MICHAEL PFAFFERMAYR

BUSINESS SERVICES IN AUSTRIA

The business services sector comprises a range of highly heterogeneous activities offered by the tertiary sector to meet the demand of industrial enterprises as well as major service enterprises, such as banks and insurance companies. It has moved into the focus of economic policy attention on account of its comparatively high growth rates of recent years in terms of both value added and employment. It is generally assumed that the sector still has a considerable employment potential.

Compared with other sectors of the economy, the business services sector achieved above-average growth rates in recent years in terms of both value added and employment. The excellent performance of the sector is due, among other things, to the tendency of the production sector to outsource its service activities. However, most authors agree that business services tend to develop complementarily to industry production and thus have a net job-creation potential. Given the high degree of specialization of service enterprises and the widening range of the service offer, business services tend to increase the productivity of downstream industrial sectors and, thus, exert a positive impact on their long-term growth. Additionally, the increasing variety in business services enhances the quality of a location and the competitiveness of a country in a sustainable fashion.

The scope of business services and their significance for Austria have been evaluated by *Hammerer – Putschek* (1996) recently. Therefore, the present paper limits itself to an assessment of the importance of the business services for the quality of business locations. It will first describe the specificities of business services and analyze the relationship between industrial production and the offer of business services. Then an attempt will be made to outline the development of the sector and its association with the production sector in quantitative terms.

The services sector includes a wide variety of economic activities, which are difficult to classify and analyze on account of their heterogeneous nature. Basically, services differ from primary and secondary sector goods in important ways. They are immaterial (intangible), non-storable, and transient. *Sapir* (1993) and *Sapir – Winter* (1994) mention three constituent elements to be considered in the definition and classification of services:

Michael Pfaffermayr is economist at the Austrian Institute of Economic Research. The author wishes to thank Michael Böheim for valuable suggestions and information. Elisabeth Neppl-Oswald and Gerhard Schwarz assisted with data processing and analysis. This article is a revised version of Chapter 4 of a study performed by WIFO on behalf of the Federal Ministry of Economic Affairs: Pfaffermayr, M., Standortindikatoren Österreich. Jahresbericht 1995/96, Vienna, 1997 (120 pages, ATS 590; orders are to be addressed to Christine Kautz, phone (++43 1) 798 26 01/282, fax (++43 1) 798 93 86, e-mail kautz@wifo.ac.at).

Table 1: Business services

1991

		Persons working in the sector		Enterprises		Persons working per enterprise location
		Absolute	Percentage shares	Absolute	Percentage shares	
ÖNACE three-digit positions						
711	Renting of automobiles	965	0.66	201	0.75	5
712	Renting of other transport equipment	79	0.05	21	0.08	4
713	Renting of other machinery and equipment	842	0.57	166	0.62	5
721	Hardware consultancy	3	0.00	2	0.01	2
722	Software consultancy and supply	9,247	6.29	1,755	6.55	5
723	Data processing	2,915	1.98	295	1.10	10
724	Data base activities	40	0.03	6	0.02	7
725	Maintenance and repair of office, accounting and computing machinery	730	0.50	135	0.50	5
741	Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings	40,898	27.80	7,488	27.96	5
742	Architectural and engineering activities and related technical consultancy	25,411	17.27	6,380	23.82	4
743	Technical testing and analysis	10,337	7.03	1,995	7.45	5
744	Advertising	8,402	5.71	2,330	8.70	4
745	Labor recruitment and provision of personnel	5,474	3.72	200	0.75	27
746	Investigation and security activities	3,965	2.70	107	0.40	37
747	Industrial cleaning	24,726	16.81	1,222	4.56	20
748	Miscellaneous business activities n.e.c.	13,072	8.89	4,476	16.71	3
	Total	147,106	100.00	26,779	100.00	5

Source: Special evaluation by the Austrian Central Statistical Office, census of enterprise locations.

- the nature and extent of interaction between producers and consumers of services,
- the significance of the problem of asymmetrical information,
- the extent of regulation.

As a rule, services require a coincidence in time of consumption and production (e.g., tourism, transport, medical care). In many cases, services must also be produced and consumed in the same place. Hence, there are three basic types of services (*Bhagwati*, 1984, *Sapir*, 1993):

1. Mobile consumers come to the place in which the service is rendered (e.g., tourism, health care services).
2. Mobile producers move from location to location to render their services to immobile consumers (e.g., engineering).
3. Service producers set up their places of business or subsidiaries at the customer's location (e.g., accounting, advertising, banks and insurance companies, consultancy).

While services of types 1 and 2 can be internationally traded, type 3 services are generally location-bound and require direct investments if they are to be provided in a foreign market. The borderline between type 2 and type 3 may be blurred and tends to shift in the course of time. For instance, developments in the fields of telecommunications and data processing have made trade in type 3 services – originally location-bound – possible, since consumers and producers need no longer be physically present in the same place (video-conferencing, fast data transmission, etc.). Another important characteristic of business services is their relevance as an intermediate product – mainly for industry.

The majority of business services are not tradable and – being location-bound – of special relevance for the competitiveness of a location.

Services markets are often characterized by information asymmetry. Usually, the quality of a service can only be assessed after its consumption. According to Tirole's classification (*Tirole*, 1988), services are "experience goods" or even "credence goods". Although the quality of services also depends on the co-operation of the buyer, the seller usually is at an advantage in terms of information. As a result of this information asymmetry, a "moral hazard" exists: unless the buyer-seller relation is a durable one, the seller is tempted to offer low-quality services at high prices, since buyers are unable, at least ex-ante, to verify the quality of the service provided. Hence, businesses interested in maintaining a long-term relationship with their customers signal their efforts to maintain a high standard of quality. Thus, for a service provider it is essential to establish a reputation, create a brand image and develop long-term customer relations. Once such long-term customer relations exist (which make a change of supplier unattractive for the customer), service providers may gain significant market power and even reach monopoly positions in certain sectors and market segments.

Moreover, such markets are often confronted with the "lemons problem" (*Akerlof*, 1970): with no other way for consumers to identify providers of poor-quality services but through ex-post verification, service markets do not fully emerge: ". . . 'good' buyers (i.e., low-risk individuals in the insurance or loan markets) or 'good' sellers (i.e., competent consultants, jurists and doctors) will tend to be driven out by 'bad' buyers or 'bad' sellers. Adverse selection, therefore, reduces the frequency of market transactions." These specific features of the services market result in comprehensive quality-assurance regulation, barriers to market entry (newcomers are at a competitive disadvantage, since they first need to establish a reputation), the existence of "non-price competition" and, if services are also offered in foreign markets direct investments abroad (which may also be required to follow a customer)[1].

Another characteristic of business services is their pronounced product differentiation (geographically on account of their location-bound nature, horizontally in terms of their properties and the variety of services, and vertically in terms of quality) and the lack of significant economies of scale, which is reflected in the prevalence of small businesses. Given these specific features of the services market, the intensity of actual or potential competition is rather low.

BUSINESS SERVICES AND LOCATIONAL COMPETITION

The development of business services depends on the performance and the market growth of the sectors demanding such services. *Krugman – Venables* (1995) and *Venables* (1996) demonstrated in a theoretical model that in the course of market integration and globalization the mutual dependence of immobile intermediate products, such as business services, and industrial production causes agglomeration effects, which result in the mutual strengthening of both sectors in their development. Hence, at a location with a large industrial sector, the growing demand for intermediate products (like business services) results in a greater volume and variety of business services being rendered to industry at more favorable costs; this, in turn, increases the attractiveness of the location for additional industrial enterprises (backward linkages). At the same time, the larger volume and/or the greater variety of specialized services increases the productivity[2] of industry and thus also enhances the attractiveness of the location (forward linkages). Overall, these two mechanism cause agglomeration effects, which result in the formation of "core-periphery structures". Considered from this point of view, the attractiveness of a business location is not only determined by its cost position, but also depends largely on whether it belongs to a core with a large variety of business services and other intermediate products or is being pushed to the periphery.

Arguing along this line *Krugman – Venables* (1995) demonstrate that in the center of the process of integration and globalization, which is modeled by decreasing the costs of distribution and transport[3], real wages can diverge in different countries or locations. Hence, globalization and further integration may result in an unbalanced development, in which high-wage locations at the center are able to maintain or even improve their high-wage positions as production locations on account of the agglomeration effects, whereas real wages at the periphery are declining, even if the level of productivity is the same. Only after globalization has advanced considerably (so that markets can be supplied from any location without significant costs of transport and distribution) that differences in unit labor costs will regain importance. In this stage of the globalization process the periphery is able to make up for the disadvantages implied by the lower degree of specialization and diversity of business services.

From this point of view, business services are of great importance for the quality of a business location. On the one hand, an innovative service sector can offer new products or – given its specialization – render services previously performed by industry itself at lower costs and, thus, induce a productivity increase in industry. On the other hand, a comprehensive and large variety of business services makes a location more attractive and thus reduces the competitive pressure on the location to attract enterprises by keeping unit labor costs down or reducing them even further. Moreover, the availability of a large variety of business services is expected to expand the activities of the

[1] "Service firms tend to acquire a quasi-contractual relationship with their customers based on trust that lowers the costs of contracting and the risks of opportunistic behavior. If the service firm has such a quasi-contractual relationship with a parent (multinational), it enjoys a quasi-transactual advantage for supplying the same service to its foreign subsidiaries" (*Sapir*, 1993, p. 88, *Caves*, 1982, p. 11).

[2] According to the usual line of arguing, a wider scope of intermediate products is associated with a higher degree of specialization. Thus, businesses in the service sector can become more highly specialized and fulfill tasks that used to be performed by industrial enterprises in a more productive manner. The industrial sector benefits from the availability of a greater variety of highly specialized intermediate products (services; see also Adam Smith's example of needle production and the arguments underlying the foreign trade theory – *Ethier*, 1982 – and the growth theory – *Romer*, 1986, *Grossman – Helpman*, 1991).

[3] This should be interpreted in a broad sense as the costs of lacking market proximity.

Table 2: Development of employment in the business services sector

		Dependent employees					
		1995	1996	1997	1995	1996	1997
		Absolute			Percentage changes from previous year		
ÖNACE two-digit positions							
71 Renting of machinery and equipment without operator and of personal and household goods		3,736	3,731	3,855	+ 0.3	– 0.1	+ 3.3
72 Computer and related activities		10,997	11,804	13,610	+ 5.0	+ 7.3	+15.3
74 Other business activities		120,825	126,795	126,025	+ 3.4	+ 4.9	– 0.6
All business services		135,558	142,330	143,490	+ 3.4	+ 5.0	+ 0.8
All economic sectors		3,068,186	3,047,253	3,055,569	– 0.1	– 0.7	+ 0.3
Shares of business services	in percent	4.4	4.7	4.7			

Source: Federation of Austrian Social Security Institutions.

headquarters of multinational corporations (such as R&D, advertising, organization and management, skill-intensive intermediate products) at high-wage locations and/or attract European and/or national centers of large multinational groups performing similar activities (*Stankovsky – Wolfmayr-Schnitzer,* 1996). Both compensate (at least partially) for the shift of production facilities to low-wage locations (*Pfaffermayr*, 1996, 1997).

Empirical evidence supporting this view is not easily available. There is empirical evidence that agglomeration effects of this type are influencing the choice of location by industrial enterprises to a certain extent (e.g., *Mayerhofer – Palme*, 1996, and in the literature referred to there). However, the question of whether business services do indeed cause agglomeration effects and whether such effects are complementary to or substitutes for development of industrial production has hardly been investigated empirically. Nevertheless, most authors agree that business services tend to develop complementarily to industry production and, thus, have a net employment-creation potential (*Audretsch – Yamawaki*, 1993). Given the high degree of specialization of services and the addition of new services, business services may also be expected to cause productivity increases in the downstream sectors of industry and thus have a positive influence on the long-term growth of the sector (see the underlying assumptions of the endogenous growth theory, e.g., *Grossman – Helpman*, 1991). Also in this respect very little empirical evidence is available.

STATISTICAL CLASSIFICATION, SCOPE AND DEVELOPMENT OF BUSINESS SERVICES IN AUSTRIA

Since comprehensive statistics on business services are not yet available, various sources, including some of only limited comparability, have to be used. The most important sources of information are the employment data of the Federation of Austrian Social Security Institutions[4], the input-output tables for 1983 and 1994 (*Kratena*, 1996, 1997) and the national accounts[5].

According to the special evaluation of the 1991 census of enterprise locations, which provides detailed information broken down to the level of three-digit positions, 147,106 persons were employed in 26,779 enterprises in 1991. This corresponds to a share of 4.1 percent of the total working population. Legal, accounting, book keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings, for 27.8 percent of all self-employed and employed persons, followed by architectural and engineering activities and related technical consultancy (17.3 percent) and industrial cleaning (16.8 percent). 8.9 percent of employment in the sector is accounted for by miscellaneous business activities, and 8.8 percent by computer and related activities. The average size of enterprise, ranging between 2 (hardware consultancy) and 37 (investigation and security activities) employees, is extremely low. More recent information on the development of the business services sector, broken down to the level of two-digit positions, can be obtained from the evaluations performed by the Federation of Austrian Social Security Institutions (for employees only) and on the basis of the national accounts. According to the statistics of the Federation of Austrian Social Security Institutions, the average number of employees working in the business services sector in 1997 was 143,490, up by 0.8 percent from 1996

[4] This source reports the average number of persons in dependent employment. The number of self-employed persons is not indicated. Given the high percentage of self-employed in the business services sector, the size of the sector, therefore, tends to be underestimated.

[5] In the national accounts, the Austrian Central Statistical Office reports the number of employed persons (dependent and self-employed) on the basis of the new ÖNACE classification. The information provided is not comparable with data supplied by the Federation of Austrian Social Security Institutions as far as levels are concerned. Therefore, reference is only made to growth rates.

Definition of business services for statistical purposes

Following the example of *Hammerer – Putschek* (1996), the business services sector is classified according to the Eurostat definitions. The classification comprises the following three-digit ÖNACE positions and clearly illustrates the diversity of the sector:

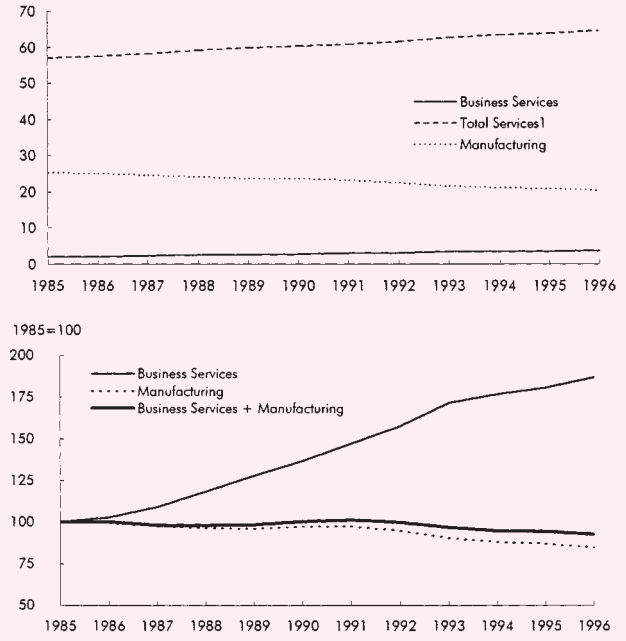
711	Renting of automobiles
712	Renting of other transport equipment
713	Renting of other machinery and equipment
720 to 725	Computer and related activities
741	Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings
742	Architectural and engineering activities and related technical consultancy
743	Technical testing and analysis
744	Advertising
745	Labor recruitment and provision of personnel
746	Investigation and security activities
747	Industrial cleaning
748	Miscellaneous business activities n.e.c.

(after +5.0 percent the year before). In all, the number of employees fell by 0.7 percent in 1996 and increased by 0.3 percent in 1997. The share of business services in total employment in 1997 was 0.3 percent higher than in 1995.

According to the national accounts, the business services sector contributed ATS 126.2 billion, i.e., 5.2 percent, to the GDP in 1996. The average number of employees in the sector was 143,000 in 1997.

According to information provided by the Austrian Central Statistical Office, the value added of the business services sector has increased by an average of 10.0 percent per year in nominal terms since 1987. In real terms, this corresponds to an average annual growth of 5.8 percent. Over the same period, goods production increased by only 3.5 percent annually in nominal terms (+1.9 percent in real terms). The situation is also reflected by the development of employment: the number of employees in the business services sector (according to data provided by the Austrian Central Statistical Office, which are not comparable with data provided by the Federation of Social Security Institutions) increased by a yearly average of 5.5 percent. The average growth rate of all services provided by the private sector increased by 1.5 percent, whereas employment in goods production fell by an average of 1.4 percent per year. These developments correspond to the general pattern of structural development with a growing importance of services (*Fourastié*, 1963). Compared with other service sectors, business services showed an extremely dynamic development. Between 1987 and 1996, the share of the sector in total employment grew by 1.5 percent. While goods production shrunk by 4.2 percent, the services sector as a whole reported a 6.4 percent gain.

Figure 1: Structure and development of employment



Source: Austrian Central Statistical Office – [1] Excluding public services.

Given the many-faceted problems of classification, international comparisons of the scope and growth of business services are difficult to perform. Comparable data are only available for a few OECD countries.

In Austria, the percentage of self-employed and employed persons working in the business services and real-estate sectors (according to ISIC Rev. 2), standing at 6.1 percent in 1994, remained well below the level of most other OECD countries. Thus, there is still a considerable potential for outsourcing in industry – with the additional employment and specialization potential of the business services sectors not necessarily at the expense of industrial employment. The employment share of the business ser-

Table 3: Value added of business services in Austria

At current prices

	Business services			Total services			Manufacturing		
	Billion ATS	Percentage changes from previous year		Billion ATS	Percentage changes from previous year		Billion ATS	Percentage changes from previous year	
		Nominal	Real (1983 = 100)		Nominal	Real (1983 = 100)		Nominal	Real (1983 = 100)
1976	15.6	.	.	392.3	.	.	190.0	.	.
1977	18.8	+20.3	+ 9.4	440.9	+12.4	+ 4.8	205.0	+ 7.9	+ 4.5
1978	19.8	+ 5.5	– 1.5	465.4	+ 5.6	+ 0.2	220.2	+ 7.4	+ 2.2
1979	22.5	+13.5	+ 7.8	519.7	+11.7	+ 6.3	234.1	+ 6.3	+ 4.3
1980	25.5	+13.6	+ 5.5	558.7	+ 7.5	+ 2.4	249.2	+ 6.4	+ 3.0
1981	28.9	+13.1	+ 4.7	604.9	+ 8.3	+ 1.6	261.1	+ 4.8	+ 0.9
1982	31.6	+ 9.3	+ 1.7	663.0	+ 9.6	+ 4.1	272.2	+ 4.2	– 0.3
1983	34.0	+ 7.8	+ 3.1	710.7	+ 7.2	+ 2.4	289.4	+ 6.3	+ 4.6
1984	36.0	+ 5.8	– 1.4	750.2	+ 5.6	+ 1.4	298.4	+ 3.1	+ 0.5
1985	39.6	+10.0	+ 5.2	794.5	+ 5.9	+ 1.6	320.2	+ 7.3	+ 4.9
1986	45.5	+14.7	+ 9.1	844.8	+ 6.3	+ 2.4	335.9	+ 4.9	+ 3.7
1987	48.7	+ 7.2	+ 2.6	889.1	+ 5.2	+ 2.9	339.4	+ 1.0	– 0.5
1988	55.3	+13.4	+ 8.8	939.0	+ 5.6	+ 3.4	358.7	+ 5.7	+ 3.8
1989	62.9	+13.9	+ 9.3	1,013.7	+ 8.0	+ 4.4	379.7	+ 5.9	+ 4.5
1990	71.9	+14.3	+ 9.9	1,097.8	+ 8.3	+ 4.6	411.0	+ 8.2	+ 4.7
1991	82.5	+14.7	+ 9.7	1,186.6	+ 8.1	+ 3.9	436.4	+ 6.2	+ 3.8
1992	91.3	+10.6	+ 3.8	1,284.8	+ 8.3	+ 3.1	442.4	+ 1.4	– 0.7
1993	96.2	+ 5.4	– 0.4	1,352.5	+ 5.3	+ 2.1	435.7	– 1.5	– 2.3
1994	105.2	+ 9.4	+ 4.8	1,408.8	+ 4.2	+ 1.1	455.6	+ 4.6	+ 3.2
1995	114.6	+ 9.0	+ 5.5	1,501.5	+ 6.6	+ 3.7	468.5	+ 2.8	+ 0.9
1996	126.2	+10.1	+ 7.6	1,560.4	+ 3.9	+ 1.8	480.5	+ 2.6	+ 1.3
1997	–	–	–	1,614.1	+ 3.4	+ 2.0	505.1	+ 5.1	+ 4.6
Ø 1977-1996		+10.0	+ 4.7		+ 6.5	+ 2.7		+ 4.4	+ 2.1
Ø 1987-1996		+10.0	+ 5.8		+ 5.8	+ 2.8		+ 3.5	+ 1.9

Source: Austrian Central Statistical Office.

vices sector in 1994 was highest in the USA (10.1 percent), France (8.1 percent), Sweden (7.9 percent) and the Netherlands (7.5 percent). With 4.4 percent, the average growth of employment between 1984 and 1994 was above average in Austria, exceeded only by the Netherlands (5.4 percent).

In Austria, the percentage of self-employed and employed persons working in the business services and real-estate sectors (according to ISIC Rev. 2), standing at 6.1 percent in 1994, remained well below the level of most other OECD countries.

The dynamic development of business services is not limited to the service sector, since such activities are also performed by industrial enterprises themselves: according to estimates by *Hammerer – Putschek* (1996), close to 7 percent of industrial employees render services similar to those of the business services sector. Hence, there is still a considerable potential for outsourcing in industry. Given the dynamic pattern of structural change, the above-average growth of business services seems not to be driven by the demand growth of the industrial sector, but also by a significant level of industrial outsourcing. As these developments coincide with a number of other trends, reliable estimates of the outsourcing effects could only be obtained through econometric approaches. However, the fact that demand for certain qualifications is falling in industry and rising in the business services sector at the same time (special evaluation of occupations by the Austrian Central Statistical Office, *Hammerer – Putschek*, 1996; relative to the number of employees –0.5 percent to –2.5 percent per year) is also quite revealing. Computer and software related qualifications, which are in growing demand in goods production, are a noteworthy exception.

The approach taken in this article is a different one: on the basis of the 1983 and 1994 input-output tables, factor intensities can be calculated which indicate the share of business services in the gross output of goods production. This measure of intensity also reflects different production

Table 4: Percentages of persons working in the business services and real-estate sectors

	1984	1994	1984-1994
	As a percentage of total labor force		Year-to-year percentage changes
Austria	4.4	6.1	+ 4.4
Denmark	4.8	6.1	+ 2.4
Finland	3.9	6.2	+ 2.7
France	5.6	8.1	+ 3.7
Netherlands	5.5	7.5	+ 5.4
Sweden	5.4	7.9	+ 2.7
USA	7.6	10.1	+ 4.1

Source: OECD, Labor Force Statistics 1973-1993, Services Statistics 1996.

Table 5: Business service intensity in mining and industry

		1983		1994		1983-1994	
		Real-estate, legal and accountancy services	Total services	Real-estate, legal and accountancy services	Total services	Real-estate, legal and accountancy services	Total services
		Demand for services as a percentages of gross output, in nominal terms				Percentage changes from previous year	
Classification of enterprises, 1968							
2	Mining	2.7	9.2	5.2	16.2	+ 2.5	+ 6.9
21	Coal mining	2.2	8.3	0.8	6.3	– 1.4	– 2.0
22	Ore mining	1.3	8.9	1.3	6.8	± 0.0	– 2.1
23	Mineral oil, natural gas extraction	3.0	8.6	5.4	15.8	+ 2.4	+ 7.2
24	Salt mining	0.5	6.6	1.2	6.9	+ 0.7	+ 0.3
26	Mining (graphite, gypsum, etc.)	0.6	6.2	6.2	25.7	+ 5.6	+19.5
27	Extraction of stones and earths	3.3	12.5	6.1	19.6	+ 2.8	+ 7.1
3, 4, 5	Manufacturing sector, industry	2.3	13.1	4.1	19.7	+ 1.8	+ 6.6
31	Production of foodstuffs and beverages	1.9	11.5	5.1	21.6	+ 3.1	+10.1
32	Beverages, tobacco	2.0	10.3	3.4	14.7	+ 1.3	+ 4.4
33	Textiles, excluding clothing	2.2	13.1	4.1	23.0	+ 1.9	+ 9.9
34	Clothing and bedding	2.9	13.7	5.3	25.6	+ 2.4	+11.9
35	Production of shoes	3.1	13.1	5.0	19.1	+ 1.9	+ 6.0
36	Production of leather	2.5	14.5	5.9	24.9	+ 3.5	+10.3
37	Wood working	1.4	14.0	2.8	19.8	+ 1.4	+ 5.9
38	Wood processing	2.3	14.7	3.8	20.1	+ 1.5	+ 5.3
39	Musical instruments, toys, sports articles	4.4	16.6	4.6	24.2	+ 0.2	+ 7.7
41	Processing of paper and board	2.0	13.1	3.8	19.8	+ 1.9	+ 6.7
42	Printing and copying	3.4	18.2	7.1	21.6	+ 3.7	+ 3.4
43	Publishing	4.7	16.1	4.5	22.0	– 0.2	+ 5.9
44	Rubber and plastics	3.0	13.5	3.7	22.6	+ 0.6	+ 9.1
45	Chemicals and chemical products	2.7	15.3	3.0	22.9	+ 0.3	+ 7.6
46	Processing of mineral oil, natural gas	0.6	6.1	1.7	10.8	+ 1.2	+ 4.7
47	Production of goods from stones	2.3	13.9	3.9	18.9	+ 1.5	+ 5.0
48	Production and working of glass	2.4	13.1	4.1	18.1	+ 1.7	+ 4.9
51	Iron and non-ferrous metals	1.8	14.0	4.9	21.4	+ 3.1	+ 7.4
52	Steel and light-metal engineering	3.1	13.7	3.8	10.8	+ 0.7	– 2.9
53	Production of metal goods	2.8	14.3	3.1	19.0	+ 0.3	+ 4.8
54/55	Production of machinery	2.6	15.0	4.7	24.1	+ 2.0	+ 9.1
56/57	Production of electrical equipment	2.6	13.1	4.3	20.1	+ 1.8	+ 6.9
58	Means of transport	2.5	14.1	4.5	15.1	+ 2.0	+ 0.9
59	Precision-mechanical, medical and optical appliances	4.4	15.5	6.3	23.1	+ 1.9	+ 7.6
93	Other asset-management services	6.0	18.1	6.8	19.0	+ 0.8	+ 0.9

Source: Input-output table: WIFO, Austrian Central Statistical Office; own calculations.

methods (above all in terms of capital intensity) and needs to be interpreted accordingly.

The input-output table is based on the 1968 classification of enterprises and defines business services as real-estate services, legal services and accountancy services, i.e., more narrowly than the ÖNACE classification. In 1983, the manufacturing sector and industry spent 2.3 percent of their gross output on business services and 13.1 percent on services in general. 6 percent of the gross output of business services (18.1 percent of services in general) were consumed within the business services sector itself; these figures do not include imports of business services.

Between 1983 and 1994, the "business service intensity" of the manufacturing sector increased by 78.3 percent to 4.1 percent. Services in general grew by 50.4 percent during the same period.

Between 1983 and 1994, the "business service intensity" of the manufacturing sector increased by 78.3 percent to 4.1 percent. Services in general grew by 50.4 percent during the same period. This development clearly shows that

- industrial demand for services is increasing (i.e., industry is outsourcing services to a growing extent) and/or
- the service sector has been able to increase its prices (not least through quality improvements) faster than industry.

The above-average development of prices in the service sector is extremely difficult to interpret, as production quantities can hardly be measured in statistical terms and correction of prices for quality improvements is practically impossible. Hence, no attempt at deflation has been made.

The most substantial increase in demand for business services and the strongest trend towards outsourcing (and/or price increases) have been observed in printing and copying, the leather industry, the food and beverages industries and the clothing industry – all sectors under strong competitive pressure and subject to fast structural change. Presumably, these are the sectors accounting for most of the

additional demand for business services and the outsourcing of service activities.

Besides the above-mentioned sectors of trade and industry, the business service intensity was highest in the following areas in 1994: precision-mechanical appliances, medical and optical equipment, watches and jewelry, production of non-ferrous metals, production of machinery, musical instruments and sports articles, production of means of transport and production of electrical equipment.

ECONOMIC POLICY COMMENTS

The short outline of the role and the development of the business services sector reveals a number of issues of considerable significance in economic policy terms. A sufficient offer of business services essentially impacts on the quality and attractiveness of a business location. The mutual interaction ("forward" and "backward" linkages) of service and industrial sectors results in agglomeration effects which make a location attractive despite its high-wage level. Such agglomeration effects may help a region to develop into a central production location instead of being pushed to the periphery. In the process of globalization, a location within a center of industrial activity can maintain its wage level more easier in the presence of an attractive offer of business services; in fact, agglomeration effects may foster in divergent real-wage levels between the center and the periphery in the longer run. Moreover, a growing offer of business services leads to productivity gains as a consequence of higher specialization (a hypothesis not yet empirically confirmed) and helps to safeguard or even extend the presence of headquarters of multinational corporations at a given location. European and/or national centers of multinational groups with group-related functions are also of considerable importance in this respect. Such a development compensates (at least partially) for shifts of production to low-wage locations and increases the density of high-value-added and skill-intensive activities at the locations in question.

Business services differ greatly from other goods. Most of them are location-bound and highly differentiated in terms of product characteristics. The services market is characterized by information asymmetries, which constitute barriers to market entry and result in comprehensive market regulation. By international standards, the offer of business services is below average in Austria and therefore needs to be increased for reasons of economic policy. With internationalization gaining in importance in the wake of direct investments and exports also in the services sector – and Austria lagging behind in this respect as well – determined measures of internationalization should be considered in order to prevent a loss of market shares in Austria and abroad to foreign service providers (a risk inherent in the current development) and/or to gain additional market shares in this rapidly growing economic sector with its considerable employment potential. The following approaches appear to be worth considering (see measures proposed in the EU White Paper and already implemented to some extent: *Vogler-Ludwig – Hofmann – Vorloou*, 1993):

- The business services sector is characterized by a whole range of complicated and comprehensive licensing rules and regulations, which constitute a barrier to market access for newcomers. Eliminating such barriers while, at the same time, strictly maintaining the desired levels of quality should be at the focus of economic policy measures – e.g., through mutual, inter-governmental recognition of formal qualifications and the elimination and simplification of rules and regulations in favor of a competition policy-driven approach. By liberalizing market access and increasing market transparency, competition policy is to ensure efficient and well-functioning markets with a competitive price structure and high quality standards.
- Market access should also be facilitated through start-up assistance and help in the approval and licensing procedure. A stronger equity base for enterprises would be highly desirable.
- Moreover, measures to increase the size of enterprises (e.g., through the promotion of networks) and support in the process of internationalization would also be meaningful. Business services constitute an important input for export businesses and may considerably improve a country's export performance (e.g., export of planning services by the business services sector itself, engineering consultancy, expert opinions, etc.). Multinational consultancy businesses are gaining in importance not only in Western Europe, but also in Central and Eastern Europe; as a result, smaller businesses are finding it more difficult to establish themselves in the face of intensified competition.
- Business services are strongly dependent on the quality of training of those working in the sector. Hence, measures to maintain and improve the standard of qualifications at all levels are essential. In the service sector, formal qualifications have an important "signaling effect" as indicators of a high standard of quality. This should also be taken into consideration in the granting of licenses and the design of training programs. Hence, internationally recognized, independent organizations (e.g., universities and/or university departments, technical colleges, independent research and testing insti-

tutes) should be more strongly involved in training and licensing.

- As a consumer of business services, the public sector is well placed to add momentum to the development of this sector in view of the considerable potential for further outsourcing of services from the public sector, on the one hand, and the large share of public sector contracts in the total volume of sales of the business services sector, on the other hand.

REFERENCES

Akerlof, G., "The Market for 'Lemons': Qualitative Uncertainty and the Market Mechanism", Quarterly Journal of Economics, 1970, 84, pp. 488-500.

Audretsch, D.B., Yamawaki, H., "The Manufacturing/Service Interface", in Buigues, P., Ilzkovitz, F., Lebrun, J.F., Sapir, A. (Eds.), "Market Services and Economic Integration. The Challenges for the 1990s", European Economy, Social Europe, 1993, (3).

Bhagwati, J.N., "Splintering and Disembodiment of Services and Developing Nations", The World Economy, 1984.

Caves, R.E., Multinational Enterprise and Economic Analysis, Cambridge University Press, Cambridge, 1982.

Ethier, W.J., "National and International Returns to Scale in the Modern Theory of International Trade", American Economic Review, 1982, 72(3), pp. 389-405.

Fourastié, J., Le Grand Espoir du XXe Siècle, Paris, 1963.

Grossman, G., Helpman, E., Innovation and Growth in the Global Economy, M.I.T. Press, Cambridge, MA, 1991.

Hammerer, G., Putschek, M., Industrienahe Dienstleistungen, Industriewissenschaftliches Institut, Wien, 1996.

Kratena, K., "Beschäftigungseffekte des Außenhandels mit Dienstleistungen in Österreich", in Federal Ministry of Economic Affairs, Der österreichische Außenhandel 1996, Wien, 1996.

Kratena, K., Input-Output-Tabellen 1983, 1994, WIFO, Vienna, 1997 (mimeo).

Krugman, P., Venables, A.J., "Globalization and the Inequality of Nations", Quarterly Journal of Economics, 1995, 110(4), pp. 857-880.

Mayerhofer, P., Palme, G., Wirtschaftsstandort Wien: Positionierung im europäischen Städtenetz, WIFO, Vienna, 1996.

OECD (1997A), Services Statistics on Value Added and Employment, Paris, 1997.

OECD (1997B), Labour Force Statistics, Paris, 1997.

Pfaffermayr, M., Direktinvestitionen im Ausland: Die Determinanten der Direktinvestitionen im Ausland und ihre Wirkung auf den Außenhandel, Physica-Verlag, Heidelberg, 1996.

Business Services in Austria – Summary

Thanks to their excellent performance, business services have attracted the attention of economists in recent years. According to national accounts figures, they contributed ATS 126.2 billion, or 5.2 percent, to Austrian GDP in 1996 and provided 143,490 jobs. In 1987 to 1996, average growth in value added amounted to 10.0 percent in nominal terms and 5.8 percent in real terms. Employment increased by 5.5 percent per year on average. In contrast, the services sector as a whole achieved an average job growth of 1.5 percent per year, whereas manufacturing lost 1.4 percent on average during this period.

Compared to other OECD countries, Austrian business services lag behind, at a share of 6.1 percent of employment, although their growth rate is better than in most comparable countries. The speed at which they gain ground reflects the high growth potential inherent in this sector. It is expected that in-house services will be increasingly outsourced. Looking at input-output statistics for 1983 and 1995, we find that the manufacturing sector has indeed stepped up its provision of services but that additional demand for new services has been created in parallel. Available data suggest a net increase of new jobs, although no proper econometric evaluation has yet been made.

In this paper it is argued that business services have a number of distinct characteristics which create barriers to competition. They are basically intangible and cannot be traded. Ex-ante quality cannot be unobservable, which frequently leads to information asymmetries (especially moral hazard). It is thus important for suppliers to establish long-term relationships with customers and to project a quality image. For this reason the market for business services is characterized by a high degree of regulation as well as high entry barriers. The sector is also a typical example of a market with a wide range of products, dominated by some companies and little competition in spite of the generally small size of firms and the absence of economies of scale.

Business services are intermediate inputs which improve a region's standing as a business location. A great variety of specialized services, usually tied to the location, leads to productivity gains for the production sector, which in turn drives supply when sufficiently large. The forward and backward linkages between the two sectors induce agglomeration economies and foster the establishment of core-periphery patterns. In the presence of proximity advantages, e.g., arising from transportation costs, regions in the center can maintain higher real wages due to agglomeration economies, while competition between regions to attract new industries is weakened.

Pfaffermayr, M., "Multinational Firms, Trade and Growth. A Simple Model with a Trade-off between Proximity to the Market and Plant Set-up Costs under International Trade in Assets", WIFO Working Papers, 1997, (90).

Romer, P.M., "Increasing Returns and Long-run Growth", Journal of Political Economy, 1986, 94(5), pp. 1002-1037.

Sapir, A., "The Structure of Services", in Buigues, P., Ilzkovitz, F., Lebrun, J.F., Sapir, A. (Eds.), "Market Services and Economic Integration. The Challenges for the 1990s", European Economy, Social Europe, 1993, (3).

Sapir, A., Winter, C., "Service Trade", in Greenaway, D., Winters, A.L. (Eds.), Surveys in International Trade, Blackwell, Oxford-Cambridge, MA, 1994.

Stankovsky, J., Wolfmayr-Schnitzer, Y., Austria as a Location for Regional Headquarters for the East, WIFO, Vienna, 1996.

Tirole, J., The Theory of Industrial Organization, M.I.T. Press, Cambridge, MA, 1988.

Venables, A.J., "Equilibrium Locations of Vertically Linked Industries", International Economic Review, 1996, pp. 341-359.

Vogler-Ludwig, K., Hofmann, H., Vorloou, P., "Business Services", in Buigues, P., Ilzkovitz, F., Lebrun, J.F., Sapir, A. (Eds.), "Market Services and Economic Integration. The Challenges for the 1990s", European Economy, Social Europe, 1993, (3).