Section 2  Offshore outsourcing trends in the US and Japan and their impact on employment

<Key points>
1. Overview of outsourcing

According to the results of a survey conducted by a private research institute, information services account for the largest share of the outsourcing market in both Japan and the United States (US) at around 20 percent, with other areas including consulting and human resources services. These outsourced services equate closely to the industry classification of “professional and business services.”

In the US, “professional and business services” in all industries account for a share of production amount approximately 1.7 times greater than in Japan.

2. Outsourcing trends in the US

While professional and business services in the US continue to grow, the pace of growth has slowed, suggesting that professional and business services are maturing as an industry.

Looking at the relationship between outsourcing market maturity and offshore outsourcing, service trade statistics reveal that the trade value of “professional, scientific and technical services” exports still outstrips that of imports, but increase rates suggest that imports are growing faster than exports. Affiliated transactions account for a growing share in the case of both imports and exports.

Looking at trends in trade, there is a possibility that India may be increasingly placed as a resource for offshore outsourcing in its relationship with the US and the entire world.

A more detailed breakdown of “professional and business services” reveals that the number of services industries with declining employment has grown at an increasingly rapid pace in recent years.

3. Outsourcing trends in Japan

In the context of the services industry as a whole, both production value and employment figures position the professional and business services industry in Japan as an industry at the growth stage.

In terms of balance of payments statistics, Japan’s offshore outsourcing remains insignificant.

4. Development stages in outsourcing in Japan and the US

Professional and business services outsourcing are considered to develop through three stages: (i) service functions are handled internally; (ii) some internal service functions are outsourced domestically; and (iii) service functions are procured offshore from affiliates and other businesses.

Using this typology, Japan can be said to be at the “growth stage” whereas the US is now in the “maturity and competition stage.” However, it is unclear whether professional and business services in Japan will tread the same development path as the US.
Section 1 demonstrated the weakening relationship between movements in GDP and job creation in Japan and the US, and changes in the micro competitive environment behind this. Discussions are taking place in the US regarding whether the offshore outsourcing\(^1\) of professional and business services is the cause of job losses.\(^2\) In past discussions, many people point out individual cases of offshore outsourcing having a negative effect on the future, but little analysis has been done based on statistics.

This section will examine the effect of the expansion of offshore outsourcing on employment trends in the US and Japan, using statistics on employment, GDP and trade.

1. **Overview of outsourcing**

As there are no official statistics concerning outsourcing, this section refers to the results of surveys released by outsourcing research institutes in Japan and the US in order to first identify the areas for outsourcing within the services industry.

According to the Outsourcing Institute in the US, information technology services make up 20 percent of the outsourcing market in the US, the largest ratio, and the areas of “administration,” “real estate and plants,” “distribution” and “human resources” each make up about 10 percent of the market (Fig. 1.2.1).

\[\text{Figure 1.2.1 Composition ratio by area of the outsourcing market in the US (2002)}\]

\[\text{Source: 5th Annual Outsourcing Index 2002 (The Outsourcing Institute).}\]

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\(^1\) Outsourcing generally refers to a company using its resources externally or using external resources. Outsourcing to locations overseas is called “offshore outsourcing” or “offshoring.” When used in this section, these words refer only to the outsourcing of professional and business services unless otherwise specified.

\(^2\) Roach and Berner (2004); Bardhan and Kroll (2003); Forrester Research (2002); etc.
According to the results of a survey carried out by the Strategic Outsourcing Council of Japan (SOCJ), information technology services, as in the US, make up approximately 20 percent of the outsourcing market in Japan, the largest ratio. These are followed by “consulting,” “human resource related services” and “specialized services” (Fig. 1.2.2).

The outsourced services covered by the organizations above equate closely to the industry classification of “professional and business services.” Therefore, in this section, we will examine trends in outsourcing and offshore outsourcing, and make observations using data on the industry classification of “professional and business services.”

Let us now compare the size of the outsourcing market in Japan with that in the US using data on production amount by industry in GDP statistics. Looking at Figure 1.2.3, one can see that the production amount of “professional and business services” in Japan in 2001 was 50 trillion yen (411.4 billion dollars), making up a 13.7 percent share of the services industry and a 5.4 percent share of all industries. Meanwhile, the production amount of “professional and business services” in the US was 1.6152 trillion dollars, making up a 19.7 percent share of the services industry and a 9.3 percent share of all industries. One can thus see that “professional and business services,” or the outsourcing market, is significantly more developed in the US than in Japan.

In this section, job areas for outsourcing are referred to as professional and business services. See AN1.2.1 for the industry classification of professional and business services. When shown in quotations, such as “professional and business services” and “business, professional and technical services,” these correspond with the industry classifications explained in AN1.2.1.
2. Outsourcing trends in the US

(1) Changes in growth of outsourcing in the US

Based on the discussion above, let us take a look at the relationship between employment trends in professional and business services and economic cycles while comparing the situation in other services industries using the method covered in Section 1. Looking at Figure 1.2.4, structural gains in employment are occurring in the services industry overall. In the services industry, “education and health services” and “financial activities” are placed in the structural gain quadrant, while “professional and business services” is placed in the procyclical flow quadrant, and the pace of employment growth for “professional and business services” during economic recoveries is slow.

Notes:
1. See AN 1.2.1.
2. Period of recession is from Mar. 2001 (peak) to Nov. 2001 (trough); period of recovery is from Nov. 2001 (trough) to Jan. 2004.
3. The size of the circle indicates the number of employees during the economic peak.
Let us then take a look at total medium-term production and employment trends in the professional and business services industry while comparing the situation in other services industries. Figure 1.2.5 and Figure 1.2.6 look at increases and decreases in the growth rate of production amount and numbers of employees in the major services industries in the US in 1993-1997 (Period 1) and 1998-2001 (Period 2). A 45-degree line is drawn through the two figures so that one can see increases and decreases in the growth rate during Periods 1 and 2. In the figures, if a services industry is located to the upper left of the 45-degree line, its growth is accelerating. If it is located to the lower right of the line, its growth is slowing.

Figure 1.2.5 Changes in the production value of the major services industries in the US

![Figure 1.2.5](image)

Note: See AN 1.2.1.
Source: Gross Domestic Product by Industry (Bureau of Economic Analysis, US Department of Commerce).

Figure 1.2.6 Changes in the number of employees for the major services industries in the US

![Figure 1.2.6](image)

Note: See AN 1.2.1. Furthermore, information after 1998 relies on data from NAICS. Adjustments were made with the use of the comparative tables from NAICS as well as from SIC.

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4 The periods were divided this way because of a change in industrial classification in the data for 1998.
As one can clearly see in Figures 1.2.5 and 1.2.6, the growth in “social services” and “personal services” in both production amount and number of employees is accelerating, while the growth in “professional and business services” is slowing.

Figure 1.2.7 shows trends in production amount and number of employees in “professional and business services” through a comparison of “professional and business services” and the services industry as a whole. The growth rate of production and number of employees in the services industry as a whole did not change during Periods 1 and 2. On the other hand, the growth rate of production and number of employees in “professional and business services” was higher than that in the services industry on the whole in Period 2, but the growth rate of professional and business services slowed relative to Period 1 and appears to be moving toward the growth rate for the services industry on the whole.

![Figure 1.2.7 Changes in growth rates of production amount of and number of employees in professional and business services in the US](image)

As such, while professional and business services in the US continue to grow, the pace of growth has slowed, suggesting that professional and business services are maturing as an industry.

(2) Services trade trends in the US

(a) Overview of progress in offshore outsourcing

As was suggested above, the domestic outsourcing market in the US is maturing. We will next look at the relationship between outsourcing market maturity and offshore outsourcing. Specifically, using services trade statistics, we will examine whether exports in professional and business services are
increasing, and if so, to what extent they are increasing.

Figure 1.2.8 looks at the import and export trends in “business, professional and technical services” in the US, which correspond almost completely with offshore outsourcing. They are divided into transactions with affiliated and unaffiliated transactions.\(^5\) Looking at the figure, it is apparent that the average growth rate of imports in 1998-2002 was 13.4 percent, a high level.

On the other hand, the average growth rate of exports in 1998-2002 was 9.4 percent, also a high level. In trade value, exports are still higher than imports in “business, professional and technical services.”

Looking at the composition ratios of transactions with affiliated and unaffiliated transactions, one can see that transactions with affiliates account for a growing share in the case of both imports and exports.

**b) Progress in offshore outsourcing by type of industry (transactions with non-affiliates)**

Looking only at transactions with non-affiliates, one can obtain a detailed breakdown of data regarding “other private services”\(^6\) in US services trade statistics. By studying the trade trends of each industry in “business, professional and technical services,” one can specifically see the industries in which offshore outsourcing is occurring.

Figure 1.2.9 shows movements in import values in 1998-2002 for the nine industries in “business,

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5 Affiliates are subsidiary companies of which a majority of stock is owned.
6 US service trade statistics classify service trade into “travel,” “passenger fares,” “other transportation,” “royalties and license fees,” and “other private services.”
professional and technical services” with the largest import values as of 2002. Looking at the industries by average growth rate in 1998-2002, “advertising,” “research, development and testing services,” “installation, maintenance and repair of equipment,” “accounting, auditing and bookkeeping services,” “training services” and “architectural, engineering and other technical services,” each had higher growth rates than the 9.8 percent growth rate for “business, professional and technical services” as a whole.

Figure 1.2.9  Trends in imports for industries categorized under "business, professional, and technical services" in the US (transactions with non-affiliates)

(c) Offshore outsourcing to China and India (transactions with non-affiliates)

We will examine US trade trends with India and China in “business, professional and technical services” since these are often mentioned as major countries with which US companies carry out offshore outsourcing.\(^7\) Looking at movements in the trade specialization coefficient between the US and these countries, the coefficient decreased slightly in the US’s relationship with China, while it decreased significantly in its relationship with India (Fig. 1.2.10). Looking at the trade specialization coefficient related to outsourcing in India and China with the entire world including the US (trade specialization coefficient for “other business services”\(^8\)), one can see that the trade specialization coefficients for China

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7 McKinsey Global Institute (2003); Roach and Berner (2004); etc.

8 The balance of payments statistics, in the balance on services, includes “transportation,” “travel” and “other services.” The “other services” is further divided into “communications services,” “construction services,” “insurance services,” “financial services,” “computer and information services,” “royalties and license fees,” “other business services,” “personal, cultural and recreational services” and “government services n.i.e.” “Other business services” is divided into “merchandising and other trade-related services,” “operational leasing” and “miscellaneous business, professional and technical services.”
and India became positive in 1997 and gradually increased thereafter (Fig. 1.2.11).

Based on these trends, the possibility appears that India may be increasingly placed as a resource for offshore outsourcing in its relationship with the US and the entire world.

(3) Short-term trends in outsourcing and employment in the US

(a) Industries with decreasing employment in recent years and characteristics of these industries

According to what has been covered thus far, it appears that although employment in professional
and business services in the US is growing, it is at the same time maturing. Here we will consider short-term trends in employment in “professional and business services.”

More specifically, we will look at changes in the numbers of employees between January 2001 and March 2004 (January 2004 for some industries due to data availability), dividing “professional and business services”\(^9\) into 21 industries.

Figure 1.2.12 compiles these into: (i) industries in which employment decreased from January 2001 through to the most recent period (10 industries); (ii) industries besides those in (i), in which employment decreased from January 2003 through to the most recent period (one industry); (iii) industries besides those in (i) or (ii), in which employment has decreased from October 2003 through to the most recent period (eight industries); and (iv) industries besides those in (i), (ii) or (iii) (two industries). As such, one can see that the number of services industries with declining employment has grown at an increasing pace in recent years.

We will now look at sales trends in 2000-2002 in the 10 industries in (i), in which employment decreased in and after January 2001, excluding “management of companies and enterprises” for which sales data could not be obtained. In Figure 1.2.13, looking at the four industries in which there is a notable decline in employment excluding “travel arrangement and reservation services,” one can see that the amount of decrease in sales has also accelerated.

Figure 1.2.13  Sales trends after Jan. 2001 through most recent period for 10 industries in "professional and business services" that led to a decline in employment

<table>
<thead>
<tr>
<th>Industry</th>
<th>Year-on-Year Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel arrangement and reservation</td>
<td>-10%</td>
</tr>
<tr>
<td>Computer system design and related</td>
<td>-8%</td>
</tr>
<tr>
<td>Advertising and related services</td>
<td>-6%</td>
</tr>
<tr>
<td>Waste treatment and disposal</td>
<td>-4%</td>
</tr>
<tr>
<td>Specialized design services</td>
<td>-2%</td>
</tr>
<tr>
<td>Accounting and bookkeeping services</td>
<td>0%</td>
</tr>
<tr>
<td>Employment services</td>
<td>2%</td>
</tr>
<tr>
<td>Architectural and engineering services</td>
<td>4%</td>
</tr>
<tr>
<td>Travel arrangement and reservation</td>
<td>6%</td>
</tr>
<tr>
<td>Computer system design and related</td>
<td>8%</td>
</tr>
<tr>
<td>Accounting and bookkeeping services</td>
<td>10%</td>
</tr>
</tbody>
</table>

Note: Yearly income values per capita were taken from the following sources due to restrictions concerning the data: 2000-2001 values from the CBP United States Economic Profiles (Census Bureau, US Department of Commerce); 2001-2002 values from the Quarterly Census of Employment and Wages (Bureau of Labor Statistics, US Department of Labor).

(b) Progress in offshore outsourcing looked at through changes in numbers of employees by occupation

Thus far we have covered employment trends in professional and business services in the domestic US economy. Here we will look at trends in the number of employees in the US by occupation in order to supplement the discussion conducted thus far. Looking at trends in employment by occupation allows one to examine trends in employment related to offshore outsourcing including employment created internally within companies.

Figure 1.2.14 shows year-on-year rates of change in the number of employees in occupations for outsourcing in the US. The occupations for outsourcing in which the number of employees declined were “office and administrative support occupations,” “computer and mathematical occupations,” “architecture and engineering occupations” and “arts, design, entertainment, sports and media occupations,” and there was a trend toward a decreasing growth rate of employment in other occupations as well.
3. Outsourcing trends in Japan

Below we will examine Japan in the same way we did the US.

(1) Changes in growth of outsourcing in Japan

Figures 1.2.15 and 1.2.16, as in the case of the US, look at changes in the growth rate of production amount and numbers of employees in the major services industries in Japan in 1989-1994 (Period 1) and 1994-1999 (Period 2).[^10]

[^10]: The periods were divided this way because the *Survey on Services Industry* by the Ministry of Public Management, Home Affairs, Posts and Telecommunications, which is used as a reference by the Ministry of Economy, Trade and Industry, was conducted every five years (1989, 1994 and 1999).
Looking at these figures, one can see that while the growth of production in “professional and business services” slowed during Period 2, the growth in the number of employees accelerated. Comparing trends in the services industry as a whole, one can see in Figure 1.2.17 that the growth rate of production as a whole declined significantly. One can also see in comparison that the growth rate in the number of employees in “professional and business services” increased and the slowdown of the growth of sales was suppressed.

As such, based on these factors, it appears that both the production amount and the number of employees show the professional and business services industry in the context of the services industry as...
a whole to be in a stage of growth.

(2) Services trade trends in Japan

We will now examine offshore outsourcing trends in Japan. Looking at balance of payments statistics in Japan, the value of imports in “other business and technical services,” which is considered to be the statistical classification closest to offshore outsourcing, has gradually decreased, and one can thus see that Japan’s offshore outsourcing remains insignificant (Fig. 1.2.18).

![Figure 1.2.18 Trends in imports of “other business and technical services” in Japan](image)


4. Development stages in outsourcing in Japan and the US

Based on the above results, it appears that while domestic outsourcing in the US (professional and business services), in spite of slowing growth, has reached a maturity and competition stage, the professional and business services industry in Japan is at a growth stage. As stated at the beginning of this section, in the US, “professional and business services” in all industries account for a share of total production that is approximately 1.7 times greater than in Japan (Fig. 1.2.3).

Based on the case of the US, there appear to be several stages in the development of outsourcing. Specifically, there seem to be three such stages: (i) the domestic professional and business services industry has not yet matured, so service functions are handled internally or services are not used (“internal creation stage”); (ii) the professional and business services industry has developed, and some internal services functions are outsourced domestically or services functions that had not existed are purchased from the professional and business services industry (“domestic outsourcing stage”); (iii) the professional and business services industry has matured and become saturated, foreign direct investment has progressed, and service functions are procured offshore from affiliates and other businesses.

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11 See footnote 8.
(“offshore outsourcing stage,” competition in the domestic professional and business services industry progresses during this stage).

Figure 1.2.19 shows the relationship between the development stages of the professional and business services industry and the outsourcing of professional and business services based on the above concepts. In the figure, it appears that Japan is at the “growth stage” whereas the US is now in the “maturity and competition stage.”

In looking at the results of the analysis of Japan and the US thus far, professional and business services in the US have matured domestically in the medium term, imports have increased centered on transactions with affiliates, and employment has decreased in recent years. Based on this, although the future effect on employment is unclear, professional and business services in the US can be said to be in a maturity and competition stage. Professional and business services in Japan, however, have grown in the medium term, imports have decreased gradually, and the production amount is nowhere near that of the US. One can thus conclude that professional and business services in Japan are still at the growth stage. It is unclear whether professional and business services in Japan will take the same path as those in the US in the future, but it will be necessary to continue to pay close attention to offshore outsourcing trends in the US.