

Section 3 Development of service industry in developed countries

【 Key points 】

All developed countries are in the process of becoming service economies as the share of service industries in economic activities and employment continues to grow. Looking to the United States, where the service industry has surged ahead particularly strongly, services in the narrow sense, and particularly services previously provided in-house but now outsourced (business services) and services previously dealt with by householders but now outsourced (health care services), are making a major contribution. The former reflects the growing trend toward outsourcing exhibited by the manufacturing industry in particular, and the expansion of irregular employment. Until the advent of the bubble economy, Japan too saw business services grow rapidly, but a protracted recession has dulled the employment absorption capacity of the service industry in recent years. Nevertheless, employment in medical and social welfare services continues to expand in response to the graying of society and the growing need for nursing care which has accompanied this.

As services come to dominate the Japanese economy, there is concern that the falling share of the manufacturing industry will result in the loss of Japan's manufacturing tradition. However, the revitalization of the US economy was achieved not simply through development of the service industry, but rather by deepening the interdependence of the manufacturing and service industries. Moreover, the manufacturing industry itself seems to be focusing increasingly on the provision of services, shifting management resources from manufacturing and assembly to the more profitable sales and after-service areas. The manufacturing and service industries are not, therefore, in a trade-off relationship, and the need to distinguish between the two seems to be fading.

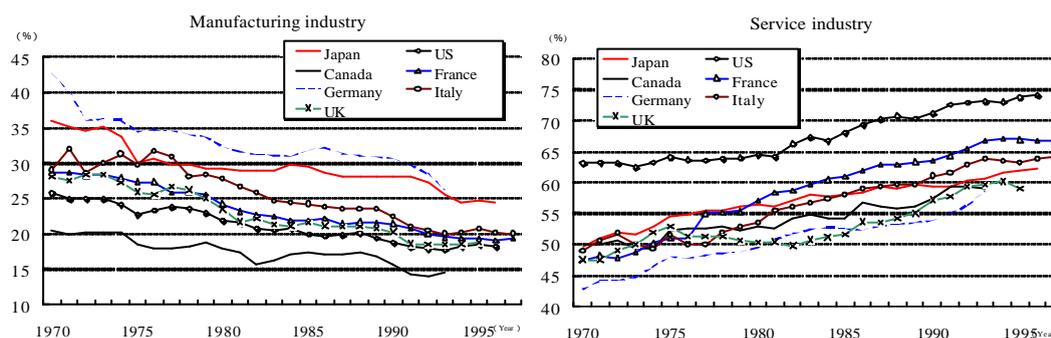
As technology leaps ahead and the pursuit of efficiency in specialist areas heightens, sustaining economic growth and the dynamism of the Japanese economy will require taking advantage of the manufacturing industries' production technology and sales strategies, which have always been Japan's strengths, while at the same time addressing a process of selection and concentration and building a powerful network with the new, differentiated and developed service industries which have emerged. Japan's domestic service industry also needs to look beyond providing services to domestic manufacturing and plan to develop internationally, targeting companies and consumers worldwide.

In the previous section, we analyzed the link between changes in Japan’s industrial and regional economic structures and the growth of East Asian economic agglomerations. The second and third cycles of change in Japan’s regional economic structure in the postwar years have been marked by the growing share of the service industry. Here we focus on the increasing predominance of the service industry in all developed countries, examining the current status and challenges of the growing weight of services in the Japanese economy.

1. Progress of the service economy

Analysis of the industrial and economic structures of developed countries reveals a decline in the share of manufacturing in economic activities and employment which has been paralleled by the growing share of the service industry¹—in other words, progression toward a service economy (Figs 1.3.1, 1.3.2). However, this trend is advancing at different speeds according to

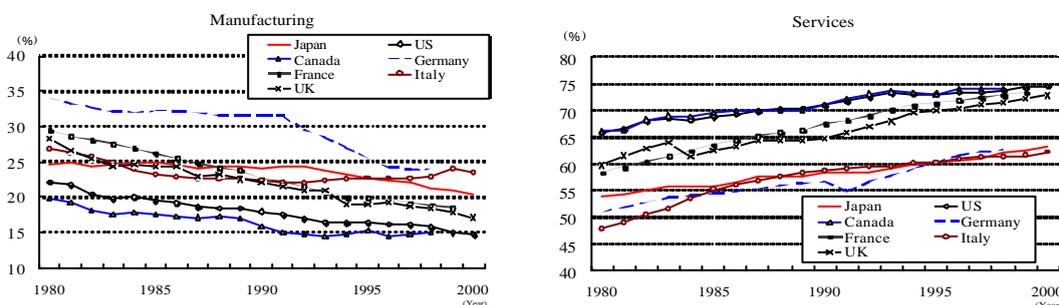
Figure 1.3.1 Trends in nominal GDP shares of the manufacturing and service industries in developed countries



Note: Figures for Germany are drawn from data for former West Germany.

Source: *National Accounts Statistics* (United Nations)

Figure 1.3.2 Trends in ratio of manufacturing and service industry employment in developed countries



Notes:

1. For Germany, data up to 1990 refer to the former West Germany, and from 1991 to the unified Germany.

2. Data for France refer to employees.

3. “Services” refers to the total of retail and wholesale (including restaurants and hotels), transport and communications, finance, insurance and real estate, and community, social and personal services.

Source: *Labor Force Statistics* (OECD).

¹ Below, the service sector in the broad sense (i.e., tertiary industry) is referred to as the “service industry” to distinguish it from the narrowly-defined service industry (see Footnote 2).

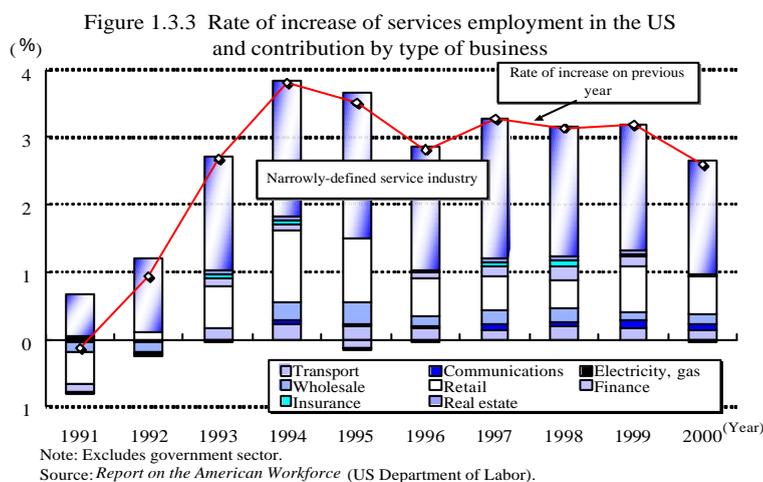
the country. For example, in Japan, the share of the service industry is growing in terms of both added value and employment. In the manufacturing industry, the share of added value might be falling, but the change in employment share has been relatively moderate, holding at just under 25 percent until the early 1990s and gradually declining since. In the United States, the manufacturing industry's share of added value was lower than other developed countries in 1970, while the service industry already accounted for around 60 percent, indicating an early shift toward the service industry. Although there are some data continuity problems in the case of Germany, the employment structure suggests a rapid service economy transition in recent years.

2. Development of the service industry

While all developed countries are experiencing the increasing dominance of the service sector, the question is exactly which areas have developed and absorbed employment. Here we examine the United States, where service industry employment surged during the 1990s process of economic rebirth, and Japan, where employment expansion has recently been hampered by a protracted recession.

(1) United States: Boom in business and health-care services

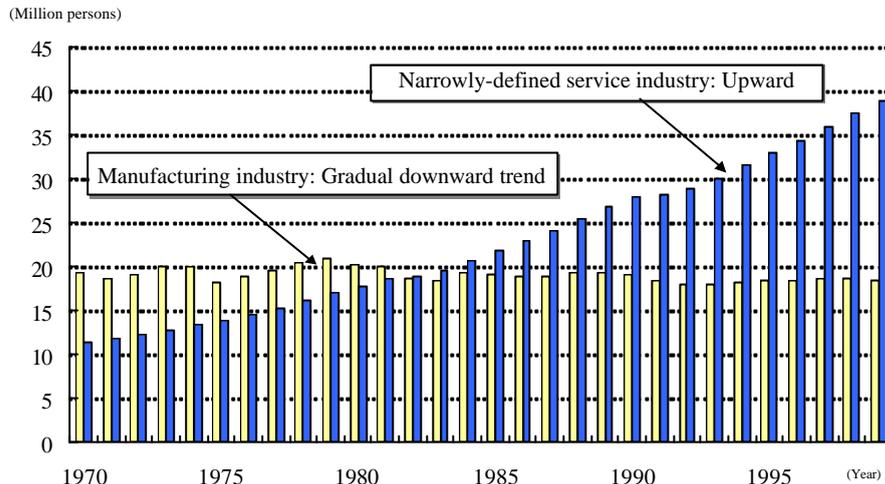
During the process of US economic rebirth, service industry employment is said to have expanded dramatically. Figure 1.3.3. looks at the growth in employment figures in the US service industry in the 1990s, as well as the degree of contribution by type of business. This breakdown reveals a substantial contribution by the narrowly-defined service industry². A comparison of the number of employees in the narrowly-defined service industry and manufacturing indicates that employment in the former topped the latter as of the early 1980s,



² The supply of services and expertise, etc., to individuals or companies. Includes personal services, business services, medical care, education, law, and accounting, etc.

with services employment continuing to expand. Employment in the manufacturing industry, on the other hand, peaked in the 1970s and thereafter sustained a gradual decline to level out recently at around 19 million (Fig. 1.3.4).

Figure 1.3.4 Trends in number of persons employed in US manufacturing and narrowly-defined service industries



Source: *Economic Report of the President* (Council of Economic Advisers)

Which particular types of businesses within the narrowly-defined service industry have expanded their employment? Figure 1.3.5 shows the rate of increase in employees in the narrowly-defined industry and the degree of contribution, suggesting a growing contribution by business and health care services. Standing out among business services is the share and contribution of personnel supply services and computer-related services (Fig. 1.3.6). During the 1980s, manufacturers and other companies began to actively outsource designing, legal affairs, accounting, and computer-related services as a means of sustaining and boosting their competitiveness, and needs expanded as a result. The lift in personnel supply services similarly reflects the growing trend toward reducing fulltime payrolls and increasing the number of irregular staff (part-timers, temp staff, etc.) as part of the selection and concentration of management resources.

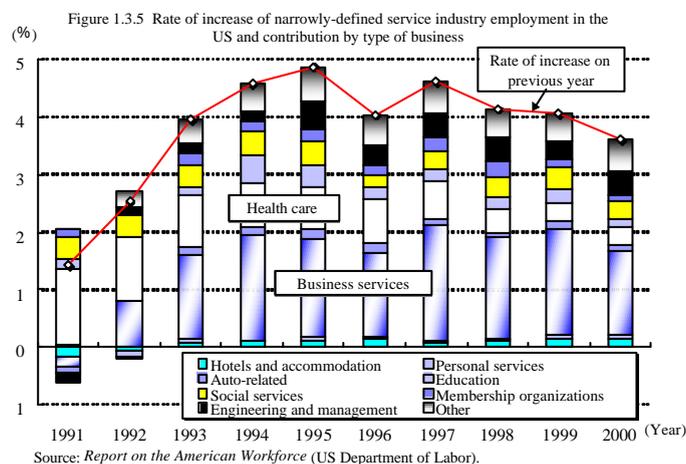
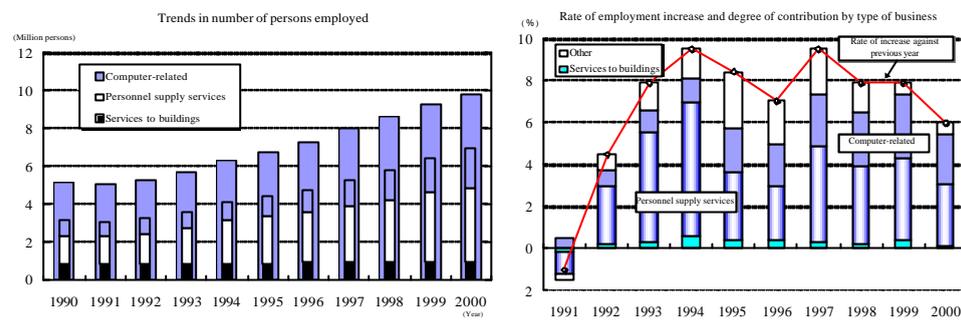
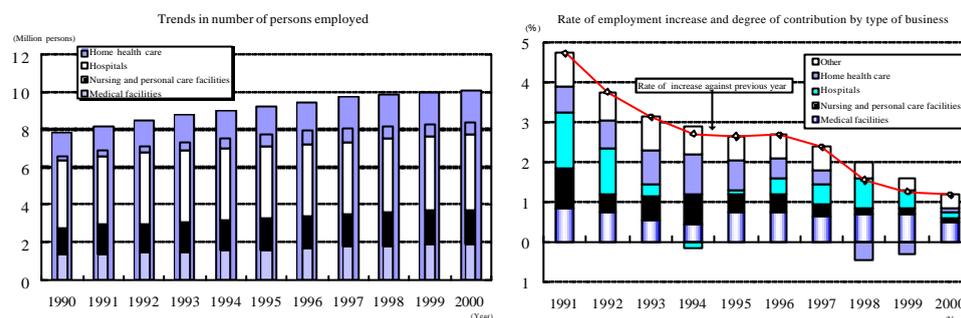


Figure 1.3.6 Breakdown of business and health care services

1. Business services



2. Health care services



Source: *Report on the American Workforce* (US Department of Labor)

In the area of health care services, the contribution of home health care services (private nursing services) has boomed alongside hospitals and medical care facilities. Once part of household work, the graying of society and growing public health awareness have led to the outsourcing and evolution of home health care as a more specialized service.

The expansion of employment in the United States can therefore be ascribed to the development of the narrowly-defined service industry, and in particular (1) the outsourcing of services which companies traditionally handled in-house (business services) and (2) the outsourcing of services traditionally handled by households (health care services).

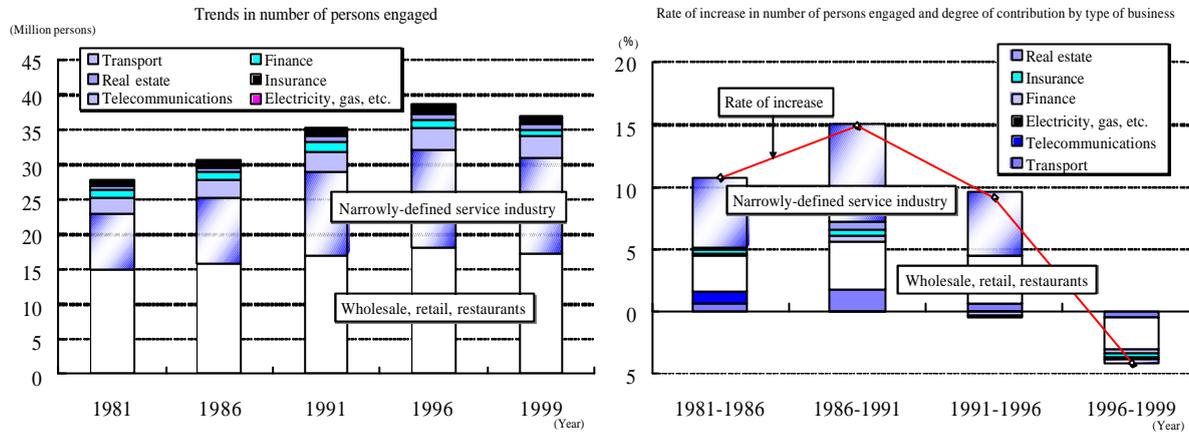
(2) Japan: Protracted recession numbs employment absorption capacity

What changes have occurred in Japan's service industry? Figure 1.3.7 uses the *Establishment and Enterprise Census of Japan*, created by the former Statistics Bureau, Management and Coordination Agency (now the Ministry of Public Management) to examine trends in the number of persons engaged by Japan's service industry and the degree of contribution of type of business. Over the last 20 years, the narrowly-defined services industry³ seems to have experienced the greatest expansion in employment. However, employment has not increased in all businesses falling within this sector, with slight differences evident according

³ Included under "L. Service Industry" in Census statistics.

to the particular business (Fig. 1.3.8).

Figure 1.3.7 Breakdown of Japanese service industry



Note: Only include private businesses

Source: *Establishment and Enterprise Census of Japan* (Management and Coordination Agency)

Figure 1.3.8 Trends in number of persons engaged in narrowly-defined service industry in Japan

	number of persons engaged					number of persons lost or gained				
	1981	1986	1991	1996	1999	1981-1986	1986-1991	1991-1996	1996-1999	1981-1999
I. Services industry	8,059	9,611	11,995	13,802	13,687	1,552	2,384	1,807	114	5,628
Medical	1,441	1,690	1,984	2,377	2,515	248	295	392	138	1,073
Miscellaneous business services	609	858	1,254	1,663	1,637	249	396	409	25	1,029
Professional services	822	1,094	1,494	1,695	1,622	272	400	201	74	800
Information services and research	185	362	681	657	732	178	318	24	75	547
Amusement and recreation services	462	584	819	1,010	956	122	235	191	53	494
Social insurance and social welfare	265	330	414	591	675	65	84	177	84	410
Laundry, beauty and bath services	977	1,058	1,129	1,212	1,175	81	72	82	34	201
Education	530	586	681	726	724	55	95	45	0	195
Goods rental and leasing	112	169	281	304	284	57	112	22	17	174
Hotels, boarding houses and other lodging places	687	732	863	903	843	45	131	40	55	161
Miscellaneous domestic and personal services	224	260	284	349	330	36	25	64	19	106
Machine, upholstery, furniture, etc. repair services	148	169	219	246	243	21	50	27	2	100
Scientific and research institutes	89	129	142	192	186	40	12	51	6	97
Waste treatment services	80	103	129	165	170	23	26	35	6	90
Political, business and cultural organizations	160	179	210	236	216	18	31	26	20	56
Advertising	94	113	163	150	147	19	50	13	3	52
Religion	211	241	271	271	250	30	30	0	21	39
Motion picture and video production	24	35	47	54	56	10	12	7	2	32
Public health services	9	12	15	24	27	3	2	10	3	18
Automobile parking	65	69	77	85	80	4	8	8	5	16
Broadcasting	54	58	63	70	69	3	6	6	1	14
Miscellaneous services	14	20	20	22	23	5	0	2	1	9
Automobile repair services	339	318	325	349	333	21	8	24	16	5
Cooperative associations	458	445	429	452	374	14	16	23	74	81

Note: major group only include private businesses.

Source: *Establishment and Enterprise census of Japan* (Management and coordination agency).

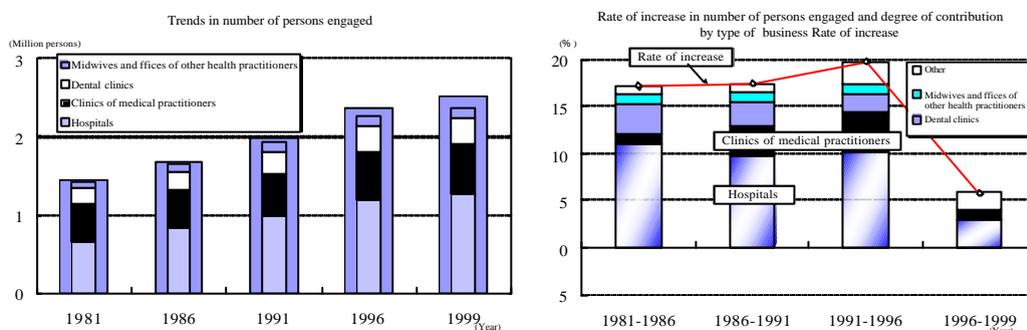
The 1986-1991 census during the bubble economy years ranked professional services, miscellaneous business services, information services and research, medical, and amusement and recreation services as the top five businesses in terms of employment growth, with more than 1.6 million jobs created. Around a decade later in the 1996-1999 census, the top five were medical, social insurance and social welfare, information services and research, waste treatment,

and public health services, which together created only 300,000 jobs. The rate of employment growth in the narrowly-defined service industry, previously characterized by high employment absorption capacity, fell to minus 1.0 percent⁴ in that same census, suggesting that the protracted recession has lowered the employment absorption capacity of some businesses.

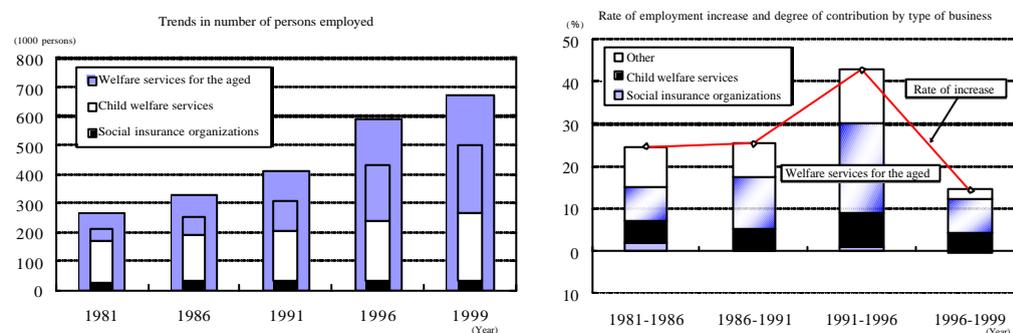
Medical services and social insurance and social welfare services saw strong employment growth despite stringent economic conditions. They were boosted primarily by hospitals in the case of the former, and senior citizen welfare in the case of the latter (Fig. 1.3.9), reflecting the rapid graying of Japanese society and the accompanying growth in nursing service needs.

Figure 1.3.9 Breakdown of medical and social welfare-related services

1. Medical



2. Social insurance and social welfare



Note: Only include private businesses

Source: *Establishment and Enterprise Census of Japan* (Management and Coordination Agency)

3. Deepening interdependence between manufacturing and service industries

As the service sector begins to dominate economies around the world, the particular fear in Japan has been that the declining weight of the manufacturing industry would spell the loss of Japan's manufacturing tradition. Does the evolution of the service industry erode a country's manufacturing base?

⁴ The number of persons engaged in Japan's narrowly-defined services industry grew by 19.3 percent over 1981-86, 24.8 percent over 1986-91, and 15.1 percent over 1991-96.

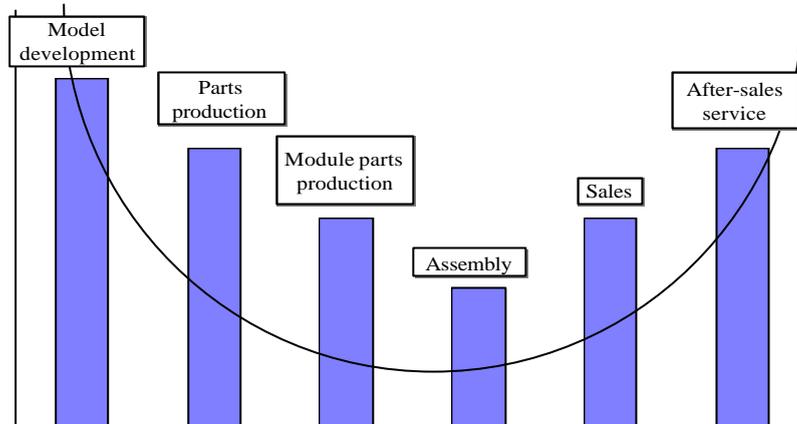
The previous sub-section noted that expanded service industry employment in the United States was underpinned by the narrowly-defined service industry, and in particular by business and health care services. Development of business services in particular hinges on a healthy manufacturing industry as the primary user of those business services. The US manufacturing industry used outsourcing as a key tool in restructuring, deepening interdependence with the service industry even as it restored its own dynamism. Employment expansion in the United States could therefore be regarded as the result of not simply service industry development but rather interdependent economic development, with the manufacturing industry utilizing the development and diversification of the service industry⁵.

Following the outsourcing of service sectors traditionally internalized by manufacturers, the manufacturing industry is now beginning to outsource even its assembly and fabrication processes. For example, a “smile curve” phenomenon is occurring in the computer industry whereby model product development, sales and after-sales service sectors are providing greater profitability than assembly and fabrication (Fig.1.3.10). The competitiveness of the manufacturing industry was traditionally considered to lie in product quality and cost, with quality positioned as the key to sales. However, cheap products imported from developing countries and the evening-out of technology levels among corporate rivals is making it increasingly difficult for companies to differentiate themselves purely on the basis of their product⁶. Companies in developed countries which statistics categorize within the manufacturing industry are therefore transferring their low-profit assembly and fabrication sectors abroad or outsourcing them, focusing their management resources instead on development, sales and other indirect sectors in what could be described as a service economy shift within the manufacturing industry. The share of the service sector in interim inputs in Japan’s manufacturing industry is also on the rise (Fig. 1.3.11). Within the services sector, education and research (R&D) and business services are growing particularly strongly (Fig. 1.3.12).

⁵ For example, the Research Bureau, Economic Planning Agency (1996) notes the importance in the development of Silicon Valley of an underpinning of a mix of “soft” and “hard” infrastructure and the agglomeration of not just high-tech industries, but also peripheral industries and the various service industries meeting the needs of high-tech companies. See Section 3, Chapter IV concerning the formation and development of Silicon Valley.

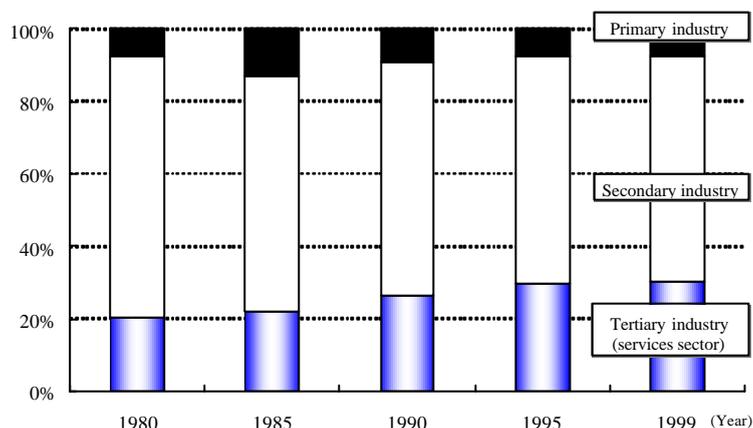
⁶ Ono (2002)

(Profit) Figure 1.3.10 “Smile-curve” image (computer industry)



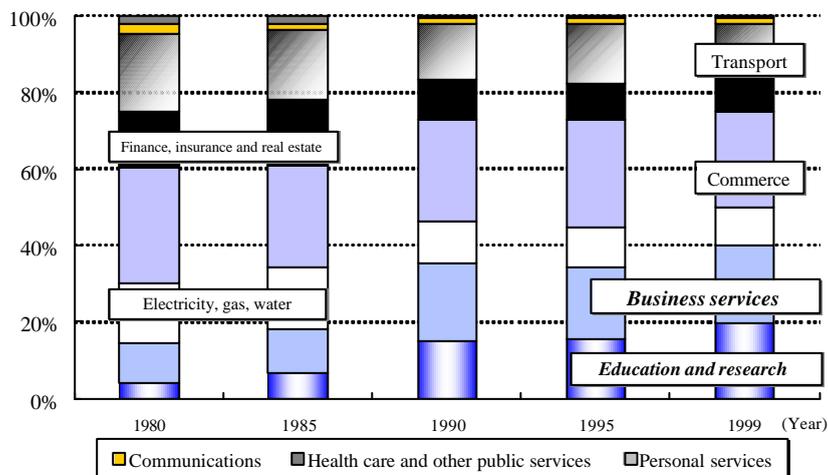
Source: Research Institute of Economy, Trade and Industry.

Figure 1.3.11 Share of services sector in manufacturing industry interim inputs



Source: *Input-Output Tables* (Ministry of Public Management), *Input-Output Tables (Extended)* (METI).

Figure 1.3.12 Composition ratio of interim manufacturing inputs from services sector



Source: *Input-Output Tables* (Ministry of Public Management), *Input-Output Tables (Extended)* (METI).

The link between the manufacturing and service industries is therefore deepening without the development of the latter being paralleled by the decline of the former. It would seem that the need to discuss the two as if they were mutually exclusive categories is in fact becoming relatively slight.

4. Challenges in development of the service industry

As interdependence with the manufacturing industry deepens, boosting the productivity of the service industry is becoming important as a means of strengthening manufacturing industry competitiveness. Transport, telecommunications, electricity and other key service sectors are crucial not only in terms of absorbing employment, but also as infrastructure for corporate economic activities. With companies now choosing countries for optimal location, greater priority is being placed on the productivity of these sectors as a cost element for the manufacturing industry.

Until now, the service industry has generally been regarded as a low-productivity, labor-intensive industry. However, the industry embraces a wide range of business types. According to the OECD (2001), certain service industries in some OECD member nations are in fact contributing extensively to higher productivity, such as transport, warehousing and telecommunications services in Australia, Finland and Italy, or the wholesale and retail industries in the United States (Fig. 1.3.13).

Figure 1.3.13 Rises in productivity in the service sector

	Australia		Canada		Finland		France		Italy	
	1979-89	1990-97	1979-89	1990-97	1979-89	1990-97	1979-89	1990-97	1979-89	1990-97
Wholesale and retail, restaurants, hotels	0.1	1.0	0.7	1.6	2.5	0.9	1.2	0.3	0.4	1.4
Wholesale and retail	-	-	1.6	2.3	2.6	0.7	1.6	0.6	0.5	1.5
Restaurants, hotels	-	-	2.4	0.9	1.7	2.0	0.6	1.0	0.4	0.8
Transport, warehousing, telecommunications	3.6	5.4	3.1	2.2	3.1	4.7	3.8	2.7	2.0	4.8
Transport, warehousing	2.1	3.5	2.5	0.5	2.3	3.8	1.7	1.4	1.3	2.6
Telecommunications services	7.5	8.6	3.7	5.0	5.8	7.0	7.4	4.8	4.6	10.9
Finance, insurance, real estate, business services	0.6	0.6	0.2	0.5	0.2	2.9	0.1	0.1	0.0	2.5
Finance, insurance	-	-	0.4	1.7	3.9	6.1	0.2	1.8	-	-
Real estate, business services	-	-	2.3	0.1	1.8	1.6	0.3	0.4	-	-
	Japan		Netherlands		Sweden		US		Former West Germany	
	1979-89	1990-97	1979-89	1990-97	1979-89	1990-97	1979-89	1990-97	1979-89	1990-97
Wholesale and retail, restaurants, hotels	4.4	1.0	1.6	0.3	1.6	3.2	1.3	3.1	0.9	0.4
Wholesale and retail	-	-	3.0	0.5	2.4	3.3	1.4	3.0	1.2	0.7
Restaurants, hotels	-	-	2.2	0.7	3.5	2.3	0.4	4.3	0.9	3.2
Transport, warehousing, telecommunications	4.1	0.5	2.6	2.5	3.8	2.1	1.6	2.0	3.1	3.9
Transport, warehousing	-	-	3.5	2.5	3.2	0.2	0.2	1.9	2.0	2.0
Telecommunications services	-	-	3.7	3.1	5.2	7.5	3.9	2.7	4.9	7.2
Finance, insurance, real estate, business services	2.3	1.8	0.7	0.9	1.4	3.0	1.1	0.4	1.6	2.8
Finance, insurance	-	-	0.3	0.4	3.1	4.2	0.4	1.3	-	-
Real estate, business services	-	-	0.4	1.3	2.9	2.5	1.8	1.2	-	-

Note: Rates of change for 1979-89 and 1990-97.

Source: OECD (2001), Chapter 2, Table 2

Service industry innovation was also once thought to be less dynamic than in the manufacturing industry, with the service industry simply using the technology developed elsewhere rather than introducing its own innovations. The recent advance in information communications technology, however, has boosted service industry awareness of the importance of technological development, and service industry R&D expenses are rising (Fig. 1.3.14). In terms of individual industries, telecommunications, computers and related activities are displaying particularly marked growth.

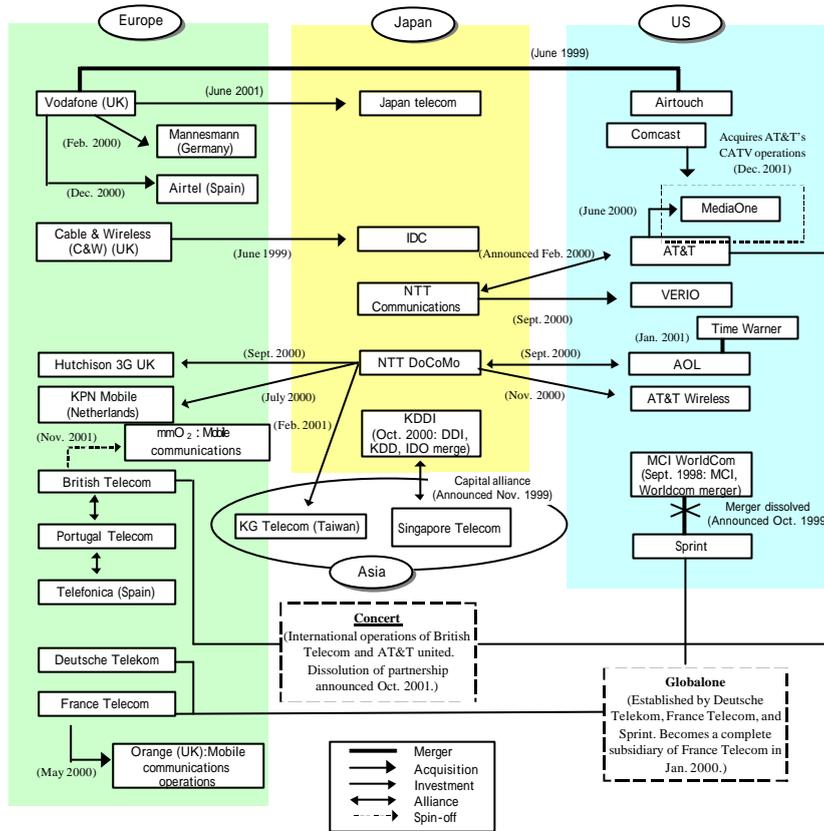
Figure 1.3.14 R&D expenses in the service industry

	Japan		US		UK		France		Germany	
	1990	1998	1990	1998	1990	1998	1990	1998	1990	1998
Service industry total	1,315	2,896	20,793	30,964	1,983	2,541	557	1,156		1,526
Wholesale and retail, automobile repairs, etc.				8,150	7	12				37
Hotels, restaurants				155						
Transport, warehousing	80	89		681	12	32	32	461		66
Communications	1,235	1,756		2,017	566	680				
Posts				58						
Telecommunications				1,959						
Finance (including insurance)				1,499						7
Real estate, leasing, business activities		1,051			1,367	1,805	525	695		1,274
Computers and related activities			4,629	8,868	723	1,042		395		484
Software and consultants										449
Other computer services										35
Research and Development			1,335	7,029	405	524				408
Other business activities					239	238		300		382
Community, social and personal service activities					32	12				15
	Canada		Italy		Belgium		Norway		Spain	
	1990	1998	1992	1998	1990	1998	1990	1998	1990	1998
Service industry total	956	2,321	544	830	351	605	270	451	325	321
Wholesale and retail, automobile repairs, etc.	145	549		30	78	108		3	1	3
Hotels, restaurants				8	2	6	3	7	3	2
Transport, warehousing	15	9								
Communications	109	101	27	49	3	13	19	64	57	104
Posts				15				4		
Telecommunications			27	34	3	33	15	64	57	104
Finance (including insurance)	117	213		54	64	107		10		
Real estate, leasing, business activities	570	1,449	505	675	202	362	243	367	255	192
Computers and related activities	176	528	80	147	88	191		131	23	69
Software and consultants			76	116	80	157		78	20	60
Other computer services			5	31	8	34		53	3	9
Research and Development	321	730	392	390	10	11	189	194	99	6
Other business activities	73	192	33	138	103	159	35	42	133	118
Community, social and personal service activities			12	14	2	9			8	19

Note: Purchasing power parity in US dollars.
Source: OECD (2001), Chapter 2, Annex Table 1

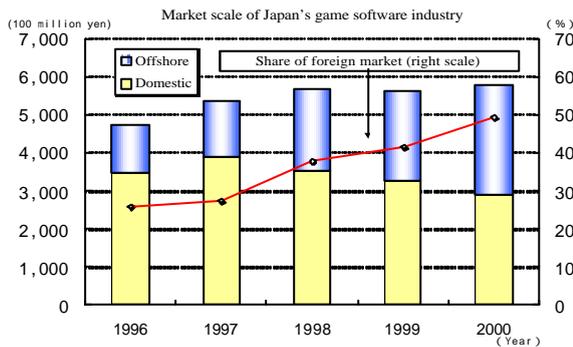
In addition, progress with regulatory reform and the expansion of trade in services are intensifying international competition. For example, cumulative deregulation of finance and telecommunications has led to corporate reorganization, including the participation of foreign-invested enterprises (Fig. 1.3.15). Media content, on the other hand, which includes the US film industry and Japan's game software industry, is reaching increasingly beyond the domestic market to enter offshore markets (Fig. 1.3.16).

Figure 1.3.15 Main M&As and alliances, etc., among telecommunications firms



Source: Created by METI from various materials.

Figure 1.3.16 Status of Japan's game software industry



Source: *The Game Industry: Current Status and Challenges* (Media and Content Industry Division, METI)

Rank	Title	Company
1	Pokemon Silver	Nintendo
2	Pokemon Gold	Nintendo
3	Pokemon Stadium	Nintendo
4	Pokemon Yellow	Nintendo
5	Tony Hawks Pro Skater 2	Activision
6	Legend of Zelda: Majora's Mask	Nintendo
7	Tony Hawks Pro Skater	Activision
8	Gran Turismo 2	Sony
9	Pokemon Blue	Nintendo
10	Pokemon Red	Nintendo

Source: *State of the Industry* (Interactive Digital Software Association)

Given the enormous technological advances and the intensifying search for efficiency in specialist areas which characterize today's world, the balanced development of the manufacturing and service industries will be critical in retaining the dynamism of the Japanese economy and locking in further growth. This will require pursuing a course of selection and concentration in the manufacturing industry which takes advantage of the production technology and sales strategy superiority which are traditional Japanese strengths, while also

deepening interdependence with the newly differentiated and developed service industry. Japan's service industry will also have grow beyond simply supplying the manufacturing industry, establishing an international presence targeting the world's companies and consumers as its market.