

THE APPLICATION OF LABOUR FORCE ATTRACTION ZONES IN REGIONAL PLANING IN SZOLNOK COUNTY

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I. The recent results achieved in the area of modernizing regional economy control include the shift of the control (planning) labour division levels, the increase in regional (local) economic independence and their social consequences. Further steps are expected in the modernisation process of regioal planning due to the increase of regional (socio-economic) independence. Its scientific bases are sill being laid down at present, partly by the national research program labelled Ts-2/2 („socio-economic processes of regional and settlement development in Hungary”).

My chosen subject-matter is related partly to the above outlined program; however, its primary aim is to contribute to the solution of the planning tasks which increased at the regional levels. In order to accomplish this aim a few theoretical, methodological and observational questions closely related to the subject-matter will be mentioned and elucidated.

The regional development of the recent decades gave rise to a new type of inter-settlement relations in Hungary. The regional formations united by these, that is the so-called „micro-regions, have a specific type, the labour force attraction zone, which is repeatedly present in the area of the country and covers it. The rapid and extensive economic development made it general as a regional structural factor. Due to the complexity of the labour force attraction zone and to the fact that it is a regularly recurrent unit in the regional structure of the society and economy, this type of region is theoretically suitable for use in regional planning. The verification of this hypothesis is an aim of research.

The attraction zones (including the labour force attraction zones) are often regarded as regional socio-economic system in the international as well as in the Hungarian literature. They are regarded as correlative regional units which are connected by natural and socio-economic real processes and which, as such, serve as bases for the planning processes. However, in reality the regions determined by the real and the planning processes do not always coincide, which constitutes a source of loss for the planning. Another research aim is to verify this statement by using facts.

There are several international examples for the application of the attraction zones in research, planning and control. In view of the national and international experiences as well as the various conceptions in the discipline, my starting point was that in economics (in regional economics) attraction zones are regarded primarily as economic fields of force. *The labour force attraction zone of Szolnok is interpreted as a field of force which is determined and operated by the spatial relations between means of*

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labour (places of work) and the labour force (places of residence) and the services. In the study of the labour force attraction zones (as fields of force and regional systems) the primary emphasis is laid on their internal cohesive forces and not on their external relations. A research aim is to determine the directions of reasonable planning, starting from the structure of the labour force attraction zone.

The scientific antecedents go back partly as far as to the classical settlement theories. In Hungary the research of the attraction zones has been done primarily by experts of economic geography and partly by experts of economics and of technical sciences. From the extremely abundant literature mainly those works of Hungarian authors were used as a basis, who take the general economic approach to the problem and who concentrate their studies on one particular region of the Hungarian Plain. The review of the scientific results related indirectly to the chosen subject-matter is beyond the scope of this study.

II. After exploring and analysing the theoretical bases, an attempt was made to apply them to the local circumstances. The study of the attraction relations of the *county of Szolnok*, as a wider range of relations, led to the labour force attraction zone of the country town (chief town of the county) (in general to the town-centred labour force attraction zone), which is a regional formation in which the real processes (labour force movement, utilization of services etc.) operate internal cohesive forces. The basis of this is formed partly by the regional correspondence of the various elements of forces of production (means of labour, labour force etc.) and partly by their differences (separation) at settlement level. The former results in the socio-economic interdependence of the settlements in question.

Thus is this inter-settlement integration (the labour force attraction zone) which provides a favourable scope of movement for the forces and relations of production to approach harmony. All these internal relations make the region type under study a suitable regional planning unit, in which the socio-economic relations can be co-ordinated efficiently. In the course of the regional analysis a simple mathematical-statistical apparatus (analysis of correlation and regression) was used; the nature of the subject did not make it necessary or indispensable to use more complicated methods.

After the definition of the labour force attraction zone of Szolnok (which seemed to be a suitable regional unit for planning at the first approach), its variability in time was studied. Furthermore, the regional formation was compared to a simple attraction zone theoretical model and also to the administrative organization (surroundings of the town) of the same order of magnitude. Based on these, the hypothesis of the regional unit being suitable for planning was confirmed. The dynamic and comparative studies verified that the labour force attraction zone is a permanent formation influenced by the laws of regional development. At the same time, however, it is not a rigid regional unit, its extension and other features are subject to considerable changes.

Then I tried to determine what are the planning tasks for which the settlement group integrated by the regional real processes in general („mikro-region”) - especially

its form of the labour force attraction zone – can be used. In order to do this regional coordinational aims (such as e.g. planning of the employment balance) were outlined. It was shown that certain types of tasks necessitate the consideration of the attraction zones, while other planning tasks can be solved properly only at settlement level. The availability of data with optimal content and regional distribution was only exceptional, so the method of continual approaches had to be used in several cases.

III *The labour force attraction zone* is a spatial organization of the socio-economic life, which includes both the characteristics of the traditional regional labour division and the beginning of future development. It provides a satisfactory framework and scope of movement for the spatial reorganization of the forces of production. It is due to this particular feature that, as a typical „micro-region”, it mediates a transition from the past condition of the regional structure to its future condition through its own transformation and through the continuous changes of its external and internal relations.

The labour force attraction zone, which is in the centre of the study, is manifested as a union of the towns and their surroundings, which is a traditional formation but changed in content. This must be emphasized not only in order to give an exact determination of the real content of the concept, but also in order to differentiate it from other region types. The reason for this is that the majority of the settlements are characterized by labour force attraction, which can serve as a basis for outlining certain attraction zones. However, complexity, the specific relations between places of work and places of residence cannot be applied to the latter formations as distinctive criteria. This does not mean, however, that the extension of the labour force attraction zones remains the same; they may be expanded or reduced, while the number of settlements with central functions decreases or increases.

The analysis of the labour force attraction zones and attraction centres of *Szolnok county* reveals that in 1949 the insufficient development of the labour force attraction relations was connected with the low degree of industrialization of the county, and also with the characteristic features of the settlement system. The network of medium-sized and large villages made it possible for the services to be organized mainly in individual settlements, and the inter-settlement organization of services was present only to a lesser degree.

As a result of the county characteristics of economic development, such as industrialization at a rate slower than the average etc., a relatively small degree of polarization can be observed in the settlement system of the county between 1949 and 1960. The number of the labour force attraction centres did not increase substantially. Only Szolnok played an important role and the labour force attraction of Jászberény could be observed.

In the sixties and seventies the far-reaching changes of the economic macrostructure and the employment structure affected Szolnok county, too. Due to this, processes

influencing the attraction zones became more pronounced and were also facilitated by administrative measures.

At the same time the special features of the county continued to influence the formation of the labour force attraction zones. In spite of the more deconcentrated industrialization policy, in 1980 there were only two settlements with outstanding labour force attraction: Szolnok and Jászberény. The latter one fell significantly behind Szolnok in order of magnitude.

Between 1960 and 1980 the attraction relations of the county became very complicated; labour force attractions forming smaller settlement integrations developed and appeared repeatedly. Their formation was related to the centralization processes taking place in agricultural plants, to the greater extent of labour division in the merged plants and also to the increased role played by the auxiliary and ancillary plants.

In the 1980s the rate of the economic and industrial development became slower, the investment resources for creating new working places became less, and these, together with the intensification efforts resulted in the fact that industry could employ less of the labour force. This entailed that the development and further expansion of the regional integrations based on the material production and services came to a sudden halt and regressed to a certain degree.

The study of the *labour force attraction relations of Szolnok* shows that its labour force attraction was extended primarily in the 1960s. 14, 20 and 21 settlements belonged to its attraction zone in 1960, 1970 and 1980, respectively. This indicates indirectly that a significant concentration of places of work took place in the county town. In addition to industry, the services can also be shown to influence the spatial integration and to strengthen the labour force attraction zone. The labour force attraction effect of Szolnok is indicated not only by the increasing number of the attracted settlements but also by the fact that its relations with the closest settlements became more intense.

If the labour force attraction zone determined by the statistical data is compared to the zone corresponding to *Reilly's model* of gravitation, the real and the theoretical zones show an approximate coincidence. This fact provides further proof for the relative regularity and stability of the studied attraction relations. The minor variations can be explained by the sources of error due to the different definitions used by the methods.

The working place and population concentration in the area around Szolnok and the expansion processes of the attraction zone can be interpreted in more than one way if they are compared to the development which took place under the circumstances of other settlement networks. The county towns selected for the purpose of comparison and situated in areas characterized by small and tiny villages extended their attraction to the neighbouring settlements to a greater extent and with more intensity between 1960 and 1980. Szolnok conformed to the wider-ranged environmental conditions in this sense, too (greater number of alternative centres, its effect of exploiting part of the resources etc.). At the same time the attraction of the studied

county towns showed a certain approach in intensity, which indicates an equalizing development with respect to the function of the above mentioned town category.

In addition to its labour force attraction and medium-degree supply area, Szolnok has other important relations which extend to greater areas. These originate primarily from the operation of the industrial companies with several premises - with Szolnok being the centre - and also by the institutes of higher education established in the town. The central organization of industry could mean financial advantages for the county (and indirectly for the town), too, (mainly for the reason that companies making great profits dominate here). These advantages were manifested potentially through the centralization possibility of the social net income, and practically through the greater proportion of planning activities and professionals with higher qualifications, acting as settlement-developing factors.

Differentiating tendencies prevail within the labour force attraction zone of Szolnok, which are due to the change of inter-settlement relations. These are manifested partly in the processes of concentration (agglomeration) around the centre, and partly in the separation efforts (at the periphery of the attraction zone), which are indicated by the increase and decrease in the intensity of the relations, respectively. This leads to a change in the quality of the inter-settlement relations and to the formation of new settlement integrations.

The decrease in the intensity of the attraction and the unfavourable traffic connections between the centre and part of the villages at the periphery make it probable that some of the villages in question will leave the attraction zone of Szolnok in the future. However, a prerequisite of this is the further economic development of the alternative attraction centres. Thus, for example, it is probable that in the future Martfű will attract Tiszajenő, Vezseny and possibly Kengyel; Tiszabó will enter the attraction zone of Törökszentmiklós; Jászalsószentgyörgy and Szászberek will be connected to Jászberény; and the attraction zone of Cegléd will extend to Köröste-tetlen and Jászkarajenő.

In some respects, however, the relations of Szolnok with some of the neighbouring settlements became stronger. There are six settlements in the immediate vicinity of Szolnok (Zagyvarékas, Újszász, Tószeg, Rákóczi falva, Tiszatenyő and Tiszavárkony) from where more than 40% of the active population commutes to the centre with favourable traffic connections. This indicates that the internal relations of the agglomeration ring around Szolnok are going to deepen, and this means special requirements for planning.

There are typical differences in the employment structure and development tendencies of the above outlined areas within the attraction zones (intensive, transitional and peripheral). Essentially it means that a phase shift can be observed both in the indices of economic macrostructure and in the tendencies of development. The structure of the centre and the agglomerational settlements is more developed and the trends of transformation are formed accordingly, while the transitional and peripheral areas have a lower degree of development, etc.

The establishment of the *public administration apparatus in the surroundings of the town* is based on the recognition that multilateral, intensive relations exist between the central settlements and their surroundings. This requires a uniform approach to the function and development of the institutions and also makes it necessary for the corresponding authorities of the central settlement (town) to provide administrative services for the settlements in the attraction zone. The surroundings of Szolnok extend primarily to the settlements belonging to the labour force attraction zone in this respect, too. At the same time better spatial correspondence of the two regional units is limited by institutional or other factors. The introduction of the two-level public administration puts an end to this loose organization of inter-settlement co-ordination and the associations of settlements will dominate in dealing with the common problems which must be solved together. However, this does not influence the application possibility of the labour force attraction zone in the county planning.

The study of the attraction relations in the county of Szolnok leads to the *summarizing conclusion* that the structure of economy and society within a county and the relations formed by traffic possibilities are substantially influenced by the development, working place concentration and choice of the attraction centres. The study revealed that the development of the attraction zone of Szolnok was significantly greater than that of its vicinity. This obviously means that a basic task for the county strategy of regional and settlement development is to determine the desirable proportions in the development of the alternative centres (i.e. whether the socio-economic importance of Szolnok and its attraction zone should further increase in the county, or whether greater emphasis should be laid on the development of the other, less developed centres). However it is also possible that the action of county (and country) planning are limited by the intensive nature of economic development and by the restricted means

In the case of the Szolnok county example numerical data verified the theoretical hypothesis that the employment *equilibrium* (i.e. the correspondence of places of work and labour force sources) can be neither studied nor realistically planned at settlement level.

The labour force attraction zones can be expected to remain stable in the future, too, partly because – under the given Hungarian settlement network conditions and in view of the expected tendencies of economic development in the forthcoming medium and long-term period – no correspondence (harmony) can be expected between places of work and places of residence at settlement level. It is not possible to distribute the places of work according to places of residence (a theoretical possibility for which would be the total renewal and technical modernisation of the fixed assets, and naturally only if the infrastructure of each settlement were properly developed). Neither is it possible to concentrate the places of residence (the employees) in the central settlements. There are no financial resources for this, either, what is more, it would not be desirable either from the point of view of efficient employment of financial resources or from the point of view of the whole society. Various interests

are known to exist to increase the population stability of villages; this is one of the major concerns of the present regional and settlement development policy.

As the labour force attraction zones can be expected to exist in the long run, a stable – although in extension and content a changing – framework is provided for the regional planning. Their application is not restricted to employment, they can be used in other planning tasks (medium-level services – development etc.) as well. If they are disregarded, the sources of errors in planning increase substantially. At the same time the labour force attraction zone cannot be regarded – even with respect to the above mentioned activities – as the sole unit of planning. Special local characteristics may make other microregion types more suitable for the given tasks.

However, for the study and planning of the regional equilibrium conditions neither the labour force attraction zone nor other micro-regions mean an exclusive regional level. Studies relating to the basic supply of the population clearly reveal that planning of the infrastructure of this kind requires calculation and consideration at settlement level. Results are distorted, for example, if the housing needs are determined at the level of the county or attraction zone. There is proof for the general principle that a given regional level belongs to each socio-economic process, and it provides a framework for reasonable planning processes. This does not mean that most of the planning tasks, which would otherwise require other regional levels, cannot be solved by the spontaneous association and co-operation of the concerned settlements. This solution is usually justified by social aspects (e.g. the great unity or traditional settlement communities and their need to act independently) even if this may create sources of loss economically. The consistent implementation of the two-level administration is expected to give rise to such development.

The financial background of the *associations* is strengthened if the independence of the local councils increases, their self-governing powers develop and the content and methods of planning improve. In the two-level administration a possible alternative for the labour division in planning between the county and the settlements is to restrict the decision authority of the county organisations to the questions concerning employment and the establishment and maintenance of services at medium and higher levels. The function of the local council authorities derives from the fact that the majority of the public matters have to be dealt with at settlement, or in some cases at inter-settlement levels. Thus their main task is not to carry out central decisions but to organize and to influence those processes in their authority which affect the life conditions of the settlements.

The property and distribution relations have to be re-interpreted as factors in the modernization of regional planning. The nature and contents of state property have to be reconsidered with respect to the infrastructure at settlement level or concerning several settlements. The state property may be replaced in the settlements by the „communal“ property, which would mean the common property of the society of a given settlement. It is not the state which would entrust the handling of the property to the local councils, but the population of the settlements. This form of property

could be extended to housing accommodations run by the state, to the public services and to all the establishments which are in the common use of the population. Under these property conditions the economic independence of the settlements would increase and the conditions for the formation of self-government, including the economic conditions for taxation, would be created.

As the resources and needs of individual settlements could be less than necessary for the economical organization of certain services, communal properties could be possessed by several settlements together. The framework for such an organization could be provided by attraction zones of varying type and size. This possibility is already indicated in our day by different association - for example for the development of the waterworks or telephone network.

IV. There are two main possibilities for the practical use of the results. The numerical verification of certain theoretical hypotheses, based on data obtained in Szolnok county, may contribute to the research conducted in order to help the modernization process of regional planning. The other possible area of utilization is the regional planning in the county. By exploring the concrete regional and settlement development tendencies the development strategy in Szolnok county can be improved. Considerations regarding the relation of the planning content and the regional unit usually help to expand the bases of regional planning at the county level.