agricultural workers is higher, while the proportions of workers in the third sector and of white-collar workers are lower.

ECONOMY

Industry

The structure of industry

In 1990 the industry of Csongrád county employed 53126 persons which equals to 4,1 % of the number of the national industrial workers *(Table 21)*. From this number 43020 persons were employed by enterprises with headquarters in the county seat, the remaining 10106 persons in other companies and organizations with headquarters in another county seat. The majority of the workers (54,8 %) employed by industrial organizations with headquarters in another county is in mining (hydrocarbon exploitation) and in machine industry. The number ofworkers in light industry with headquarters in another county is also significant (2361 persons), but, considering its proportion, especially compared to the whole of the county's light industry it is less important (13,16 %).

But the chemical industry with headquarters in another county is worth mentioning, it affects 1344 persons, and it gives 48,05 % of all the county's chemical workers. We focus on the chemical industry also for other reasons: because of its reserves and the development opportunities.

If we compare the number of employees working for a company with headquarters in the county, but on an outside plant to the number of employees working for a company with headquarters in another county but on a plant in Csongrád county, the latter is almost twice as high, and in many cases this is unfavourable in respect of the development of the county's industry. With the subsidiaries and plants gaining their independence this proportion is expected to improve. Today, when subsidiaries become independent organizational and economic units, often are privatized, the headquarters give up their units outside the county first. This is a negative selection, too, as according to the national tendency, the units situated closer to the headquarters have a higher technical level, while that level is lower in case of units directed from another county. So, production costs in the latter case are higher, so the company headquartes liquidate these regional units first, by letting them gain independence.

If we examine the branch structure of the purely county-based industry, the following result is given according to inductrial branches:

heavy industry	43,09 %
light industry	33,77 %
other industry	1,84 %
food industry and production of other consumer goods	21,30 %

Table 21.

Number of employees in the county's industry

Description	Companies, organizations with county headquaters	From this: plants outside the county	Companies, organizations with headquaters in another county	From those with county hadquaters the number of workers employed in the county	Pure county industry	
	number of employers				Nr.	%
Total	48484	5464	10106	43020	53126	100,00
From this: mining	-	-	2319	-	2319	4,36
electric energy ind.	3003	1444	.	1559	1559	2,94
metallurgy	968	-	12	968	980	1,84
machine ind.	8952	81	3219	8871	12090	22,75
building material ind.	2973	76	258	2897	3155	5,94
chemical ind.	2158	705	1344	1453	2797	5,26
light ind.	18152	2572	2361	15550	17941	33,77
other ind.	909	5	69	904	973	1,84
food ind.	11369	581	524	10788	11312	21,30

If we compare this structure with the national structure, we find that light industry and food industry are more significant in Csongrád county, and the share of the heavy industry is 16,9 % lower.

Micro- and macro-level concentration of the industry

We have to examine the concentration of industry on both micro- and on macro-(regional) level. The plant concentration of the industry of the county is as follows:

1990

Description	Nr. of industrial establishments	Nr. of blue-collar workers
Max. 10	216	743
11-20	78	1094
21-50	98	2842
51-100	58	4149
101-300	60	10035
301-500	12	4398
501-1000	14	9718
1001-2000	4	4634
Total	540	37613

These data show that in 40 % of the industrial establishments only 2,0 % of the blue-collar workers is employed, while 12,3 % of the total number is employed in 0,8 % of the industrial establishments. This shows a relatively high plant concentration. It is also illustrated by the attached Lorenz curve (fig. 26.). The above data prove that in Csongrád county not just the company concentration but also the plant concentration of the industry is high.

The industry of Csongrád county is concentrated on 7 cities and 34 communities. 93 % of the industrial employees is working in the 7 cities. The industry of Szeged employs 51 % of the total number of industrial workers in the county and 55 % of the total number of industrial workers of the cities. The 34 communities together employ hardly more industrial workers than the fifth industrialized settlement of the county, Csongrád city. The industrialization level of our youngest town, Mórahalom, is below that of several communities of our county.

If we compare the industrialization level of the seven cities of the county, we find, that Hódmezóvásárhely, Szeged and Csongrád are far beyond the city average. The last one is Mórahalom, hardly reaching the community average level.

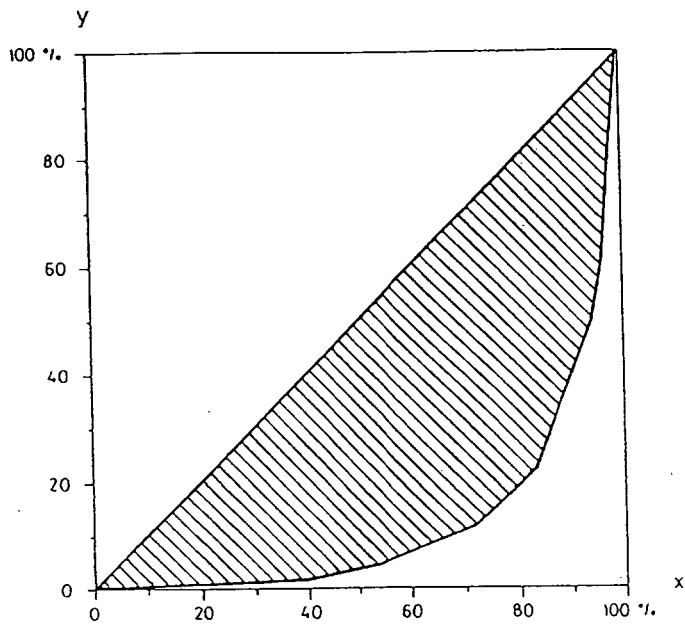


Fig. 26. Concentration of industrial units in 1990
(on the basis of number of manual workers)
x: percentage of industrial units
y: percentage of manual workers

Industrial specialization of the settlements*

The branch structure of the industry is one of the questions in the focus of the professional interests. Today, there is no more dispute on the importance of the rationalization of the industrial structure. In the settlement relations it is also important how the industry of the settlement is divided among various branches, and how the activities of the branches are related to each other, and also, how the vertical and horizontal division of labour is developing.

Further on we were looking for an answer to the question, how the branch specialization (from the human and the material side) was developing in the past two decades in the cities and communities of the county, as this process was strongly influenced by the county specialities, the agricultural conditions of the county, different from the national ones. From the human side the number of industrial workers was taken into consideration, while from the material side, the gross value of fixed asset. We chose 1970 as the basis year, and the actual data are represented by the data of 1990. We used the following branch division for the examination:

Mining
Metallurgy
Machine and equipment industry
Transport vehicles manufacturing industry
Electric machinery and equipment manufacturing
Communication and vacuum technology
Precision engineering
Metal ware industry
Building material industry
Wood-working industry
Paper-making industry
Clothing industry
Textile industry
Leather, fur, shoe-making industry
Printing
Handicraft
Other
Food industry

$$I = \sqrt{\sum_{i=1}^{n} p_i^2} \times 100$$

$$P_i = \frac{Q_i}{Q}$$

Q = the number of employees in an industrial branch or the gross value of the fixed assets of a branch

n = the number of branches

Based on the number of personnel in each branch and the gross value of industrial fixed assets, we calculated the specialization index of the industry of the settlements of Csongrád county. The spreading of the specialization index is as follows:

	%	%
1970 I min	35,08 - I max. 100,00 = 64,93 based on employees	
1970 I min	41,60 - I max. 100,00 = 58,40 based on employees	
1970 I min	32,80 - I max. 100,00 = 67,20 based on employees	
1970 I min	42,79 - I max. 100,00 = 57,21 based on employees	

The minimum value in respect of the four indices was represented three times by Szeged, and, based on the fixed assets in 1990, once in Makó. The extent of the spreading in the 20 years in question increased from the human side and slighty increased from the material side. The direction of the difference between the two indices shows that the degree of supply of fixed assets slightly improved in less asset-intensive branches.

Considering the average of the specialization indices, some changes occured, that show, that the industrial branch specialization of the settlements of the county increased very slightly both from the human and from the material side. The increase was mainly the result of the fact that, compared with the status of 1970, by 1990 another 9 settlements had an industrial plant of the same branch (or company). If we do not take this into consideration, then the branch specialization of the industry has significantly decreased in the industrialized settlements of the county in the 20 years of the survey. So, the industrial activity of various branches in these settlement has widened, that is, diversification increased.

If we take a lookat *the industrial specialization index of the cities of the county in 1990, based on the number of workers,* it is as follows, in growing order:

Szeged	32,80
Makó	37,84
Hódmezővásárhely	39,84
Szentes	43,81
Csongrád	51,58
Kistelek	60,93
Mórahalom	73,77

We find that the value of the most industrialized Szeged city is the lowest, and that of the least industrialized Mórahalom is the highest. This also shows, that in respect of settlements and cities the industrial development was on the way of diversification, and

the plant concentration of industrial companies and the increased specialization did not help the development of the efficiency of the industry. This industrial diversity is not a disadvantage in the current recession, as the crisis hits various industrial branches at different times and to a different extent. (fig. 27.)

Technical niveau, investment

The industrialization in the countryside after 1958–60 resulted in a particular company structure and technical niveau in Csongrád county, too. But the result was rather quantitative than qualitative. The equipments, the technical niveau, the infrastructural background were underdeveloped, so, altogether, the whole industrialization programme did not bring those marked, positive changes, that could simplify adaptation to the current economic environment.

The technical condition of the fixed assets in the county in 1990 showed a very colourful picture:

Name	Real estates	Machinery, equipment	Vehicles	Total fixed assests
	net value in the % of the gross value			
Machine ind.	77,2	29,0	39,5	52,8
Building mat. ind.	77,4	67,4	55,9	71,5
Chemical ind.	72,4	58,0	74,7	70,9
Light ind.	67,3	35,5	38,9	50,4
Other ind.	94,2	81,1	59,4	87,4
Food ind.	77,5	42,5	41,4	60,7
Total	66,1	45,5	42,9	58,1

The depreciation of the fixed assets of the county's industry is very high. For real estates the net value is 66,1 % of the gross value, and for machinery and equipment the average is 45,5 %. But, of course, this percentage is varied according to branches. Unfortunately it is low in the machine industry (29,0), in the light industry (3,5) and in the food industry (42,5). And these are exactly those branches that have an outstanding role in the county's industry.

Fig. 27. Level of industrialization in the settlements
(on the basis of number of industrial employed per 1000 inhabitants)

For vehicles depreciation is even bigger (the net value is 42,9 %) and it is above the average again in the light industry, the machine and the food industry.

If we compare the technical conditions of the industrial fixed assets of Csongrád county with the national status, the disadvantage of the light industry of the county is worth mentioning.

If we compare the gross value of the fixed assets of the industry in Csongrád county projected to the number of industrial workers with the national status, we get an unfavourable picture again *(Table 22)*. Based on the 9-branch division the gross value of fixed assets per employees is higher than the national average only in mining and in other industries in Csongrád county. These two branches employ altogether 3292 persons, that is 6 % of the industrial workers of the county. So, in all the remaining branches the grade of supply of fixed assets is considerably worse than the average in the country. Although it is true that the asset needs are different according to branches and profile, but 7 unfavourable positions out of 9 branches say something.

Table 22.

Gross value of fixed assets per 1000 industrial workers (1990)

Branch	Csongrád county	Country total
	billion HUF	
Mining	11,99	1,94
Electric energy	3,49	5,67
Metallurgy	0,70	1,65
Machine ind.	0,44	0,53
Building material ind.	0,77	1,09
Chemical ind.	1,57	2,23
Light ind.	0,28	0,40
Other ind.	0,25	0,15
Food ind.	0,77	0,91
Total	1,13	1,06

The share of machines and equipment in the gross value of fixed assets is also unfavourable (e.g. in chemical industry: 35,7 %, in electric energy industry: 33,6 %, in food industry: 45,8 %).

Unfortunately, willingness to invest is low in Csongrád county. In 1990 the share of Csongrád county in the total investments of economic organizations was only 2,97 %. Industrial investment per one inhabitant was 8914 HUF, that is 1197 HUF less than the national average, but even less than the value of the neighbouring counties. Construction investments in Csongrád county in 1985 dropped, and since then it did not show sufficient increase to reach the proportion of other counties in the total national value. All this indicates the on-going tendency of the negative processes in the county.

Development of the industrial performance in the past decades

In the past decade the industrial performance of Csongrád county varied according to industrial branches. The performance of the heavy industry, although with some setbacks, showed a growing tendency from 1979, as the basis, until 1987. From then on, it decreases at a constant annual rate (fig. 28.).

The most striking change occured in the light industry. Though the chain relatives describing its annual changes are different *(Table 23.)*, but the figure showing the basis relatives indicates a decreasing tendency of its importance. (By 1990 the performance of the light industry is slightly going up, but the rise of the curve is small, and the direction of change is referring to a smaller time period.)

By 1990 the volume indices of some industrial branches of the county have changed as follows:

Branch	$\frac{1990}{1979}$
heavy industry	1,089
light industry	0,677
other industry	0,599
food industry	1,118
industry – total	0,968

As far as we know, if we continued the time scale until 1992, the performance of the whole industry would show further decrease. A further proof of this is that there was no considerable modernization, while the number of industrial workers significantly decreased.

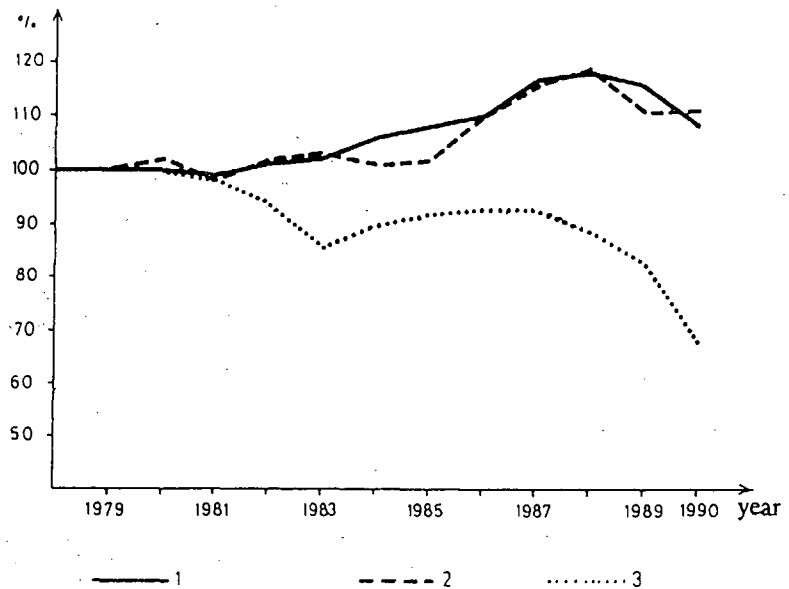


Fig. 28. Change in volumenindex of industrial maingroups
(1979 = 100,0)
1: heavy industry 2: food industry 3: light industry

Table 23.

Development of the industrial performance according to industrial branches (previous year =100,0)

Year	Heavy ind.	Light ind.	Other ind.	Food ind.	Industry total
1980	100,3	99,8	95,7	102,6	100,5
1981	99,2	99,1	103,6	97,3	99,0
1982	102,0	95,9	97,4	101,9	100,1
1983	100,4	91,4	92,5	100,8	97,8
1984	104,4	104,6	97,2	98,4	103,5
1985	101,3	101,7	101,8	101,2	101,4
1986	102,9	101,1	101,8	107,9	103,3
1987	105,7	100,0	103,8	105,2	104,1
1988	101,1	95,8	82,8	101,6	99,6
1989	97,9	93,9	96,8	94,6	96,4
1990	93,9	80,8	80,0	99,9	91,8

Main characteristics of the industry

The significance of the industry in the economy of Csongrád county hardly reaches average, considering national rates. The level of industrialization in 1990 was 121 (number of industrial workers in 1000 inhabitants), that is lower than the national average by 3. With this value we are 13. among the counties and the capital.

The branch structure of the industry of the county has several special characteristics, e.g. food and light industries have a greater importance than the national average, and the branch specialization is low.

The monthly gross salary of the industrial workers was 638 HUF less in 1990 than the national average, and with this value we occupy 9th place among the counties.

The technical niveau of the industry is relatively unfavourable. In the majority of the county's industry (in 7 branches out of 9) the gross value of fixed assets per 1000

industrial workers is lower than the national average, except for mining and other industries.

The technical condition of industrial fixed assets is also not satisfactory. Depreciation of machinery and equipment is the strongest in the food industry, light industry and machine industry.

In the organizational system of the industry in the past period hierarchic structure and the high rate of subordinates directed from outside, often from another county were dominant. The negative influence of these factors is still perceptible today. It restrains flexibility, there are few information related to production and sales in the plants, the number of transmissions is high, the points of decision are not placed properly, the interest and initiative of plant managers are low, the specific asset supply of the peripheral units is worse than in the base plant, the wage level is lower, etc.

The industrial branch specialization of the county's settlements increased in the past two decades. The reason of this growth is that one industry, belonging to the same branch, operated in 9 more settlements. Without this the branch specialization of the industry decreased significantly in other settlements, which is in connection with the special characteristics of the county.

The company and plant concentration of the industry is high. Its territorial concentration is also high (93 % of the industrial workers of the county is employed in the 7 cities, and 51 % in Szeged).

Efficiency of the county's industry was on 9th place among the counties of the country in the mid-80s. Since then this relative place has deteriorated somewhat.

Recent investments in the county's industry do not even reach (the relatively low) national average. Based on the volume of investments put into operation in the industry, the county was on 9th place among counties in 1990.

The rationalization of the branch structure, product group and product structure, the process of development of a new structure has not started in the industry.

Although the transformation of the organizational system of the industry has begun, but it is slow, over-cautious and late. The good effects of the actual transformation are hardly perceptible.

The privatization process in the industry is somewhat slower than in the country in general, and it is also one step behind.

By 1990 the industrial performance of the county dropped the most in the light industry and in the other industries, compared to the situation 10 years before.

Transformation process of the industry

After the changes in the system the disintegration of the Comecon, the collapse of the Eastern markets, the problems accompanying the formation of a real market economy, inflation, mutual indebtedness, the high number of bankrupt companies, the

decrease of the purchasing power of the population, the tightening of the domestic markets, unemployment, entering into the new Eastern markets, adjustment to the world market, meeting the requirements ofjoining the EC, the increase of debts, the need of structural changes have fallen to us all at once. In this situation we need *capital* to achieve marked positive changes.

The shortage of internal resources can be overcome by the use of external ones.

The later the operating capital arrives, the bigger our technical (and other) disadvantage(s) will be, that later can be eliminated only through even greater sacrifices and efforts.

The currency capital (founding capital in hard currency) of the joint ventures founded in Csongrád county in 1991 is the 15. among the counties. This represents 1,03 % of the national value.

The national number of joint ventures founded in 1991 is 5642, and in the county in question it was 174 (this is 3,1 % of the national value). The above data are far behind the national role the industry of our county represents. The average size of joint ventures in Csongrád county is far below the national average.

If we examine the branch structure of the economic enterprises with legal entities, founded with foreign participation in 1991, the very small proportion of the industry is striking (17,8 %). Only 31 joint ventures were founded in all the industrial branches. The branch structure of these is as follows:

	Number of joint ventures founded 1991
Machine ind.	14
Chemical ind.	2
Ligt ind.	13
Food ind.	2
Total	31

So not just the role of foreign capital is that is irrealistically small in the county's industry, but its structure is also deformed. Its structure differs from the current structure of the industry (which is not a problem), but also from the rational structure, the real needs of the region.

Economic enterprises

One of the manifestations of the economic systems change is the transformation of economic associations. As new elements of the market economy, more and more

economic enterprises substitute the formerly dominant companies under the control of the Council of Ministers, the local council or cooperatives.

Today the liquidation of the state property is an important drive in the transformation of the organizational structure of the economy. In these organizational transformations various activities of the third sector (foreign and domestic trade, financial operations, other services) are in the lead.

In December 1991 the number of economic enterprises in Csongrád county was 1797. This represents 15,3 % of all the economic enterprises of the 6 counties of the Great Plain:

Counties	Number of economic enterprises			Economic enterprises per 1000 inhabitants		
	Total	Ltd. Co.	Limited partnership	Total	Ltd. Co.	Partnership
Bács-Kiskun	2871	1368	715	53	25	13
Hajdú-Bihar	2298	951	664	42	17	12
Csongrád	1797	951	377	41	22	9
Jász-Nagy-kun-Szonok	1579	634	319	37	15	7
Békés	1389	623	365	34	15	9
Szabolcs-Szatmár-Bereg	1825	930	248	32	16	9
Great Plain	11759	5457	2688	40	19	9

Source: Related issues of the company information gazettes in the reduction of J. Nemes and É. Ruttkay

The data of the chart indicate that Csongrád county occupies a relatively unfavourable position in terms of both volume and specific indices, even among the counties of the Great Plain, that are falling behind on the structural transformation process of the economy. Bács-Kiskun county is in the lead in every respect of the transformation process.

If we examine the proportion of the Limited companies in Csongrád county, the picture is not too promising, either, as their share is 17,4 % and the share of

partnerships is 14,0 % from the whole of the Great Plain. The latter does not even reach the 15 % population rate.

In Csongrád county the number of economic enterprises per 10000 inhabitants is 41 (the average in the Great Plain is 40), the number of limited companies per 10000 inhabitants is 22 in the county in question (the average in the Great Plain is 19) and the number of partnerships is 9 in both cases. Actually, in the Great Plain Csongrád county takes the lead only in respect of economic enterprises as legal entities.

So in the region Csongrád county shows a value just near to the unfavourable average, where the lowest value is generally represented by Szabolcs-Szatmár-Bereg county, and the highest, by Bács-Kiskun county.

If we analyze the territorial division of the seats of the economic enterprises per settlements, we find that the settlement concentration in Csongrád county is relatively high (that is in accordance with the urbanization level of the county), and only 52,5 % of the settlements is a company seat as well. Under this value we can find only Szabolcs-Szatmár-Bereg county, with 46,7 % and the values in the other four counties are around 52,5 and 73,2 %. So, while e.g. 73,2 % of the settlements of Bács-Kiskun county are functioning as company seats, the same proportion in Csongrád county is only 52,5 %. In spite of this the position of Szeged is the most unfavourable among the 6 county seats: because the number of economic organizations per 10000 inhabitants is 71,3 in Szeged, while it is 71,5 in Debrecen, 81,9 in Békéscsaba, 96,5 in Nyíregyháza, 102,7 in Kecskemét and 105,9 in Szolnok.

The composition of economic organizations in the cities of Csongrád county showed a very interesting picture at the end of 1991:

City	Totals	Ltd. Co.	Econ. association	Limited partnership	Public Co.	Economic teams	Enterprises per 10000 inhabitants
Szeged	1247	662	194	293	15	83	71,3
Hódmező-vásárhely	237	103	73	33	2	26	46,5
Szentes	72	35	13	14	2	8	21,9
Csongrád	56	30	4	4	2	16	28,0
Makó	50	34	6	6	1	3	18,2
Kistelek	18	12	1	5	–	–	23,1
Mórahalom	11	5	1	5	–	–	20,0

Source: based on the collections of J. Nemes Nagy and É. Ruttkai

The data indicate that the transformation of Csongrád county is characterized by development in small steps, slowness, lateness, to a certain extent. The reasons are the termination or interruption of the former social-political and primarily economic relationships (cooperations) (sugar beet, milk, hemp processing cooperations, etc.) In certain cases the over-cautious, slow procedure results in a loss and sometimes also direct damages. The advanced productive forces, the accumulated intellectual capital would make it possible to accelerate the progressive processes of the region, to give an uplift to positive procedures, to start an economic development and increase.

Development opportunities

The economic and industrial structure of our county that was developed in the past decade, cannot be altered overnight, in spite of the clear tasks and the emerging problems (underdevelopment, bad technical niveau, inflexibility, bottle-necks, unused reserves, wasting of various resources, etc.). The reduced availability of development resources, the underdevelopment of the infrastructure, various subjective factors and other newly emerged economic problems also make these changes impossible. A deep analysis of the situation, and the evaluation of the natural, social and economic resources of the region – despite the several uncertain factors – we can outline the desirable direction and some elements of the future change, emphasizing that this is only a potential opportunity, which seems reasonable in the present situation, but significant variations can occur.

We must note the following:

– The natural resources of Csongrád county provide raw materials to the carbonhydrate exploitation and to the building industry – from among the heavy industrial branches. From the raw material side the exploited crude oil and natural gas provide the pre-conditions for a chemical industrial plant. From among light industrial branches we can mention few branches that use local raw materials, except for hemp production and certain handicrafts. The situation is different in the food industry. It seems that mainly this area offers an opportunity for a well-thought-out and reasonable improvement.

From the raw material side the vegetables, fruits, grape, sugar beet, cereals, the pigs, cows, livestock of the region (can) ensure the opportunity for improvement in the meat processing industry, in the poultry and eggprocessing industry, in the canning, cold-storage and dairy industries, in soft drink and wine production, in the sugar and the confectionery industry.

Water and thermal water are favourable factors in the modernization and effective operation of the county's industry.

We must emphasize the qualification level and structure and the great number of qualified work force. There are few other regions in the country where the

concentration of the qualified work force is so high. Both the cultural level and the academic qualifications, the level of education is on the top among the counties. As biology, medicine, pharmacology, mathematics and chemistry are at very high level, and their education is also outstanding, this can have a favourable impact on the development of the chemical industry, food industry, biotechnology, etc.

The well-developed industry needs a similarly highly developed *infrastructure.* Unfortunately neither of the regions of Hungary, including Csongrád county, has any reasons to be proud of, in this field. Based on the complex development index of the infrastructure the county is mediumranked, and occupies 1Oth position among the counties.

The various branches of the infrastructure cannot meet the expectations, not even the financial infrastructure, that showed relatively rapid increase recently. Dynamic development of transport, communication, storage, environment protection (and of course the social infrastructural branches) is absolutely necessary. From among the listed areas the level of communication will take a favourable direction in the near future, as a result of the on-going development process. A similarly rapid development is needed in all branches of transport (waterways, air transport, land transport and railway).

The transformation of the branch and territorial structure of the industry is expected to take a longer period. Actions without thorough analysis can be dangerous, because conflicts can emerge between branch and territorial interests again, and the market positions of the existing and the potential branches (plants) can be damaged.

Agriculture

Some correlations of the development of agriculture

Agriculture, as a spatial economic system, has several territorial development aspects. Not just because it is income-producing, but mainly according to its use of space, that is, according to theterritorial suitability of food production (mainly of agriculture) in the given territorial unit (in the county, in the settlement, etc). Actually this approach comes from the theory, which says that the favourable or unfavourable resources of a territory are depending on the aspect of the examined function (of course, the stereoscopic suitability of several functions can be favourable in the given area). The development of a proper (economic and development) strategy aimed at the proper use of space probably cannot do without these pieces of information. Especially not in the case of the biggest space user, agriculture. We think, that stereoscopic suitability is a determining category, and changes in ownership and structure on their own (without the stereoscopic suitability taken into consideration) do not provide the

necessary result. So we primarily examined those trends and circumstances (possibilities and limits), that can be important in the future of the food economy of the county.

Agriculture and food industry are still the mainfactors of the county's economy. Whatever the structure of agriculture in the future will be, a non-efficient operation less than the maximum capacity is unacceptable. This would mean a serious waste of resources, that is against the interests of both the county and the country.

The use of land for agricultural purposes in Csongrád county is determined by the *arable land and the grass land.* These represent 96 % of the total agricultural use of land. The remaining 41 % is used for vegetables and fruits which is an outstanding agricultural speciality of the county. Vegetable and fruit gardening looks back to great traditions, several vegetables (onion, garlic, parsley, red pepper) are native here, and are the basis of established commercial relationships. New vegetables are also appearing, like bonnet pepper, tomato and capsicum *(Table 24).*

Table 24.

Land according to the type and forms of cultivation 1990, %

	Agricult co., economic association	Agricult. cooperative	Small farmers	Associations outside agriculture	County total.
Arable land	67,6	71,5	61,9	7,0	60,8
Garden	0	0,1	10,1	2,3	2,2
Fruit garden	0,3	0,7	2,7	0,3	1,0
Vineyard	1,6	1,2	2,8	0,6	1,5
Grass	15,6	17,0	10,6	2,8	13,8
Agricultural territory	85,1	90,5	88,1	13,0	79,3
Forest	5,9	3,9	0,3	46,2	9,1
Reeds	0,7	0,4	0	0,3	0,4
Fish-pond	2,9	0,7	0,4	0	0,8
Cultivable land	94,6	95,5	88,8	59,5	89,6
Land not under cultivation	5,4	4,5	11,2	40,5	10,4
Total	100,0	100,0	100,0	100,0	100,0

The transformation process in the large-scale farming began already in 1989 very intensively, and it accelerated in 1991. While in 1988 the average number of employees was 29557, by 1991 it decreased by more than 1/3, to 18890. In cooperatives the decrease of the number of employees in 1991 was 75,7 % of the previous year. Unfortunately this number appears in the unemployment statistics of villages.

It would be desirable to maintain the capital-intensive large-scale farming characteristic of the agriculture. Division of labour with part-time small farmers results in a joint cost-efficiency, and, together with this, also competitiveness. The economic policy, the supporting laws and the financial system should take note of the resources of the county and also the international experiences in the development of the agriculture. In cultivation of grain crops and in animal farming we should follow the steps of the USA, while in growing vegetables, in trade, in processing, the Dutch and German practice should set up a standard. Cooperatives and the transforming state farms should organize a more effective trade with producer interests, because income could be multiplied this way. Temporarily we must count on the decline of domestic trade. Due to this, exports will be vital (for a short period), because we can maintain food industrial capacities only this way.

Despite great „worries" Western exports should increase significantly. Western exports of food products of Csongrád county in 1990 at current price increased to 120,1 % of the value of the previous year, and Eastern exports dropped to 14,4 %. Despite the radical drop of Eastern exports, the total return on export sales exceeded the value of the previous year (although mainly as a result of the *price increase).*

The importance of food exports is also indicated by the fact that 51,6 % of the Western exports of the county was of foodstuffs in 1990, and in 1992 this proportion ranked 55,0 %. In this situation it would be a mistake of the economic policy to give up exports and to cut down agriculture, and there is no acceptable reason for it!

Watering can be the basis of vegetable and fruit production with large yields, and also that of the related industrial processing. We can count on an increased consumption of fresh and chilled fruits and fruit juices in Western Europe, and of canned vegetables in Eastern Europe. International statistics show that besides the consumption of orange juice, the consumption of tomato juice is also increasing. The viticulture of Csongrád county is also worth mentioning. Now it is in a loosing position, and is declining, loosing its name and fame. Everybody knows that the position of this excellent vine-country, with private and cooperative-owned vine-cellars, with strict quality guarantees, can be restored.

Using the current state subsidy opportunities the characteristics of the agriculture of the county are the significant *hothouse cultivation, poultry farming* with thermal water, and communal heating (more than 40 % of the utilisable *thermal energy* is in this county.

We must mention that hothouse cultivation could maintain its position only because of a well-organized trade (so-called „KZR"), that ensured sales. Hothouse cultivation became a determining factor in *large-scale vegetable growing.*

Poultry farming practically broke down in the past two years. Its political and economic support was linked to the leading personalities of the old system, with prices cut down forcefully, and with development and export subsidies far beyond the subsidies of other branches. Now, the reorganization of production is on the way, Csongrád county can keep its position in the competition because of the thermal energy, although the large „tax" (fund-like) levied on thermal energy can cut back utilization. This government regulation causes irrationally great damages to Csongrád county. The existing and empty poultry farms can be re-started any time, and in the meantime, mushroom is produced in several places. We should try to establish slaughter houses beside large plants, because the branch could reach real profitability only through this.

The favourable geographic position of Csongrád county offers many opportunities for special commercial activities, including the establishment of a *duty free area.* A duty-free area should be available for food-storage, processing and packaging at an advanced level, and also for further processing of raw materials, semi-finished products coming from the East. The duty-free zone should be linked to the *produce exchange,* where businessmen in produce, animal and meat trade meet to establish a market. Through this Csongrád county could become the central market of Southern Hungary and the regions near the border.

Hopefully the necessary modifications in the law will also occur. The most competitive company size will be established and the *large-scale farm character* will remain. Probably, *economic units operating under the direction of associations* (limited companies, small cooperatives, large rentals, etc.) will be characteristic, the original organizational frame (large cooperative, state farm) will change in content, and it will have a special, „holding" function. The competitiveness could be increased by the realistic relationships of private ownership and the group interst, the number of employees will decrease further, wasting will cease, and the socio-political function of organizations supporting pensioners, villages, will also cease. The part time agricultural activity will become more popular, here the bigger associations and companies should take up an *integrating* role, and the smaller farmers will organize their own commercial units. Unfortunately the current integrating activity is broken, the reason for this is the termination of incentives in a region in unfavourable position, and also the general shortage of current assets and demand.

Food *processing industry* is in a difflcult position all over the country, stoppages and bankruptcies occur very often. The county's food industry can adjust itself to the new market and economic situation only with great difficulties, with huge loans. The most hardly-hit is the *canning industry,* which could be solved only with a change in ownership. Agricultural producers of the county depend on the food processing

companies to a great extent, and a stronger cooperation (in terms of capital and direction) is the mutual interest of both parties. Unfortunately, producers do not participate in the enterprises already founded, as the representatives of the state.

Agriculture has so *strong vertical relationships,* that hardly any raw materials leave the county unprocessed. Unfortunately, the differences in niveau in the processing branches are significant. In the processing industry we feel the lack of a large-capacity cold-storage plant, which would have a favourable impact on the fruit and vegetable production. Business relations experience a considerable growth – in a contradictory way, though. The monopolistic situation decreased in almost every branch. At the same time big, financially strong food industrial companies must face the fact, that their real territory is the export market: both Eastern and Western. They have to work with raw material producers in a closer cooperation, if they do not want production to decrease.

Only an integrated large-scale production can be the basis of food export. On the domestic markets, however, the big food companies could be squeezed out from the market in an unchanged structure. A large number of modern, productive small slaughter-houses, bakeries, paprika mills, dairy processing and canning plants, etc. are established, that are cost-conscious, flexible and their market research is effective. The development of these enterprises is very important for the county. It is essential that these small enterprises get support and help from the local administrative authorities, and that they be part of the regional territorial development programmes.

Wholesale markets, discount chains are expected to grow, and the establishement of a South-Eastern *Product Exchange* in Szeged, with regard to the improving relationships on both sides of the frontier is a serious issue.

Regions in unfavourable position, with disadvantageous location

Managing regions with disadvantageous location is the greatest challenge for the authority in power, so generally it is an outstanding part in the government programme. In the past period we received considerable budget support for this area. Termination or decrease of this without substitute operating mechanisms – can put the population into a hopeless situation, and it stimulates transmigration.

The fault of the former concept was that the disadvantageous position was considered to be the same as the unfavourable agricultural opportunities, so the whole issue was reduced to the support of agriculture. The technical solution of the previous system was also attackable, e.g. it was not neutral, regarding the various economic sectors (cooperatives did not pay land tax, but the small farmers did), and it was too organization-centered, as the integrator received the subsidy after the small farmer, too. Deformity in the production structure was caused also by the fact that the system gave preference to the feed consumption in those areas, where this was produced at a higher cost (e.g. pig-breeding dropped in the surroundings of Makó, and it increased on sand

soil!). A rightful objection was raised by the industry, when they claimed that cooperatives in unfavourable position received allowances on industrial subsidiary plants established in favourable locations, too. At the same time the levelling off of prices of work-intensive vegetable growing and breeding of ruminant animals, and also the tax exemption of lands (up to 19 AK) were favourable measures. It was an error to annul these subsidies. It is widely known that an enterprise in any of these fields needs capital and has costs above the average, because the infrastructure necessary for starting up the business is missing, the solvent demand is limited, so the risk is higher (fig. 29.).

But in these areas of the county the survival and development of *vegetable growing, fruit and grape production and processing* have to be subsidized. Financial means are needed to stop wind erosion, and also to the installation of economical watering systems.

It is worth mentioning that subsidizing disadvantageous territories is a top-priority issue in the countries of the EC. For example, more than 50 % of the agricultural areas of Germany belong to this category! It would be advisable to adapt all those systems from the EC that are suitable for our position and characteristics. There, they have overproduction, and the maintenance of production in such areas serves not production-political and branch objectives, but their aim is to keep the population, to protect the environment and the surroundings. This should be the right direction for us to follow.

Spatial order of production

We examined the territorial division of the cultivation of the most important plants and the breeding of animals from two aspects: *at settlement and at micro-regional* level. We got very expressive results if we compare all the available county data of the given plant or animal to the settlement and micro-regional data *(Table 25)*. But in our work we had to accept certain limits:

– we could work with the data referring to 1991, but since then many significant changes occured. These are basically of quantitative character, and among them the most important is *the increase of the proportion of fallow ground,* on one hand, and *the decrease of the number of animals on,* the other hand. All this affects the evaluation of the territorial specialization opportunities only to a small extent, but it is not negligible, that in case of a constant increase or decrease of the operation an agricultural branch, or the production of some products can terminate;

– in plant cultivation we do not have a full range of data about small farms. But other information and previous statistics indicate that the data of large-scale farming well describe the specialization of the area for field growing ofplants, but for fruits and vegetables they also provide sufficient information regarding the territorial specialization opportunities. So we think, these data show a realistic picture of the territorial order of the agriculture of the county.

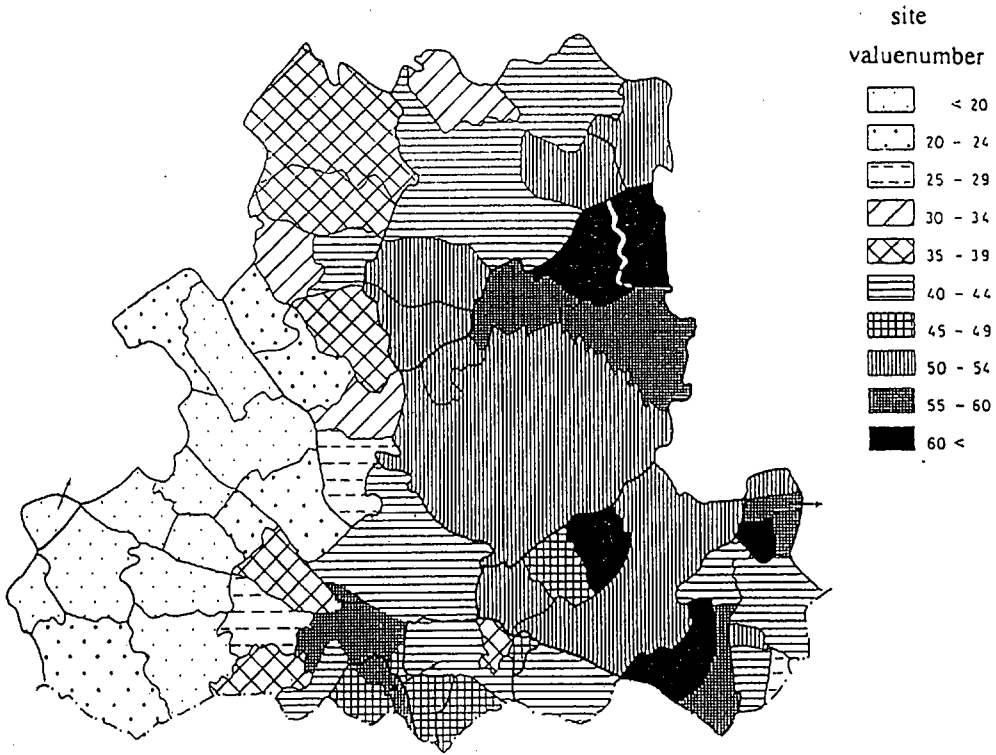


Fig. 29. Evaluation of site

(Source: Hungarian National Atlas)

Table 25.

Share of microregions in the county's total sowing area and pcs value of a given produce, 1991, %

Micro-region**	Plant cultivation													Animal farming			
	wheat	rye	barley	corn	pea	sugar beet	potato	sunflower	maize for silage	lucerne	onion	paprika	other plants	cow	pig	sheep	lives-tock
Szeged	13,5	16,8	17,7	10,8	6,8	3,9	–	18,8	13,1	16,7	–	25,0	15,6	10,8	19,5	8,7	23,6
Hmvhely	25,4	–	18,8	23,6	9,8	51,8	0,4	23,1	26,1	25,7	1,3	4,1	19,5	26,6	24,5	19,4	10,7
1 Földeák-Maroslele	2,4	–	3,9	2,6	3,7	5,9	–	3,5	1,2	2,1	0,5	–	5,2	0,8	2,0	2,4	3,8
Makó	9,8	–	8,9	11,8	5,4	14,8	0,2	2,8	5,0	1,5	68,9	53,2	3,0	5,9	4,8	4,8	6,3
Total	1,2	16,8	49,3	48,8	25,7	76,4	0,6	48,2	45,4	46,0	70,7	82,3	43,3	44,1	50,8	35,3	44,4
Szentes	9,8	–	10,5	13,8	28,1	–	–	8,6	15,6	12,6	–	–	6,5	12,8	13,5	19,3	12,8
2 Csongrád	6,3	–	7,4	5,8	3,7	–	–	8,8	3,8	3,8	–	–	7,8	2,7	4,0	6,5	2,7
Total	16,1	–	17,9	19,6	31,8	–	–	17,4	19,4	16,4	–	–	14,3	15,5	17,5	25,8	15,4
3	9,5	–	6,5	9,0	5,2	18,6	–	4,8	4,2	2,6	29,0	5,2	2,0	3,8	6,3	5,2	5,7
4	3,4	35,6	4,5	0,6	–	–	70,0	8,6	3,8	9,6	–	5,2	7,8	8,9	7,1	3,5	9,2
5	4,2	47,6	7,6	3,6	–	–	26,0	8,5	5,2	9,6	–	3,9	22,0	7,5	5,8	19,5	11,0
6	3,8	–	7,2	4,2	–	–	–	1,8	3,9	1,7	–	–	2,0	3,4	1,8	2,3	4,5
7	5,2	–	2,8	6,6	11,4	–	–	8,9	13,5	8,8	–	3,4	2,6	11,5	6,1	2,8	3,7
8	6,6	–	4,2	7,6	25,9	5,0	3,4	1,8	4,6	5,3	0,3	–	6,0	5,3	4,6	5,6	6,1

*Plant cultivation includes data from large-scale farming, animal farming also includes dta of small farming

**The numbers indicate the micro-regions shown in fig. 7.

It is well-perceptible, that:

- the land and production of the 5 traditional cities is of high importance in the agriculture of the county. Especially outstanding is the share of Hódmezővásárhely (wheat, corn, sugar beet, sunflower, maize for silage, lucerne, cow, pig, sheep).

- in the rural microregions, especially Csanádpalota and its surroundings (3), and the surroundings os Fábiánsebestyén (8) show a wide product range in both plant cultivation and in animal breeding. But some specialized branches also appear here: sugar beet, onion (3), pea (8),

- Specialization is the most important factor in the evaluation of the other microregions, too, as here - due to territorial suitability - a full product range cannot be expected. The area is specialized for the cultivation of the following produces: rye, potato (4,5), pea, maize for silage (7), lucerne (4,5, 7), paprika (4). In animal farming the emphasis is on cows, pigs, sheep and livestock.

Conclusions with some spatial relationships

The territorial specialization in the agriculture of the county proves that the region possesses an agricultural suitability of various quality. On county level, dominant is the good quality, but the difference appears also in the sizes of settlements. The classification of the agricultural area currently must be examined from at least three aspects:

- *the stereoscopic aspect of territorial specialization,* which basically shows two types: field cultivation and sand soil cultivation, although there is another view about the existence of a so-called river-valley specialization, too.

- *the inner structure of the territorial specialization,* which represents the relations of territorial and plant specialization. The stereoscopic extension of plant specialization will probably increase. The new small farms will probably move to this direction because of their profitoriented character. But the plant specialization is very market-sensitive, and it can operate only in a stable market situtation, so it is possible, that part of the small farms will choose the mixed-product-structure farming (because of financial and security reasons). This could create a very unfavourable tendency for the economic positions of the county, as with the mixed product structure the product volume decreases and the economic views of these farmers will get far from the modern market economy.

- *the extent of the use of territory,* which shows the relations between lands under and outside cultivation. At present, it took a very unfavourable direction, and came close to the critical value. The proportion of fallow ground can reach 40 %. If this tendency remains constant, it could lead to the qualitative deterioration of the territorial suitability of land locally (and altogether, country-wide). We would like to take the

opportunity and mention that the problem of unfavourable situation should be re-defined soonest.

We think it is important that agriculture be considered as part of the settlement economy, too, and it should appear in the settlement development plans accordingly. But this requires a wider space-perception of the leading authorities of the settlements. Namely, that, due to the limited economic and financial possibilities of a settlement and the continuity of space, a micro-regional cooperation among settlements is necessary from the agriculture's point of view, too. The establishment of an overall agricultural (bank) and information network is essential in the practical organization of the agricultural territory.

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