RIETI Policy Discussion Paper Series 17-P-011

Global Service Value Chain in Japan: Inbound tourism cases

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The Research Institute of Economy, Trade and Industry
http://www.rieti.go.jp/en/

RIETI Policy Discussion Paper Series 17-P-011

March 2017

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Abstract

Japanese manufacturers are becoming increasingly dependent on non-manufacturing functions such as sales, leasing, and after-sales services as their main source of value added in global value chains (GVCs). We discuss the role of services in GVCs in observing the service industry's contributions to exports and growth of the Japanese economy. The service industry affects trade and the global economy in two ways. One is by exports of services directly to partner countries. Another is through observation of the services embodied in the manufacturing process for parts, intermediate products, or final products, which is known as indirect trade. In this paper, we focus on tourism because of Japan's favorable tourism market, which has grown rapidly in recent years. Also, tourism has a unique feature known as high tradability service and affects various industries (e.g., transport, retail, wholesale, restaurant, agricultural production, cleaning, information communication, etc.). In order to understand Japan's tourism GVCs, we propose the GVC map following Gerreffi et al. (2011) and estimate the ripple effects of the inbound boom to the Japanese economy using the input-output (I-O) table conducted by the Ministry of Economy, Trade and Industry (METI).

Keywords: Inbound boom, Economic ripple effects, Demand prediction, Policy reform, GVCs

JEL classification: D57, F14, F68, L83

*This study is conducted as a part of the "Decomposition of Economic Fluctuations for Supply and Demand Shocks: Service industries" project undertaken at RIETI and "Services supply chains – implications and opportunities for RCEP" undertaken at ERIA. The author appreciates invaluable advice for data construction and I-O analysis by Ms. Junko Tojo, Mr. Hidekazu Tamura and Mr. Takashi Saito (METI). The author is also grateful for helpful comments and suggestions by Professor Christopher Findlay, (The University of Adelaide, ERIA), Professor Fukunari Kimura (KEIO University, ERIA), Professor Shandre M Thangavelu (The University of Adelaide, ERIA), Dr. Lurong Chen (ERIA) and workshop participants at ERIA. The author also appreciates insightful comments by Chairman Atsushi Nakajima (RIETI) and President and CRO Makoto Yano (RIETI), and is grateful to Vice President Masayuki Morikawa (RIETI) for the opportunity to participate in the ERIA project. The author is grateful for helpful comments and suggestions by Professor Kyoji Fukao (Hitotsubashi University, RIETI-PD) and seminar participants at RIETI. This research was partially supported by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Grant-in-Aid for Scientific Research (No. 15K03407) and Research Project 2016 of Kyoto Institute of Economic Research.

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1. Introduction: Overview of Japanese Economy

Since the bubble economy burst in the early 1990's, the Japanese economy has grown at a stagnant pace, and productivity has continued to decline. This period has been referred to as the "lost two decades." A number of researchers have investigated what transpired during this period. The government is also attempting to answer this question in its quest for an effective policy that will grow gross domestic product (GDP). In 2015, the government set a goal of raising nominal GDP to 600 trillion yen by 2020. An annual rate of 3.5% of growth is necessary to achieved a 600 trillion yen GDP by 2020 as nominal GDP was 486 trillion yen in 2014. Figure 1 shows nominal GDP and the growth rate. We obtained the GDP figures for 2015 and examined the gap between actual GDP and expected GDP. The gaps in GDP and annual growth rate are five trillion yen and approximately 1%, respectively.

"Why does the growth rate keep declining?" One possible reason for the low or negative growth rate is low industrial productivity. In particular, these substandard figures are due to low service industry productivity, according to Bosworth and Triplett (2004), McKinsey report (2015) and others. Bosworth and Triplett (2004) used government statistics to measure U. S. productivity across a broad class of service industries and showed that retail and some other personal service industries had low productivity in the 1990s. These findings were in relation to the macro-economic situation and used labor productivity[1].

In 2005, the OECD reported that Japan ranked 20th in level of labor productivity among the then 30 member countries, but placed sixth in the manufacturing industry

[1] Bosworth and Triplett (2004) said that it is harder to obtain capital stock data for the service industry than for the manufacturing industry. There is a serious problem with the availability of data about the service industry. However, as is well known, the service sector is comprised of a broad range of industries, including those that are labor-intensive as well as capital-intensive industries such as telecommunications and transport services. Therefore, labor productivity is not necessarily an appropriate measure of productivity.

classification. This created the perception that weakness in the service sector was a drag on productivity. A more recent comparison conducted in 2012 also shows that Japan ranked 21st among the 34 OECD countries, which is the lowest of the seven major economies, in terms of productivity for all industries, but was seventh in a ranking of manufacturing industries[2]. Thus, attention has been drawn toward the service sector in the past several years, ironically, because of its low productivity.

In economics, productivity measurement studies have long focused on the manufacturing industry. Japan is no exception. Due partly to an image widely held at home and abroad of Japan being a country that excels in production technologies led by certain manufacturers, the manufacturing industry's productivity and technological capabilities have been perceived as a source of growth.

However, looking at the composition of the Japanese economy in recent years, the reality is that non-manufacturing industries account for 75% or more of GDP. More specifically, the service-providing industry's[3] share of GDP stands around 20% and, when the transport, wholesale, and retail trade industries are included, this figure rises to 35% or more, consistently exceeding the manufacturing industry's share since 2009[4] (See the left graph in Figure 2). Also, the service-providing industry's share of the labor market has been on the rise since the 1990s and reached approximately 30% by 2009, whereas the manufacturing industry's share has trended downward since the 1990s to approximately 15% in 2014 (See the left graph in Figure 2). As evident from these figures,

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[2] For an international and industry-by-industry comparison of labor productivity across OECD countries, see the Japan Productivity Center's report listed in Reference [6].

[3] In this article, the term "service-providing industry" collectively refers to the narrowly-defined service industries classified into categories L through R under the Japan Standard Industrial Classification (13th revision in October 2013). Broadly-defined service industries represent the tertiary industries and herein referred to as the "service sector." For the Japan Standard Industrial Classification, see the Ministry of Internal Affairs and Communications' website at the URL given in Reference [19] below.

[4] The percentage figures were calculated based on data from the National Accounts of Japan listed in Reference [2] below.

overall economic activity can no longer be explained simply in terms of the manufacturing industry. The service sector is extremely important due to its presence in the overall economy and magnitude. Despite this fact, very few studies have focused on this sector because of the difficulty of obtaining data and the fact that service sector industries in general have not been recognized as major industries. The service industry is a very broad classification, which includes education, finance, insurance, transportation, logistics, food service and many other sectors. These exhibit, in our understanding, distinctive different structures, and the construction of a single model accounting for all service sectors does not appear to be an easy feat. Therefore, we do not believe there has been a productivity decline in all Japanese service industries. In order to determine the causes of such a phenomenon, we need to thoroughly investigate which service industry sectors exhibit low productivity.

Next, we attempt to observe the service industry's role in trade activity. Figure 3 shows the value of Japan's exports of goods and services and the ratio of total exports to nominal GDP over the period from 1994 to 2014. The ratio of total exports to nominal GDP in 1994 and 2014 were 9% and 18 %, respectively. This figure has been upward trend since the 1990s (see the lower graph in Figure 3). After 1990, the percentage of goods exports has continued to account for the largest share, 85% or more of Japan's total exports (see the top graph in Figure 3). The manufacturing industry constitutes the bulk of exports. However, when we examined the annual growth rate from 1994 to 2014, the gain in service exports was 4.6%, which is higher than the manufacturing industry gain of 3.2%. Section 3 provides a description of the specific components comprising service transactions. The understanding in this section is that the direct contribution made by service exports to GDP was not sufficiently enough despite the growth rate being higher than that of the manufacturing industry. In the next section, we discuss the role of services in Global Value Chains ("GVCs") to observe the service industry's indirect

contribution to exports and growth of the Japanese economy.

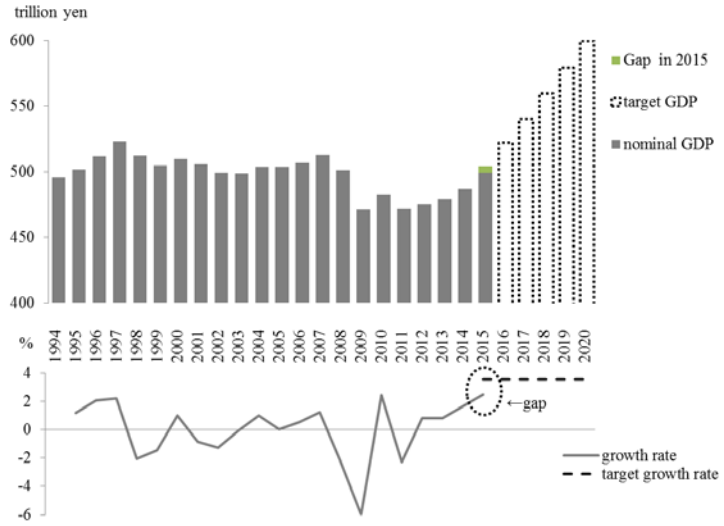

Figure 1: Japan's nominal GDP and growth rate 1994-2020
Source: Calculated by the author using the Cabinet Office's National Accounts of Japan

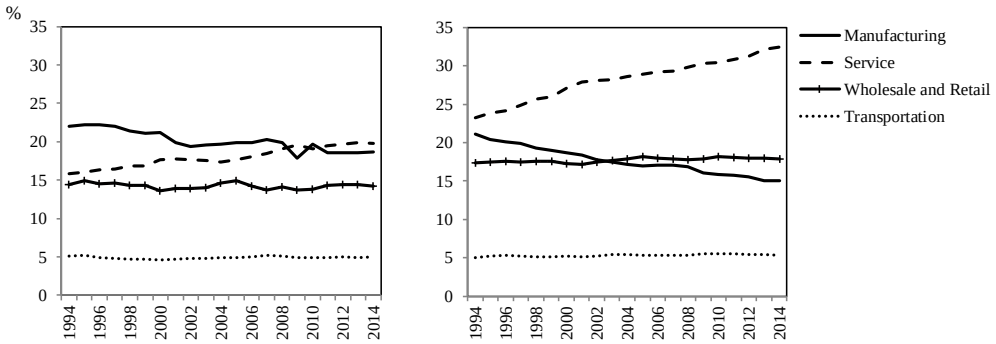

Figure 2: Share of GDP (left) and share of total number of employees (right)
Source: Calculated by the author using the Cabinet Office's National Accounts of Japan

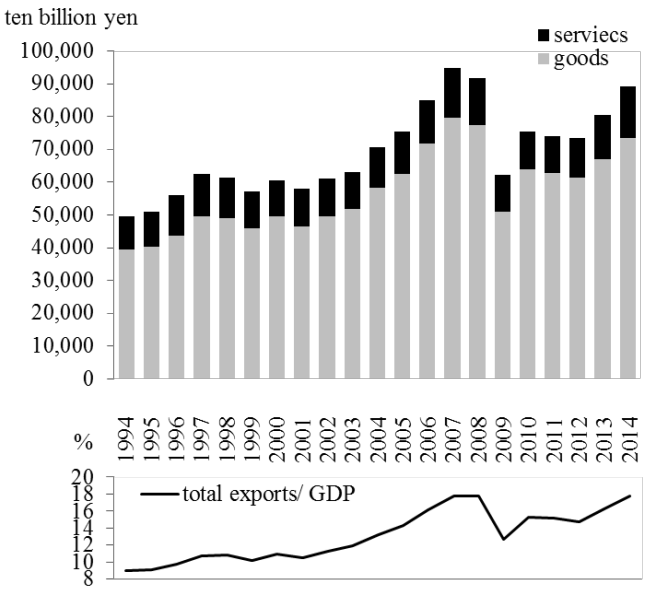

Figure 3: Exports of goods and services (top graph) and share of total exports as a percentage of GDP (lower graph)

Source: Calculated by the author using the Cabinet Office's National Accounts of Japan

2. Understanding Japan's Participation in GVCs

The service industry affects trade and the global economy in two ways. One is exports of services directly to partner countries. As shown in Figure 3, the service exports share of Japan's total (gross) exports has been less than that of the manufacturing industry. Another way is to observe the services embodied in the manufacturing process for parts, intermediate products or final products, which is known as indirect trade. Figure 4 shows the role that services play in the production process. In recent years, Japan has been exporting not only final products but also intermediate goods to partner countries where they are assembling and processed. Afterwards, the final products are exported as consumer goods to third countries. The good news for global trade is that trade has been liberalized, lowering transportation cost, information and communications costs, and other trade costs. In addition, as international competition has intensified, the manufacturing industry has to provide a high quality and precise products, which require more complicated processes and technology. Such conditions have been an

incentive for Japanese firms to create GVCs and participate in the international fragmentation of production. Therefore, it is increasingly necessary to analyze GVCs so as to precisely capture the value of services embodied in the production process.

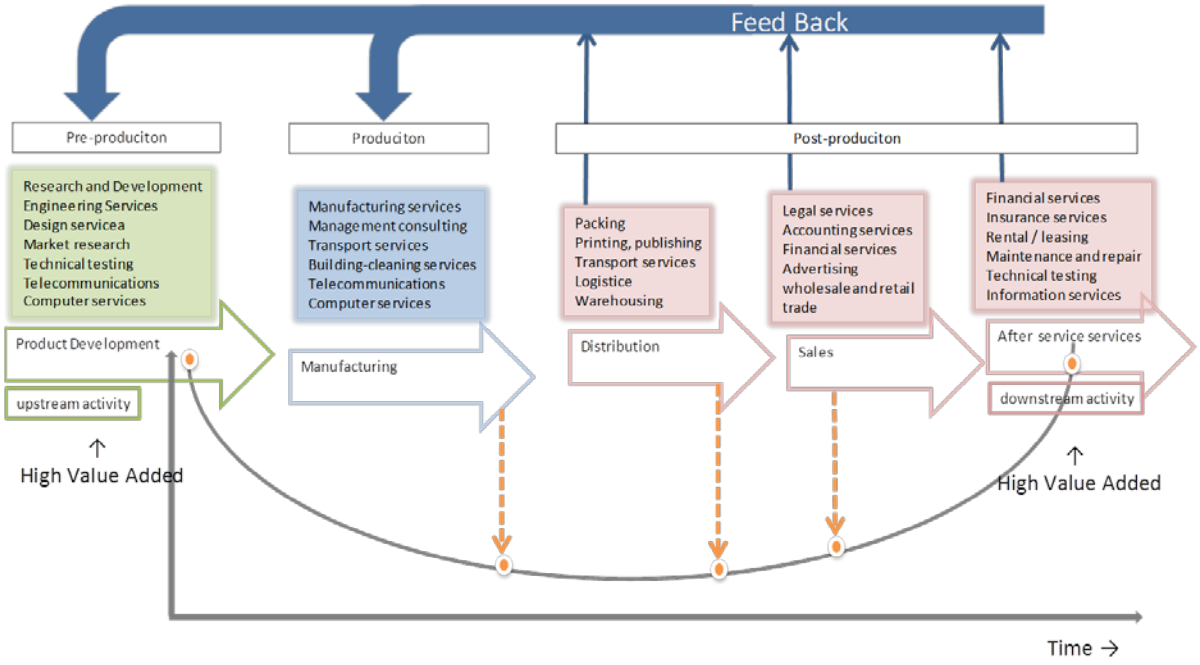

Figure 4: Smiling curve showing the roles of services in production processes
Source: WTO (2013) Report figure C.11 modified by the author

As Johnson (2014) acutely pointed out when examining the export shares of goods and services to world-wide gross exports based on trade or other such regular statistics, the share of manufacturing and service exports are 67% and 20%, respectively. On the other hand, using the WIOD (World Input-Output Database), they re-calculated the export ratio in terms of value-added trade. This resulted in service exports in terms of value-added trade being 41 %, which is larger than the share of goods exports (39%). Francois *et al.* (2015) also used WIOD data and found that developed countries tend toward high-service intensity exports. Their examination showed that Japan's share of service exports based on value-added has increased rapidly world-wide from 6.5% in 1992 to 30%

in 2011.

2.1 Degree of Participation in GVCs

Each country integrates itself in GVCs to a different degree. In order to measure the degree GVC depth integration, a participation index provided by OECD (2013a) is used. In Figure 5, we compare the participation index in GVCs across selected countries, emphasizing positions such as backward and forward participation. All countries registered an increase in the participation index from 1995 to 2009 with Asian countries becoming more integrated into GVCs than developed countries. The GVC participation index was proposed by Koopman, Powers, Wang and Wei (2010). The participation index comprises forward participation and backward participation indices. The forward participation index represents the ratio of domestic value-added used as an intermediate input for production in the third countries to the country's gross export value. Backward participation represents the ratio of the value of a country's imports from other countries that comprise intermediate inputs in domestic production for export to the country's gross exports.

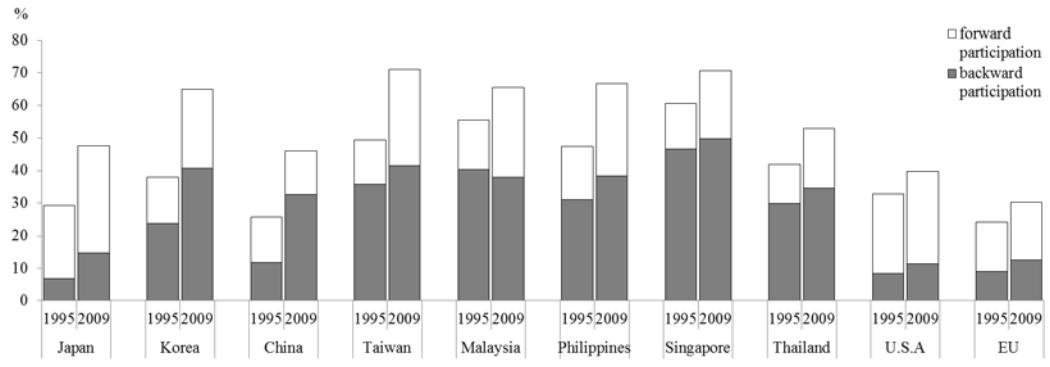

Figure 5: Change in the GVC Participation Index

Source: Calculated by the author based on OECD "Global Value Chain Indicators"

The US, EU and Japan have relatively higher forward participation, but backward participation also increased from 1995 to 2009. On the other hand, backward participation tends to be higher in other Asian countries. The important point here is that Japan's forward participation index was highest of the countries in 2009 with a ratio of about 33%. To increase their capability to create value added in Japan, firms need to focus on specific GVC sectors and processes that earn higher value added. Such processes are located on both ends of the smiling curve in Figure 4. These are upstream (pre-production) and downstream (post-production) activities. Figure 6 shows Japan's industrial participation index in 2009 in which service sectors, utilities, and light manufacturing industries have larger share of GVC forward participation. The manner in which firms participate in GVCs maintains heterogeneity among industries.

Let us now look from a different aspect at GVCs in Japan that emphasize forward participation. Growth exports can be classified into three types of goods: primary, intermediate and final. Intermediate goods include parts and components as well as processed goods. Final goods include consumption goods and capital goods.

Table 1 indicates the export share according to the type of goods from 2001 to 2014. These export ratios represent the degree of GVC participation (see the arrow in Table 1).

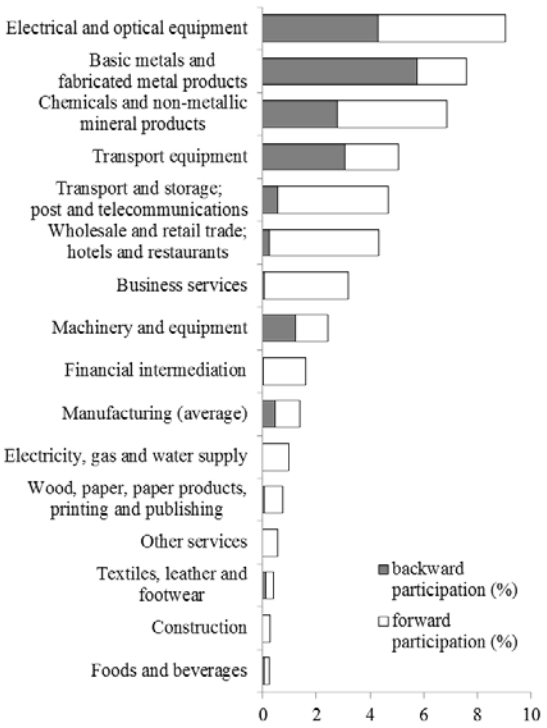

Figure 6: Japan's industrial participation index in 2009
Source: Calculated by the author based on OECD "Global Value Chain Indicators"

The ratio of intermediate goods to gross exports has increased from 2001 to 2014. The value added of parts and components as well as processed goods account for 29.6% and 29.3% of gross exports in 2014, respectively. Figure 7 shows the change in the shares of parts and processed goods from 2001 to 2014. The share of processed goods rose steadily from 2001 to 2009, after which it remained at the similar level as that for parts and components. Furthermore, we found that the annual growth rate for processed goods was 6.9%, which is more than twice of that for parts and components (3.1%). Needless to say, processed goods are closer to final goods than parts and components. It follows from what has been said that forward participation has been a superior feature of Japan's GVCs.

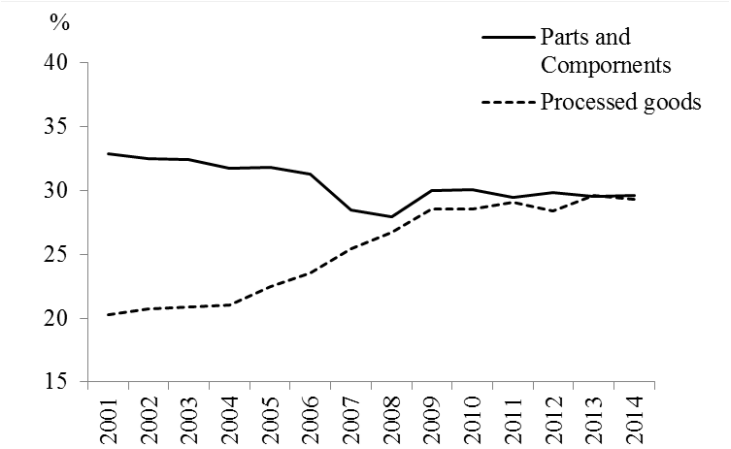

Figure 7: Export value share of parts & components and processed goods
Source: Calculated by the author based on "RIETI-TID 2014," Research Institute of Economy, Trade and Industry (RIETI).

Another feature that is important for Japan's GVC participation is the relatively high share of capital goods in gross exports in comparison to other countries. The capital goods are used to produce equipment or machinery, which require continuous maintenance and after service. An increase in the share of capital goods may be expected to bring greater stability and higher value added from GVCs. In 2014, capital goods exports accounted for 22.8% of gross exports, while the annual export growth rate was 2.9% from 2001 to 2014. Both the share and annual growth rate of capital goods were higher than the share and growth rate of consumption goods.

Table 1: Share of gross exports by type of goods (Japan)

Primary goods		Intermediate goods				Final goods			
Primary (%)		Parts (%)		Processed (%)		Consumption (%)		Capital (%)	
2001	2014	2001	2014	2001	2014	2001	2014	2001	2014
0.5	1.3	32.9	29.6	20.3	29.3	20.3	16.9	26.0	22.8

Backward Participation → Foward Participation

Source: Calculated by the author based on "RIETI-TID 2014," Research Institute of Economy, Trade and Industry.

2.2 Degree of GVC Depth: Trade in Value Added

In section 2.1, we used forward and backward participation indices to observe the degree of GVC participation. These indices indicate the degree to which domestic value added of a country is embodied as primary or intermediate inputs in other countries' gross exports and the import content of exports in a country. However, when our interest is economic growth or wealth of a country, it is appropriate to adopt the value-added-base method for GVC analysis because GDP as index of wealth is derived from the sum of individual value added. Indicator of trade in value added for a country is defined as the ratio of a country's amount of value added to the country's gross exports. OECD-WTO (2015) provides the TiVA database with data available for 1995, 2000, 2005, 2008, 2009, 2010 and 2011 by country and industry. The thick line in Figure 8 indicates the share of domestic value added to Japan's gross exports. Although it has been slowly decreasing, it is still high. We can see that Japan's exports mostly comprise domestic goods and services. This suggests that there is little margin for foreign countries to gain value added in Japan's exports. The gross export share of domestic value added is divided into two bars: the share of intermediate goods' value added and final products' value added. Comparing Table 1 in 2001 and Figure 8 in 2001, the magnitude of the relationship between the two kinds of goods does not change even though the indices are calculated using different numerators (export value and domestic value added). It would better to say that we have conducted a side-by-side comparison of the participation index with the trade in value added index. Interestingly, the participation index and trade in value added index for intermediate goods seem to be similar, accounting for 53.1% and 54.37%, respectively, of gross exports. By contrary, the participation index of final goods is 20.3% and trade in value added index is 37.8%. We could say that the trade in TiVA index is more appropriate for measuring the value added contribution of final goods to exports.

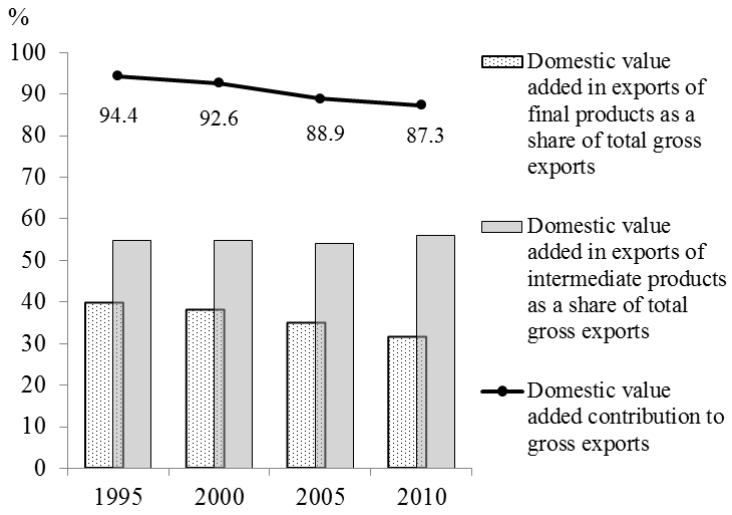

Figure 8: Contribution of domestic value added to gross exports in Japan (by type of goods)
Source: Calculated by the author based on TiVA dataset provided by OECD-WTO

In Figure 9, we break down the share of domestic value added for gross exports (same as bold line in Figure 8) into shares for the manufacturing and service industries. The service industry share maintains a steady 30% during the period. As shown in Figure 3 in Section 1, service exports account for 15% or less of gross exports. The value added base share is more than twice as high as the gross export base share. A gap of this magnitude between the two shares is consistent with the results obtained by Johnson (2014) even though this study used WIOD to examine this gap for the world as a whole.

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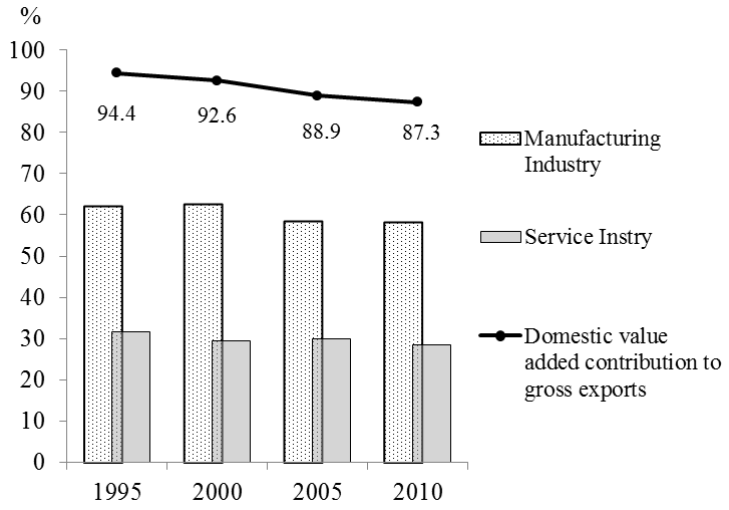

Figure 9: Contribution of domestic value added to gross exports in Japan (by industry)

Source: Calculated by the author based on OECD and WTO Tiva

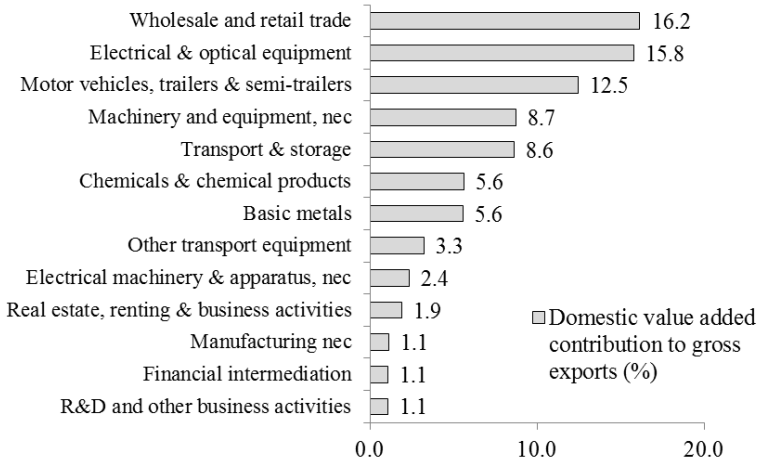

Figure 10: Industrial domestic value added contribution to gross exports

Source: Calculated by the author based on OECD and WTO Tiva

Our research objective is to observe the role of services (or the service industry) in GVCs. Figure 10 indicates the extent of each industry's value-added contribution to gross exports. It should be mentioned that the wholesale and retail industry ranks first. When considering the service industry, total service value added accounts for 28.5% of gross exports. The share of retail and personal services (sum of wholesale, retail, hotels, restaurants and transport) amounts to 25.3%, and the share of business services (finance, real estate and business services) is 2.9%. In the following section, we will discuss the effect of the personal service industry on GVC.

3. Role of Services in International Trade

Before turning to a discussion of the service industry's role in GVCs, we would like to draw attention to the reality of service productivity in Japan. Looking forward against the backdrop of Japan's aging of society, low birthrate and prolonged economic stagnation, the government must adopt adequate policies to improve productivity. As mentioned in Section 1, the non-manufacturing industries account for over 75% of GDP. The service sector is extremely important in terms of its presence and magnitude in the overall economic activity. Nevertheless, several studies have published results showing lower productivity[5] or rate of growth in the service industries. This has created the perception that service sector weakness has been a drag on productivity in Japan. It has been famously said that Japan's labor productivity is only half that of the United States. Having taken this into consideration, the Japanese government proposed in 2015 to increase the rate of labor productivity growth in the service industry from 0.8% to 2.0% by 2020. Of the few exceptions[6], we refer to Jorgenson, Nomura, Samuels (2015) which

[5] We should notice that the results are based on measurements of labor productivity rather than Total Factor Productivity (TFP) or other variables.

[6] Konishi and Nishiyama (2016), Konishi, Mun, Nishiyama and Sung (2014) and Konishi and Nihisyama (2010) provide theoretical models for the retail, transport and hair-salon industries, respectively. Based on these models, they examined the productivity or efficiency

examined TFP for both the manufacturing and non-manufacturing industries (see Figure 11). Although Japan's industrial TFPs are more than half those in the US, service sector productivities are lower than those in the US with the exception of medical care.

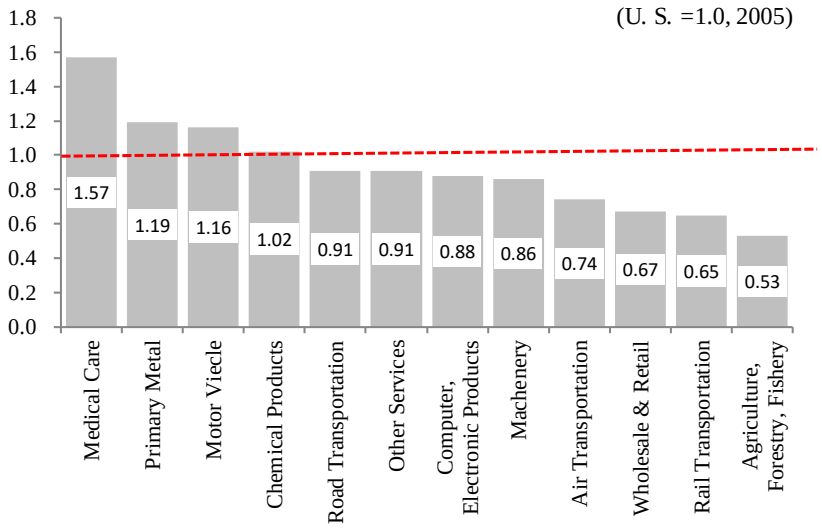

Figure 11: US-Japan TFP comparison (U.S. =1.0, year 2005)
Source: Jorgenson, Dale W., Koji Nomura, and Jon D. Samuels (2015)

3.1 Trade in Services in 2014 and 2015

Let us now return to trade in Japan's service industry. Table 2 lists the balance of payments for 2014 and 2015. The balance of services is comprised of transport, travel and other services. We observed that freight under sea and air transport, travel, construction, financial services, use of intellectual property rights and government goods & services are the only surpluses in the report compiled by the Ministry of Finance (2016). The item with the highest revenue is the use of intellectual property rights, which is listed under other services. Meanwhile, even though this is the highest revenue item,

of each sector by using micro panel data for Japan. Morikawa (2014, 2016b) not only analyzes service-sector industries but also includes comparisons with the manufacturing industry to provide a comprehensive set of empirical analyses of productivity in Japan. Also, the book covers various topics which relate to the service industry rather than productivity, e.g. labor market, international trade, regional economy, innovation and so on.

most of the revenue is paid by overseas subsidiaries of Japanese firms. The use of intellectual property rights is intimately related to R&D as shown in Figure 12. In recent years, R&D expenditures by overseas subsidiaries of Japanese firms have rapidly increased. Other services include items distributed on the ends of the smiling curve pictured in Figure 4. However, most of these balances are still negative. This suggests that there is an opportunity for national economic enrichment by acquiring higher knowledge and skilled services and promoting effective utilization of such services.

What is notable about 2015 is that the travel balance shifted from deficit to surplus for the first time in 53 years. We would like to mention some features of financial services and tourism because these two services have maintained service trade balance surpluses and both belong to the personal service sector.

Table 2: Japan's balance of payments (years: 2014 and 2015; unit: 100 million yen)

Item	2014C.Y.			2015C.Y.		
	Export (Revenue)	Import (Expenditure)	Net Balance	Export (Revenue)	Import (Expenditure)	Net Balance
Goods (Total)	740,747	845,400	-104,653	752,653	758,941	-6,288
Services (Total)	172,768	203,569	-30,801	196,834	212,462	-15,628
Transport	41,904	48,581	-6,677	42,965	49,597	-6,632
Sea transport	34,592	36,444	-1,852	34,976	38,511	-3,535
Passenger	9	40	-31	11	70	-59
Freight	32,189	24,646	7,544	32,413	25,347	7,066
Air transport	7,232	11,982	-4,750	7,705	10,932	-3,227
Passenger	2,083	9,777	-7,694	2,795	8,639	-5,844
Freight	2,309	1,637	673	2,335	1,657	678
Travel	19,975	20,416	-441	30,838	19,621	11,217
Other Services	110,889	134,572	-23,683	123,031	143,244	-20,213
Manufacturing services on physical inputs owned by others	310	5,254	-4,944	284	5,427	-5,143
Maintenance and repair services	2,113	7,548	-5,435	816	4,159	-3,343
Construction	11,987	11,085	902	12,801	9,866	2,935
Insurance and pension services	1,652	5,433	-3,781	1,913	5,743	-3,830
Financial services	7,665	5,587	2,077	12,422	7,317	5,105
Charges for the use of intellectual property	39,071	22,098	16,973	44,157	20,123	24,034
Telecommunications, computer, and information services	3,375	12,139	-8,764	3,896	13,611	-9,715
Other business services	39,506	62,451	-22,945	40,726	73,078	-32,352
Personal, cultural, and recreational services	500	900	-401	785	1,548	-763
Government goods and services	4,712	2,076	2,636	5,230	2,372	2,858

Source: Balance of Payments Statistics, Ministry of Finance

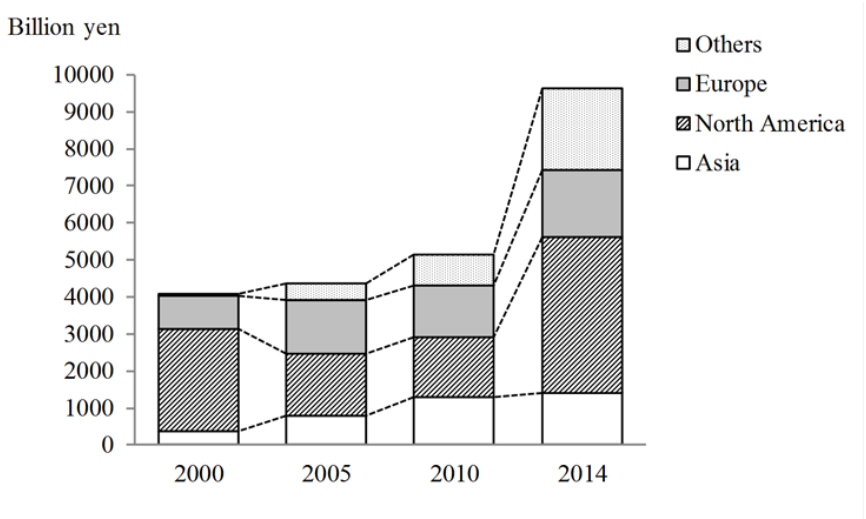

Figure 12: R&D by overseas subsidiaries of Japanese firms divided by region

Source: Calculated by the author based on "Survey of Trends in Business Activities of Foreign Affiliates" conducted by the Ministry of Economy, Trade and Industry

3.2 Characteristics of Tradable Service Industries (Financial Services and Tourism)

Generally speaking, service industries possess the following characteristics.

1) Simultaneity: Services are consumed as provided.

2) Inseparability: There is no partial receipt of the service; there is no separating the place of consumption from the place of provision.

3) Intangibility: No inventories are held; inventories are invisible.

Because of these three characteristics, service-sector companies are mostly domestic players and tend to be **"locally oriented"** in their operations. On the other hand, financial service and tourism acquire customers from a broad area. In the case of financial services, customer may use electronic-based financial services to participate in the global financial market without moving from their original location.

How about tourism? From the perspective of the demand side (travelers), customers move to where they want to go. From the supply side, the tourist industry may maintain inventories. Customers are served when they arrive at hotels, use transportation or take

part in activities. This is the typical style of services. Without moving or setting up new branches, the domestic tourism industry is able to obtain not only local customers but also travelers from other regions or countries. We may say that these two services have high tradability.

4. Inbound Tourism in Japan

The reasons why we focus on tourism are that tourism is classified under the personal service industry, a high tradability service and affects various industries (e.g. transport, retail, wholesale, restaurant, agricultural production, cleaning, information communication and so on). We will describe tourism's uniqueness as concerns these three reasons. First, as shown in Section 2.2, total service value added accounts for 28.5% of gross exports, about 90% of this is comprised of personal services. Second, Morikawa (2016a,b) found a negative correlation between recent depreciation (see Figure 13) of the yen and the number of overseas travelers. In addition, based on empirical results obtained using micro data, Morikawa (2016a,b) points out that overseas travelers ought to contribute to smoothing demand for accommodations because of their different holiday calendars as well as their eating, staying and playing preferences. Implementation of demand smoothing in the service industry is extremely rare and valuable.

4.1 Japan's Recent Inbound Tourism Boom and the government efforts

According to the Ministry of Finance, Japan registered a travel surplus of about 1.1 trillion yen in 2015, marking the first black ink in 53 years (see Table 2). This signifies a rise in Japan's competitiveness as a tourism exporter. Let's take a look at some statistics. According to the Japan National Tourism Organization (JNTO), the number of inbound tourists to Japan totaled 19.7 million in 2015, a 47.1% increase year-on-year, exceeding the number of outbound tourists from Japan for the first time in 45 years (see

Figure 13). According to the Japan Tourism Agency (2015a), spending by foreign tourists in Japan, whether for shopping, accommodation, meals, or other items, totaled a record 3.4 trillion yen, a 70% increase over 2014.

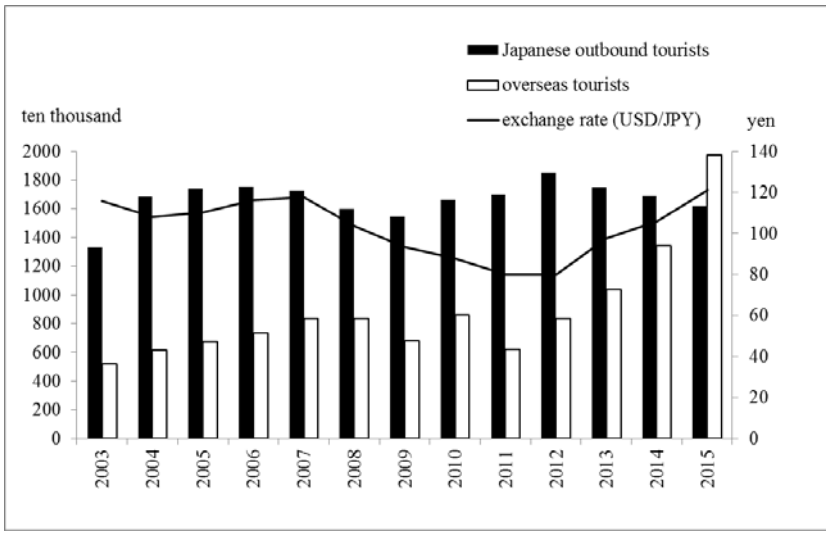

Figure 13: Number of inbound and outbound tourists and the USD/JPY exchange rate
Source: Calculated by the author based on statistics from the Japan National Tourism Organization

What factors are behind the boom in inbound tourism in recent years? The Japanese government launched its "Visit Japan" campaign in 2003 and has vigorously promoted inbound tourism ever since. This has led to a steady increase in the number of foreign visitors over the years. However, in order to explain the rapid increase in recent years, we need to focus on developments since 2013 when there was a sudden shift that depreciated the previously strong yen (see Figure 13), boosting expectations for a rise in the number of inbound tourists. Since then, the government has taken bold steps to relax relevant regulations and made a substantial effort, along with the business community, to promote inbound tourism and favorable external conditions. Other measures include the relaxation of visa regulations for visitors from China and Southeast Asia, which were instituted in 2013, as well as an increase in international and domestic flight routes

served by low-cost carriers. In 2014, the government expanded the scope of duty-free items to all general goods including consumables, prompting a rapid increase in the number of duty-free shops.

In addition, the UNESCO designation of Mount Fuji as a World Cultural Heritage site and Japan's traditional dietary culture "washoku" as an Intangible Cultural Heritage, along with the selection of Tokyo to host the 2020 Olympic Games provide opportunities to promote Japan as a tourist destination. In addition, against the backdrop of remarkable economic growth in Asia, more and more households in the region are moving into middle and more affluent classes. The accompanying rise in income is also stimulating demand for tourism.

There was also good news about tourism in 2015. Japan was ranked 9th on the Travel and Tourism Competitiveness Index (TTCI) for the first time which is produced by the World Economic Forum (WEF) among the 141 countries. Japan has been highly acclaimed items about Treatment of customers, Extent of staff training, Quality of railroad infrastructure and so on.

4.2 Asian Economy's Impact on Japan's Inbound Tourism

As shown in the previous subsection, Japan has had a favorable tourism market in recent years, which has grown rapidly. According to the JNTO, China was the largest single-country source of foreign tourists to Japan in 2015, accounting for 25.3% of arrivals. By region, East Asia accounted for 72%, rising to 82% when Southeast Asia and India are included, indicating Japan's heavy dependence on Asian economies for its tourism. While visitors from the United States and Europe are mostly independent travelers, 40% of those from China and Taiwan come on group tours mainly to the Kanto and Kansai regions, primarily for shopping. In 2015, Chinese tourists' per capita spending in Japan was US$2,735, 1.6 times greater than the average foreign tourist. Overall spending by

Chinese tourists was US$13.5 billion, up 153% from 2014, accounting for 40% of total spending in 2015. Some people may think that other regions have little to gain from the growing number of inbound tourists. However, the ripple effect of Chinese tourists' spending sprees have spread across regions and industries. Also, the issuance of multi-entry visas to Chinese tourists has led to a rise in the number of repeat visitors. It is expected that more and more will return to Japan as independent travelers in the coming years. This would result in a greater variety of the reasons for traveling Japan, places to visit, and activities to engage in while in country. Chinese tourists' travel behavior undoubtedly will have a significant impact on the inbound tourism environment as well as on economic indices.

4.3 Mapping GVCs and observing the economic ripple of Japan's Inbound Tourism

Referring to Gereffi and Fernandez-Stark (2011), Christian et al. (2011) and WTO (2013), we composed a map of Japan's tourism sector. Figure 14 indicates that tourism is related either directly or indirectly to a variety of industries.

<Insert Figure 14 here>

Since tourism encompasses a broad range of industries including transportation, accommodation as well as food and beverage, promoting Japan as a travel destination to capture demand from overseas contributes significantly to the nation's economic growth. According to the Japan Tourism Agency (2015a), the relevant consumption expenditure components are shopping, accommodation, eating and drinking, and transportation, which account for 41.8%, 25.8% 18.5 % and 10.6% of the total, respectively. We should take advantage of the ongoing inbound tourism boom to attract not only sightseeing tourists but also potential business partners and students from overseas, turning this

expansion into a springboard for the growth of industries important for Japan's future and an opportunity to acquire outstanding talent toward that end.

As a next step, we attempt to examine the economic ripple effect of recent inbound tourism boom using Input-Output table (hereinafter I-O table) provided by METI and Ministry of Internal Affairs and Communications. We mainly use "the 2013 Updated I-O table" of 2011 base year conducted by METI. In order to estimate the ripple effects of inbound tourism for detailed sectors, we use the I-O table which has a matrix in 516 rows times 319 columns that is called "Basic Sector." Also, it is available the share of each item (shopping, accommodation, restaurant and transportation) of total amount of expenditures through "Consumption Trend Survey for Foreigners Visiting Japan" provided by JTA.

Table 3: The economic ripple effects on inbound tourism boom

		Primary economic ripple effect				Secondary economic ripple effect				Primary+Secondary economic ripple effect			
Amount of consumption for Foreign tourists (billion ¥)		Production inducing effect (billion ¥)	Value-Added inducing effect		Job creation effect (10000 Employees)	Production inducing effect (billion ¥)	Value-Added inducing effect		Job creation effect (10000 Employees)	Production inducing effect (billion ¥)	Value-Added inducing effect		Job creation effect (10000 Employees)
			(billion ¥)	GDP share 2015			(billion ¥)	GDP share 2015			(billion ¥)	GDP share 2015	
2015	3,477	6,199	3,088	0.58%	44.6	1,354	683	0.13%	8.4	7,553	3,772	0.71%	53
2020	8,000	13,817	6,900	1.30%	99.4	2,908	1,466	0.28%	18	16,725	8,368	1.58%	117.5
2030	15,000	25,907	12,938	2.44%	186.4	5,452	2,752	0.52%	33.8	31,358	15,689	2.96%	220.2

Table 3 shows the results of economic ripple effects for inbound tourists in 2015 (the most recent year for which confirmed figures are available), 2020 and 2030. In 2015, total amount of consumption by foreign tourists in Japan was 3,477 billion yen. To predict the ripple effects in 2020 and 2030, we adopted government target values that are 8000 billion yen and 15000 billion yen as consumption of foreign tourists in 2020 and 2030,

respectively. The economic impact of inbound tourism in 2015 is 7,553 billion yen on gross output, 3,772 million yen on value added (GDP) and 0.53 million jobs. These figures account for 0.84% of gross output, 0.71% of GDP and 0.8% of the entire labor market in Japan. The figure of consumption in 2015 is strongly influenced by the bombings of Chinese tourists, and the ratio of expenditure on shopping is higher in total expenditure. In the near future, it is expected that more and more will return to Japan as independent travelers in the coming years. This would result in a greater variety of the reasons for traveling Japan, places to visit, and activities rather than shopping to engage in while in country. Then, in 2020 and 2030, we adopt that the expenditure ratio of Australians in 2015 who spend a lot on leisure, service experience, accommodation etc. The economic impact of inbound tourism in 2020 and 2030 are 16,725 billion yen and 31,358 billion yen on gross output, 8,368 billion yen and 15,689 billion yen on value added (GDP) and creating 1.18 million jobs and 2.20 million jobs. These figures account for 1.67% and 3.14% of gross output in 2015, 1.58% and 2.96% of GDP in 2015 and 1.8% and 3% of the entire labor market in 2015.

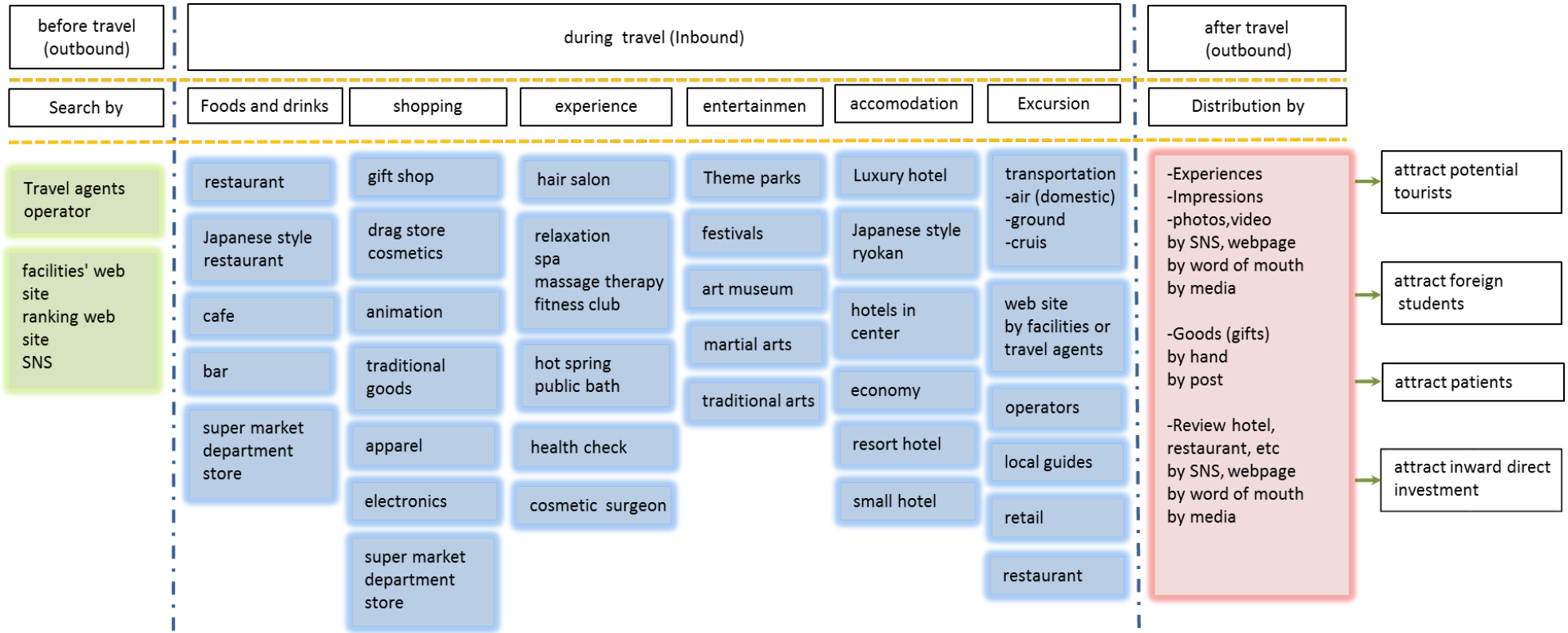

Figure 14: Tourism GVCs in Japan

5. Furthering the Tourism Boom and Recent Government Challenges

In early 2016, the government announced its new aim of increasing the number of inbound tourists to 40 million persons per year and the accompanying amount of consumption to 8 trillion yen by 2020, doubling the initial goal of 20 million persons and 4 trillion yen. This move suggests that the ongoing inbound tourism boom has been far greater than expected in terms of the speed at which its ripple effects have spread across regions and industries as well as of the sheer magnitude of the overall impact on the Japanese economy. As pointed out in 4.1 and 4.2, so far this boom has been sustained in part by favorable external conditions. Going forward, though, both the government and businesses need to take more vigorous steps to make the tourism sector resilient to uncontrollable external fluctuations.

5.1 Using ICT Technology for Tourism and Improvement of Network Environment

A survey conducted by the JNTO has found that many foreign tourists to Japan have used personal blogs, SNS communications, and restaurant and hotel review sites on the Internet as a source of information before or while traveling, and/or used them as a tool for communicating their experiences in Japan while or after traveling. Thus, in order for Japan to be selected as a travel destination, relevant businesses and local governments need to proactively communicate information in multiple languages. It is also important to make available free WiFi service in more areas so as to enable independent travelers to collect and disseminate information while traveling.

One notable trend in the behavior of foreign tourists in recent years has been an increase in the number of tourists visiting local life and leisure facilities in the hope of fulfilling their wish to experience what it is like to live in Japan. What they want to see in Japan is not just another cosmopolitan city. Many of the things foreign visitors find marvelous and entertaining are a part of or associated with the culture and customs unique to

Japan, natural landscapes, and interaction with Japanese people. There is a need for multilingual signs and information warning about potentially life-threatening hazards or calling attention to matters that may significantly undermine tourists' satisfaction with a specific experience. For instance, it would be helpful if foreign visitors, particularly those who need to avoid certain foods because of an allergy or for religious reasons, were able to hold their smartphone over the menu to know in their native language what ingredients are in each dish, or if they were able to hold their smartphone up to read in their native language the instructions for use of public baths. Such services may become available when automatic identification and data capture (AIDC) systems, a technology that utilizes information and communications technologies (ICT) and artificial intelligence (AI), come into greater use. For example, the development of wearable technology or smartphone apps capable of translating scanned characters is one possible way to help reduce the number of staff members needed to attend to foreign visitors and prevent accidents due to insufficient information. It will also allow information to be collected about travelers' needs. Tourism is a service industry and must attend to its customers' needs to be able to flourish.

5.2 Recent Government Challenges

Since tourism encompasses a broad range of industries including transportation, accommodation and hospitality, capturing external demand can significantly boost the Japanese economy. While creating a tourist-friendly environment is important, it is also crucial that Japan better understand what aspects of the country are attractive to foreign tourists. The ongoing inbound tourism boom is an opportunity to attract potential parties who can help create new growth industries. As recent government efforts, in the face of rising demand, the government decided to deregulate the rules for the tour guide and hotel industry, saying licensed guides and accommodation facilities could be

massive shortage in 2016. Since 2016, allow to work as a chargeable guide without qualification. Also, the government decided to deregulate so that vacant rooms in private homes can be rented to travelers. However, if the target of 80 million foreign tourists visit Japan in 2020, accommodation should not be enough in this pace reform. Again, in order for Japan to be selected as a travel destination, relevant businesses and local governments need to proactively communicate information in multiple languages. It is also important to make available free WiFi service in more areas so as to enable independent travelers to collect and disseminate information while traveling.

6. Discussions

A hollowing out of industries is unlikely to happen in the service sector. Hints for expansion lie in the service industry characteristics discussed in Section 3.2. Such services are difficult to share, bundle together, or break down the process of their provision. Also, because the degree of customer satisfaction depends on subjective individual customer preferences as well as on the varying levels of service quality and individual employee technical skills, service-sector companies need to invest in market research to learn more about customer preferences in their service areas as well as in the employee education and training. Because of such factors, it is difficult for service-sector companies to divide up and outsource operations.

OECD (2013b) said: "Competitiveness in GVCs requires strengthening factors of production that are "sticky" and unlikely to cross national borders. This implies investment in people, education, skills and high-quality infrastructure and encouragement of strong industry-university linkages and other tacit knowledge. The quality of institutions and government are also important – long term – factors in firms' decisions to invest and engage in economic activities in a country."

It sounds as though we should develop high-quality, attractive and strong service sectors

in country and link manufacturing to such service industries through the use of advanced technologies, such as ICT and AI. Indeed, as indicated by the fact that we often hear the term servitization of the manufacturing industry, we saw in this paper that Japanese manufacturers are increasingly dependent on non-manufacturing functions, such as sales, leasing, and after-sales services as their main source of value added in GVCs. How they define this phenomenon--i.e., whether they see it as an increase in the cost of non-core operations or an opportunity that should be taken advantage of not only to decelerate the hollowing out of domestic industries but also to develop a new source of added value, differentiation, and competitiveness--will have a significant impact on their future corporate value.

High on the agenda of Prime Minister Shinzo Abe's government's growth strategy, improvement of service sector productivity has garnered increasing attention. As discussed at the outset of this article, the reason for the increased attention is that Japan's service sector continues to compare poorly with that of other developed economies. The reason for an increasing number of studies focusing on the service sector is that many researchers question that finding. They are asking: "Is the productivity of services in Japan truly low? Doesn't it deserve a higher rating given the variety and quality of services provided?"

Establishment of the Nihon Service Award Program, which offers annual awards presented by the Prime Minister and other Cabinet ministers to recognize excellent service providers, was necessary to create a common measure for assessing services so as to ensure transparency of the selection process. We hope that this will provide momentum for the development of statistical data on service-sector industries and that more researchers will join us in carrying out further research in this field. We expect the continuing discussions about service industries to shed light on how to address the issue of sustainable growth against the backdrop of a super-aging society and low birthrate.

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