THE ROLE OF THE HIERARCHIC LEVEL IN THE OCCUPATIONAL REORGANIZATION OF THE WAGE EARNERS OF THE CENTERS OF THE SOUTHERN PART OF THE GREAT HUNGARIAN PLAIN (1960—1970)

by

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Industrialization, vigorous expansion of production, and growth of the importance of the tertiary sector alter the occupation structure of the population and reorganize the most important force of production, the working population. For the majority of the population this reorganization means not only a change of occupation but also a change of residence. The new structure of production creates a new spatial structure and leads to a new territorial distribution of the workforce.

Industry and the tertiary sector, compared with the agriculture, make a much higher concentration of the workplaces necessary. Thus the occupational regrouping of the population means also its territorial concentration.

An ever growing proportion of non-agricultural workplaces can be found at settlements performing higher functions for their surrounding areas. Thus they play a special role in the occupational reorganization and territorial concentration of the population.

I. Purpose and method of the present paper

The purpose of the present study is to report on the role of the centers of the southern part of the Great Hungarian Plain (hereafter the Southern Plain) and their hierarchic grades in the process of occupational regrouping.

The development of the occupational composition or structure of occupations of all wage-earners (active and inactive together) between 1960 and 1970 has been used as a basis.

As regards the areas of the centers and their hierarchic grades, we have relied on the last summary of our investigations carried out during several years (J. Tóth, 1972). According to this one regional center (Szeged), three paracenters (Kecskemét, Békéscsaba, Baja), eight mesocenters (Kalocsa, Kiskunhalas, Kiskunfélegyháza, Szentes, Hódmezővásárhely, Makó, Orosháza, Gyula), six subcenters (Kiskőrös, Csongrád, Szarvas, Gyoma, Békés, Szeghalom), and fourteen microcenters (Mezőkovácsháza, Mezőhegyes, Medgyesegyháza, Tótkomlós, Battonya, Kunszentmiklós, Dunavecse, Solt, Jánoshalma, Bácsalmás, Kiskunmajsa, Kistelek, Mezőberény, Sarkad) can be distinguished in the Southern Plain.

The quantitative definition of the occupational regrouping proportional also with the changes in the number of all wage earners can be expressed by the C index according to the following formula:

$$C = \frac{X_1 \cdot Y_2}{X_2 \cdot Y_1}, \text{ where}$$

X_1=number of all wage earners in 1960,
X_2=number of all wage earners in 1970,
Y_1=number of wage earners in the branch examined in 1960,
Y_2=number of wage earners in the branch examined in 1970.

II. **Results**

1. *Changes in the number of all wage earners*

The number and ratios of all wage earners between 1960 and 1970 with regard to the centers and other settlements of the Southern Plain developed so that the development clearly indicates the growing importance of the centers and within their group the growing importance of the higher hierarchic grades.

The number of wage earners in the region grew by 90.000 during the ten years examined. More than nine-tenths of the growth fell to the centers, and this meant a 21.4% growth as compared with the number in 1960. The number of the wage earners of the other settlements grew only by 1.3%. (As the direction of the change in the total number of population in the two groups of settlements is different, the difference appearing in the value of the C indexes is smaller, only 0.04.) The ratio of the change, in the settlements with center role, lessens from the higher hierarchic grades to the lower grades. It is remarkable that there is hardly any difference between the ratio of Szeged and that of the paracenters.

TABLE 1

Changes in the number and ratios of wage earners in the center settlements of the Southern Plain (1960—1970)

	Wage earners (1960)		Change (1960—1969)		„C" index	Wage earners (1970)	
	number	ratio %	persons	%		number	ratio %
Reg. center	59794	60,4	20692	34,61	1,12	80486	68,0
Paracenters	81414	55,5	27643	33,95	1,16	109057	64,9
Mesocenters	133592	54,4	25503	19,09	1,15	159095	62,6
Subcenters	49880	51,9	6958	13,95	1,15	56838	59,7
Microcenters	70055	52,6	3795	5,42	1,11	73850	58,8
Total of centers	394735	54,8	84591	21,43	1,15	479326	62,9
Other settlements	406911	53,0	5452	1,34	1,11	412363	58,9
Total of Southern Plain	801646	53,8	90043	11,23	1,13	891689	61,0

Owing to the arrangement of the ratios of change according to the hierarchic grades, by 1970 the order of magnitude of the grades, which was still defective in the basic years, is established corresponding to the ratio of all wage earners of the centers as compared with the total population. The ratio of wage earners of the subcenters is also above the average of the noncentral-like settlements, while the ratio of the micro-centers is only minimally below the average (Table 1).

2. Changes in the number of agricultural wage earners

The number of the agricultural wage earners of the region decreased by more than 55.000 in the decade examined. Their number in 1970 was only 44.1% as against 55.9% in 1960.

The decrease took place in a differentiated way. It was less in the centers (8.7%) than in the other settlements (14.1%); thus the situation was that at the end of the decade a larger ratio of the agricultural wage earners remained in the center settlements than in 1960. Yet in the centers with rapidly growing populations of wage earners the value of the C index expressing the relative weight change of the wage earners in the particular branch of economy was smaller (0.75) than in the other settlements (0.85).

The order according to the rate of change and the value of the C index is not identical with the hierarchic order. The centers representing identical hierarchic grades function in different type areas, which have distinctive traditions, weights, and especially present possibilities, and their values are merged in the average. In Szeged the number of agricultural wage earners increased by more than 2.500 persons owing to the favorable selling and income conditions (market conditions) of the dyna-

TABLE 2.

Changes in the number and ratios of agricultural wage earners in the center settlements of the Southern Plain (1960—1970)

	Agricultural wage earners (1960)		Change (1960—1969)		„C" index	Agricultural wage earners (1970)	
	number	ratio %	persons	%		number	ratio %
Reg. center	3904	6,5	2511	64,32	1,23	6415	8,0
Paracenters	18364	22,6	—804	—4,38	0,71	17560	16,1
Mesocenters	52073	39,0	—3857	—7,41	0,77	48216	30,3
Subcenters	26222	52,6	—1379	—5,26	0,83	24843	43,7
Microcenters	43086	61,5	—8958	—20,79	0,75	34128	46,2
Total of centers	143649	36,4	—12487	—8,69	0,75	131162	27,4
Other settlements	304835	74,9	—43047	—14,12	0,85	261788	63,5
Total of Southern Plain	448484	55,9	—55534	—12,38	0,78	392950	44,1

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mically developing city. The increase was larger in the number of all wage earners; the value of C was 1.25. Thus the ratio of agricultural wage earners reached 8,0% by 1970 as against 6.5% in 1960.

The ratios of the agricultural wage earners to the number of all wage earners corresponded to the hierarchic grades of the centers already at the beginning of the decade. The same relationship was still more clearly apparent in 1970 although owing to slow regrouping of the wage earners of the subcenters the difference between the micro and subcenters had become smaller (Table 2.).

3. Changes in the number of wage earners in the industries and the building trade (industrial wage earners)

The greatest changes in the decade examined took place in the number and ratios of the industrial wage earners. The number of the industrial wage earners grew by more than 127.000, i.e. 83.1% in the region so that the rate of growth of the centers remained somewhat below that of the other settlements (82.7 and 84.1% respectively). The rate of change according to the hierarchic grades is corresponding: it grows from the regional center toward to microcenters; the subcenters constitute an

TABLE 3.

Changes in the number and ratio of industrial and building workers (wage earners) at the center settlements of the Southern Plain (1960—1970)

	Industrial and building workers (1960)		Change (1960—1969)		„C" index	Industrial and building workers (1970)	
	number	ratio %	persons	%		number	ratio %
Reg. center	22660	37,9	16352	72,16	1,27	39012	48,5
Paracenters	27443	33,7	23381	85,20	1,38	50824	46,6
Mesocenters	33786	25,3	29348	86,86	1,56	63134	39,7
Subcenters	10745	21,5	7447	69,31	1,48	18192	32,0
Microcenters	11988	17,1	11604	96,80	1,86	23592	31,9
Total of centers	106622	27,0	88132	82,66	1,50	194754	40,6
Other settlements	46808	11,5	39357	84,08	1,81	86165	20,9
Total of Southern Plain	153430	19,1	127489	83,09	1,65	280919	31,5

exception. The situation is similar according to the C index values expressing the relative changes in the ratio of those engaged in this branch of economy: the series growing toward the microcenters is broken by the subcenters which show little dynamic regrouping. In the row of the ratios of industrial wage earners to all wage earners, which became established according to the hierarchic grades of the centers already in 1960, an

important change in tendency not affecting the order took place: the difference between the paracenters and Szeged as well as the difference between the sub and microcenters became less. Unlike the situation in 1960, the ratio of the industrial wage earners of the microcenters was above the average of the Southern Plain by 1970 (Table 3).

4. Changes in the number of other wage earners

The number of wage earners in other occupations grow by only 9.1%, during the 1960's. The increase was less in the centers (6.2%) than in the other settlements (16.5%). As a result of a faster rate of growth in the number of all wage earners, the C index was less than one (0.87) at the settlements with center functions and 1.15 at the other settlements. In all grades of centers the number of other wage earners grew; most considerably in the paracenters (14.23%), least in the mesocenters (0.02%). The value of the C index varies according to the hierarchic grades of the centers, excepting the mesocenters, so that it exceeds one only in the case of the microcenters. The ratio of other wage earners to all wage earners is highest is Szeged and decreases according to the grades of hierarchy. By 1970 the ratio of the subcenters had sunk below the average of the Southern Plain and had come nearer to that of the microcenters (Table 4).

5. The concentration of wage earners according to the hierarchic grades of the settlements

The centers play a much greater role in the regrouping of the wage earners of the region than could be excepted from the ratio of their population to the total population of the Southern Plain.

TABLE 4.

Changes in the number and ratio of other wage earners at the center settlements of the Southern Plain (1960—1970)

•	Other wage earners (1960)		Change (1960—1969)		„C" index	Other wage earners (1970)	
	number	ratio %	persons	%		number	ratio %
Reg. center	33230	55,6	1829	5,50	0,78	35059	43,5
Paracenters	35607	43,7	5066	14,23	0,85	40673	37,3
Mesocenters	47733	35,7	12	0,02	0,84	47745	30,0
Subcenters	12913	25,9	890	6,89	0,94	13803	24,3
Microcenters	14981	21,4	1149	7,67	1,02	15130	21,9
Total of centers	144464	36,6	8946	6,19	0,87	153410	32,0
Other settlements	55268	13,6	9142	16,54	1,15	64410	15,6
Total of Southern Plain	199732	25,0	18088	9,06	0,98	217820	24,4

In 1970 the centers held 52.1% of the population of the region. Of all wage earners they held 53.8%, of the industrial and building workers 69.3%, and of other wage earners 70.4%. Thus the concentration of the active population (and of those employed in the other two branches of economy, which are important from the point of view of the regrouping), was greater than that of the total population. Owing, to the accelerating and greater dynamism of the regrouping of the population of the other settlements (which in the majority of the cases was due just to the influence of the centers and to the low basic values where the rates are concerned), the concentration of industrial and building workers and other wage earners decreased on the whole as compared with the figures of 1960.

From the point of view of the hierarchic grades the centers can be classified into:

a) *Regional center:*

The degree of concentration of all wage earners and workers in the two branches examined (agriculture and industry) was greatest here. The concentration of other wage earners, though decreased as compared with the situation at the beginning of the decade, was remarkable: it was nearly double the ratio to the population:

b) *Paracenters:*

In accordance with their place in the hierarchy the degree of concentration was high and both as regards the number of wage earners and the two branches of economy increased in the decade examined. Although to a much lesser extent than in the case of Szeged, the concentration of those employed in the other branches of economy exceeded that of the industrial

c) *Mesocenters:*

The degree of concentration was much less here than in the paracenters; considering all wage earners and the industrial and building workers it grew, considering the other wage earners it diminished during the decade. The concentration of those engaged in other branches of the economy was smaller by 1970 than that of the industrial and building workers.

d) *Subcenters:*

In the case of the population number a greater concentration was not reached even in 1960 uniformly and by 1970 it was not manifested in any component examined by us. The contingent of wage earners grew faster than the ratio to the total population but even in 1970 it could only approach it. The ratio of industrial and building workers in 1960 was still slightly greater than the ratio of population, but by 1970 it had fallen below that. The backwardness of the subcenters in industrialization was remarkable.
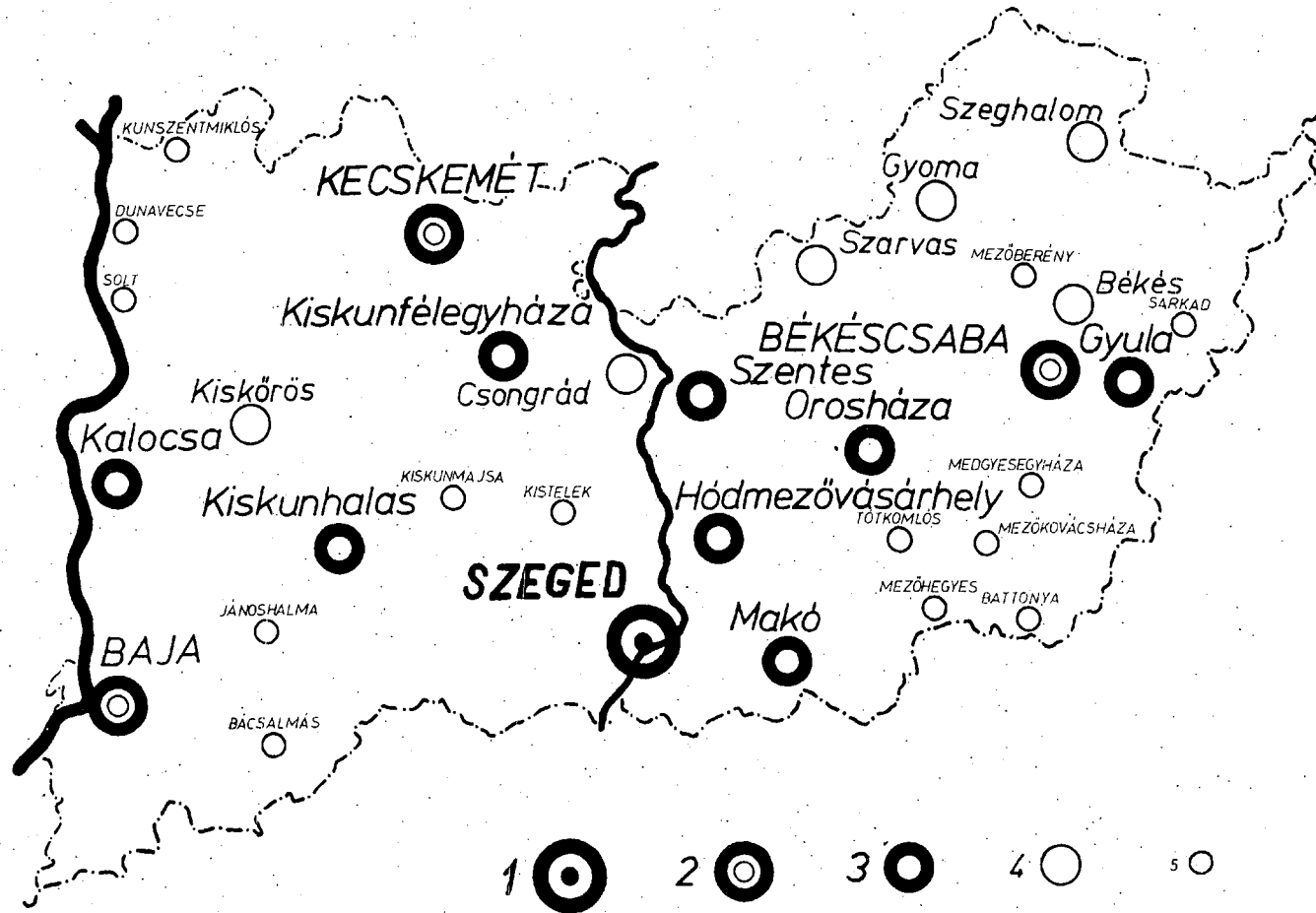
Fig. 1.: The hierarchic grades of the centers of the Southern Plain.
1 = regional center, 2 = paracenter, 3 = mesocenter, 4 = subcenter, 5 = microcenter

e) *Microcenters:*

They had no greater concentration of their share of population already in 1960. It is remarkable on the other hand that although their share of the total population and wage earners decreased, the ratio of industrial and building workers grew and by 1970 had approached the population ratio of the microcenters. The ratio of other wage earners also decreased only minimally (Table 5).

TABLE 5.

Share of the different-grade centers in the total and the particular section of the population of the Southern Plain

	Population		Wage earners		Industrial and building workers		Other wage earners	
	1960	1970	1960	1970	1960	1970	1960	1970
Reg. centers	6,65	8,13	6,46	9,03	14,77	13,89	16,64	16,09
Paracenters	9,86	11,49	10,16	12,23	17,89	18,09	17,83	18,67
Mesocenters	16,49	17,37	16,66	17,84	22,02	22,47	23,90	21,92
Subcenters	6,45	6,51	6,22	6,37	7,00	6,48	6,46	6,34
Microcenters	8,94	8,59	8,74	8,28	7,81	8,40	7,50	7,51
Total of centers	48,39	52,09	49,24	53,75	69,49	69,33	72,33	70,43
Other settlements	51,61	47,91	50,76	46,25	30,51	30,67	27,67	29,57
Total of Southern Plain	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

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