Towards Innovation and Productivity Improvement in Service Industries

April 2007

Ministry of Economy, Trade and Industry

Commerce and Information Bureau

Service Unit

Preface

Service industries are extremely important industries that account for almost 70% of the Japanese economy, whether measured in terms of GDP or employment. The importance of service industries is expected to increase further as its market expands due to increasing demand for services caused by changes in the social structure, such as the dwindling birthrate and the aging population; increasing outsourcing due to the greater use of modules in businesses, especially within the manufacturing industry; and the emergence of new markets created by the opening of public services to allow the private sector entry and deregulation.

While the role of service industries is increasing, its rate of productivity growth is relatively low when compared to domestic manufacturing industry or service industries in other countries. Thus, achieving innovation and productivity improvement in service industries is an important agenda for the development of the Japanese economy.

There has been discussion within the Ministry of Economy, Trade and Industry as to what must be done to promote innovation and productivity improvement in the service industry. Specific consideration was given to following four points:

＜On the spot and actual examples＞

○ Examine the situation based on “first-line principle” by collecting opinions and analyzing number of actual examples on the spot of service industries. Specifically, opinions were gathered from over one hundred practitioners and academicians and the best practices of both domestic and international companies were collected and analyzed to provide an expert basis for discussion.

＜Cross-industrial framework＞

○ Previously a discussion of this nature focused on a specific industry. However, for the first time in a discussion of this nature, a generic framework was created taking into account characteristics that were common to various service industries.

＜How to jump start the industry＞

○ Attention was devoted to how to generate positive change in an industry that is not predisposed to dynamic change or the pursuit of innovation. Regarding this point, a great deal still depends on the wide range of policies to be implemented and the activities of Service Productivity & Innovation for Growth.

＜New perspective＞

○ In order to achieve the objective of revitalizing the service industry, new approaches including the scientific and engineering approaches and increased application of manufacturing know-how have been considered.

Starting from this innovative foundation, the discussion recorded in this report examined specific approaches to improve the market infrastructure of the service industry including, but not restricted to, increased adoption of the scientific and engineering approaches, the creation of a system to link service providers and consumers, and increasing emphasis on human resource development.

A crucial consideration is how to appropriately apportion roles between the public sector and the private sector in implementing these cross-industrial approaches. Service industries consist of diverse sectors and policies for specific sub-sectors and cross-industrial policies should be implemented through coordination and cooperation among government institutions and between the public and private sectors.

Service Productivity & Innovation for Growth and the government are expected to get all concerned parties involved in the creation of this new dynamic movement, which will promote increased innovation and productivity improvement in Service industries.

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【Members of the study group】

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(All titles are as of the start of the study group)

The study group conducted discussion based on opinions of (about 20) experts and (about 100) corporate practitioners from the first-line of service industries and by analyzing various cases in the service industry.

 mark refers to comments received from study group members, experts and corporate practitioners. Comments from study group members are quoted with their names while comments from corporate practitioners include reference to the name of their respective industry.

1. Importance and Low Productivity of Service Industries

＜Increasing Importance of Service Industries*＞

The tertiary sector is an important sector accounting for nearly 70% of the Japanese economy (in terms of GDP and employment). Of this tertiary sector, the proportion of service industries (in a narrow sense) in Japan's GDP increased from 41% in 1990 to 44% in 2000.

The importance of service industries and their markets are expected to further increase on the back of such factors as (1) an increase in demands for services corresponding to change in the demography structure such as the dwindling birthrate and the aging population; (2) an increase in outsourcing due to the greater use of modules in businesses especially in the manufacturing industry; and (3) an emergence of new markets due to the opening of public services to the private sector and deregulation.

＜Increasing importance of service industries* in the world＞

Japan is not the only country witnessing the increasing importance of service industries*. The service industries'* share in GDP has been growing in other countries as well.

(※) Change in service industries'* share in real GDP (from 1990 to 2002)
Japan: 61.7→67.9%; U.S.: 70.2→70.9%; EU 15 countries: 59.0→62.8%; China: 31.3→41.7%

As the weight of service industries* increases, not only developed countries but also Asian countries such as China started adopting policies that place importance on their service industries*.

（※）Excerpt from the Innovate America (Palmisano Report, 2004)
"Competitive companies are bundling production and services … Manufacturing companies are transforming themselves from product suppliers into solutions providers … winning will depend on customization, flexibility, speed and innovation, not competing in a low-wage, mass-production system."

（※）China's 11th five-year plan (September 2005) aims to increase service industries' share in the country's GDP by 3% (40.3% → 43.3%) and their share in the number of employees by 4% (31.3% → 35.3%).

（※）Korea listed "the development of evaluation indicators to assess the effect of measures to enhance competitiveness of service industries" in its "Basic Policy for Economic Operation in 2006."

＜Smaller productivity growth in service industries* compared to the manufacturing industry＞

While productivity growth in service industries has been smaller than that in the manufacturing industry in most advanced countries, their difference is especially noticeable in Japan and poses a challenge for the country's economic growth.

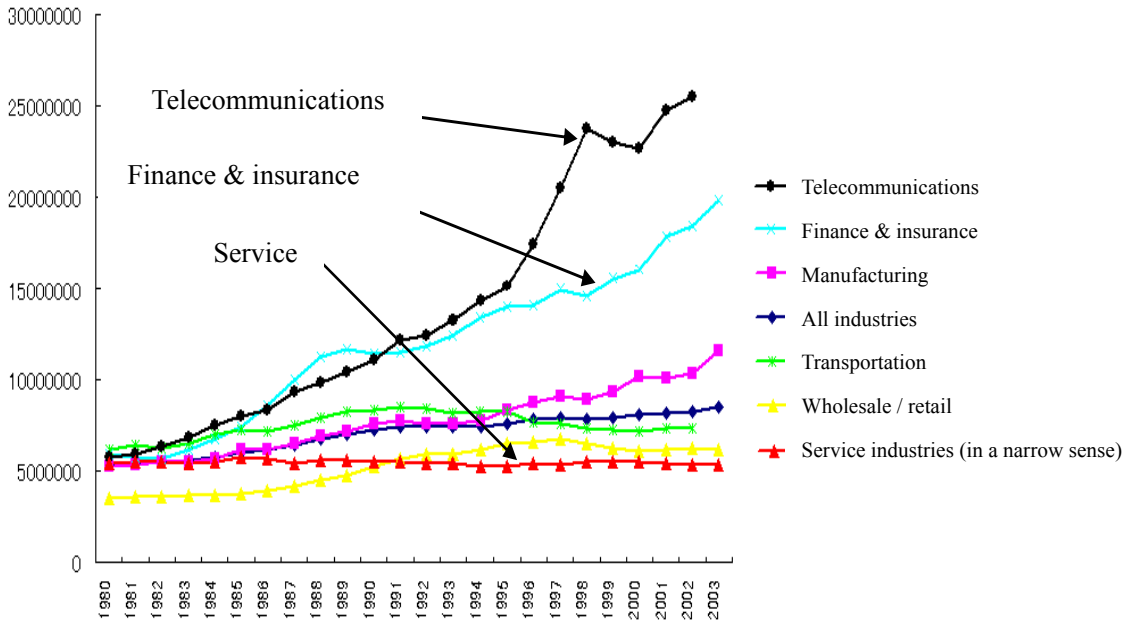
Labor productivity growth rate (1995 to 2003)

	US	UK	Germany	Japan
Manufacturing industry	3.3%	2.0%	1.7%	4.1%
Service industries	2.3%	1.3%	0.9%	0.8%

(Source) OECD Compendium of Productivity Indicator 2005

＜Strong Need of Higher Productivity in Service Industries (in a narrow sense)＞

Compared to industries such as telecommunications and finance & insurance where productivity has improved thanks to global competition, new entries and competition through deregulation, and technological innovation, productivity growth in service industries (services provided to businesses and individuals, logistics, etc.) has been smaller. Accordingly, service industries (in a narrow sense) have higher needs for productivity growth among the tertiary sector.



Source: System of National Accounts, JIP Data, RIETI

Change in productivity by industry (yen/person) 1980 to 2003

＜Society that has traditionally placed importance on manufacturing＞

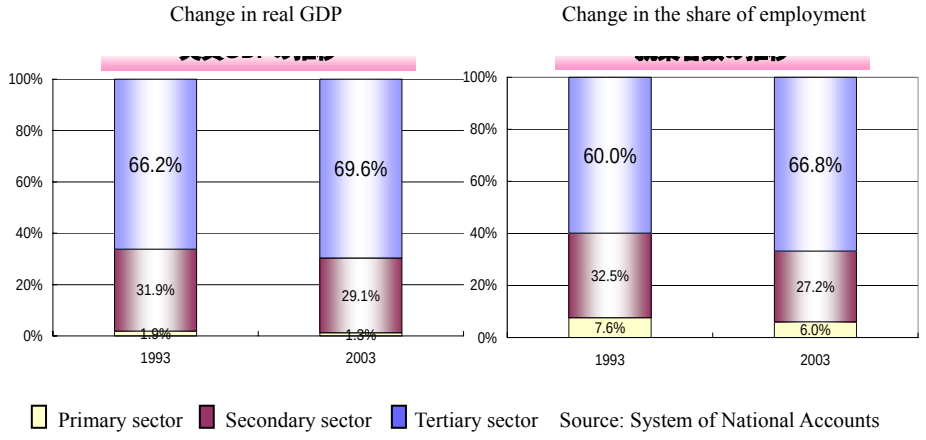
While it is generally agreed in Japan that “manufacturing” is important, some point out that the country may be taking service industries less seriously.

[Disregard for service industries compared to manufacturing]

・While Japanese business communities and citizens agree that “manufacturing is important,” there is no such consensus regarding services. (Murakami)

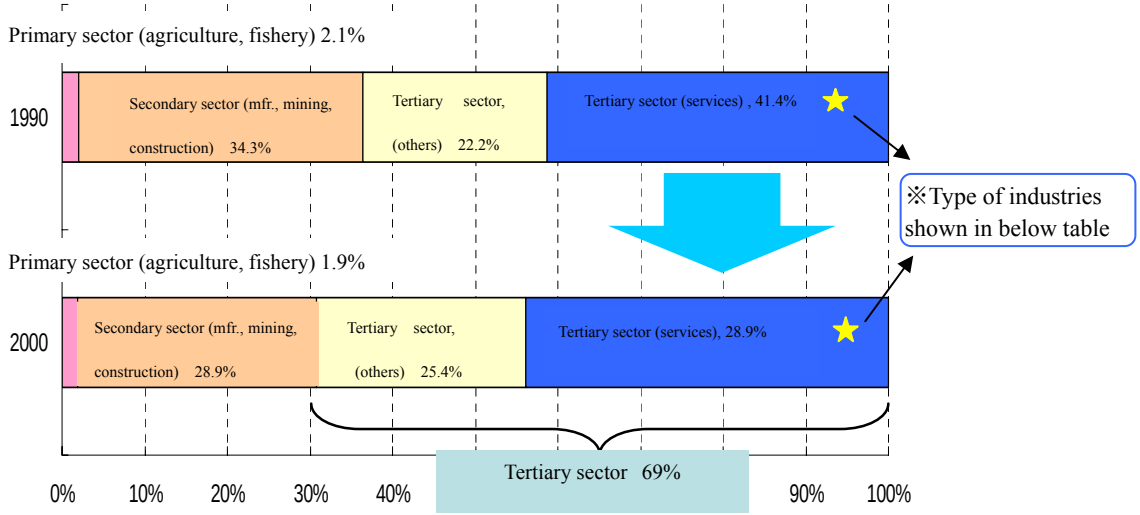
[Reference] What are service industries?

Service industries* sometimes refer to the so-called tertiary sector of industry. In this case, they include an extremely wide range of industries that do not fall under the primary and secondary sectors of industry. On the other hand, service industries may refer to services provided to individuals, businesses and so forth in a narrow sense. The government often develops policies for service industries in this narrow sense. In this material, “＊” is attached if the words “service industries” is used to refer to the entire tertiary sector.



Change in the share of GDP and employment by industry

(※) The share of service industries (healthcare, nursing care, education, distribution, logistics, services provided to individuals and businesses, etc.) in the economy increased from 41% in 1990 to 44% by 2000.



Ratio of service industries

Tertiary sector industries and growth rates
(Calculated by using the value-added amount in 1990 and 2000)

Unit: In trillion yen; gross value added amount based on amounts in 1995			1990	2000	Share in all industries (1990)	Share in all industries (2000)	2000/1990 (%)
Agriculture, Foresty and fishery			9.7	9.4	2.1%	1.9%	97%
Manufacturting, mining and construction			161.0	146.2	34.3%	28.9%	91%
Tertiary sector	Others	Rean estate	45.8	55.5	9.8%	11.0%	121%
		Electricity, gas, water, waste and manegement	15.8	16.1	3.4%	3.2%	102%
		Finance and insurance	20.8	26.0	4.4%	5.1%	125%
		Transportation (excluding freight, etc.)	12.9	12.3	2.7%	2.4%	95%
		Telecommunications and broadcastings	7.3	17.0	1.6%	3.4%	234%
		Others	1.6	1.2	0.3%	0.2%	75%
	Total of Others		104.2	128.1	22.2%	25.4%	123%
	Services	Healthcare, insurance, social security, aged care	17.4	18.2	3.7%	3.6%	105%
		Education and research	24.0	24.1	5.1%	4.8%	100%
		Service to individuals	32.9	32.4	7.0%	6.4%	98%
		Service to businesses	33.8	46.6	7.2%	9.2%	138%
		Wholesale and retail	56.4	70.3	12.0%	13.9%	125%
		Logistics (freight, warehousing, packaging)	11.2	10.5	2.4%	2.1%	94%
		Public services	15.4	16.8	3.3%	3.3%	109%
		Other public services	2.8	2.7	0.6%	0.5%	96%
	Total of Services		193.9	221.5	41.4%	43.8%	114%
			298.2	349.7	63.6%	69.2%	117%
Total all industries			468.9	505.3	100.0%	100.0%	108%

Source: “Long-term Industry Correlation Table” by the Research Institute of Economy, Trade and Industry (RIETI)

Healthcare includes medical treatment provided by national or public institutions, charitable organizations and medical corporations. Social security refers to social security business and social welfare. Logistics refers to railway transportation, road transportation,

freight businesses, warehousing and packaging.

Services to individuals refer to entertainment, food and beverage, accommodation, and other services provided to individuals.

Services to businesses refer to advertisement, research and information, leasing, automobile and machinery repair, and other services provided to businesses.

(※) Services to businesses grew significantly including a 167% growth in added value in the temporary staff dispatch service. On the other hand, in services to individuals, while cinemas and theatres decreased to 58% and 82% respectively, beauty business and ceremonial business (marriage, funeral and ancestral worship) both increased to 142%, showing variations among business types. (Comparison of figures in 1990 and 2000)

Growth in Services in terms of Value Added

Comparison of value added by industry (1990 / 2000)

Examples of industries with growing value added

Information service	417%
Rental car service	323%
Rental service (excluding cars)	233%
Temporay staff service	167%
Wholesale	143%
Beauty business	142%
Ceremonial business (※)	142%
Finance	111%

Examples of industries with decreasing value added

Cinemas	58%
Office rental	67%
Hired cars / taxis	70%
Real estate brokering / management	75%
Railway transportation	75%
Theatres / performance facilities	82%
Buses	86%
Warehousing	91%

(※) marriage, funeral and ancestral worship

Based on "Long-term I/O Table,"

Research Institute of Economy, Trade and Industry (RIETI)

Services to Businesses (highlighted with light blue)

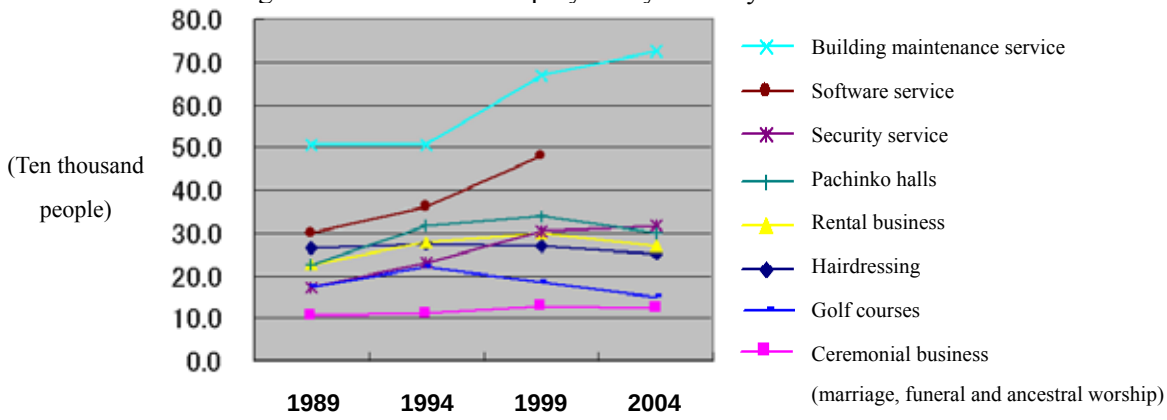
・Services to businesses grew significantly including a 167% in value added in the temporary staff service. (Comparison of figures in 1990 and 2000)

Services to Individuals

・Services to individuals have a mixed result with cinemas and theatres recording 58% and 82% respectively, while beauty business and ceremonials business (marriage, funeral and ancestral worship) both are 142%. In services to individuals, it seems new industries are constantly replacing old industries. (Comparison of figures in 1990 and 2000)

Growth in Services in terms of Employment

Change in the number of employees by industry



Based on the Basic Survey of Service Industries (Ministry of Internal Affairs and Communications) selecting industries for which data could be consistently obtained from 1989 onwards.

Services to Businesses

・Significant growth in the number of employees in services to businesses like the building service, software and security.

Services to Individuals

・In services to individuals, the number of employees declined in hairdressing, pachinko halls(one of Japanese amusement industries) and golf courses. However, it slightly increased in ceremonial business, showing variations among services to individuals.

2. Background of Low Productivity in Service Industries

＜Common Characteristics in Service Industries＞

There is a wide variety among service industries. However, there are also some common characteristics such as being “intangible” (unseeable) and “perishable” (consumed at the time of supply).

Furthermore, service industries include many new industries that target emerging needs. They also have a higher ratio of small- and medium-sized enterprises (SMEs).

Service industries’ low productivity is considered to come from these characteristics and other market factors as non- exposure to global competition, markets that are limited to regions, and difficulties of consumers to access information on quality and so forth.

【Reference】 Characteristics of Service Industries

Intangible (Unseeable)

Due to the asymmetrical nature of information,
(1) consumers cannot easily get information, which is preventing sufficient competition, and
(2) the market cannot develop without the viewpoints and confidence of consumers.

<Intangible (Unseeable)>

・There are many complaints against childcare industry in terms of the quality of its services. These include: a) clients often get different babysitters rather than consistently getting the same babysitter who got on well with the baby/child; b) clients do not know which babysitter will be coming until the previous day; c) there have been incidents where babies cared for have been injured; and d) babysitters are being late for appointment. (Person in the childcare industry)

Perishable (consumed at the time of supply)

Due to restricted competition,
(1) Service industries are not exposed to global competition compared to the manufacturing industry because services do not have the same nature as tradable commodities.
(*) However, development in IT technologies in recent years has exposed many sectors in service industries to global competition.
(2) Competition is insufficient because the market is limited to a certain locality.
(3) Research and development activities are not robust compared to the manufacturing industry.
(4) Know-how is easily copied because it is difficult to protect intellectual properties. As a result, premiums for new service know-how disappear relatively quickly.

< Perishable (consumed at the time of supply)>

・In service industries, it is possible to start a business with a little creativity. While a manufacturer cannot survive without R&D, it is not so in service industries. Accordingly, there is not much incentive to pursue research activities systematically in service industries. (Person in the healthcare industry)

Newness / Large number of SMEs

Because markets are young and there are many SMEs,

(1) Service industries have fallen behind in systematically nurturing human resources for the industries (through, for instance, secondary and tertiary education) and in developing curriculums for that purpose. As a result, there is a lack of development in human resources who can lead the industries in the future.
(2) The use of IT is not robust enough.
(3) The industries need to win trust from consumers.
(4) Other (e.g. Society that places a higher value in traditional "manufacturing" as compared to service industries)

< Newness / Large number of SMEs>
In service industries, a company may make profit easily without carefully building up its business. This has caused problems such as the lack of morals and ethics in some quarters, which may be damaging the image of the whole industries. If there is a negative image about service industries, talented people will not work for them, which will result in a vicious circle. (Expert)

3. Importance of Creating a Cross-sectional Framework to Encourage Private Sector Initiative – Developing a Business Environment that Promotes Competition

<While service industries contain diverse businesses, cross-sectional initiatives that pay attention to common characteristics of the industries are important>

Service industries are diverse and include a wide range of industries. However, there are also some common characteristics. It is important to develop cross-sectional initiatives based on such characteristics and to create a framework in which service industries can flourish.

[Create a framework for service industries to freely move!]

・Service industries are very diverse and include a wide range of industries. It is important to create a framework that enables diverse service industries, including education and aged care, to freely move and develop (Ushio).

<Utilize the energy of the private sector – developing a business environment that promotes competition - >

Innovation and productivity growth require the private sector to freely unleash its energy. For this purpose, it is necessary to promote the development of a business environment to facilitate competition with the appropriate allocation of roles between the public and private sectors based on the characteristics of service industries.

[Grassroots activities belong to the private sector; the government should create a framework]

・Grass-roots productivity growth is primarily based on the private sector's efforts. The government's role is to get involved in systems and structures. (Itoh)

・If too much leadership is expected on the private sector, they might say, "We don't know what to do." It might be easier for companies if the government clarifies, for instance, "what kind of initiatives are necessary" and that "activities of the Council will be reflected in the government's policies." (Sakuragi)

<Regulatory reform and markets that promote competition>

Productivity growth in service industries is small. This is considered to be because many businesses are not exposed to global competition and there are many new companies. Another reason may be that the market of service industries is not well developed because, unlike products, services cannot be seen. Together with further efforts for regulatory reforms, it is necessary to develop markets that promote competition.

(※) Excerpt from a proposal by a private-sector member of the Council of Economic and Fiscal Policy
Although regulatory reforms have been carried out through four 3-year plans, there still remain very inflexible regulations. They exist in areas that are closely related to our lives and that have great market potential such as health, medicine, childcare and education.

[Not only deregulation, but also development of proper business environment is necessary]
・Deregulation itself does not encourage new entries into markets. Together with reforms that are promoted by the Council for Regulatory Reform, it is necessary to improve business environment. (Itoh)

<Fostering Innovation>
In addition to steady efforts to improve productivity, it is necessary to encourage innovation that will bear fruit a few decades later and will create new businesses in service industries.

[Initiatives that might bear fruit decades later]
・While it is necessary to steadily improve productivity, having advanced initiatives that might flourish 10-20 years later is also critical. (Itoh)

<What can change the structure of service industries?>
It is important to see how fundamental changes can be brought about. For instance, there could be three forces: "structural reforms," "change of social structures," and "learning from foreign countries."
For dynamic change or innovation to occur, it is essential to have some triggers such as global competition. However, these conditions may not be present in the case of service industries. Nonetheless, it is necessary to facilitate such dynamic change through cooperation between industry and academia and the development of business environment that promotes competition.

[Consider how changes can be realized]
・It is important to consider how dynamic innovation can be brought about. Unless some forces that can realize breakthrough is deployed, all the efforts could end up being a pie in the sky. (Itoh)

[Reference] For Dynamic Innovation

Structural Reform

For instance, in the IT industry, availability of ADSL kicked off the spread of broadband. Another example is securitization of real estate. It improved the liquidity of the market (Itoh)

→ Cooperation between industry and academia can become the driving force of innovation. It is important to develop people who can see the big picture and work as a coordinator between companies and universities. (Hashimoto)

Change of social structure

Innovation may occur as a response to change of social structure caused by technological innovation or aging of the population. (Itoh)

→ Once operations become "visible," ways to improvement become clear. For instance, there were discussions about standardization and improving efficiency. These are absolutely necessary when the social structure changes. Those working in service industries probably need to actively engage themselves in these activities. (Kobayashi)

Learning from foreign countries

Growth may occur by learning from examples in foreign countries. It can be said that the manufacturing industry in Japan developed by learning from foreign countries. Same process may be necessary in service industries. (Itoh)

→ In some industries, global competition is emerging. Industries that are not exposed to global competition should have the awareness that they will face global competition sooner or later. (Expert)

4. Direction of Measures for Innovation and Productivity Growth

<For productivity improvement>

To improve productivity in service industries, it is important to (1) pursue efficiency and (2) improve service quality such as improving customer satisfaction and hospitality.

In order to pursue efficiency, initiatives such as “intensifying scientific and engineering approaches” and “improving the service supply process by applying know-how of the manufacturing industry” will be most effective.

(※) In many cases, scientific/engineering approaches and the know-how in the manufacturing industry are used not only to pursue efficiency but also to improve customer satisfaction and so forth.

[Adoption of manufacturing industry approach]

・The application of scientific and engineering approaches to service industries is important over a long-term. Different industries use different approaches and it is important to apply the manufacturing industry’s know-how to service industries. I think the manufacturing industry will adopt more good practices of service industries and vice versa. (Arai)

In order to increase value added and to create new businesses through improving customer satisfaction and service quality, it is important to “create a structure to provide information and improve confidence” and to “construct cross-sectional benchmarks for quality assessment.” These will improve communication and trust between service providers and consumers.

In addition, efforts in such areas as cultivating human resources are considered effective for both efficiency and quality improvement.

[Denominator (efficiency/cost) and numerator (demand creation)]

・When comparing those that are like a denominator such as costs and rationalization and those that are like a numerator such as innovation and demand creation, we tend to focus on improving denominator to achieve productivity growth. To foster innovation in service industries, however, it is important to increase studies on numerator factors. The Council should explore initiatives and examine stimulative measures. (Saito)

[Reference] What is productivity?

Definition of Productivity

Productivity denotes the efficiency of the resources used to produce value in the market.
Accordingly, for productivity improvement, it is necessary to improve efficiency (focusing on the denominator of productivity) and to improve value added and create new businesses (focusing on the numerator of productivity) at the same time.

(※) OECD defines productivity as "a ratio of a volume measure of output to a volume measure of input."
(※) Generally, productivity often refers to productivity measured with labor as an input (productivity per one labor per hour) = "labor productivity."

[Definition of productivity - denominator and numerator -]

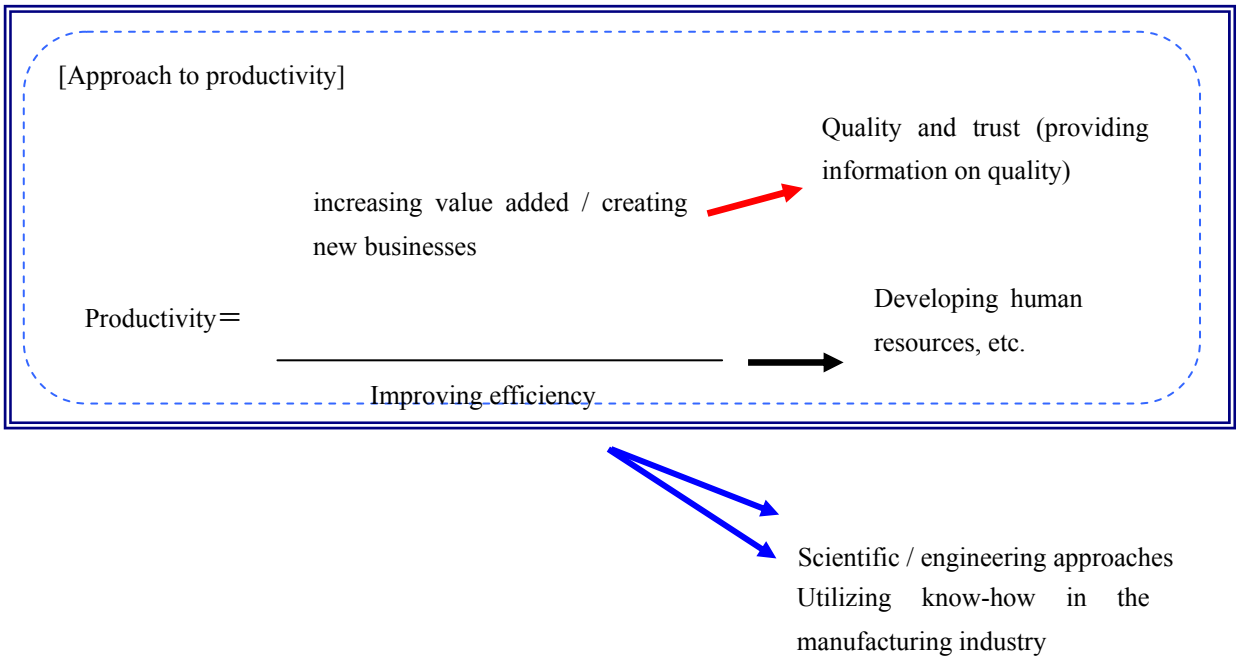
・When recalling the definition of productivity, the denominator is the number of workers multiplied by working hours and the numerator is nominal GDP. In this formula, we tend to focus on the denominator. When comparing denominator factors as costs and rationalization and numerator factors as innovation and demand creation, we tend to go for denominator factors to achieve productivity growth. The academic studies on productivity also seem to have initially developed from measuring and quantifying the denominator factors. (Saito)

Misunderstanding that "productivity = efficiency." Value added and service quality are important

In discussing productivity we generally focus on "improving efficiency" paying attention only to the denominator. However, it is also important to "increase value added and create new businesses" by paying attention to the numerator. It is important to develop an environment that enables the originality and creativity of companies to increase value added.

[The concept of value added is also important]

・Companies providing services often place importance on making contribution to society by addressing customers' needs. Accordingly, putting efficiency in the forefront may put off managers of these companies. While recognizing the significance of efforts made in the manufacturing industry, it is important to consider how to motivate service companies. Service companies always think about how to anticipate needs and do what others are not doing. In that sense, guiding companies to increase "value added" maybe an effective approach (Sakuragi)


[Approach to productivity]
Quality and trust (providing information on quality)
increasing value added / creating new businesses
Productivity＝
Developing human resources, etc.
Improving efficiency
Scientific / engineering approaches
Utilizing know-how in the manufacturing industry

5. Policy Package

5.1 From services relying on "experiences and intuition" to services based on "scientific and engineering approaches"

5.1.1 Expanding scientific and engineering approaches

○ As pointed out in the report by the U.S. Council on Competitiveness (Palmisano Report), innovation, improvement of quality, productivity and efficiency in services are popular topic of scientific research about service industries.

○ However, service science in the area of services and research and development in the area of service engineering are still insufficient. Cooperation between industry and academia has not progressed either.

○ It is necessary to promote the initiatives to solve various problems of service industries, improving productivity and realize innovation through scientific methodologies. We should also promote research and development in service engineering/science and accelerate dissemination of the outcomes.

○ Japanese companies in service industries are not investing in research and development as much as their US counterparts.

In the U.S., companies in the non-manufacturing industry spend 43% of R&D expenses of all companies, while Japanese non-manufacturing companies spend less than 12%.

[Let's introduce scientific and engineering approaches to Japan!]

・For the Japanese economy to sustain growth, it is necessary to pursue scientific approaches in the service sector. (Expert)

[Specific Initiatives]

(1) Developing a service research / technology roadmap for service science and service engineering (initiative by the government)

In order to facilitate research and development in the area of services, the government is to develop a service research / technology roadmap for service science and service engineering as a guideline to show the path for research and development activities and to help researches in academia and industry to understand the position of their own researches. The working group for this purpose will be established in fiscal 2007 to start creating the roadmap.

(2) Establishing service research centers (initiative by the government)

As a hub for service related researches in universities, institutions, industries in Japan, the government will create centers for R&D of service engineering in the National Institutes of Advanced Industrial Science and Technology (AIST), etc.

(3) Promoting research and development in advanced and innovative areas (initiative by the government)

Unlike areas where research and development activities have already progressed in the traditional manufacturing area, research and development in specific advanced areas (cognitive engineering, ergonomics, etc.) such as the analysis of customer behavior, which will lead to improvement in customer satisfaction, will be promoted. In this instance, open-bid system as R&D projects of AIST and proposal-based projects of the New Energy and Industrial Technology Development Organization (NEDO) will be used.

(4) Strengthening and promoting cooperation between industry and academia (support by the government and initiative by the Council)

Cooperation between industry and academia in the area of services will be promoted. For instance, NEDO's project to promote cooperation among universities will be utilized. Creation of similar systems that address specific concerns of service industries and effective use of existing systems will be examined after fiscal 2008.

Cooperation between universities and industries will be promoted by, for instance, creating a venue for industries, sections in charge of TLO in universities, etc. to exchange opinions regarding actual industry-academia cooperation and technology transfers.

(5) Demonstration experiment of the application of scientific and engineering approaches to the service area (support by the government)

There are many service areas in which the mathematical models for optimizing the service supply process can be applied. Such demonstration for introducing engineering to the service supply process will be conducted from fiscal 2007 and will be advertised as model cases. This is expected to increase cases of mathematical model applications. Furthermore, demonstration to use recently commercialized technologies such as GPS and RFID in services will be conducted from fiscal 2007.

The government will support the spread and development of similar cases by sharing with the Council members information on the contents, results and assessment of demonstrations to be conducted by the government from fiscal 2007.

(6) Researching best practices to accelerate learning and promote cooperation between different industries (initiative by the Council)

In order to effectively utilize technologies that are widely accepted in other areas, the Council will conduct research on best practices to spread the knowledge. The Council will also create opportunities to match-make potential users of scientific and engineering approaches and their suppliers to facilitate cooperation between different industries and areas.

[Reference] Examples of Use of Scientific and Engineering Approaches

Improving efficiency by sharing know-how of well-performing taxi drivers

(1) "H" Taxi Company

The company used the GPS system to track the driving pattern of well-performing drivers whose turnover is equal to or exceeds 1 million yen a month and analyzed their routes. This is used in training sessions to share know-how.

Scheduling is a perfect game!

(2) Optimizing game schedule at the U.S. Major League

Company "S" has experts as Professor T at Carnegie Mellon University that produced a high-quality annual game schedule for 2005 taking into account various factors that may hinder the smooth implementation of the games.

5.1.2 Improving the Service Supply Process by Utilizing Manufacturing Know-how

○ To promote the introduction of productivity improvement know-how of the world-class "production technology" to service industries

○ The manufacturing industry's production management know-how has not yet been widely adopted by service industries. In order to facilitate the adoption, the public and private sectors should appropriately share responsibilities and provide support.

[Introducing world-class know-how of manufacturing industry to service industries]

・Initiatives as the visualization of services, certification, skills standards, human resources development and model contracts have been promoted for the IT service industry as one package. Such packages can be applied to service industries in general. (Murakami)

・It is important to introduce the manufacturing industry's know-how to service industries and to industrialize services. While factories are making efforts to improve efficiency in units of one second or 0.01 yen, systems engineers, for instance, are talking in units of one hour or 10,000 yen. (Akikusa)

[Specific Initiatives]

(1) Dissemination of best practices and creating a network of former employees and companies in the manufacturing industry (initiative by the Council)

The application of production management know-how in service industries will be standardized to make the process easy to understand. Develop people who would become evangelist of production management know-how. The best practices will be disseminated and the network of former employees and companies in manufacturing will be established.

(2) Improve support provided by consultation services of the Organization for Small & Medium Enterprises and Regional Innovation, Japan, etc. (initiative by the Government)

Establish support system in the Organization for Small & Medium Enterprises and Regional Innovation, Japan and other organizations related to SMEs to provide appropriate advices to service providers and to provide effective support to SMEs in service industries, which may find it difficult to introduce production management know-how by themselves.

(3) Analyzing utilization of production management know-how (initiative by the Council)

In order to support the application of production management know-how to service industries, the Service Council will sort out cases that are desirable for dissemination ("research / verification type") by the end of fiscal 2007 and support research and verification works of those cases.

(4) Research and verification of cases to utilize production management know-how and accumulate successful cases (support by the government)

Cases that are classified as "research / verification type" by Service Productivity & Innovation for Growth will be studied within the framework of industry-academia cooperation and verification in real-business settings will be conducted to accumulate successful cases.

[Reference] Examples of Utilization of Production Management Know-how

Re-designing the hotel management with the production engineering (IE approach)

(1) "Y" Hotel (hotel)

"Y" Hotel hired a consultant and embarked on improving efficiency in cleaning guest rooms. This resulted in almost halving the cleaning time. The hotel aims to shorten the flow line in work and reduce overlapping work through an analysis of body movement during work and is examining a rational work process and preparing a standard work sheet.

Introducing the "just-in-time" system to a hospital

(2) "I" Hospital (healthcare)

The hospital hired a consultant specializing in Toyota's manufacturing method ("just-in-time" system) in an attempt to reduce patients' waiting time. While same doctors used to see patients both with and without appointment, doctors are now only seeing either patients with appointment or patients without appointment. This has leveled the work volume of doctors and significantly reduced waiting time for patients.

5.2 Creating a structure that links service providers and consumers

- Improve value added and expand the market by addressing issues as the asymmetrical nature of information –

<Creating a system to provide information to improve credibility>

○ Due to the asymmetrical nature of information, (1) consumers do not get sufficient information, which prevents competition and (2) the market cannot develop without consumers' input and trust.

(※) Excerpts from proposals made by private-sector members of the Council on Economics and Fiscal Policy

"Areas with greater consumer needs should be deregulated in order to encourage creativity of suppliers. Post-deregulation monitoring should be strengthened." "(As a way to improve the monitoring) Develop and enhance third-party organizations that assess quality of services from consumers' perspective"

[Consumers' perspective is important]

・Yardsticks to measure service industries should be developed by taking into account not only productivity but also improvement in the standard of living, benefits provided to customers and customers' evaluation. (Saito)

○ Government regulations as quick-fix should be avoided and support should be given to the creation of a structure by the private sector (for instance, the introduction of a certification system.) Efforts to "visualize" service should be made to promote competition.

(※) For instance, the Council can promote industries, initiatives with great consumer needs such as the beauty industry and dating agencies.

[Information of TV commercials a decisive factor for service industries]

・Services provided by service industries are not visible. Therefore, consumers cannot get information appropriately. As a result, they tend to rely on information such as TV commercials. (Expert)

[Specific Initiatives]

(1) Developing voluntary industry standards, etc. and creating third-party certification system and ADR mechanism (initiative by the Council)

Private sector initiatives to make the contents and quality of services "visible", such as certification system, are important and the Council will support such initiatives. More specifically, the Council will support voluntary initiatives of the industries, the establishment of third-party certification systems and creation of ADR (Alternative Dispute Resolution) mechanisms.

(2) Support of verification projects such as certification system and ADR mechanism (support by the government)

The government will conduct projects to verify actual effectiveness of certification systems and ADR mechanisms created by the private sector based on the discussions at the Council.

<Establishment of cross-sectional benchmarks for quality assessment>

(Establishment of the Japanese Customer Satisfaction Index)

○ Establish cross-sectional benchmarks that enable comparison of service quality between different companies and service industries in Japan by referring to examples in the U.S.

○ Setting up competition based on substantiated service quality is a premise for appropriate price competition and will lead to the improvement in the quality and productivity of service industries.

(※) In the U.S., customer satisfaction levels of service industries covering 43 industry types (more than 200 companies) have been measured, indexed and published since 1994 under cooperation between industry, academia and government. This index (ACSI) is used as a benchmark to measure quality improvement of public services in response to executive order. A similar index has already been created in South Korea.

(※) Customers are a kind of off-balance-sheet assets and have a great impact on corporate value. Accordingly, high customer satisfaction levels should theoretically improve shareholder value. However, there were no indexes for investors and shareholders to assess customer value. To rectify such a situation, Professor Claes Fornell and others in the University of Michigan developed the American Customer Satisfaction Index (ACSI) in 1994, and the Wall Street Journal started publishing the results every quarter. The index now attracts attention from not only companies included in the index but also from the Wall Street. Once customer satisfaction that was used as a micro index within the company starts being widely used as a macro index outside the company, customer relation strategies should naturally evolve. (Diamond Harvard Business Review, July 2002)

(※) EU conducted the research and survey for Customer Satisfaction Index in 2004. (Budget size 400,000Euro, about 60,000,000Yen)

[Specific Initiatives]

(1) Establishing and spreading the Japanese Customer Satisfaction Index (initiative by the Council)

Explore the development of the Japanese CSI and its operating organization under cooperation with experts such as academic societies and experts by referring to customer satisfaction indexes in other countries. In launching the Japanese CSI, the Council will create the system for its development and operation, publish the CSI scores, and start various initiatives for spreading the CSI to promote its effective use.

(2) Support the launch of the Japanese Customer Satisfaction Index and initiatives that encourage its wider use (support by the government)

Utilize various organizations and groups to spread the CSI. For example, consultation regarding the use of CSI could be provided to promote the CSI developed by the Service Productivity & Innovation for Growth.

(※) Examine compatibility with benchmarks used in the U.S. and South Korea as a system to enable international comparison of, for instance, public services. (South Korea uses the service standard in the U.S. as the benchmark and index to strengthen competitiveness.)

(※) Examine measurement of public services including not only prices but also quality assessment.

5.3 Human Resources Development

Because people mainly provide services, service quality and efficiency rely heavily on people. Accordingly, it is important to acquire and develop good human resources.

[People are the key of quality]

・Our company considers people as our assets and put special efforts in developing good staff. (Person in the fitness industry)

・In service industries, it is important to develop people who have both wisdom and quality. (Sakuragi)

<Improving a structured education system and promoting communication between industry and academia to develop human resources for service industries>

While the manufacturing industry has academic structures such as the engineering department and the science department in educational facilities as universities, service industries do not have a structured education system. The government will promote communication between industry and educational facilities and support initiatives for improving the education system.

[Specific Initiatives]

(1) Clarify human resource needs and types of people required by service industries (initiative by the Council)

The Council and other forums will identify needs of service industries for human resources, what kinds of people are required (knowledge, skills, technologies, etc.) and career paths in companies.

(2) Promote communication between industry and academia to improve the educational system to develop human resources for service industries (support by the Council and initiative by the government)

Promote communication between industry and educational institutions such as universities regarding the types of people required by service industries (knowledge, skills and technologies) and support initiatives for improving the educational system. Specifically, discuss better ways to develop managers who have not only industry-specific knowledge but also management technologies (the development of human resources with knowledge of service engineering etc. and service industries related studies as hotel management in the departments of education and tourism) under cooperation between industry and academia. In addition, support research on service engineering to facilitate the recognition of its importance and the utilization of service engineering methods in service industries.

<Strategic development of human resources in service industries – creation of a platform for developing human resources in service industries - >

Clarify skills and know-how that are considered useful within a certain industry or across industries and organize a system to develop human resources in a more strategic way.

[Specific Initiatives]

(1) Produce a standard for human resources skills (initiative by the Council)

The Council clarifies service industries' needs of human resources, establish skill levels and standards to develop skills and know-how that are considered to be commonly useful within a certain industry or across industries in a more strategic manner.

(2) Support the creation of skill assessment system (tests, examinations) as a common platform for developing human resources (support by the government)

Provide support for creating a skill assessment system (tests, examinations). Support the efforts to improve educational programs and materials that will be necessary as the creation of this common platform for developing human resources progresses.

(3) Utilization of job cards (support by the government and initiative by the Council)

Develop a standard for skills that are common to an industry for each service area and organize corresponding human resources development system, qualification system, etc. To launch the "job card system," which has been decided as a strategy to raise overall skill level in service industries, create a system while encouraging companies participating in the "Service Productivity & Innovation for Growth" to cooperate with the Council's initiative.

5.4 Utilization of IT in Service Industries

Because of such characteristics as being “intangible” (unseeable) and “perishable” (consumed at the time of supply), it is difficult to provide information and appropriate evaluation on the contents and quality of services. Accordingly, it is important to use IT to supplement incompleteness of information and to put market mechanism at work.
In order to improve productivity in the manufacturing industry and the service industries like distribution industry, it is important to share information among concerned parties by utilizing technologies like e-commerce and electronic tags.
In particular, SMEs, which account for a majority of service industries, could open new markets by harnessing the information dissemination power of IT.

<IT to create new services >
In the information service, the use of IT resulted in new businesses as Business Process Outsourcing (BPO), remote maintenance and supply of software functions via the Internet (SaaS: Software as a Service). The use of IT also gave rise to many new businesses that overcome geographical and time constrains.

[Examples]

Various examples using remote monitoring technology

○ Remote monitoring utilizing IT
Company “A”, a logistics system company, monitors logistics systems, such as automated warehouses owned by clients located throughout Japan from a center established in Shiga Prefecture 24 hours a day, seven days a week.

○ Providing new monitoring services by developing aerial remote monitoring system
Development of an aerial remote monitoring system that carries out unmanned inspection, status investigation and monitoring operations in dangerous low altitude areas that cannot be accessed by manned aircrafts or people has enabled the supply of efficient services that go beyond traditional services.

Operations by a skilled doctor in a distant place

○ Telemedicine utilizing IT
Telesurgery across the Atlantic Ocean has been successfully conducted due to dramatic improvement in robot technology and communications technology.

<IT creating new competition>
The utilization of IT has allowed the services to be provided from geographically remote areas in various forms, which has resulted in new competition. For instance, there has been an increase in cases where part of business process of a company is outsourced to an external vendor (Business Process Outsourcing: BPO).
Furthermore, the use of IT has enabled the real time verification of users' assessment of service quality. This will lead to better service quality assessment and promotion of sufficient competition.

[Examples]

My home is my workplace.

○ Telecommuters providing services from distant places
Company I registers contract staff who work from home as "telecommuters." They carry out various outsourcing operations including data entry and web research.

<Utilizing IT to supplement services>
Because of such characteristics as being "intangible" (unseeable) and "perishable" (consumed at the time of supply), it is difficult to provide information and get evaluation on the contents and quality of services. Accordingly, it is important to use IT to supplement incompleteness of information and to put market mechanism at work.

[Example]

Quality assessment by consumers

○ Service quality assessment using IT
A free web service that allows users to search reviews and rankings by people who have actually used services as food and accommodation is rapidly growing with support from consumers.

<Utilizing IT to improve customer satisfaction and efficiency through the visualization of business processes>

[Improvement in operational efficiency and customer satisfaction through the visualization of a call center]

・In the maintenance service operation (call center) of electric and electronic equipment, customer satisfaction and productivity have improved because customers do not need to repeat the same contents again on telephone thanks to the instant identification of customers using the number display function, speech recognition technology used for conversations with customers, and links to the customer database. (Expert)

・A system that grasps the place of work and progress status on real time basis has been created. Using this system, service staff can input progress information from their mobile phone to the host computer. It also has mapping functions. This system has improved work ratio of service staff, thereby increasing productivity. The said location information is disclosed to customers on the website and used to provide a service that enables customers to check the progress status real time. (Expert)

<Effectively using e-commerce and electronic tags>

It is important to share information among concerned parties by effectively using e-commerce and electronic tags to improve productivity not only in the manufacturing industry but also in the service industries including the distribution industry.

[Realizing improvement of productivity and customer satisfaction at shops through the introduction of electronic tags]

・The ladies' footwear section in a department store introduced electronic tags. This has made it unnecessary to walk to and from the warehouse to check inventory and improved customer services. Now, people in the ladies' footwear section can "check inventory immediately," and the "inventories do not run out." Disclosing inventory data has improved the probability of fitting and purchase. Customers were reluctant to make shop attendants walk to and from the warehouse. Now, they are more likely to try on and purchase items after checking data ("visualization for customers").

<Promoting the use of IT in small- and medium-sized service companies>

SMEs account for a majority of companies in service industries and they could open new markets by exploiting the information generation power of IT.

[Specific Initiatives]

(1) Developing human resources in IT (initiative by the Council and support by the government)

Facilitate the cultivation of people who are not only familiar with IT but also with the business practices in service industries through cooperation among industry, academia and the government.

(2) Ensuring credibility and safety (security privacy) (initiative by the Council and support by the government)

In collecting and utilizing customer information, it is necessary to pay appropriate attention to the balance between information protection and its use in accordance with the Personal Information Protection Law. Improve information environment and develop technology to promote compliance with technological security and organizational security.

(3) Research and development necessary for promoting the use of IT (e.g. Information Great Voyage Project) (initiative by the government)

Advancement of IT has made it possible to accumulate and distribute huge and diverse information. However, unless users can search for and analyze information that they truly require in a simple and efficient manner, they will only drown in the "sea of information" and cannot improve productivity or achieve innovation. Accordingly, industries, academia and government will cooperate to develop basic technologies for searching and analyzing information and to build up specific service models.

(4) Organizing foundations for electronic tags and e-commerce as social infrastructure (initiative by the government)

In Japan, more than 70% of the use of IT in companies is inhibited by the boundaries between divisions. It is thus important to facilitate the use of IT beyond the boundaries of "divisions" and "companies." An electronic tag will be an important tool for this purpose. Technologically, electronic tags can be used across traditional boundaries of "companies, industry types and sectors." Accordingly, the government will organize foundations for the use of electronic tags and e-commerce as economic and social infrastructure ahead of other countries in order to accommodate new social challenges such as energy conservation and environment problems among other issues. More specifically, the government will create rules that apply across industries such as the contents of information that should be shared and the best way to utilize electronic tags.

(5) Promoting the use of IT in management and at small- and medium-sized service companies, in particular (initiative by the government)

- Business and accounting management utilizing the Internet

  Provide a nationwide service that enables small- to medium-sized service companies to enter accounting transactions through Internet so that they can easily and cheaply create management information that can be used in computers. Also, encourage electronic tax payment by SMEs through additional promotion. Promote telecommuting through cooperation between relevant ministries and agencies bearing in mind the expansion of employment opportunities for those engaged in childrearing and aged care.

- Business and financial management utilizing IT

  Support the use of IT suited to the size and business of SMEs and craft an "IT Management Roadmap for SMEs." Provide support to the use of IT suited to the actual condition and

problems of each company.

- Providing support that is available locally and convenient

  To enable SMEs to speedily solve problems they face concerning the use of IT, create a system to dispatch experts who can best serve needs of individual companies.

(6) Initiative to improve investment efficiency, productivity and competitiveness through the effective use of software (initiative by the government)

Japanese companies, including those in service industries, generally tend to develop their own software, spending unnecessary costs for IT investment that does not lead to either differentiation or the creation of value added. They tend not to make "aggressive IT investment" that lead to an increase in value added or an expansion of the market. In order to improve investment efficiency of IT and link it to productivity growth and greater competitiveness, it is critical to start sharing software and to share the successful cases for strategic use.

5.5 Globalization of businesses in service industries

○ One of the reasons behind the low productivity of service industries in Japan is that they have not been exposed to a global competition environment.

○ It is expected that Japan's service industries will improve their productivity and promote innovation through global competition.

○ In order to promote overseas investment of service industries in Japan, activities to collect and supply information regarding the overseas trading and investment environments are also important.

[Japanese hospitality can be a big advantage]

・For Japanese service companies to expand overseas, high quality services and hospitality, in which Japanese have strengths, could become advantages. (Saito)

・When setting up operations overseas (Indonesia and other South-east Asian countries), we have difficulties collecting local information (legal requirements, etc.). We will be grateful if there is a system to obtain such information easily. (Person in the taxi industry)

[Specific Initiatives]

(1) Actively promoting negotiations on the liberalization of trade in services (initiative by the government)

Negotiations on services at the GATT and WTO have so far produced results in areas such as computers, acoustic imaging, finance and information and communication. The government will continue actively participating in negotiations on services with an aim to produce results in a number of areas.

With respect to the EPA and FTA, because the country or region with which negotiations are conducted and service areas in which they are interested in are mutually specified, it is possible to specifically address the latest needs at the forefront of businesses. The government will also continue actively participating in liberalization negotiations on service trade through the EPA and FTA.

(2) Improving productivity and promoting innovation service industries in Japan by encouraging investment by foreign companies (initiative by the government)

In service industries including medicine and health service sectors and tourism and customer gathering and exchange sectors, many foreign companies are operating advanced businesses with a high level of productivity using a new business model. When the government implements measures to encourage direct investment in Japan, it will actively lure these advanced foreign companies, thereby stimulating the Japanese market and aiming to facilitate productivity growth and innovation in Japan's service industries. Furthermore, the government will compile cases of forward-looking investment by foreign companies in industries in Japan including service industries and introduce them both within and outside Japan.

(3) Providing support to businesses making foreign investment by providing information and covering risks (support by the government, etc.)

It is pointed out that the companies in service industries, which try to set up operations overseas face the lack of information on trade and investment of the counterpart countries. Majority of businesses in service industries are SMEs and their lack of information collection ability is also a problem.

JETRO and other organizations have been supplying information on trade and investment through their consultation services, websites and relevant materials. They actively support market development of content businesses, too. In addition, overseas operations of Japanese companies in service industries can use trade insurance offered by Nippon Export and Import Insurance (NEXI) to cover risks such as the collection of payments.

The government and other organizations will continue to collect and supply information on overseas trade and investment to promote overseas presence of Japanese service industries.

(4) Creating a mechanism to identify obstacles for service trade and industries' needs (initiative by the Council)

Not only in strictly regulated areas but also in service areas with less or moderate regulation, expansion into foreign market will create comparative advantage against other companies that enter the same market later. There is also a tendency that regulation related problems in the foreign market to which these companies have entered are not often addressed as problems. Based on such situations, the Council will endeavor to create a mechanism for information sharing across industries and for grasping needs of businesses to clarify obstacles they face and use such information in liberalization negotiations of services with other countries and regions.

5.6 Regional revitalization through service industries

Service industries' roles in non-metropolitan areas can be classified into the following three types.

(1) Providing services beyond geographical constraints using IT [services overcoming geographical constraints]

(2) Service industries that address new needs emerging in the region [services addressing demands within the region]

(3) Service industries that contribute to the improvement of the brand value of the region [services creating the regional brand]

Based on the characteristics of the above three types, it is important to collect and spread service industries' best practices in non-metropolitan areas, to focus on new functions of service industries in non-metropolitan areas and to try to reactive regional economies through the promotion of such businesses.

Furthermore, support will be provided utilizing programs for SMEs such as "Regional Resources Utilization Program for SMEs" and "New Cooperation Support." It is also considered necessary to support activities of new players such as NPOs in non-metropolitan areas.

[Promoting BPO in Regional Cities]

・Not only call centers but also Business Process Outsource (BPO) is likely to move to regional cities. A problem is that local governments only develop support measures for companies that they want to move to their locality. Primarily, local governments should encourage local companies to enter into new services to acquire customers in metropolitan areas. (Person in the temporary staff dispatch industry)

・Cooperation between industry and academia can function as a trigger for innovation. Many SMEs participate in such cooperation and it helps regional revitalization. From this point, industry-academia cooperation using, for instance, the engineering department of local universities is very important. (Hashimoto)

[Specific Initiatives]

(1) <u>Support through programs for SMEs (support by the government)</u>

Utilize programs for SMEs such as the "Regional Resources Utilization Program for SMEs" and "New Cooperation Support" to support SMEs that try to develop and provide new services.

(2) <u>Improve support through consultation services provided by the Organization for Small & Medium Enterprises and Regional Innovation, Japan, etc. (support by the government)</u>

In order to provide effective support to SMEs in service industries, which may find it difficult to introduce production management know-how by themselves, organize a system to provide appropriate advices to service providers through the Organization for Small & Medium Enterprises and Regional Innovation, Japan and other organizations related to SMEs.

(3) Establishing a fund for SMEs in service industries (support by the government)

Given that there are many start-up businesses in service industries that target newly emerging needs and they often find it difficult to raise funds, establish a fund for service industries utilizing "SMEs Venture Fund (*Ganbare! Chuu-shou-kigyou fund*)" implemented by the Organization for Small & Medium Enterprises and Regional Innovation, Japan.

(4) Providing support for the creation of new industries through cross-sectional cooperation (initiative by the Council)

In order to effectively use technologies that are widely used in other areas, conduct research on successful cases and disseminate the results.

(5) Promoting cooperation between industry and academia and improving consultation services (developing human resources) (support by the government)

Promote cooperation between industry and academia in the area of services through the expansion, effective use and so forth of the existing system.

Provide support for improving consultation services specializing in services at industry-academia cooperation centers and TLOs at universities.

In addition to actively promoting cooperation between industry and academia, consider cultivating people (translators) who can realize transfer of advanced technologies in universities to service industries.

(6) Promoting the use of IT (support by the government)

Create a system to dispatch experts. Furthermore, organize an environment to provide financial support to introduce IT in SMEs through the promotion of the electronically registered bond system. Improve the contents for service industries in group-studies on management reforms using IT. Promote telecommuting to expand employment opportunities for people engaged in childrearing and aged care.

Promote the use of electronic tags and e-commerce system and facilitate the use by providing services through initiatives as "IT management support groups." In promoting telecommuting, try to strengthen cooperation among relevant ministries and agencies.

(7) Creating a structure for new players (considering support)

Consider creating a structure for establishing cooperative relationships among organizations and providing support for commercialization, including securing of funds, in order to support regional revitalization activities of NPOs and LLPs, the new players that address change in the social structure. These activities may include health, welfare, parenting support, among others.

(8) Utilizing the "Law on the Creation and Revitalization of Industries in Regional Areas by Attracting Enterprises, etc. " (Initiative by the government)

5.7 Increasing investment in service industries and promoting new market entries

○ It is important to promote innovation and competition through market entries of new companies.

○ However, the market may not have much confidence in service industries because of their newness, and their ratio of fixed assets is also low. Furthermore, they have difficulty raising funds because they have to rely on non-real estate assets as collateral.

○ Therefore, it is important to improve and increase funds focusing service industries.

[Surprisingly, investments by funds offer hope]

・We should think about how to communicate best practices. Service industries contain extremely wide range of industries and it is difficult to affect all industries at once. Most effective approach would be to choose the right ones and show them inspiring examples. (Itoh)

・Because there are many businesses that are local by nature and unlikely to reach IPO, I thought there wouldn't be any funding. However, investments by funds are very robust and they are often made to companies in service industries. (Kobayashi)

[Specific Initiatives]

(1) Establishing a fund for SMEs in service industries (support by the government)

Given that there are many start-up businesses in service industries that target emerging needs and they often find it difficult to raise funds, establish a fund for service industries utilizing "SMEs Venture Fund (*Ganbare! Chuu-shou-kigyou fund*)" implemented by the Organization for Small & Medium Enterprises and Regional Innovation, Japan.

(2) Improve support through consultation services provided by the Organization for Small & Medium Enterprises and Regional Innovation, Japan, etc. (support by the government)

Organize a system to provide appropriate advises to service providers through the Organization for Small & Medium Enterprises and Regional Innovation, Japan and other organizations related to SME. Consider providing consultations regarding fundraising.

5.8 Organizing statistics on service industries and investigate the actual situation

<Organizing statistics>

As the importance of service industries in the economy increases, there is growing needs to increase and improve statistics that function as basic information for government policy designing and corporate activities. The government is undertaking initiatives to improve and increase service statistics.

However, collection of statistics is not easy because service industries change quickly as new business emerge one after another and services as maintenance are performed inside manufacturing companies. The government and the industries need to cooperate to compile statistics that represent actual status of service industries. In addition to statistics compiled by the government, the industries are expected to improve statistics compiled by themselves.

<Productivity>

Service industries are yet to organize sufficient data for each industry, which are required for calculating productivity. Because the calculation method of productivity is not yet established internationally, it is not easy to measure productivity for each industry.

[Measuring productivity is the first step to improving productivity]

・It is important to fine tune service industries statistics. In the U.S., employment trend in the service industries are monitored, but statistics to monitor service industries are still insufficient in Japan. (Ushio)

・Basic data necessary for measuring productivity should be collected by Establishment and Enterprise Census. (Person in a university)

(※) Many statistical surveys are based on the Japan Standard Industry Classification (JSIC). As a result, industries not included in the JSIC are often not included in statistics. For instance, although there is data showing that the game software creation industry has a market exceeding 1 trillion yen (Digital Contents White Paper 2006 (Digital Content Association of Japan)), the industry is not an independent item in the JSIC. In fact, government statistics do not currently include the game software creation industry.

[Specific Initiatives]

(1) Improving statistics on the demand side / reflecting the actual status of the industries in statistics (initiative by the government)

Improve statistics on service industries by, for instance, reviewing the Standard Industrial Classifications of Japan as necessary, and reflecting the actual status of the industries in statistics by, for instance, continuing to improve employment statistics and statistics on the demand side.

(2) Providing information necessary for reviewing statistics (initiative by the Council)

Pick up the industries' needs and provide information regarding the review of statistics and so forth with respect to the actual situation of the ever-changing service industries.

(3) Considering the reorganization of industry made statistics (initiative by the Council)

Support the reorganization of industry made statistics through the sharing of industry statistics know-how, etc.

(4) Promoting researches on service industries' productivity (support by the government)

Promote researches on productivity such as productivity measurement and factor analysis mainly through RIETI.

(5) Examine the measurement of productivity (initiative by the Council)

Discuss more accurate measurement of productivity including challenges concerning the calculation of productivity in service industries (for instance, definition of the value of production, clarification of the capital input in service industries, etc.)

6. Improve consultation services, etc. by the government

< Improve support through consultation services provided by the Organization for Small & Medium Enterprises and Regional Innovation, Japan, etc.>

Because service industries include many new industries that target emerging needs, the government has not been able to provide sufficient consultation services on its policies or to fully implement them.

Accordingly, the government will improve the systems so as it could provide appropriate advices to service providers through the Organization for Small & Medium Enterprises and Regional Innovation, Japan and other organizations related to SMEs. The objective is to provide effective support to SMEs, which may find it difficult to introduce production management know-how by themselves.

<Develop centers for research on services>

Establish a center in RIETI to conduct economics and management research on services and also establish center(s) in AIST, etc. to conduct R&D activities in the area of engineering. These activities will be carried out in coordination with each other.

7. Role of Service Productivity & Innovation for Growth

Service Productivity & Innovation for Growth provides a forum to address challenges faced by diverse service industries. Industry, academia and government will work together in this common platform to achieve innovation and productivity improvement in service industries.
The Council is expected to undertake a wide range of activities to revitalize service industries and to operate dynamically to achieve innovation and productivity improvement.
To achieve such purposes, the Council is expected to be established by and to get participation of not only people in service industries but also people in manufacturing industry that has a link to service industries, universities and relevant ministries and agencies.

(※) Outline of Economic Growth Strategy (Conference on Integrated Reforms of Finance and Economy in July 2006 (government/ruling party))
Although service industries account for 70% of the Japanese economy, their productivity improvement efforts started late. Accordingly, it is imperative to fundamentally improve productivity in service industries and make the industries one of the "twin engines for economic growth" together with the manufacturing industry. More specifically, the following actions were mentioned: (1) establishing "Service Productivity & Innovation for Growth" with participation from industry, academia and government and creating "Japan Service Quality Awards" for the innovation of service industries, and (2) creating "Service Research Center" to promote research on productivity of services, etc.

<Contents of Activities>

(1) <u>Public relations activities</u>

Productivity improvement in service industries will be based on creativity of the private sector. Therefore, knowledge and know-how that helps productivity improvement will be collected, organized and shared by wide range of parties.
Furthermore, especially advanced and good cases will be selected as "300 Best Service Practices (provisional name)" and good services awarded.

[Reference] "300 Best Service Practices (provisional name)"

While there have been initiatives such as listing "300 active small- and medium-sized manufacturers," "100 energetic shopping areas" and giving Manufacturing Excellence Awards, no such initiatives have been undertaken for service industries.
In "300 Best Service Practices (provisional name)," advanced examples that are full of originality and creativity and help improve productivity will be selected. The selection will mainly focus on small- and medium-sized service companies and will be carried out

under cooperation with the Ministry of Economy, Trade and Industry and the Small and Medium Enterprise Agency, etc.

(※) Service Productivity & Innovation for Growth is considering selecting 100 cases every year for three years from 2007 to 2009.

(2) Introducing scientific and engineering approaches and improving the service process

In order to increase the application of scientific and engineering approaches and the introduction of the manufacturing industry's know-how to service industries, collect and introduce successful cases and offer opportunities for cooperation between different industries and between industry and academia.

(3) Establish competitive market through system as quality certification

Make service quality "visible" to stimulate competition on service quality, to gain credibility from consumers and to promote service innovation.

(4) Develop human resources

Clarify the attributes of people required by service industries while considering the contents expected to be included in the education process. Provide support to the industry-wide initiatives for the development of human resources.

(5) Reorganize statistics on service industries and grasp the actual situation

Streamline the industries' needs and make recommendations to the government to improve service industries statistics and support cooperation between companies on efforts to compile industry made statistics.

(6) Other (e.g. organizing a business environment)

Explore ways to improve productivity in service industries, such as regulatory reforms and the opening of public markets to the private sector, and conduct research and make recommendations on necessary initiatives.

[Reference] Reforming public regulations

Third report on main issues for promoting regulatory reforms and the opening of markets to the private sector (December 25, 2006)

♦Welfare / childcare

(1) Prepare an environment where users can select childcare service in accordance with their needs

○ Monitor and evaluate the implementation of "certified day-care/kindergarten (*nintei-kodomo-en*)" system, review the system and try to simplify application and other procedures (actions to be taken as appropriate from fiscal 2007 onwards)

○ Consider the introduction of direct contract for approved day-care services to improve user convenience and encourage efforts to improve services,.

○ Consider giving subsidies to users rather than to childcare facilities to make the financial costs of users more equitable. At the same time, consider creating "parenting insurance (provisional name)" financed by insurance premiums and the budget for parenting support, etc.

[With respect to the above two items, consider whether or not to introduce them to all day-care facilities over a long term based on the implementation situation, etc. of the "certified day-care/kindergarten" system.

(2) Promoting social welfare operations as a safety net

○ Publish local governments initiatives on operations to assist self-support, such as subcontracting to social welfare counselors and use of temporary staff. [Measures to be implemented as appropriate from fiscal 2006 onwards]

♦Healthcare

(1) Review the qualification system for healthcare staff

○ Consider initiatives for improving knowledge, skills and qualification of doctors, such as regular check of their qualification, regular seminars on medical safety, etc., and support for lifetime learning [to be discussed and concluded in fiscal 2007]

○ Consider how to ensure that medical specialists have knowledge and clinical skills that can have the confidence of patients [to start discussions soon and reach a conclusion within fiscal 2007]

(2) Dispatching healthcare staff for temporary assignment

○ Consider permitting the temporary dispatch of healthcare staff based on the needs and the impact on fulltime staff, etc. [to be discussed and concluded within fiscal 2007]

♦Education and research

(1) Promote wider choice of schools and establish systems for evaluating teaching staff and schools, etc.

○ Ensure an understanding about how to handle request for changing schools based on reasons such as bullying, convenience for commuting, extracurricular activities [measures to be taken within fiscal 2006]

○ Establishing evaluations system of teaching staff, schools, etc. that reflects the inputs of students and their parents/guardians [measures to be taken during fiscal 2006]

(2) Education voucher initiative

○ Carry out more research and discussions on the education voucher system [to continue discussion and to reach a conclusion in or after fiscal 2007]

(3) Reviewing the board of education system, etc.

○ Based on “Large-boned Policy 2006” and the decision made by headquarters of special zones in September this year as well as discussions on the revised Fundamental Law of Education at the Diet and opinions of the Education Rebuilding Council, revise the law on regional education administration [measures taken in fiscal 2006]

(4) Allocating research funds in an appropriate manner

○ Reviewing relevant systems to achieve an appropriate allocation of research funds including assessment and ex-post evaluation of outlays for promoting science and technology, etc. [to be discussed and concluded in fiscal 2007]

※ The Council for the Promotion of Regulatory Reform and Opening Up to the Private Sector was dissolved as of January 25, 2007. The Council for the Promotion of Regulatory Reform was launched as its successor and has had three meetings as of April 2, 2007.