

Janusz SŁODCZYK and Dariusz RAJCHEL
Opole University

EXOGENOUS FUNCTIONS OF TOWNS IN THE OPOLE REGION AND CHANGES IN THESE FUNCTIONS IN THE PERIOD 1991–2001

Introduction

To ensure its existence and develop normally, a town should be able to supply its inhabitants with an adequate amount of goods and services, in order to satisfy their basic needs. The urban organism, in the broadest sense, produces for the local market, but also partly covers external demand, *i.e.* for surrounding areas and areas located farther away. This situation has been described by many authors, who divided the activities of a town and its population into three general functional groups:

- creative activities within the town, consisting of seven sectors of the national economy and education, science, culture and health care (socio-cultural services),
- complementary activities,
- activities of professionally inactive people, including everyone living on a transfer payment such as pensioners and students [Kosiński, 1958, 574; Jerczyński, 1971, 37].

This division has aroused many controversies, especially concerning evaluation of different branches of the national economy [Dziewoński, 1967, 38]. K. Dziewoński proposed the use of the following terminology:

- exogenous activities – activities of the town aimed at satisfying the needs of people living outside the town,
- endogenous activities – activities of the town aimed at satisfying the needs of its own population.

The exogenous function has also been called the creative, external or basic function of a town. The endogenous function has also been called

the complementary or secondary function. The exogenous function connects the town with the outside world, and is an expression of its openness. The endogenous function involves the closed economy of a town. This classification makes it possible to define fields of economic and social life that significantly influence the formation of functions of urban areas.

When researching the functional structure of a town, it may be possible to define one specific field of economic activity that influences the formation and development of the main function of the urban area. In other words, the dominating field of economic activity determines the dominating function of a given town. However, it should be emphasised that when, for example, the industrial or service function is the most common function in a town, this does not automatically imply that this function dominates.

Furthermore, it is possible to distinguish functional specialisation. For example, within the field of industrial activity a town can be specialised in the food-processing industry, steel industry or metallurgy. A town functions within a certain administrative-territorial structure, and is connected with other (neighbouring) towns. These towns exchange different goods and services with each other, creating interdependency. As a result, social, economic and political relations may strengthen. The different branches and sectors of the national economy in a certain town are connected with the functioning of the town itself and the development of relations with the outside world as a result of co-operation between towns, regions and countries. The types of connections and activities mentioned create the town's economic base.

The aim of this article is to define the economic base of towns in the Opole Silesia region, taking into consideration eventual transformations leading to a change in the function of a town. The research concerns all the towns in the Opole Silesia region possessing a town charter in the years 1991–2001.

The economic base of towns in the Opole region

The basic issue in the concept of the economic base of a town is to establish to what extent economic activity is undertaken for the local market (for its urban population) and to what extent for the external market. In order to define the economic base of a town, an *index of surplus labour*, a modification of the location index, has been used. This method, developed by M. Jerczyński, seems to be the most accurate in reflecting the specialisation of the economic base of towns in the current economic situation.

$$E_{surplus_i}M = E_iM - \frac{EM \times E_iK}{EK}$$

where:

E_iM – employment in activity “i” in town;

EM – total employment in town;

E_iK – employment in activity “i” in the country or region;

EK – total employment in the country or region.

The estimation of the economic base of towns in the Opole region in general and for particular economic sectors using this method makes it possible to define the functional specialisation of exogenous activities.

The classification of the towns in the region investigated is based on a system developed by M. Jerczyński, who distinguishes the following types of towns:

- service towns – where the services sector employs more than 50% of people working in non-agricultural exogenous activities,
- industrial towns – where industry and construction employ more than 50% of people working in non-agricultural exogenous activities.

When close to 100% of people working in non-agricultural exogenous activities work in industry, then the following types can be distinguished:

- industrial towns specialised in one branch of industry (more than 50% of employment in industrial exogenous activities is in one branch),
- industrial towns specialised in two branches of industry (more than 66.7% of industrial exogenous activities is in these two branches),
- industrial towns of a diversified character (employment in one branch does not exceed 50%, and employment in any two branches does not exceed 66.7% of total employment in industrial exogenous activities) [Jerczyński, 1973, 67].

Research of the functional structure and economic base of the Opole region has a long tradition. J. Kroszel researched, analysed and defined the functional structure of towns in the Opole region in 1971 [Kroszel, 1971, 177–217]. He distinguished towns according to the following typology:

- towns with specialised functions, *i.e.* industrial, housing.
- towns with complex functions, *i.e.* domination of industry, domination of industry and communications, domination of industry and housing, domination of the administrative and service function or without specific domination.

In order to confirm the results of his research, Kroszel also presented a division of towns in the Opole region according to the structure of employment and the level of diversification. Using the criterion of structure of employment, he divides towns in the Opole region in the following way:

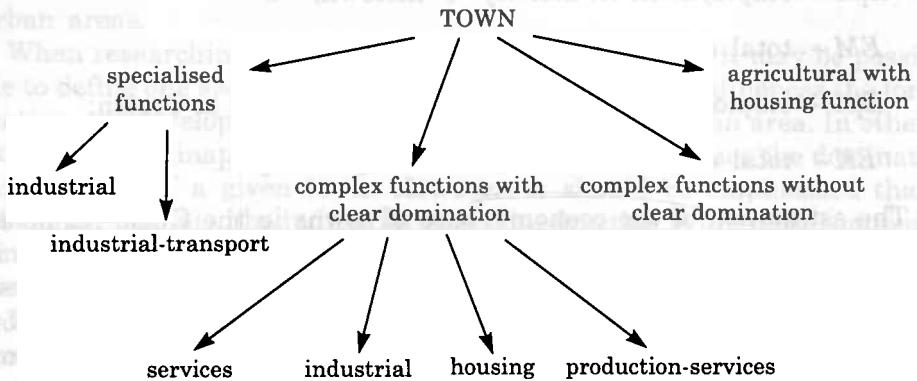


Fig. 1. Functions of towns in the Opole region

Source: authors' own elaboration based on J. Kroszel, "Struktura funkcjonalna miast w województwie opolskim", in: S. Golachowski (ed.), *Struktury i procesy osadnicze, Opole 1971*.

The level of diversification of employment was estimated using a location coefficient. Kroszel distinguished four types of towns characterised by:

1. a strong differentiation within the structure;
2. a weak differentiation within the structure;
3. a poor structure;
4. a mono-culture.

It can be expected that the system transformation that started at the beginning of the 1990s has influenced the specialisation of the economic base in Polish towns. In order to define the effect of this transformation on specialisation of the economic base and to enable comparison with earlier research, classification and estimation methods applied by M. Jerczyński and other researchers (e.g. A. Matczak, A. Harańczyk and S. Kozłowski) were used in this study.

At the beginning of the period under analysis (1991), Opole Province had 29 towns within its borders. This number had increased to 34 by 1999. This was a result of the following factors:

- in 1993 Korfantów regained its town charter;
- the administrative reform that came into force in 1999 added the Olesno county, which embraces four towns – Olesno, Gorzów Śląski, Dobrodzień and Praszka, to the Opole region.

For the purpose of our research, the towns in the Opole region have been divided into five groups according to population. In the Polish literature, all the towns in the Opole region are classified as small or medium-size towns, including Opole, the capital and at the same time the largest town in the region. However, the division into five groups presented in Table 1 makes it easier to describe and analyse significant differences between the economic bases of different towns in more detail and to analyse the dependency between size and specialisation of the economic base.

Table 1. Division of towns according to the number of inhabitants

Type of town	Number of inhabitants
Smallest towns	Less than 5,001
Small towns	5,001–10,000
Medium-size towns	10,001–20,000
Large towns	20,001–40,000
Largest towns	More than 40,000

Source: Authors' own definition.

Changes that took place in the specialisation of the economic bases in towns within the Opole region base in the period 1991–2001 are presented in Figure 2.

Each pie chart presents the functional specialisation of exogenous activities in a given town in the years 1991, 1999 and 2001. A detailed analysis of the economic base is presented in Table 2.

In 1991 six towns belonged to the group of the smallest towns. Five of them specialised in services, while only one, Baborów, specialised in agriculture. The share of agriculture in exogenous employment was 86.7% in 1991. This share declined significantly to 31.3% in 1999 and 28.5% in 2001. As a result of these changes, none of the sectors of the economy dominated in Baborów. In other words, there was no functional specialisation. However, a strong development of the services sector can be observed. In 1999 real estate services accounted for 37.8% and education for 28% of exogenous activities. In 2001 the food-processing industry was the largest with a share of 43.2%, followed by agriculture with 28.5%. Thus, it may be possible that in the future industry will become the dominant exogenous activity in Baborów.

In the other five smallest towns the services sector was dominant in 1991. In Biała, trade was the most important, making up 53.4% of exogenous employment, while health care had a share of 21.9%. Although

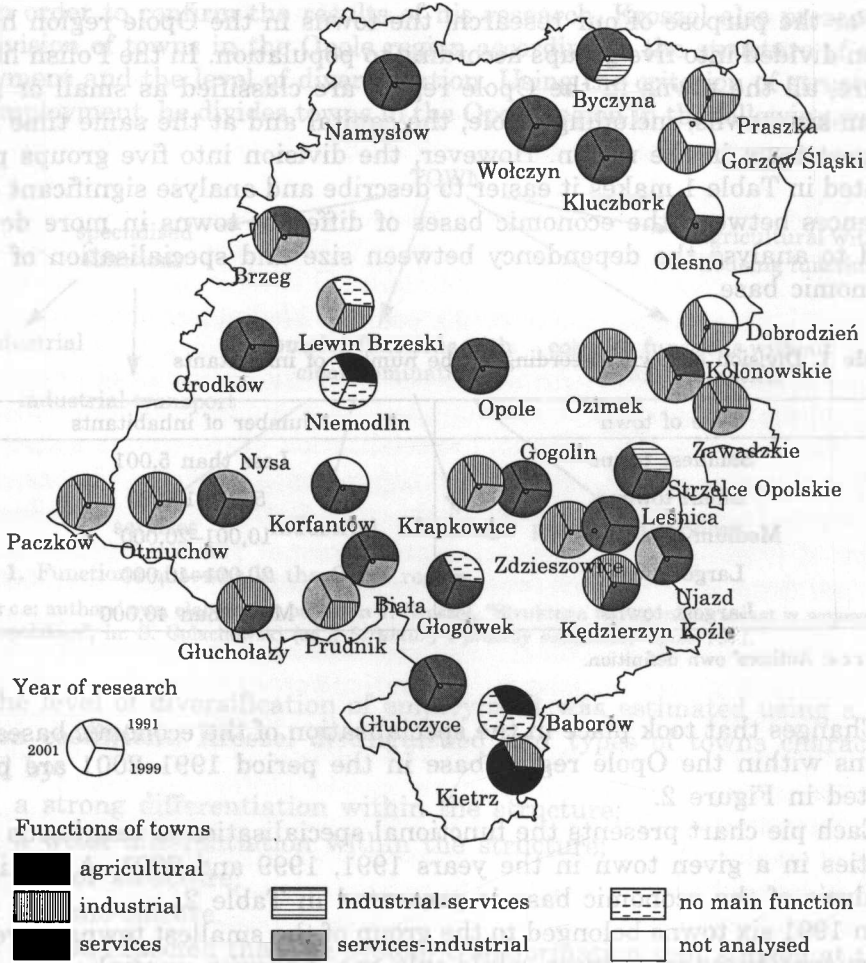


Fig. 2. Changes in the specialisation of the economic base in towns in the Opole region in the period 1991–2001

the share of trade declined to 25.3% in 1999, this was still the main activity. The service sector was still dominant, as the share of health care increased to 23%, and education to 16.4%. Furthermore, public administration and transport and warehousing activities gained in importance. The share of financial mediation declined. The year 2001 shows a different picture, with the food-processing industry having a 47.9% share in the total exogenous employment. As a result, the functional specialisation had changed from services to services-industrial.

In Byczyna, municipal services were the most important sector (33.6%) in 1991, together with trade (19.8%) and transport and commu-

Table 2. Functional specialisation of the smallest towns in the Opole region according to exogenous groups in 1991, 1999 and 2001 – percentage share of branches and sectors in economic activity

Town	1991		function	1999		function	2001		function
	specialisation			specialisation			specialisation		
Baborów	Agriculture	86.7	A	Real estate services	37.8	nmf	Food-processing industry	43.2	nmf
	Public services	12.9		Agriculture	31.3		Agriculture, hunting and forestry	28.5	
	Physical recreation and tourism	0.4		Industry	28.1		Real estate services	15.8	
	Total	100.0		Education	2.8		Education	12.6	
				Total	100.0		Total	100.0	
Biała	Trade	53.4	S	Retail and wholesale trade	25.3	S	Food-processing industry	47.9	SI
	Health care and social welfare	21.9		Health care	23.0		Health care and social welfare	20.6	
	Public services	10.6		Other activities	19.1		Other activities	11.4	
	Education	6.4		Education	16.4		Retail and wholesale trade	9.1	
	State administration and administration of justice	4.8		Public administration	9.1		Education	7.6	
	Finance and insurance	2.9		Transport and warehousing activities	5.2		Financial mediation	3.4	
	Total	100.0		Financial mediation	1.8		Total	100.0	
		Total	100.0						
Byczyna	Public services	33.6	S	Public administration	34.6	S	Industrial food-processing	45.2	IS
	Trade	19.8		Hotels and restaurants	17.6		Agriculture, hunting and forestry	26.1	
	Transport and communications	18.5		Financial mediation	16.7		Education	14.9	
	Other non-material production	10.3		Real estate services	14.7		Hotels and restaurants	7.8	
	State administration and administration of justice	6.5		Education	11.8		Other activities	4.8	
	Education	6.3		Other activities	4.9		Financial mediation	1.3	
	Finance and insurance	3.2		Total	100.0		Total	100.0	
	Agriculture	1.0							
	Culture and art	0.7							
	Total	100.0							

Table 2. Contd.

Town	1991		1999		2001	
	specialisation	function	specialisation	function	specialisation	function
Kolonow- skie	Trade	36.0	Industry	71.2	Food-processing industry	72.3
	Transport and Commu- cations	17.5	Transport and warehousing activities	18.6	Education	9.3
	Education	12.7	Other activities	8.8	Other activities	6.6
	Public services	11.4	Public administration	1.4	Hotels and restaurants	6.3
	Forestry	9.9	Total	100.0	Production and supply of electricity, gas and water	5.6
	State administration and administration of justice	9.5			Total	100.0
	Construction	2.9				
	Total	100.0				
			S		I	
Korfantów	×		Health care	74.2	Health care and social welfare	77.2
			Industry	25.8	Food-processing industry	22.8
			Total	100.0	Total	100.0
				S		S
Leśnica	Health care	39.2	Health care	46.6	Education	48.1
	Education	35.7	Education	29.6	Production and supply of electricity, gas and water	16.6
	Trade	9.1	Public administration	8.8	Health care and social welfare	11.7
	Public services	8.2	Hotels and restaurants	7.3	Financial mediation	9.0
	State administration and administration of justice	4.3	Agriculture	5.9	Hotels and restaurants	6.4
	Culture and art	2.4	Financial mediation	2.1	Public administration and national defence	6.4
	Finance and insurance	1.2	Total	100.0	Agriculture, hunting and for- estry	1.8
	Total	100.0			Total	100.0
			S		S	

Table 2. Contd.

Town	1991		1999		2001	
	specialisation	function	specialisation	function	specialisation	function
Ujazd	Agriculture	31.3	Industry	43.3	Education	33.0
	Public services	18.1	Other activities	23.9	Food-processing industry	29.4
	Education	18.1	Agriculture	20.6	Other activities	27.4
	Trade	13.8	Public administration	8.0	Public administration and national defence	5.3
	State administration and administration of justice	12.4	Education	4.1	Financial mediation	4.9
	Finance and insurance	3.4	Total	100.0	Total	100.0
	Culture and art	2.8				
	Total	100.0				
Dobrodzień	x		Industry	94.8	Food-processing industry	95.5
			Other activities	5.2	Other activities	4.5
			total	100.0	total	100.0
Gorzów Śląski	x		Industry	91.8	Food-processing industry	71.6
			Education	6.4	Education	24.7
			Real estate services	1.8	Real estate services	3.7
			Total	100.0	Total	100.0

Source: authors' own research.

nications (18.5%). These three functions made up more than 70% of exogenous employment. In 1999 the service sector was still dominant. However, in that year public administration was the largest branch with 34.6% of exogenous employment, compared to 6.5% in 1991. Other important services were hotels and restaurants (17.6%), financial mediation (16.7%), real estate services (14.7%) and education (11.8%). In 2001 the picture changed completely, as the food-processing industry had become the largest branch of exogenous employment (45.2%). The functional specialisation changed from services in 1999 to industrial-service in 2001, while agriculture had significantly increased in importance.

Kolonowskie shows a different trend in its development. The functional specialisation changed from services in 1991 to industrial in 1999 and 2001. In 1991 trade (36%), transport and communications (18.5%) and other services accounted for more than 50% of exogenous employment. Construction (2.9%) and forestry (9.9%) were of relatively small importance. In 1999 and 2001 industry was dominant with more than 70% of exogenous employment.

In Leśnica the services sector was dominant in 1991, 1999 and 2001. In 1991 and 1999 health care was the most important, and its share in exogenous employment increased from 39.2% to 46.6%. Also education remained important in 1999, although its share in exogenous employment had declined from 35.7% to 29.6%. Public administration was in the third place (8.8%), while new branches such as hotels and restaurants and agriculture developed. Exogenous employment in culture and art, municipal services and trade had disappeared. Although in 2001 the functional specialisation was still services, education had become the dominant branch with 48.1% of exogenous employment, while the percentage for health care had declined from 46.6% in 1999 to 11.7% in 2001.

Although agriculture was the largest branch in exogenous employment (31.3%) in Ujazd in 1991, the service sector was dominant. Municipal services, education, trade and public administration accounted for more than 60% of exogenous employment. The situation had changed radically by 1999, when industry had become the most important exogenous branch. However, no branch was dominating. In 2001 the service sector was dominant again.

Due to the administrative reform, Dobrodzień and Gorzów Śląski became part of the Opole Province in 1999. These towns belong to the smallest in the province. In both of them industry was dominant in 1999, with more than 90% of exogenous employment. By 2001 the share in exogenous employment of industry in Dobrodzień had risen by 0.7% while declining in Gorzów Śląski to 71.6%, leaving industry the dominant sector.

The next group, containing the largest number of towns, are small towns with five to ten thousand inhabitants. In 1991 almost 35% of all towns in the Opole region (10 out of 29) belonged to this group. In 1999 Praszka was added, increasing the number of small towns to 11, while the total number of towns in the Opole region increased to 34. The structure of exogenous employment in the group of small towns is presented in Table 3.

In 1991 two small towns (Głogówek and Lewin Brzeski) did not have a functional specialisation. In three towns (Gogolin, Grodków and Wołczyn) the services sector was dominant, in four towns (Kietrz, Otmuchów, Paczków and Zawadzkie) industry was dominant while in one town (Niemodlin) both agriculture and services were important in exogenous employment.

Of special interest are Lewin Brzeski and Niemodlin. Lewin Brzeski, applying M. Jerczyński's method, had an industrial function when considering exogenous employment in industry (43%) and construction (20.7%) together. In Niemodlin agriculture had a share of 49.8% in exogenous employment, construction 13.8% and services the remainder.

In 1999 Niemodlin was the only town without functional specialisation of its economic base. The share of agriculture and construction in exogenous employment declined, while the services sector increased in importance, a trend that may continue in the future. In Głogówek, Gogolin, Grodków and Wołczyn the services sector was dominant. The other towns were functionally specialised in industry. In Lewin Brzeski and Otmuchów the importance of industry increased. Although remaining industrial, exogenous employment increased in the services sector in Paczków. Zawadzkie and Praszka show a strong functional specialisation in industry with 100% of exogenous employment. Thus, in six towns the functional specialisation did not change, while in four towns changes took place. A characteristic case is Kietrz, where the functional specialisation changed from industrial in 1991 to agricultural in 1999.

No radical changes took place in the functional specialisation of small towns in the Opole region in 2001. Only one town, Paczków, was an exception. The share in exogenous employment in industry decreased by 18.2%, while increasing by 25.6% in construction. Combining industry and construction, the town can still be considered to be functionally specialised in industry. However, when industry and construction are considered to be different branches, the town does not possess any functional specialisation.

Niemodlin remained without any functional specialisation, although diversification had taken place through development of different branches of the national economy.

Table 3. Functional specialisation of small towns in the Opole region according to exogenous groups in 1991, 1999 and 2001 – percentage share of branches and sectors in economic activity

Town	1991		1999		2001	
	Specialisation	function	specialisation	function	specialisation	function
Głogówek	Construction	34.7	Education	32.8	Food-processing industry	36.0
	Agriculture	23.1	Real estate services	27.0	Education	22.2
	Public services	16.9	Transport and warehousing activities	26.8	Transport and warehousing activities	21.7
	Education	16.9	Health care	13.4	Real estate services	17.1
	Trade	5.5	Total	100.0	Health care and social welfare	2.1
	Health care	2.9			Retail and wholesale trade	1.0
	Total	100.0			Total	100.0
Gogolin	Trade	32.2	Transport and warehousing activities	25.2	Education	34.6
	Education	24.3	Other activities	20.7	Other activities	31.4
	Health care	16.0	Public administration	18.9	Agriculture, hunting and forestry	20.2
	Public services	9.2	Retail and wholesale trade	15.2	Public administration and national defence	7.2
	Transport and Communications	5.5	Education	8.4	Transport and warehousing activities	4.2
	State administration and Administration of justice	3.8	Construction	5.5	Retail and wholesale trade	2.5
	Finance and insurance	3.8	Hotels and restaurants	2.7	Total	100.0
	Construction	3.1	Financial mediation	1.8		
	Other non-material production	2.1	Health care	1.5		
	Total	100.0	Total	100.0		

Table 3. Contd.

Town	1991		function	1999		function	2001		function
	Specialisation			specialisation			specialisation		
Grodzów	Health care	28.5	S	Industry	34.1	S	Food-processing industry	39.6	S
	Agriculture	23.0		Health care	31.9		Retail and wholesale trade	24.1	
	Education	15.7		Other activities	16.7		Health care and social welfare	14.4	
	Housing and non-material public services	14.3		Education	9.9		Other activities	11.8	
	Public services	10.8		Public administration	5.0		Education	8.5	
	Finance and insurance	5.4		Retail and wholesale trade	2.4		Financial mediation	1.6	
	State administration and Administration of justice	1.4		Total	100.0		Total	100.0	
	Political organisations	0.9							
	Total	100.0							
Kietrz	Industry	55.4	I	Agriculture	74.3	A	Agriculture, hunting and forestry	67.2	A
	Agriculture	41.5		Education	10.6		Health care and social welfare	18.3	
	Public services	3.1		Other activities	9.5		Health care and social welfare	7.7	
	Total	100.0		Health care	5.6		Production and supply of electricity, gas and water	4.1	
				Total	100.0		Retail and wholesale trade	2.8	
							Hotels and restaurants	100.0	
Lewin Brzeski	Industry	43.0	nmf	Industry	67.3	I	Food-processing industry	67.1	I
	Public services	27.0		Retail and wholesale trade	28.2		Retail and wholesale trade	31.1	
	Construction	20.7		Other activities	4.5		Transport and warehousing activities	1.8	
	Culture and art.	5.4		Total	100.0		Total	100.0	
	Trade	3.9							
	Total	100.0							

Table 3. Contd.

Town	1991		1999		2001	
	Specialisation	function	specialisation	function	specialisation	function
Niemodlin	Agriculture	49.8	Agriculture	37.2	Agriculture, hunting and forestry	29.6
	Construction	13.8	Retail and wholesale trade	24.6	Retail and wholesale trade	18.4
	Transport and communications	8.5	Health care	15.0	Financial mediation	16.7
	Health care	7.5	Construction	12.6	Education	10.3
	Forestry	6.4	Financial mediation	10.4	Fishing and fish farming	8.5
	Finance and insurance	6.4	Public administration	0.2	Mining	6.6
	Public services	5.9	Total	100.0	Construction	6.5
	Housing and non-material public services	1.7			Public administration and national defence	2.0
	Culture and art	0.7			Hotels and restaurants	1.4
	Total	100.0			Total	100.0
			A		nmf	
Otmuchów	Industry	65.7	Industry	80.8	Food-processing industry	92.6
	Public services	19.4	Hotels and restaurants	8.6	Education	6.1
	Trade	12.2	Public administration	7.7	Production and supply of electricity, gas and water	1.3
	State administration and administration of justice	1.2	Education	2.7	Total	100.0
	Other non-material production	0.8	Real estate services	0.2		
	Culture and art	0.7	Total	100.0		
	Total	100.0				
			I		I	

Table 3. Contd.

Town	1991			1999			2001		
	Specialisation		function	specialisation		function	specialisation		function
Paczków	Industry	78.5	I	Industry	60.1	I	Food-processing industry	41.9	nmf
	Health care	11.6		Other activities	16.4		Construction	38.1	
	Public services	6.5		Construction	12.5		Other activities	8.5	
	Housing and non-material public services	2.7		Health care	11.0		Health care and social welfare	7.4	
	Culture and art	0.7		Total	100.0		Production and supply of electricity, gas and water	3.9	
		100.0					Education	0.3	
	Total						Total	100.0	
Praszka	×			Industry	100.0	I	Food-processing industry	84.4	I
				Total	100.0		Real estate services	12.1	
							Production and supply of electricity, gas and water	2.2	
							Hotels and restaurants	1.2	
					Total	100.0			
Wolczyn	Industry	32.2	S	Industry	46.1	S	Food-processing industry	47.2	S
	Public services	29.3		Retail and wholesale trade	27.4		Retail and wholesale trade	34.2	
	Construction	15.5		Real estate services	13.8		Production and supply of electricity, gas and water	8.8	
	Trade	12.4		Health care	12.7		Real estate services	5.4	
	Health care	8.6		Total	100.0		Transport and warehousing activities	2.4	
	Transport and communications	1.9					Financial mediation	2.1	
	Culture and art.	0.2					Total	100.0	
	Total	100.0							
Zawadzkie	Industry	99.6	I	Industry	100.0	I	Food-processing industry	100.0	I
	Forestry	0.4		Total	100.0		Total	100.0	
	Total	100.0							

Source: authors' own research.

The least number of changes in the structure of the economic base in the Opole region took place in medium-sized towns. The data presented in Table 4 show that in these towns a strong functional exogenous specialisation had already existed in 1991, which did not change before 2001, with the exception of Głucholazy.

Industry strongly dominated in four medium-sized towns in 1991, with an exogenous employment share ranging from 70.5% in Głucholazy to 100% in Zdzieszowice. The services sector gained some importance, while other non-industrial sectors were of little significance. Thus, little has changed and industry remains dominant in these towns. This situation is unlikely to change in the near future, because of the location of large industrial plants within the borders of these towns such as coke plants in Zdzieszowice, paper and pulp plants and shoe factories in Krapkowice. Two towns, Głubczyce and Namysłów, specialised in services in 1991. The economic base of Głubczyce was very diversified with ten groups of exogenous economic activity. The largest branch of services was health care with 23.4% of exogenous employment. In Namysłów also ten groups of exogenous economic activity could be distinguished, of which transport and communications had the largest employment share (28.9%). In 1999, after the administrative reform, Olesno joined the group of medium-sized towns with functional specialisation in services, dominated by health care (52.1% of exogenous employment).

Although there was a further decline in industrial employment, Krapkowice, Ozimek and Zdzieszowice remained strongly specialised in industry in 2001. A significant decline in employment in industry (by 18.8%) was only observed in Głucholazy. In consequence, by 2001 its functional exogenous specialisation had changed from industrial to services.

Table 5 presents the situation in the group of large towns in the Opole region. In this group no changes in the specialisation of the economic base have taken place since 1999. In 1991 Kluczbork and Brzeg specialised in services, while Prudnik specialised in the service-industrial function and in Strzelce Opolskie the industrial-service function was dominant. In the last two towns the share of industry and services was around 50%. In 1999 the functional specialisation in these towns took a more definite shape, as either industry or the services sector strongly dominated in large towns. In Kluczbork transport and warehousing activities were dominant, while in Strzelce Opolskie public administration was the most important service in exogenous employment. In 2001 there were no radical changes in the functional structure of large towns, although in Kluczbork exogenous employment in the most important

Table 4. Functional specialisation of medium-size towns in the Opole region according to exogenous groups in 1991, 1999 and 2001 – percentage share of branches and sectors in economic activity

Town	1991		1999		2001	
	Specialisation	function	specialisation	function	specialisation	function
Głubczyce	Health care	23.4	Real estate services	30.0	Public administration and national defence	29.3
	Transport and Communications	20.7	Health care	21.4	Real estate services	26.7
	Trade	19.7	Construction	20.1	Construction	22.4
	Public services	8.6	Public administration	18.5	Health care and social welfare	20.8
	Public administration	7.6	Retail and wholesale trade	6.4	Education	0.7
	Other non-material production	7.4	Financial mediation	3.6	Total	100.0
	Education	5.0	Total	100.0		
	Finance and insurance	4.7				
	Physical recreation and tourism	1.7				
	Housing and non-material public services	1.1				
	Total	100.0				
Głuchołazy	Industry	70.5	Industry	64.5	Health care and social welfare	46.5
	Health care	17.8	Health care	33.8	Food-processing industry	45.7
	Housing and non-material public services	10.2	Hotels and restaurants	1.1	Hotels and restaurants	7.1
	Physical recreation and tourism	1.5	Other activities	0.5	Other activities	0.7
	Total	100.0	Total	100.0	Total	100.0

Table 4. Contd.

Town	1991		function	1999		function	2001		function
	Specialisation			specialisation			specialisation		
Krapkowice	Industry	96.9	I	Industry	84.1	I	Food-processing industry	76.1	I
	Physical recreation and tourism	1.8		Health care	9.7		Construction	15.7	
	Finance and insurance	1.3		Hotels and restaurants	2.3		Hotels and restaurants	3.5	
	Total	100.0		Financial mediation	2.2		Financial mediation	1.6	
				Real estate services	1.7		Real estate services	1.9	
				Total	100.0		Health care and social welfare	1.2	
				Total	100.0				
Namysłów	Transport and communications	28.9	S	Health care	20.6	S	Health care and social welfare	36.5	S
	Health care	22.3		Financial mediation	17.6		Food-processing industry	23.6	
	Trade	15.5		Retail and wholesale trade	15.9		Financial mediation	19.2	
	Housing and non-material public services	10.8		Public administration	13.8		Production and supply of electricity, gas and water	15.0	
	Finance and insurance	6.8		Industry	12.7		Education	5.7	
	Forestry	4.4		Transport and warehousing activities	9.8		Total	100.0	
	Education	3.4		Education	9.6				
	Industry	3.0		Total	100.0				
	Other non-material production	2.8							
	Public services	2.1							
	Total	100.0							
Olesno	x		S	Health care	52.1	S	Health care and social welfare	43.2	S
				Public administration	22.6		Public administration and national defence	32.9	
				Retail and wholesale trade	17.0		Retail and wholesale trade	13.0	
				Financial mediation	7.1		Transport and warehousing activities	5.4	
				Education	0.8		Financial mediation	4.5	
				Real estate services	0.5		Education	0.9	
				Total	100.0		Total	100.0	

Table 4. Contd.

Town	1991			1999			2001		
	Specialisation		function	specialisation		function	specialisation		function
Ozimek	Industry	99.6	I	Industry	95.4	I	Food-processing industry	92.1	
	Other non-material production	0.4		Health care	3.5		Real estate services	7.1	
	Total	100.0		Hotels and restaurants	1.1		Health care and social welfare	0.8	
				Total	100.0		Total	100.0	
Zdzieszowice	Industry	100.0	I	Industry	97.4	I	Food-processing industry	89.2	
	Total	100.0		Construction	2.6		Construction	9.1	
				Total	100.0		Hotels and restaurants	0.2	
							Transport and warehousing activities	1.5	
							Total	100.0	

Source: authors' own research.

Table 5. Exogenous functions of towns in the Pole region in 1991, 1999 and 2001

Table 5. Functional specialisation of large towns in the Opole region according to exogenous groups in 1991, 1999 and 2001 – percentage shares of branches and sectors in economic activity

Town	1991		1999		2001	
	Specialisation	function	specialisation	function	specialisation	function
Brzeg	Trade	27.5	Industry	65.6	Food-processing industry	67.3
	Housing services	20.5	Real estate services	14.5	Real estate services	15.0
	Industry	18.5	Public administration	10.7	Public administration and national defence	11.5
	Public services	17.8	Other activities	6.8	Other activities	4.9
	Other non-material production	6.5	Financial mediation	2.0	Financial mediation	1.4
	State administration and administration of justice	4.0	Hotels and restaurants	0.4	Total	100.0
	Other non-material Services	3.3	Total	100.0		
	Finance and insurance	1.4				
	Total	100.0				
Kluczbork	Transport and Communications	82.5	Transport and warehousing activities	70.5	Transport and warehousing activities	61.5
	Trade	8.8	Industry	26.2	Public administration and national defence	15.4
	Physical recreation and tourism	2.8	Public administration	3.3	Production and supply of electricity, gas and water	11.0
	Health care	2.7	Total	100.0	Food-processing industry	9.0
	Public services	2.2			Hotels and restaurants	2.5
	Political organisations	0.6			Health care and social welfare	0.5
	Other non-material Services	0.3			Real estate services	0.2
	Finance and insurance	0.2			Total	100.0
	Total	100.0				

Table 5. Contd.

Town	1991		1999		2001	
	Specialisation	function	specialisation	function	specialisation	function
Prudnik	Industry	47.9	Industry	75.5	Food-processing industry	79.5
	Health care	31.9	Public administration	12.7	Public administration and national defence	19.1
	Housing and non-material public services	7.6	Health care	11.5	Health care and social welfare	1.0
	State administration and administration of justice	5.0	Financial mediation	0.3	Financial mediation	0.4
	Transport and Communications	3.7	Total	100.0	Total	100.0
	Finance and insurance	3.6				
	Political organisations	0.2				
	Total	100.0				
			SI		I	
						I
Strzelce Opolskie	Industry	50.8	Public administration	51.3	Public administration and national defence	70.2
	State administration	25.0	Real estate services	23.1	Retail and wholesale trade	22.0
	Trade	8.8	Industry	18.6	Health care and social welfare	4.4
	Public services	6.6	Retail and wholesale trade	5.3	Real estate services	2.4
	Other non-material Services	3.8	Financial mediation	1.7	Production and supply of electricity, gas and water	1.0
	Finance and insurance	3.1	Total	100.0	Total	100.0
	Housing and non-material public services	1.9				
	Total	100.0				
			IS		S	
						S

Source: authors' own research.

services, transport and warehousing activities, declined from 70.5% to 61.5%.

The last group to be discussed is the group of the largest towns in the Opole region, *i.e.* Nysa, Kędzierzyn-Koźle and Opole. In Kędzierzyn-Koźle industry and construction was the functional specialisation in 1991. The structure of exogenous employment in Nysa and Opole was diversified, with nine and fourteen branches respectively. Nysa has lost its industrial character as a result of the disappearance of many plants and the announcement of the liquidation of the largest factory (DAEWOO). As a result, the services sector has become the most important. The services sector dominates in Opole. In 1999 trade with 25.4% of exogenous employment, construction with 23.9% and financial mediation with 9.9% were the most important. At the end of the study period Opole was not industrial anymore and there was no industry among the groups of exogenous activities. However, construction has been an important branch during the whole transformation period. In 2001 the most important branches determining the domination of the services sector in Opole are construction (24%), trade (18.9%) and public administration (18.3%), while six other branches are of lesser importance. In 2001 trade was the largest exogenous group in Nysa with a share of 24%, followed by transport and warehousing activities (20.9%). Industry employed only 10.9%, which is a 21 percentage point decline compared to 1999.

The largest changes in the functional structure took place in Kędzierzyn-Koźle. In 1999 it specialised in industry, with a share of 46.7% of exogenous employment. Besides industry, there were only three other exogenous groups. In 2001 there was much more diversification, as the town possessed fourteen exogenous groups. The largest branch is industry with a share of 34.2%. In accordance with M. Jerczyński's assumptions, even industry and construction combined do not make industry dominant, as more than 50% of exogenous employment is in the services sector.

It has to be noticed that the growth of employment in administration, especially outside Opole, the capital of the province, is likely to be a consequence of the fact that the towns that also have the status of a *powiat* provide administrative services for other towns and villages. Towns with the status of a *powiat* are Namysłów, Brzeg, Kluczbork, Olesno, Nysa, Strzelce Opolskie, Krapkowice, Prudnik, Kędzierzyn-Koźle, Głubczyce and Opole. Because the administrative units of the *powiat* are located in these towns, a significant increase in employment in administration, a part of the services sector, can be observed.

Table 6. Functional specialisation of the largest towns in the Opole region according to exogenous groups in 1991, 1999 and 2001 – percentage share of branches and sectors in economic activity

Town	1991		function	1999		function	2001		Function
	specialisation			Specialisation			specialisation		
Kędzierzyn-Koźle	Industry	60.3	I	Industry	46.7	I	Food-processing industry	34.2	S
	Transport and Communications	15.7		Transport and warehousing activities	31.6		Transport and warehousing activities	12.7	
	Science and technological Development	13.4		Real estate services	13.6		Retail and wholesale trade	7.8	
	Construction	9.4		Construction	8.1		Health care and social welfare	7.8	
	Public services	1.2		Total	100.0		Public administration and national defence	7.8	
	Total	100.0					Education	7.2	
							Construction	7.0	
							Production and supply of electricity, gas and water	5.0	
							Real estate services	4.9	
							Financial mediation	2.7	
Nysa	Industry	49.6	SI	Industry	32.5	S	Retail and wholesale trade	24.0	S
	Transport and Communications	21.1		Transport and warehousing activities	24.4		Transport and warehousing activities	20.9	
	Housing and non-material public services	12.7		Retail and wholesale trade	16.3		Public administration and national defence	16.4	
	Health care	7.4		Real estate services	12.3		Production and supply of electricity, gas and water	12.0	
	Finance and insurance	3.6		Public administration	7.3		Food-processing industry	10.9	
	Other non-material Services	2.2		Financial mediation	4.5				

Table 6. Contd.

Town	1991		1999			2001		
	specialisation	function	Specialisation	function	function	specialisation	function	Function
Nysa	State administration and administration of justice	1.4	Other activities	2.0	S	Real estate services	10.7	S
	Public services	1.3	Hotels and restaurants	0.7		Other activities	2.8	
	Physical recreation and tourism	0.7	Total	100.0		Health care and social welfare	1.3	
	Total	100.0				Hotels and restaurants	1.0	
						Total	100.0	
Opole	Construction	33.2	Trade	25.4	S	Construction	24.0	S
	Trade	15.3	Construction	23.9		Retail and wholesale trade	18.9	
	Finanse i ubezpieczenia	9.3	Financial mediation	15.5		Public administration and national defence	18.3	
	Transport and Communications	6.8	Real estate services	9.0		Financial mediation	10.0	
	Other non-material production	6.4	Public administration	8.9		Real estate services	10.0	
	Health care	4.6	Transport and warehousing activities	8.7		Transport and warehousing activities	9.1	
	Public services	4.5	Other activities	3.3		Other activities	4.6	
	Culture and art.	4.4	Health care	2.9		Health care and social welfare	3.1	
	State administration and Administration of justice	4.0	Hotels and restaurants	2.4		Hotels and resaurants	2.0	
	Housing and non-material public services	3.6	Total	100.0		Total	100.0	
	Physical recreation and tourism	3.2						
	Other non-material services	2.7						
	Political organisations	1.4						
	Science and technological Development	0.5						
	Total	100.0						

Source: authors' own research.

Concluding remarks

Based on the research presented in this article, it can be argued that the specialisation of the economic base of towns in the Opole region has been relatively stable. Of the 34 towns, 29 have had an industrial, services or agricultural mono-function since 1999, while only two towns did not possess a specific specialisation. In 13 of those towns the specialisation has not changed since 1999, although many changes have taken place, as many economic branches have developed during the economic transformation. It is possible to distinguish the following functional types of towns in the Opole region:

- in 1991:
 1. towns with a specialised function
 - industrial (9 towns);
 - services (13 towns);
 - agricultural (2 towns);
 2. towns with a complex function
 - with domination of services (2 towns);
 - with domination of industry (1 town);
 - without functional specialisation (2 towns).
- in 1999:
 1. towns with a specialised function
 - industrial (15 towns);
 - services (15 towns);
 - agricultural (1 town);
 2. towns with a complex function
 - without functional specialisation (3 towns).
- in 2001:
 1. towns with a specialised function
 - industrial (12 towns);
 - services (16 towns);
 - agricultural (1 town);
 2. towns with a complex function
 - with domination of services (1 town);
 - with domination of industry (1 town);
 - without functional specialisation (3 towns).

There is a tendency that more and more branches of the national economy are becoming important for the exogenous function of towns, diversifying the exogenous economic base. A good example is Kędzierzyn-Koźle. The existence of many firms, which are threatened by bankruptcy or may have to reduce production and employment, may influence the future development of the economic base, especially in towns with a low

level of diversification. The disappearance of such firms is likely to lead to an increase in unemployment in these places.

Summarising, the following conclusions can be drawn from the research presented:

Although changes in the functional structure of exogenous groups with respect to particular sectors of the economy have taken place, these changes have not radically changed the functional type of the smallest towns. One time one sector is dominant, another time another, with the exception of Biała and Byczyna, which changed from a functional specialisation in services to a mixed service-industrial or industrial-service function.

In small towns the functional specialisation of the economic base has not changed, although changes within sectors have taken place. Similarly in medium-size towns the functional type of the exogenous group has not changed, with Głuchołazy as an exception. In large towns the functional specialisation of exogenous groups has remained unchanged despite of apparent changes in their share in the functional structure.

Among the largest towns, only Kędzierzyn-Koźle has transformed from industrial domination to specialisation in services, while diversifying its exogenous economic base at the same time. In the other towns the functional specialisation remained unchanged.

Based on our research, the following tendencies can be observed in the towns in the Opole region:

1. A decline in exogenous employment – an increase in the level of endogenous employment (the share of exogenous groups in general employment declined mainly due to a reduction in industrial employment and, to a lesser extent, services).

2. Diversification in exogenous employment in large and the largest towns.

3. In many towns the number of branches of the national economy with exogenous employment is increasing, and the dependency on exogenous employment in one group, mainly industry, is declining.

Literature

Dziewoński, K., *Baza ekonomiczna i struktura funkcjonalna miast (The Economic Basis and Functional Structure of Towns)*, Warszawa, 1967.

Jerczyński, M., „Zagadnienia specjalizacji bazy ekonomicznej większych miast w Polsce” (“Questions of specialisation and economic basis of larger cities in Poland”), in: K. Dziewoński (ed.), *Studia nad strukturą funkcjonalną miast (Studies in the Functional Structure of Cities)*, *Prace Geograficzne IG PAN no. 97*, 1973.

Kosiński, L., „Klasyfikacja funkcjonalna większych miast polskich według stanu na rok 1950” (“The functional classification of bigger cities in Poland according to the state in 1950”), in: *Przegląd geograficzny (The Geographical Review) vol. 30, no. 4*, 1958.

- Kroszel, J., „Struktura funkcjonalna miast w województwie opolskim” (“The functional structure of the towns in Opole Province”), in: *Struktury i procesy osadnicze (The Settlement Structures and Processes)*, Opole, 1971.
- Ślodeczyk, J., *Przestrzeń miasta i jej przeobrażenia (The Space of the Town and its Transformations)*, Opole, 2001.
- Ślodeczyk, J., „Rola funkcji przemysłowej w miastach regionu opolskiego w świetle struktury osób pracujących” (“The role of industrial function in the towns of Opole Region in the light of the structure of employed people”), in: J. Ślodeczyk (ed.), *Spoleczne, gospodarcze i przestrzenne przeobrażenia miast (Social, Economic and Spatial Transformations of Cities)*, Opole, 2000.
- Rajchel, D., „Funkcja czterech miast przyłączonych do województwa opolskiego – na tle zbioru miast tego regionu” (“The function of four towns annexed to Opole Province – against the background of the set of the towns in the region”), in: J. Ślodeczyk (ed.), *Spoleczne, gospodarcze i przestrzenne przeobrażenia miast (Social, Economic and Spatial Transformations of Cities)*, Opole, 2000.
- Rajchel, D., „Zmiany struktury funkcjonalnej miast regionu opolskiego na podstawie proporcji zatrudnienia w sektorach gospodarki” (“Changes in the functional structure of the towns of Opole region on the basis of the ratio of employment in the sectors of economy”), in: J. Ślodeczyk (ed.), *Przemiany bazy ekonomicznej i struktury przestrzennej miast (The Transformations of the Economic Basis and Spatial Structure of Towns)*, Opole, 2002.
- Rocznik statystyczny województwa opolskiego 1992 (Statistical Yearbook for Opole Province 1992)*.
- Rocznik statystyczny województwa opolskiego 2000 (Statistical Yearbook for Opole Province 2000)*.
- Tabele statystyczne dot. pracujących w 2001 (Statistic Employment Tables for the Year 2001).