

Tentative Translation

Structural Reform Evaluation Report 6
- Relationship between Recent Progress in
Regulatory Reform and Productivity -



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Productivity -
(Main Points)

1. Progress in Past Regulatory Reform (since 1995)

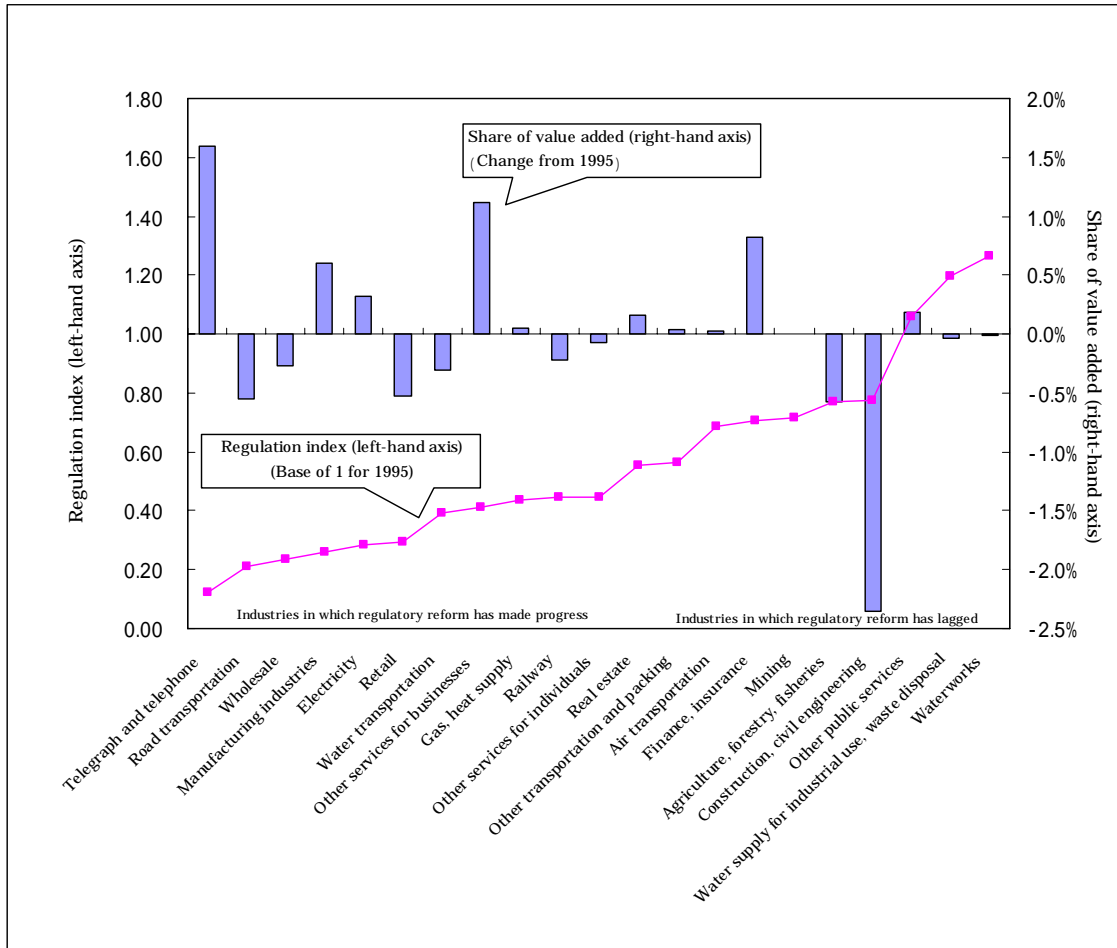
The “regulation index” was formulated to numerically gauge the progress in regulatory reform for each year since 1995 on an industry-by-industry basis.

Regulation index: An index compiled based on the number and quantity of regulations (laws, ordinances, etc.) that govern each industry, in order to enable the numerical evaluation of progress in regulatory reform compared with 1995. The index for 1995 is set at the base value of 1, with a decrease from 1 indicating progress in reform.

Averaged across all industries, the amount of regulations dropped to approximately 40 percent of the 1995 level in 2005. On a sector-by-sector basis, regulatory reform has made progress in industries such as telegraph and telephone, services for businesses and electricity, and these industries' shares of value added have increased.

The progress in regulatory reform has been accompanied by the industrial structural change away from the construction, civil engineering industry.

Figure 1: Relationship between Progress in Regulatory Reform and Change in Share of Value Added on Industry-by-Industry Basis (Comparing Figures for 1995 and 2002)

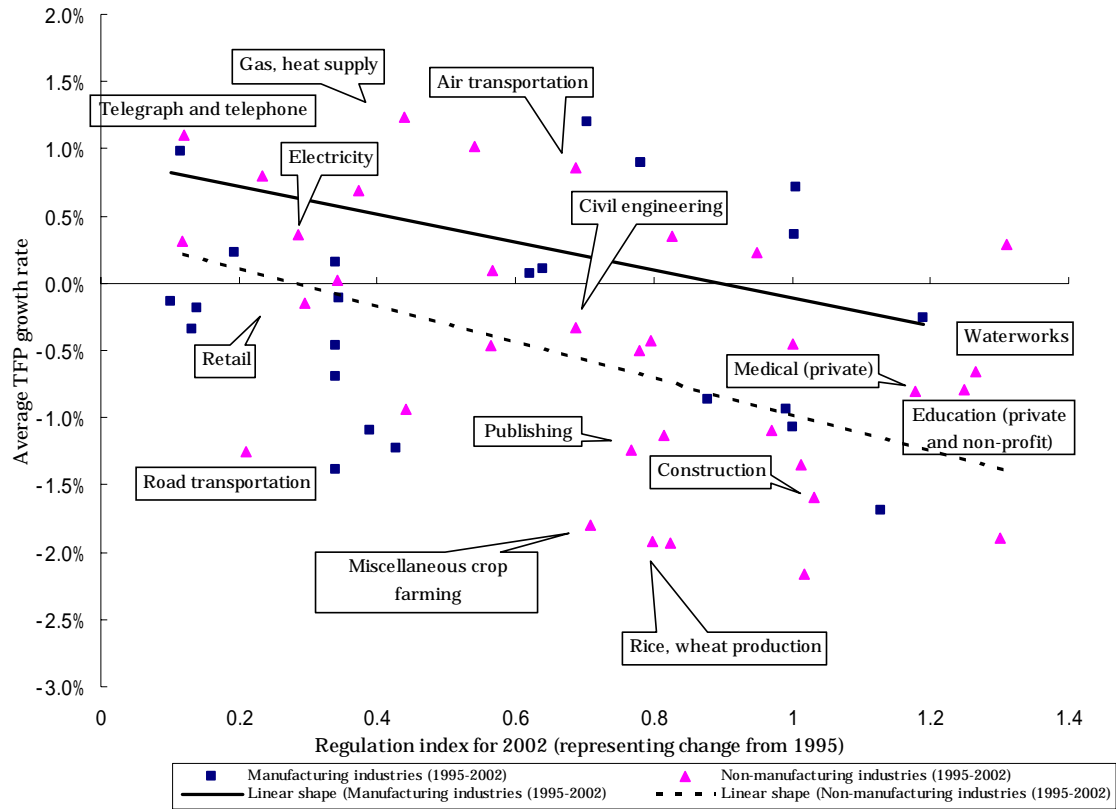


2. Relationship between Progress in Regulatory Reform and Productivity Growth over Past 7 Years (1995-2002)

The correlation between progress in regulatory reform and productivity growth is statistically significant.

A decline of 0.1 percentage point in the regulation index per year from the 1995 level pushed up the TFP growth rate (total factor productivity, or output growth in the GDP that is not accounted for by growth in labor and capital inputs) by 0.14 percentage point (by 0.19 percentage point for the non-manufacturing sector alone). Progress in regulatory reform produced substantial effects in the finance, insurance industry, real estate industry, and construction, civil engineering industry. Effects were also tangible in the agriculture and energy industries.

Figure 2: Relationship between Progress in Regulatory Reform and Average TFP Growth Rate in Major Industries (1995-2002)

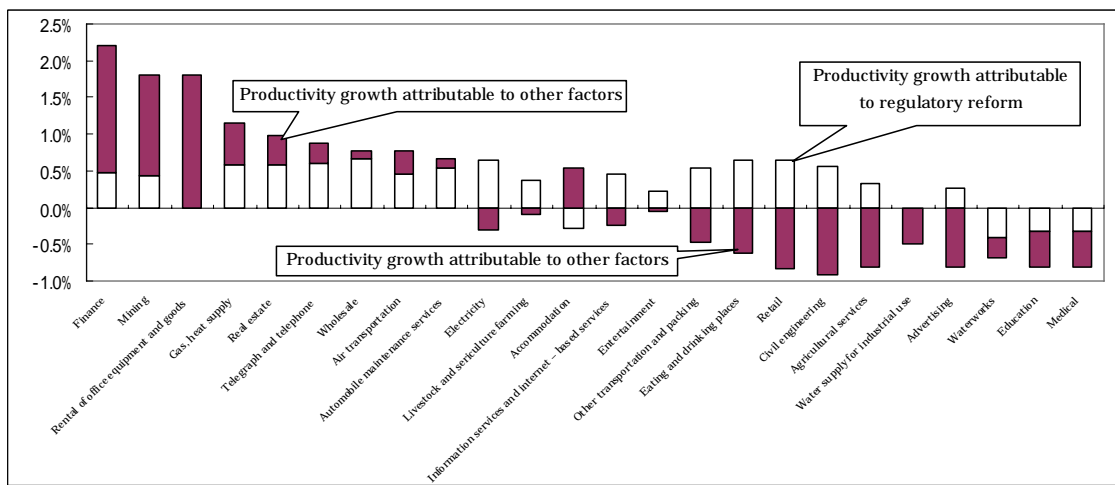
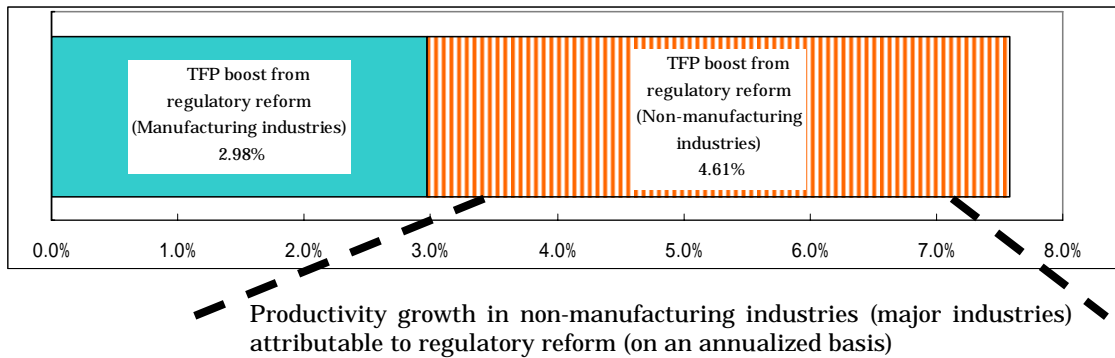


Excluding industries with a regulation index of zero in 1995 and 2002
 Major industries picked up from Figure 5-1 in the report proper

3. Contribution of Regulatory Reform to Productivity Growth over Past 7 Years (1995-2002)

Figure 3 shows past productivity growth attributable to progress in structural reform as calculated with the use of the co-efficient for all industries used in the estimation formula (2) in Section 6 of the report proper, based on the analysis of the relationship between reform progress and productivity shown in Item 2..Of the TFP growth for the economy as a whole, approximately 60 percent was attributable to progress in regulatory reform in non-manufacturing industries.

Figure 3: Breakdown of TFP Growth Attributable to Regulatory Reform (Accumulated Basis) (1995-2002)



4. Effects Expected from Accelerated Regulatory Reform in Future

If the amount of regulations in all industries is halved over the coming two years, productivity is expected to rise 0.11 percentage point as a result on an all-industry basis. If the halving is achieved over a five-year period, the productivity boost at the end of the period will be around 0.05 percentage point. (see Figure 4)

Of industries still governed by a relatively large number of regulations concerning entry into and exit from the market, agriculture and public services, services for individuals (medical, education, social welfare, etc.) are expected to get a productivity boost of 0.06-0.24 percentage point if the amount of regulations is halved. (see Figure 4)

Of industries still governed by a relatively large number of regulations concerning entry into and exit from the market, the finance, insurance industry is expected to receive a productivity boost of 0.64 percentage point three years later if 10 percent of the existing regulations are eased in each of the next 3 years. The ratio of the TFP of

the Japanese financial industry to that of the U.S. financial industry was 0.69 in 2000, but the figure is expected to rise to 0.74 if productivity growth accelerates in Japan as a result of regulatory reform as shown in Figure 5 (assuming that typical growth will continue in both Japan and the United States).

Figure 4: Productivity Boost in Target Year Due to Halving of Regulations from Current Level

	Current TFP growth rate	TFP boost in the target year (compared to the previous year)		(For reference) Share of value added in overall industries
		2 years later (the end of fiscal 2007)	5 years later (the end of fiscal 2010)	
Manufacturing industries	1.3%	0.02% points	0.01% points	0.25
Non-manufacturing industries	0.1%	0.14% points	0.07% points	0.75
All industries	0.7%	0.11% points	0.05% points	1
Public services/ services for individuals (medical care, education, social welfare, etc.)	-0.5%	0.12% points	0.06% points	0.12
Agriculture	0.9%	0.24% points	0.12% points	0.02

Note 1: The current TFP growth rates cited above are figures for 2002-2004 calculated with a SNA-based simplified estimation formula.

Note 2: The shares of value added cited above are figures for fiscal 2002

Figure 5: Effects Expected from Review of Regulatory Requirements Concerning Market Entry/Exit in Finance, Insurance Industry

In the case where a total of 30 percent of the requirements are eased over 3 years, with 10 percent eased each year (See Note 1 below)

Examples of Deregulation	Current TFP growth rate	TFP growth rate 3 years later (estimate)		For reference Ratio of Japanese TFP to U.S. TFP in 2000
		TFP boost	Ratio of Japanese TFP to U.S. TFP	
Easing of 10 pct of requirements under regulations concerning market entry	1.6%	0.47% points	0.736	0.690
In addition to the above, easing of 10 pct of requirements under regulations concerning market exit		0.64% points	0.740	

Remarks: The current TFP growth rates cited above are figures for 2002-2004 calculated with an SNA-based simplified estimation formula.

(Note 1) "Easing of 10 percent each year" = The average deregulation speed for the five countries which made the fastest progress in economic deregulation in 1998-2003 among the 26 OECD countries other than Japan. Data are taken from "Product Market Deregulation in OECD Countries: 1998 To 2003" by Conway, Janod and Nicoletti (2005). The five countries were Belgium, the Czech Republic, Hungary, Italy and Turkey.

(Note 2) Data used in the comparison of the Japanese and U.S. TFP is by Motohashi (2003)

<Policy Message>

In order to enhance the Japanese economy's growth potential and productivity, it is important to speed up regulatory reform, in non-manufacturing industries in particular. Also important is to verify the progress in reform to ensure that sector-by-sector reform measures will lead to productivity growth at the macroeconomic level.