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- Praca opublikowana w: Słodczyk, J. and Hasiński, W. (eds.), *Problems of the Life Quality of City-Dwellers, Economic and Environmental Studies*, No. 9, Opole: Wyd. UO, 2007, s. 43-53.

## **The servicisation process based on the structure of employment in large German cities in 1996-2002.**

### **ABSTRACT**

The paper concentrates on the changes in the service sector as they are visible in the studies of the structure of employment in larger German towns (above 100 thousand inhabitants; exchangeably called cities later in the text) in the period 1996-2002. The population of German towns with such high number of dwellers amounts to 24 million people, who constitute 30% of the population of the country, and at the same time 40% of the employed in Germany. The analyses presented in the paper point out a few significant changes in the economy and in the social sphere of German cities. On one hand, these changes may be seen in continuous deindustrialisation; and on the other hand in a permanent growth of the service sector (characteristic of the 70s and onwards especially in East Germany). Moreover, the paper notices some additional major changes in the structure of the subsectors and movements in the structure of the employment in services in Germany.

### **INTRODUCTION**

At the very beginning of this paper the authors wish to remark that the following reasoning and analysis of servicisation process in larger German towns is based on the scientific inquiry only into the growth of the number of those employed in the service sector. The authors are aware of multifold aspects causing the growth of the service sector as can be seen in the progressive and diverse changes in European countries.

Out of a few facets of servicisation, the first to notice is connected with an increasing role of services in creating GDP (Gross Domestic Product) also known as servicisation of production. The second aspect is combined with a constant increase both in the consumption of services and in the growth of the consumption of services in a household and in the society (servicisation of consumption). Finally, the third facet of the process is best seen in a growing number of employment in services and in a constant increase in the number of the employed in the service sector (servicisation of work and of employment).

When analysing the servicisation of production in connection to GDP, it is worth mentioning that in the most developed countries nearly 70-75% of GDP come from the service sector, 20-25% from industry, and around 5% from agriculture. In the USA services amount to 80% of GDP (in 2001), in the UK it is 74% (in 2001), in France 71% (in 2002), in Japan and in Germany 68% (in 2001), and in Poland it is 61% (in 2001). The process of servicisation is also present in East Europe e.g., in Russia in 1998 the sources of GDP were divided in the following manner: production of goods – 39.9% (in 1990 it was already 60% of GDP), production of services – 52.7%. Therefore, for the first time in the history of Russia services amounted to more than a half of its GDP (Szymańska., 2004a; 2004b).

Another aspect of servicisation already mentioned in the article is found in the constant increase of the consumption of services and in the growth of the share of that consumption in the total household expenses as well as in the national expenses (servicisation of consumption). Such trends are typical of the societies in the developed countries. Although the topic itself is more than interesting to a scientist, it is not of prime importance within the scope of this article.

Every year the number of people employed in the service sector, especially in the developed countries, is growing substantially. Nowadays, more than a half of those capable of working is employed in services. In Germany nearly 70% of the employed work in the service sector (2002), while in Poland, for comparison, it is only 46% (in 2001; although in 1987 it was even more astonishingly low 35%).

After World War 2, there was a significant boost in the development of the service sector due to rapid changes in the economy of Western countries, which were caused by some major shifts in demography, society, and politics. As a direct effect, the service sector became a new major branch of the West Europe market (Payne, 1977,p.17). However, it is necessary to remember that the process was not simultaneous in all countries. The speed of servicisation

depends on such factors as local characteristic of economies based on natural resources, the age structure of the society, the level of wealth of the society, and state healthcare among many others, all of which may significantly diversify the amount of services required in countries at a similar stage of development. For example, in the Federal Republic of Germany only 70% of the employed work in services (in 2001) which is surprisingly low when compared with Belgium – 72%, Norway – 74.5%, and finally with the USA – 75%. The relatively low percentage of people employed in the service sector in Germany is a direct consequence of the natural characteristics of the country, in which the industry is of a major importance.

Therefore, a question arises what changes are of importance in the process of servicisation as it can be seen in the structure of employment in large German towns in the period 1996-2002. Those towns house 24 million citizens, who constitute 30% of German nation and 40% of the employed in the country.

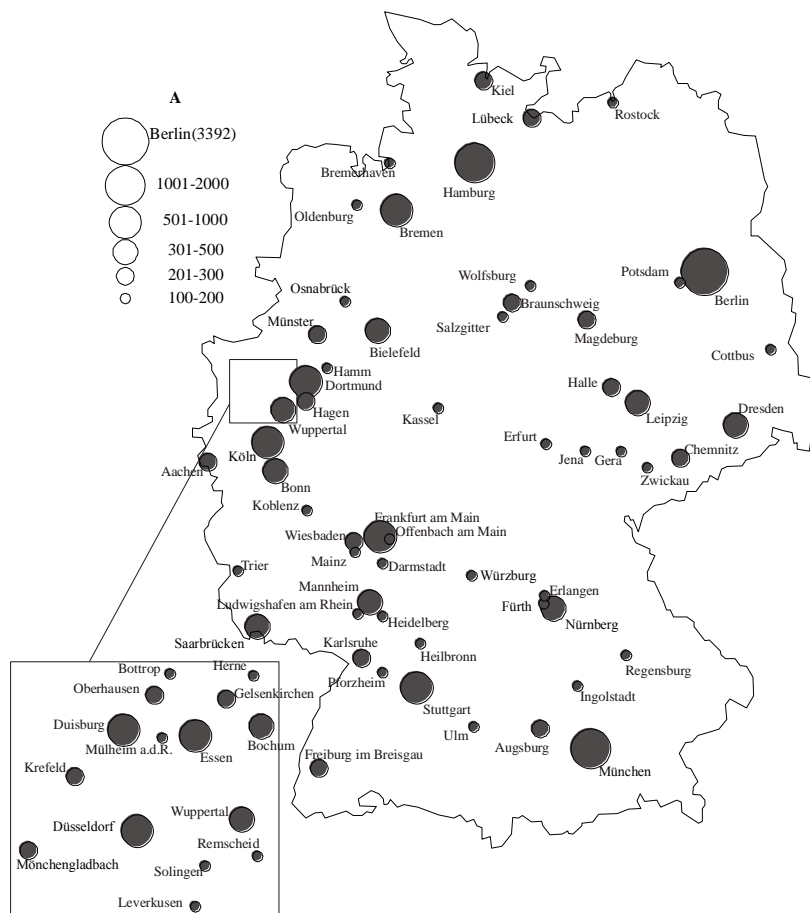


Figure 1. German towns with population above 100 thousand inhabitants

*Explanations:* A-the number of city inhabitants in thousands

*Source:* Authors' study based on the data from Statistisches Landesamt Deutschland

The investigation concentrates on towns with more than 100 thousand inhabitants as it was these cities that they housed 40% of the employed in the service sector out of all people working in services in 2002 in Germany. In some sections of the service sector it was even 50% of the employed in services, e.g., in financial intermediation (J) and in real estate, renting, and business activities (K). (Classification and translations here and in the rest of the text after Główny Urząd Statystyczny, Rocznik Statystyczny – Central Statistical Office, Statistical Yearbook of Poland 2004.) The analysis presented here ignores data from 12 large towns (out of the total number of 84) from 2002 as some major pieces of information seemed unreliable. Nevertheless, the exclusion of those cities from the investigation does not probably influence the analysis to a great extent, and the data from the cities may be neglected without distorting the final image of the process of urbanisation in Germany. In order to present the changes within the process, the number of the employed in the service sector was set against the number of those working in the other sectors in 1996 and in 2002. The investigation also took into account structures of sub-sectors within services; the service sector was divided into the following groups: (G) wholesale and retail trade; repair of motor vehicles, motorcycles, and personal and household goods; (H) hotels and restaurants; (I) transport, storage, and communication; (J) financial intermediation; (K) real estate, renting, and business activities; (L) public administration and defence; compulsory social security; (M) education; (N) health and social work; (O) other community, social, and personal service activities; (P) activities of households; and also two grouped sub-sectors G, H, I, and J, K.

Such a division of the sector allows its further general stratification into market services and social services (Bywalec, 1990). Of course, every division is questionable, and even here some of the services included in sub-sectors L, M, N, O, P are paid services directed towards the market e.g., education or health care. Nevertheless, as this article concentrates on a specific topic from a precise point of view, the division of the service sector into the presented groups should suffice to illustrate some trends and regularities in the development of services at the time of major changes in demography – population ageing process, in social shifts – foreign immigration, and in the sphere of politics and economy – restructuring of the Ruhr Basin, the unification of Germany. These factors influenced the Germans throughout the whole country but are most

visible in town agglomerations (the level of urbanisation in 2000 for Germany was 87.5% (Rocznik Statystyki..., 2003).

## **CHANGES IN THE STRUCTURE OF EMPLOYMENT IN THE SERVICE SECTOR IN LARGE GERMAN TOWNS IN 1996 AND 2002**

As it was mentioned so far, 74 towns were investigated and the data collected refers to two periods, to years 1996 and 2002. The share of the employed in the service sector in large German towns in 1996 reached an average of 74.3% and in 2002 it already increased to 78.7%. In addition, the percentage of those working in services in the total amount of people employed in Germany reached 65.4% in 1996 and 70.0% in 2002. Bremerhaven is the only investigated town in which the share of service sector workers did not increase relatively to the number of people employed in two remaining sectors. In more than ninety percent of the towns, in 66 to be precise, more than 60% of working people were employed in services both in 1996 and in 2002. Moreover, in 1996 in 60% of large German towns 60-80% of the employed worked in the service sector, and in 22% the share amounted to 80-89%. However, in 2002 60-80% characteristic was describing only 49% of investigated cities, and the 80-89% share was typical of 43% of large German towns (Figure 2). There is, nevertheless, still another point to be noticed as the range of cities that reached maximum or minimum levels far from the statistical average also grew substantially. Hence, in the periods studied Wolfsburg was the city with the lowest share of service sector workers with 34% in 1996 and 39.6% in 2002. On the other side of the spectrum one can find Bonn with 86.7% in 1996 and 89.1% in 2002 of those working in services in the total amount of the employed. The case of Wolfsburg can be easily explained by the virtue of high industrialisation. Among many others, the car factory of Volkswagen is situated in the vicinity, which explains an astounding figure of 60% share of people employed in industry to the total amount of workers still in 2002.

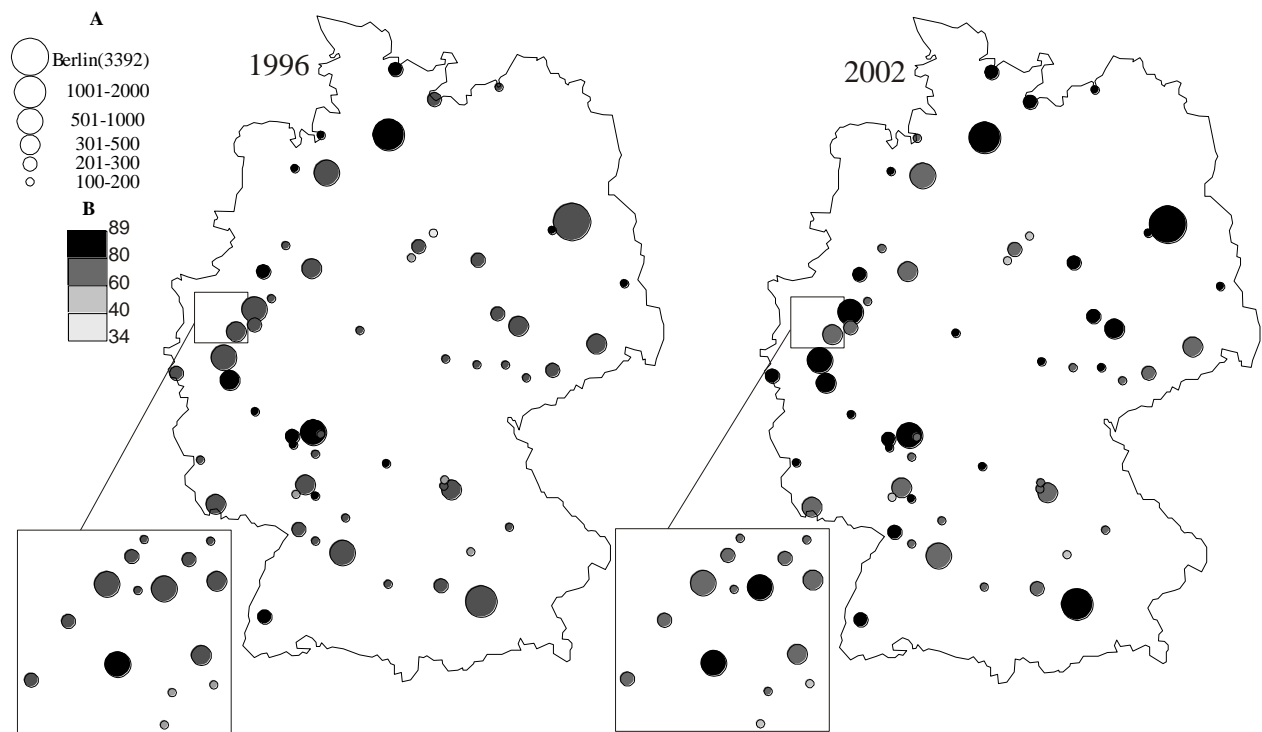


Figure. 2. Service sector workers in total amount of the employed in large German towns in 1996 and in 2002

*Explanations:* A- population in thousands; B- share of service sector workers in the total amount of the employed given in %

*Source:* Authors' study based on the data from Statistisches Landesamt Deutschland

In 1996 there were only 5 large towns with the share of service sector workers lower than 50%; however, in 2002 there were barely 2 such towns left, namely Wolfsburg with 39.7% and Ludwigshafen am Rhein with 49.8% (Figure 2).

The investigation into the relation between the number of large German towns' inhabitants and the amount of service sector workers proves the connections rather strong around the level 0.9614 in 2002 and 0.9655 in 1996)..

The evidence for the development of the service sector is also found in the services burden index (Jakubowicz, 1993; Nowosielska, 1994), which presents the number of people employed in services per 1000 persons. In the period studied 1996-2002, the services burden index on average increased by 10%, from 427 to 472 service sector workers per 1000 persons. Leipzig is the only exception from this general rule as the index fell slightly by 0.8% there. In general, throughout the Germany there were 297 people employed in services per each 1000 persons in 1996, and the number increased to 327 in 2002. The ratio of service sector workers is

spatially differentiated in Germany, which is best visible in former East Germany where the service sector employs many fewer workers (Figure 3).

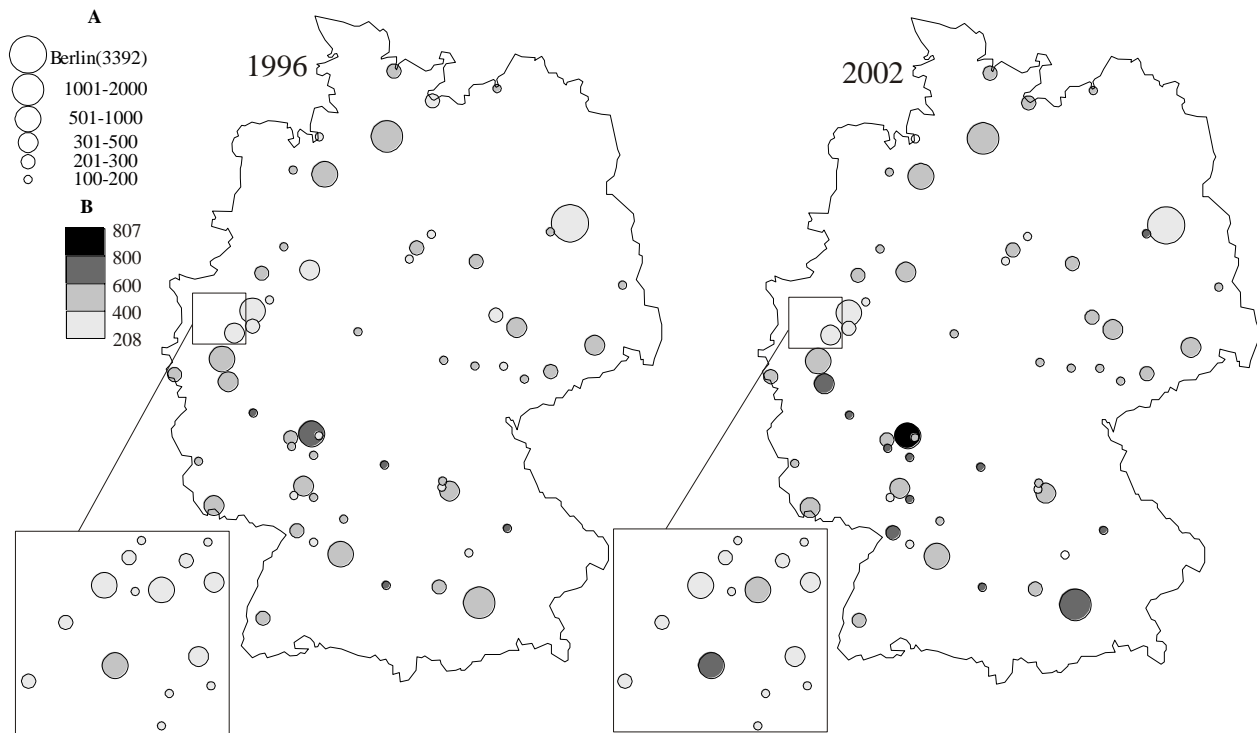


Figure. 3. The amount of service sector workers per 1000 inhabitants of large German towns in 1996 and in 2002

*Explanations:* A- population in thousands.; B-the number of service sector workers per 1000 inhabitants

*Source:* Authors' study based on the data from Statistisches Landesamt Deutschland

In 1996 the minimum and maximum of the services burden index were noted in Herne – 209, and in Koblenz – 779. However, in 2002 the extremes rose respectively with the lowest number in Bottrop – 262, and the highest in Frankfurt am Main – 808. The differences are as much quantitative as qualitative. It also worth mentioning that in 1996 only in 7% of cities (5) with 600-800 service sector workers per 1000 persons, in 51.4% of towns the services burden index reached 400-600, and in 41.6% it was below 400. In 2002 the maximum extremity changed significantly, namely, there were 17% of cities (13) with more than 600 service sector workers per 1000 persons. Moreover, another spatial issue should be taken into account – both in 1996 and in 2002 the services burden index did not exceed 540 in the former East Germany. Potsdam was the only exception from that rule with 601 service sector workers per 1000 persons in 2002. On the other hand, the services burden index in former West Germany surpassed 540 in 22% of

cities in 1996, and in 35% of cities in 2002 (Figure 3). What can also be distinctly noticed is the fact that in 1996 there was a clearly defined district of the Ruhr Basin with the share of service sector worker below 400 per 1000 persons. In contrast, the cities with highest numbers of workers employed in services were found in Southern regions of the former West Germany in Frankfurt am Main, Wiesbaden, Stuttgart, Munich, and others (Figure 3). The explanation for the fact is quite simple as the service sector is boosted in the area by the presence of various institutions and high rank services such as majority of European and world banks (Frankfurt am Main), scientific research institutes, technological parks (Regensburg, Stuttgart, and Munich), specialised spas with numerous clinics, convalescent homes, social venues like theatres, culture institutions, entertainment places (Wiesbaden). These cities are characterised by their specific functionality, as they are known for numerous cultural events also related to their location appealing to tourists, who visit the Frankish Alb and Bavarian Plateau). Due to all the factors listed above the services burden index exceeds 700 per 1000 persons.

Other analysed element was the structure of the employed in particular services subsectors according to the selection. Considering a general division into sections G,H, I, J,K, (G - wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, H - hotels and restaurants, I - transport, storage and communication, J- financial intermediation, K - real estate, renting and business activities), which are market services and selection services L, M, N, O, P (L - public administration and defence; compulsory social security, M – education, N- health and social work, O - other community, social and personal service activities, P - activities of households), so taking public character, into account, it is worth noticing that both in 1996 and 2002 in 86% of the cities (62) there was a higher quota of those working in market services to those in non-market servicing. It is also essential to mention that the share of those working is decreasing yearly if compared to a general number of those working in G,H,I sections, which are basic services. The average for the considered cities set was 35.3% in 1996 and in 2002 it was 32.1% (of working in G, H, I). Examining a part of the employed in those sections according to cities size categories it should be noted that in the cities of 100-200 thousand inhabitants in 1996 there were 36.6% employed, while in 2002 there was 33.1% of the general employment and in the cities from 500 thousand to one million inhabitants there were 37.4% and 33.6% accordingly, thus in Berlin there were 30.5% and 27.4% (Table 1). From numerous researches it can be stated that in the period 1970-1996 an increase in services



employment and a decrease in two other sectors was generally noted in Germany. In basic services sections (G, H, I) it was a minimal growth, while in higher rank services it was over twice as big (Kulke, 1998, p.188.). In the higher rank market services (IV sector – J,K - quaternary activity) the average for cities of over 100 thousand inhabitants was 23% in 1996 and in 2002 it was 27.5% and in the cities from 500 thousand to 2 million there were 32% on an average of the employed in those sections in 2002, and in Berlin 24.4% (compare Table 1).

Table 1. The number of working in services in large German towns in 1996 and 2002

population in thousands			101-200	201-300	301-500	501-1000	1001-2000	3992-Berlin	
1996	total	1	2580,8	2729	2012,9	3068,9	1878,8	1581,9	
		2	1759,3	2018,7	1465,2	2344,2	1476,5	1224,9	
	sections	total	1	68,2	74,0	72,8	76,4	78,6	77,4
			2	644,4	696,1	515,1	876,3	529,0	374,2
		G,H,I	1	36,6	34,5	35,2	37,4	35,8	30,5
			2	318,2	412,5	332,7	630,8	403,1	270,9
		J,K	1	18,1	20,4	22,7	26,9	27,3	22,1
			2	796,6	909,6	617,4	837,2	544,4	579,8
	L,M,N,O, P	1	45,3	45,1	42,1	35,7	36,9	47,3	
		2	3066,1	2388,3	2083,0	3259,1	1973,7	1531,4	
2002	total	1	2243,7	1888,9	1614,6	2629,1	1608,4	1272,5	
		2	73,2	79,1	77,5	80,7	81,5	83,1	
	sections	total	1	741,7	603,6	520,5	884,5	518,2	348,2
			2	33,1	32,0	32,2	33,6	32,2	27,4
		G,H,I	1	506,6	466,7	430,2	854,7	520,0	312,6
			2	22,6	24,7	26,6	32,5	32,3	24,6
		J,K	1	995,6	818,5	663,6	889,8	570,2	611,7
			2	44,4	43,3	41,1	33,8	35,5	48,1

*Explanations:* 1- in thousands; 2- in percentage;

G- wholesale and retail trade; repair of motor vehicles, motorcycles, and personal and household goods; H- hotels and restaurants; I - transport, storage, and communication; J - financial intermediation; K- real estate, renting, and business activities; L - public administration and defence; compulsory social security; M- education; N- health and social work; O - other community, social, and personal service activities; P activities of households;

*Source:* Authors' study based on the data from Statistisches Landesamt Deutschland

The share of the working inhabitants in the market services (G, H, I, J, K sections) in the overall number of the employed in services in large German towns was slightly spatially diversified. A little smaller part of working in those sections can be noted in cities of eastern part of Germany (especially in 1996 – Figure 4), higher in western Länder (the area of former Federal Republic of Germany)

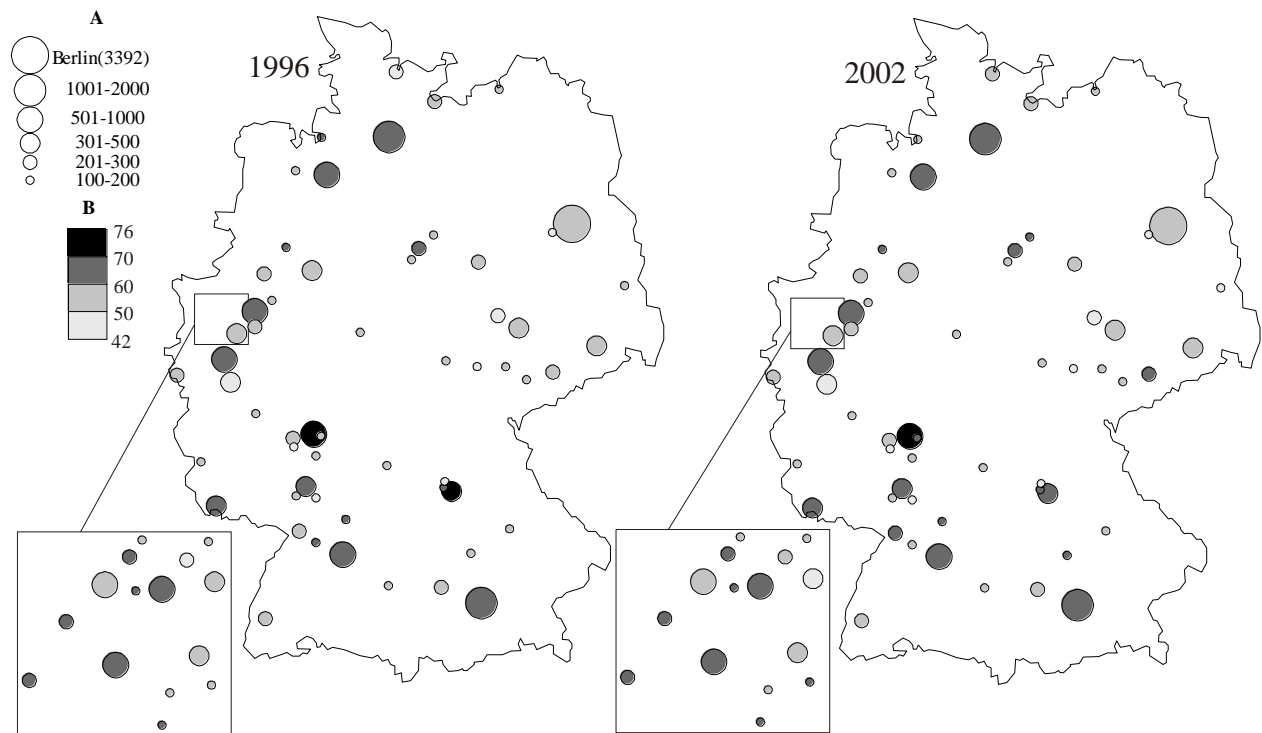


Figure. 4. The number of working in market servicing (G, H, I, J, K sections)\* to a general number of employed in services in large German towns in 1996 and 2002

*Explanations:* A- population in thousands.; B- the number of working in market servicing (G, H, I, J, K sections)\* to a general number of employed in services.; see explanations in the text

*Source:* Authors' study based on the data from Statistisches Landesamt Deutschland

Comparatively small share of working in market services to the overall employment in the third sector was noticed in such university towns as Heidelberg (49.5%) and Cottbus (46.4%), and the most people in market services sector (above 65%) work in towns lying in west Germany; these are the cities bound with both world market, such as Frankfurt am Main (European Central Bank, Stock Exchange, numerous bank centres), Düsseldorf (numerous banks, insurance concerns centres), Hamburg (trade and transport metropolis), as well as smaller towns such as Fürth, Heilbronn or Mülheim an der Ruhr where a high percentage of working in market services is a result of restructurisation and creation of new work places in this sector in the Ruhr Basin.

In the analysed period (1996 and 2002) in the range of market services there were quite a few movements on the part of working in the G,H,I and J,K sectors. Hence, with the exception of

Bonn and Leipzig, in all other cities there was a decrease in the inhabitants working in the sectors G, H, I and a considerable increase in those working in J, K sectors (Figure 5)

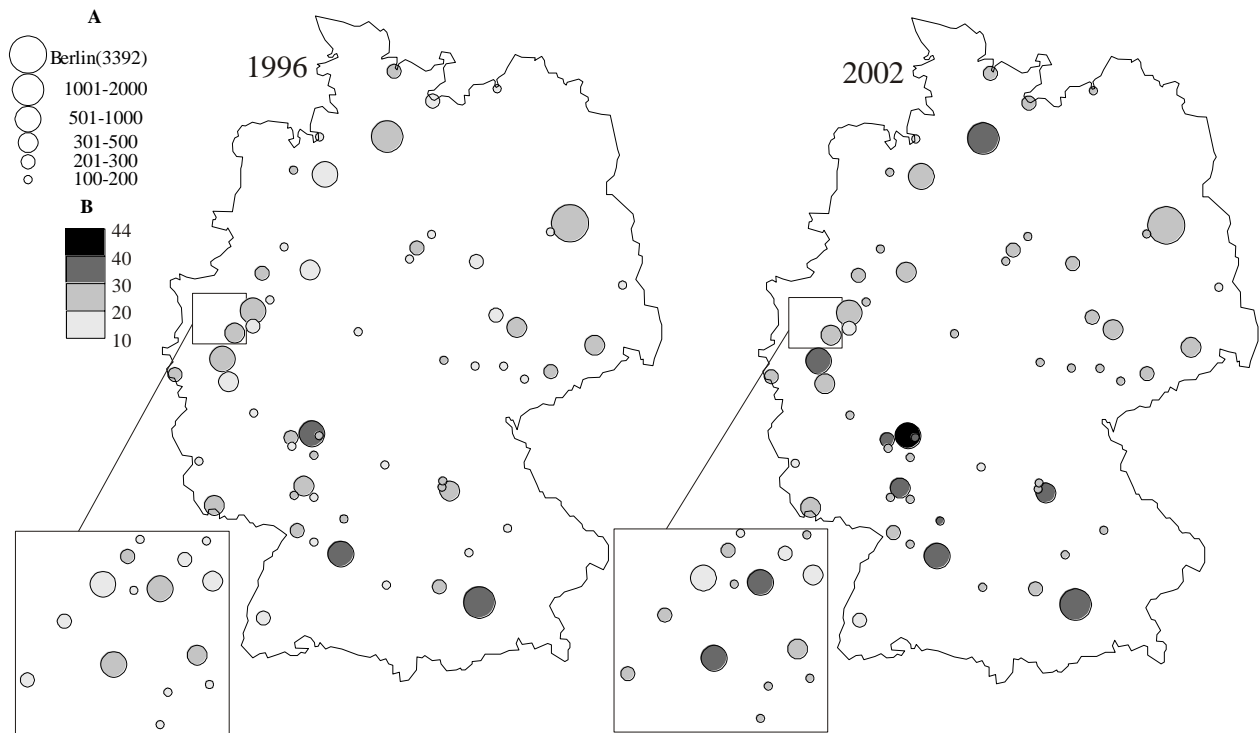


Figure 5. The inhabitants working in market servicing - J,-K sections to an overall number of working in services in large German towns in 1996 and 2002

*Explanations:* A- population in thousands.; B- The inhabitants working in market servicing - J,-K sections to an overall number of working in services (%)

*Source:* Authors' study based on the data from Statistisches Landesamt Deutschland

And so in 1996 in 55.5% (40 cities) of a given city set this share was from 10 to 20% and in the following 40.3% of cities it was on the level of 20-30%; in 2002 it was only 10 cities (14%) in which those working in J, K sectors were below 20% and in almost 70% of cities the share of people working in J, K sectors was from 20 to 30%, and in other 16.6% from 30 to 40%. In the last case it is a four times increase, for in 1996 there were 3 cities (4.2%) in which there was a quota of working in J, K sectors over 40% and in 2002 there were 12 such cities.

## CONCLUSION

To sum up it is essential to consider that both in Germany as well as in many other developed countries the number of those working in service sector is continually increasing. From the undergone researches it can be stated that in large German towns the process of servicisation measured by the number of employed in services is very intense, and cities that

were connected with production activities there was a turn towards developing the services sector, especially the higher services order. The increase in importance of this sector is undoubtedly connected with a growing demand for different services, starting from satisfying basic needs to specialised services such as banking, financial servicing, education, IT, etc.

The level of servicisation in large German towns shows a considerable spatial differentiation. The distinction between west and east parts of Germany is still well visible. Till now in the former East Germany there has been a fairly lower share of those employed in market services than in west Länder ; it applies both to the quota of working in services to overall working force as well as to the intensity of services that is the number of those working in services to 1000 inhabitants. It seems though that these differences will be decreasing because in the east Länder there are huge socio-economic changes and the process of servicisation is proceeding very intensely and is gaining a new quality.

Finally, it should be underlined that it is not a complex view on the servicisation process in Germany and the paper is only a preliminary inquiry before a further research into the subject is undertaken.

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