

Towards Innovation and Productivity Improvement in Service Industries

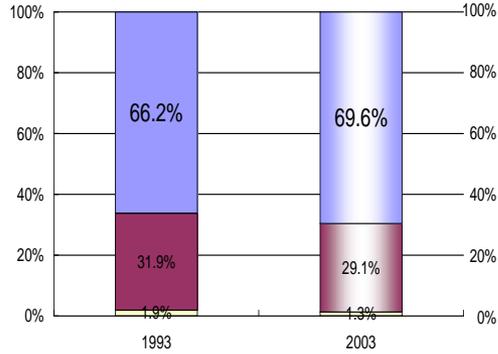
October, 2007

Ministry of Economy, Trade and Industry
Service Unit

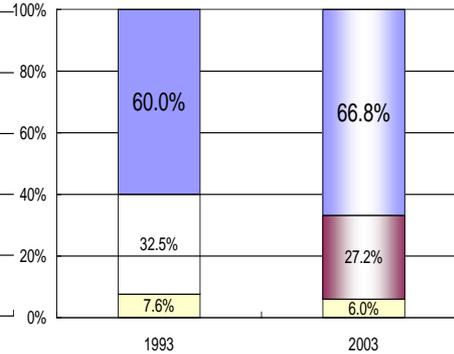
Importance and Low Productivity of Service Industries (1)

1. Service industries are extremely important industries that account for almost 70% of the Japanese economy, whether measured in terms of GDP or employment.

Change in real GDP



Change in the share of employment



Legend: Primary sector (yellow), Secondary sector (maroon), Tertiary sector (blue)

Source: System of National Accounts

2. Productivity growth in service industries has been smaller than that in the manufacturing industry in most advanced countries. However, the difference between the two is noticeable, especially in Japan.

Labor productivity growth rate (1995 to 2003)

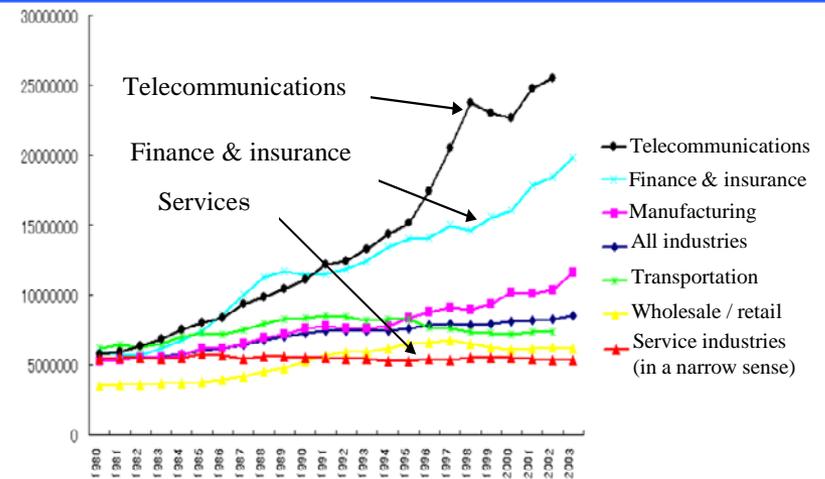
	US	UK	Germany	Japan
Manufacturing industry	3.3%	2.0%	1.7%	4.1%
Service industries	2.3%	1.3%	0.9%	0.8%

Source: OECD Compendium of Productivity Indicator 2005

Backgrounds

- Increasing demand for services caused by changes in the social structure (e.g. the dwindling birthrate, the aging population)
- Increasing outsourcing due to the greater use of modules in businesses, especially within the manufacturing industry
- The emergence of new markets created by the opening of public services to allow the private sector entry and deregulation

3. Compared to industries such as telecommunications and finance & insurance where productivity has improved thanks to global competition, etc. 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

Importance and Low Productivity of Service Industries (2)

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, Forestry and fishery		9.7	9.4	2.1%	1.9%	97%	
Manufacturing, mining and construction		161.0	146.2	34.3%	28.9%	91%	
Tertiary sector	Others	Real estate	45.8	55.5	9.8%	11.0%	121%
		Electricity, gas, water, waste and management	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%	
Total of Tertiary Sector		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)

Change in the share of GDP by industry

Primary sector (agriculture, fishery) 2.1%

Secondary sector 34.3%
(mfr., mining, construction)

Tertiary sector,
(others) 22.2%

Tertiary sector (services), 41.4% ★

Primary sector (agriculture, fishery) 1.9%

Secondary sector 28.9%
(mfr., mining, construction)

Tertiary sector,
(others) 25.4%

Tertiary sector (services), 43.8% ★

Tertiary sector 69%

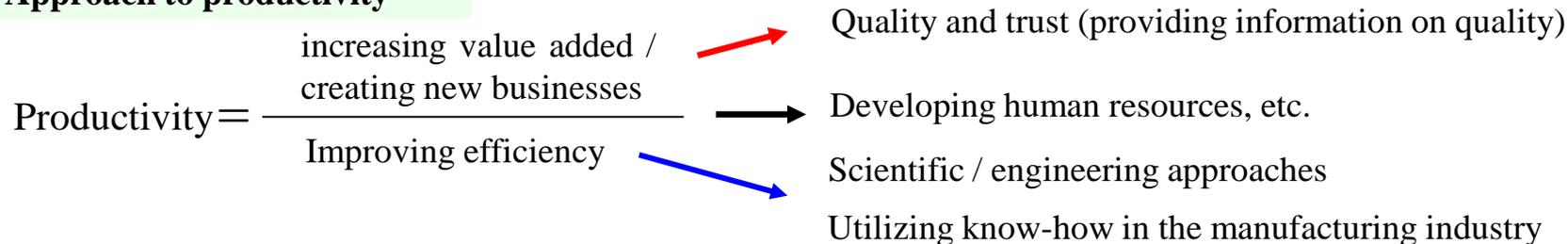
(※) The share of service industries (healthcare, nursing care, education, distribution, logistics, services provided to individuals and businesses, etc.) in the economy increased from 41% in 1990 to 44% by 2000.

Importance of Creating a Cross-Sectional Framework to Encourage Private Sector Initiative

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

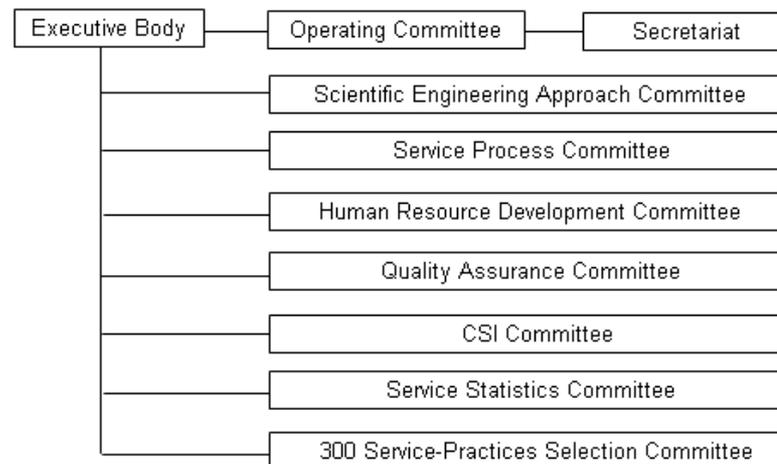
In discussing productivity we generally focus on “improving efficiency” paying attention only to the denominator. However, it is also important to “increase value added and create new businesses” by paying attention to the numerator. It is important to develop an environment that enables the originality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

Approach to productivity



Establishment of “SPRING (Service Productivity and Innovation for Growth)”

In order to solve the cross-sectional problems in service industries, an organization called "Service Productivity and Innovation for Growth (SPRING)" was established in May mainly by the business sector. This organization conducts a range of activities to implement the various solutions and ideas raised in the report, and METI and other government agencies are also working with SPRING by supporting its activities.



Structure of SPRING

From services relying on “experiences and intuition” to services based on “scientific and engineering approaches”

Expanding scientific and engineering approaches

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%.

- Developing a service research / technology roadmap for service science and service engineering (initiative by the government)
- Establishing service research centers in the National Institutes of Advanced Industrial Science and Technology (AIST), etc. (initiative by the government)
- Strengthening and promoting cooperation between industry and academia (support by the government and initiative by the Council)

Improving the Service Supply Process by Utilizing Manufacturing Know-how

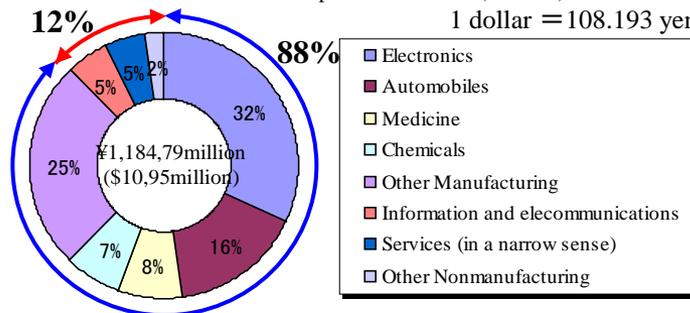
The manufacturing industry’s production management know-how has not yet been widely adopted by service industries.

- Dissemination of best practices and creating a network of former employees and companies in the manufacturing industry (initiative by the Council)
- Improve support provided by consultation services of the Organization for Small & Medium Enterprises and Regional Innovation, Japan, etc. (initiative by the Government)

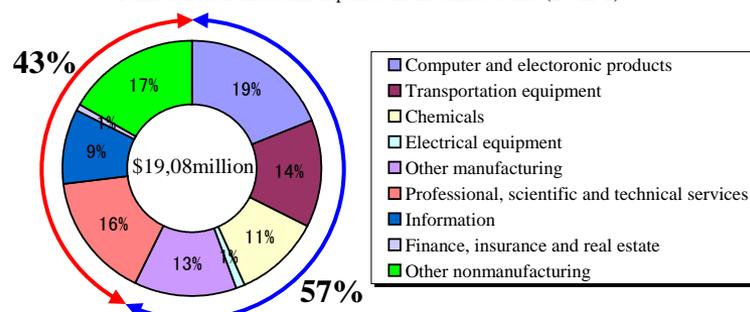
Comparison of funds for R&D industrial expenses between Japan and the U. S.

Funds for R&D industrial expenses in JAPAN (2004FY)

1 dollar = 108.193 yen



Funds for R&D industrial expenses in the United States (2002FY)



→ Manufacturing → Nonmanufacturing

Source: Statistics of MIC (Jun. 2006) (for Japan)
Statistics of NSF (Dec. 2005) (for U.S.)

Creating a structure that links service providers and consumers

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.

- Developing voluntary industry standards, etc. and creating third-party certification system and ADR mechanism (initiative by the Council)
- Support of verification projects such as certification system and ADR (Alternative Dispute Resolution) mechanism (support by the government)

Establishment of cross-sectional benchmarks for quality assessment

- Establishing and spreading **the Japanese Customer Satisfaction Index** (initiative by the Council)
- Support the launch of the Japanese Customer Satisfaction Index and initiatives that encourage its wider use (support by the government)

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.

Improving a structured education system and promoting communication between industry and academia

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

Strategic development of human resources in service industries

- Produce a standard for human resources skills (initiative by the Council)
- Support the creation of skill assessment system (tests, examinations) as a common platform for developing human resources (support by the government)
- Utilization of job cards (support by the government and initiative by the Council)

Examples of the Productivity Growth in Service Industries

Examples of Use of Scientific and Engineering Approaches

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

“H” Taxi 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!

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

Examples of Utilization of Production Management Know-how

Introducing the “just-in-time” system to a hospital

“T” 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.

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

“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.



Service Productivity & Innovation for Growth and METI will cooperate with each other and will award “300 Best Service Practices” as mentioned here in three years.