

Japanese Business Responses: Beyond Regulations

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(Management Tools)
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1. Introduction

- Japan suffered from severe pollution problems till 1970's.
- Japan dealt with these problems and solved to certain extent.
- Recently, Japanese business take environmental actions beyond regulations

2. Eco-Efficiency in Japan

Eco-Efficiency
=GDP/Environmental Impact

Figure 2.1: Trends in Eco-Efficiency (SO₂, NO_x & PM)

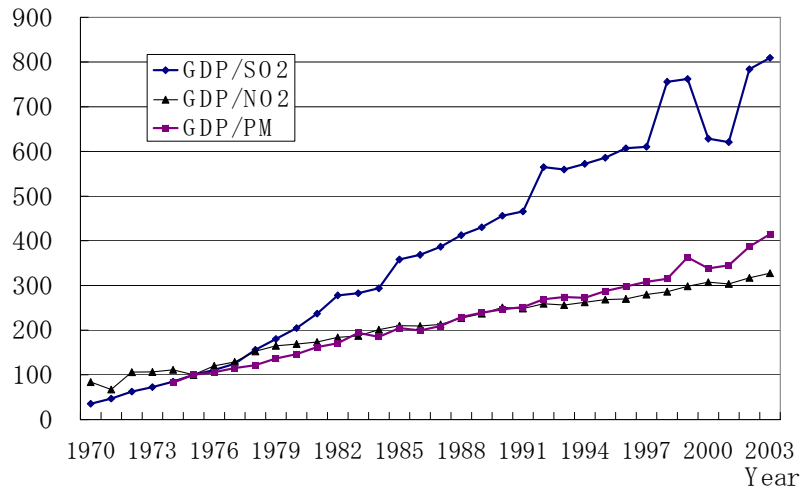


Figure 2.2: Trends in Eco-Efficiency (Waste, Energy Consumption & CO₂)

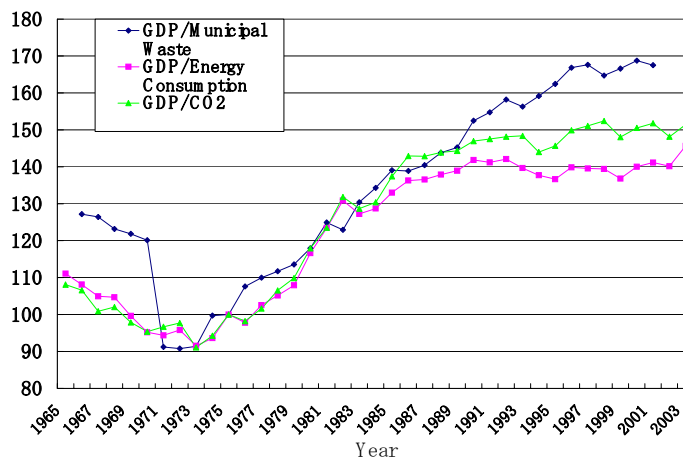
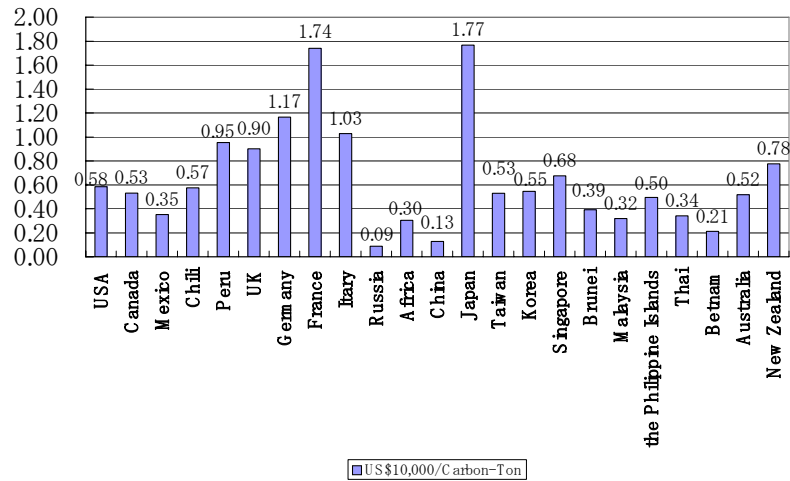


Figure 2.3: International Comparison of CO₂ Efficiency



Japanese Eco-Efficiency

- Continuous Improvement in GDP/traditional air pollutants
- Continuous Improvement in GDP/Energy, GDP/CO₂ and GDP/Waste
- Successful Regulation
- Voluntary Practices and Actions?

3. Voluntary Environmental Practices (Management Tools)

Environmental Management System (EMS, ISO14001)

- A means of that enables a firm to undertake environmental conservation measure on a voluntary basis.
 - (1) setting up principles and goals
 - (2) establishing systems and procedure
 - (3) implementation
 - (4) checking
- ISO14001 is a certified EMS
(***Standardization***)

Figure 3.1: Trends in Japanese ISO14001

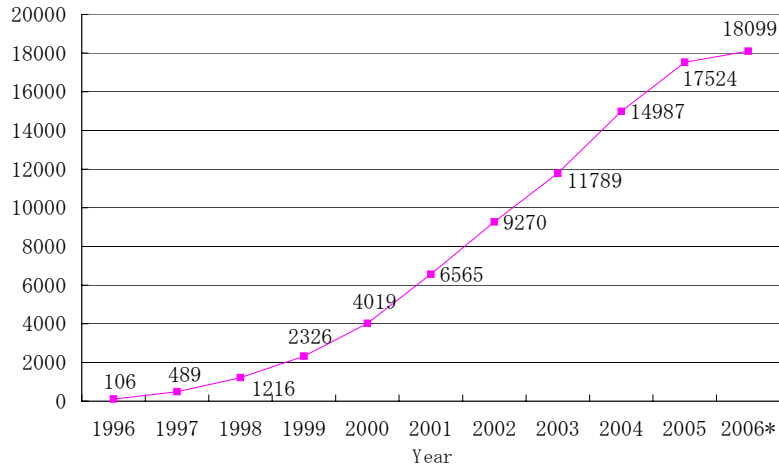


Figure 3.2: International Comparison of ISO14001

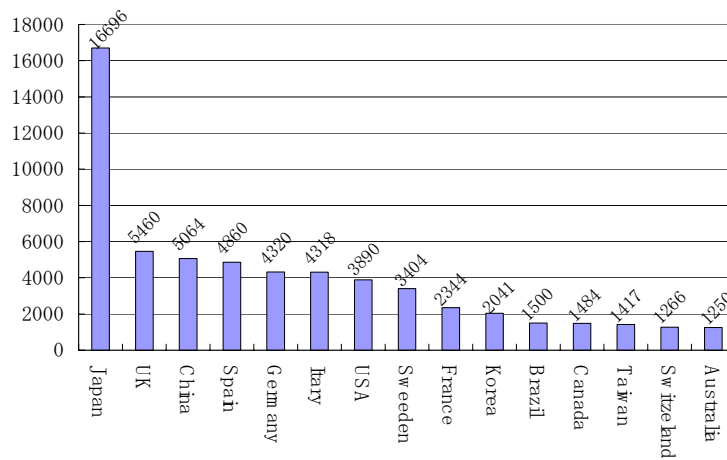
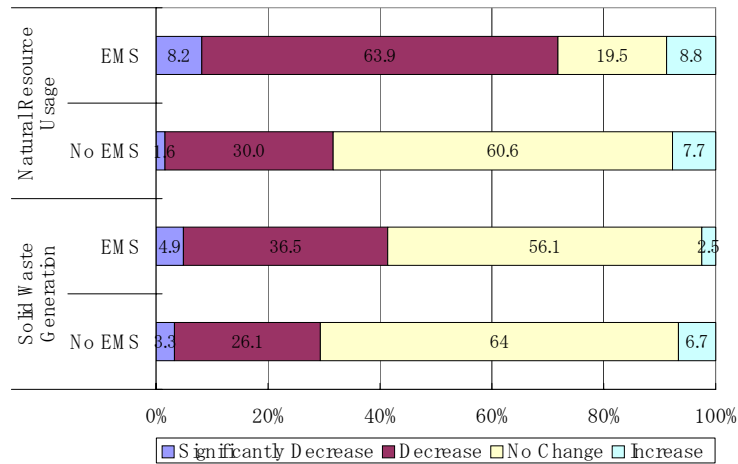


Figure 3.3: Effects of ISO14001



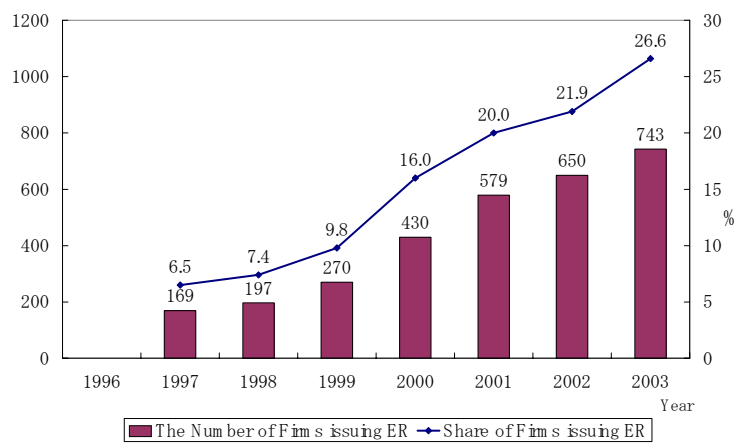
Environment Reports by Private Firms

- Disclose information on environmental impacts of production processes or products to the public
- Reports are designed to inform stakeholders (e.g., investors and consumers) of the firm's products and environmental performance.
- Developed into "Sustainable Report"

Sustainability Report: Mitsubishi Corporation



Figure 3.4: Firms issuing a environmental report



Environmental Accounting System

- *Support management make more efficient decisions concerning the impact of the firm's production practices on the environment*
 1. *Environmental conservation costs,*
 2. *Environmental conservation benefit*
 3. *Economic benefit associated with environmental conservation activities.*
- **Effects on Environmental Innovation**

Figure 3.5: Increases in Environmental Accounting System Adoption

(Data from "The Survey of Environmental Friendly Corporate Activities.")

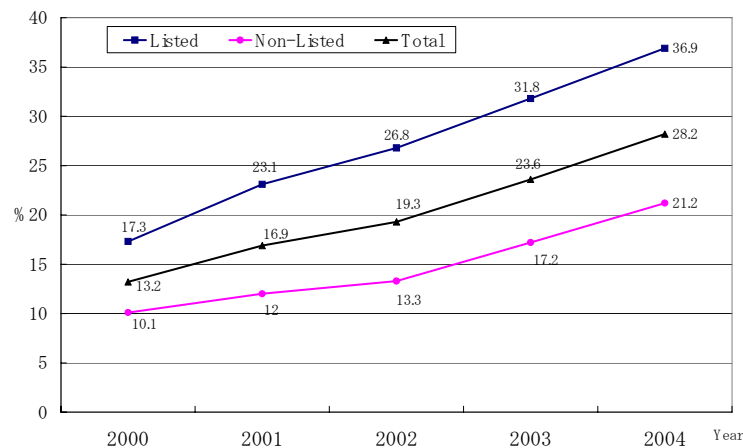
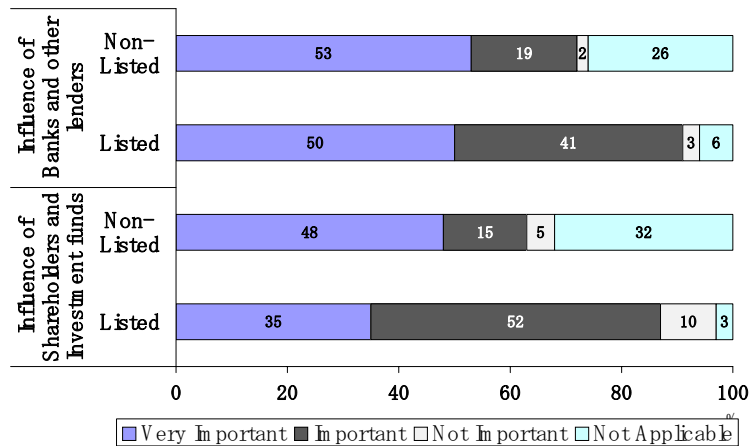


Fig.3.6: Roles of Financial Sectors
(From the OECD survey)



Voluntary Environmental Practices

- Diffusion of Environmental Management (ISO14001), Environmental Accounting & Environmental Report
- ➡ Reduction of Environmental Impacts
- Environmental Innovation (Arimura et al. (2006))
- Socially Responsible Investment
- **Role of Stakeholders**

4. Voluntary Action Plan

- Japanese Business Federation (Keidanren)
 - VAP proposed: 1996
- Major Goal: **Counter global warming and waste problems**
 - Reduce CO₂ emission &/or Energy Consumption (Global Warming)
- 57 industrial organizations and companies (FY2005)

Characteristics of VAP

1. Completely Voluntary: Free from regulatory surveillance
2. Wide variety of participants (includes manufacturing, energy, distribution, transportation, construction, foreign trade, non-life insurance, etc.)
3. Flexibility of Targets (Quantitative targets (absolute) or relative targets)
4. Performance evaluated annually

VAP

1. Setting Targets
 2. meeting the targets
 3. Follow-up of Performance (Evaluation)
 4. Public Disclosure
- These 4 steps are repeated each year to prevent not meeting the targets set at 2010.

Figure 4.1: CO₂ Emission/Energy Consumption of VAP participating firms

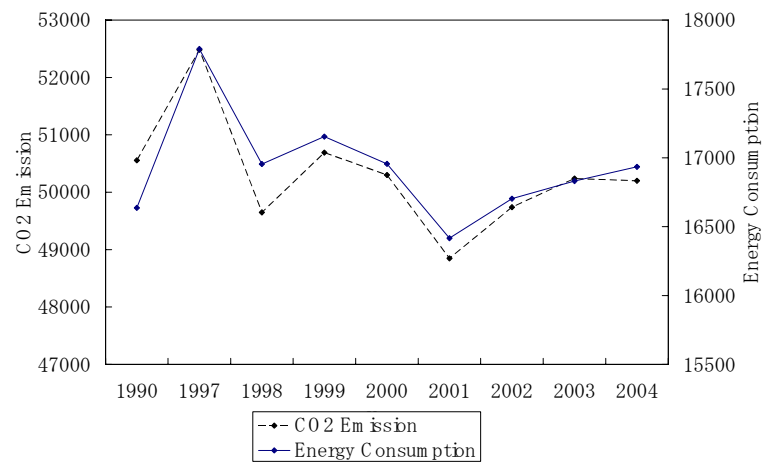


Figure 4.2A: Trends in CO₂ emission intensity (Industries with CO₂ intensity targets)

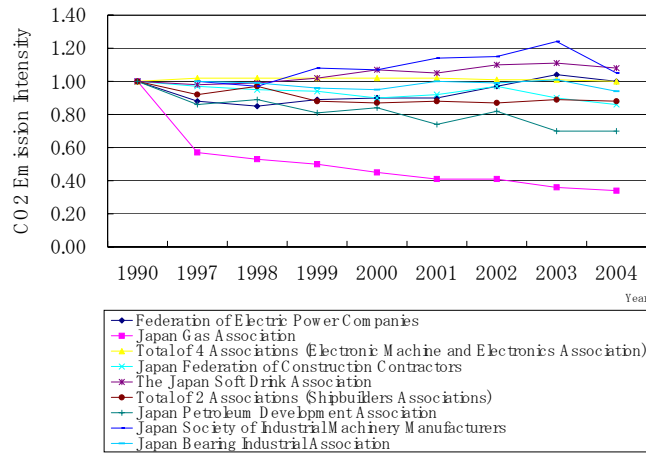


Figure 4.3: Trends in CO₂ emission (Industries with CO₂ emission targets)

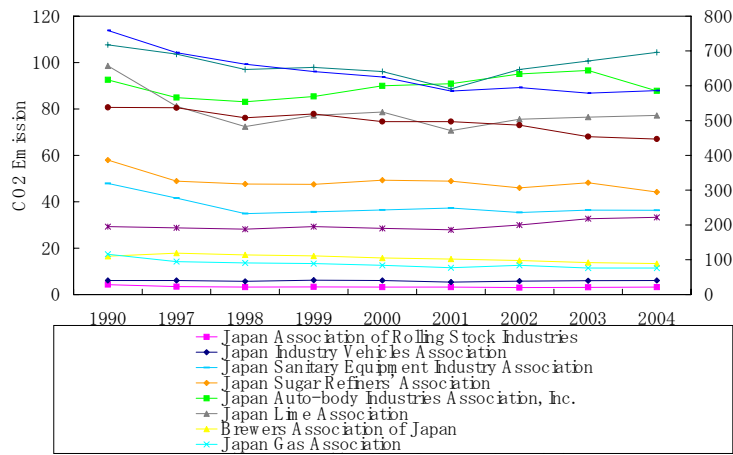


Figure 4.4: Trends in energy consumption intensity

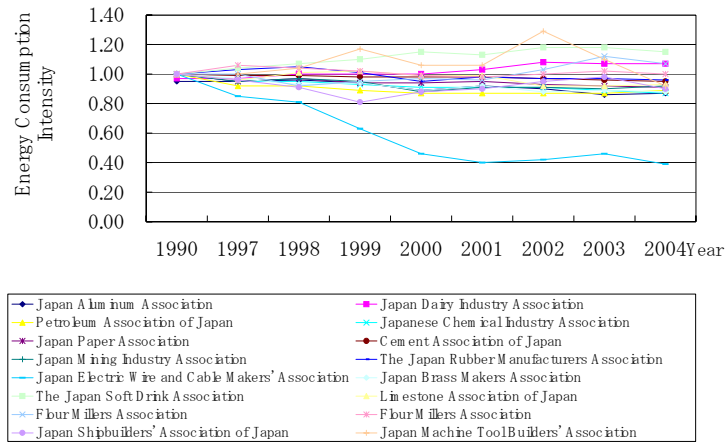
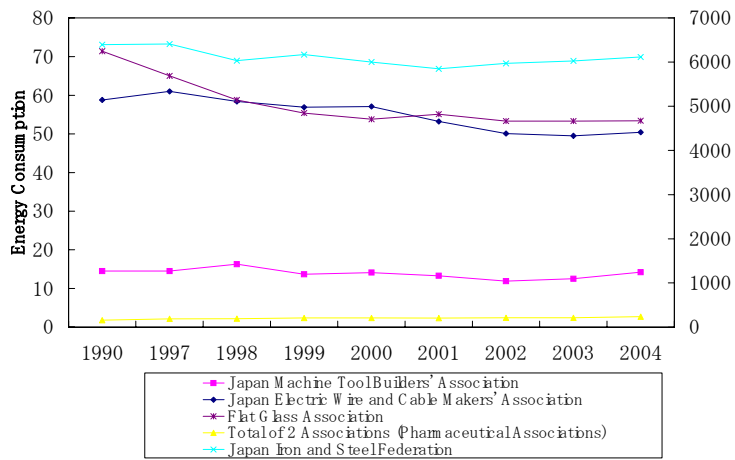
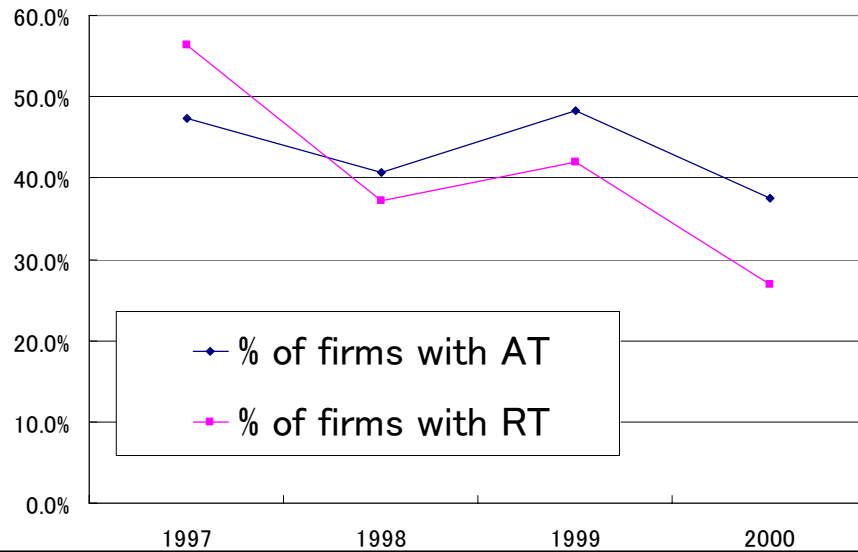


Figure 4.5: Trends in energy consumption



Investment in Energy Saving Technology



Effects of VAP

- Mixed Results
- Absolute Targets promotes energy saving investment (Arimura et al (2006))

5. Role of Public Sectors

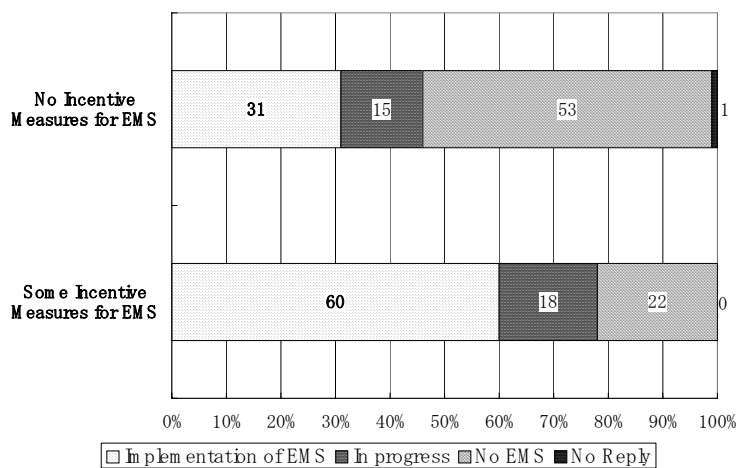
- Guidelines for Environmental Reports and Environmental Accounting



A kind of **Standardization**

- Assistance Program for Adopting EMS
 - Financial Supports
 - Reduction of Inspection Frequencies
 - Technical Assistance *etc.*

5. Role of Public Sectors



Concluding Remarks

- In Japan, diffusion of voluntary environmental practices are evident.
- Some effects of voluntary practices are reported.
- Some Effects of Voluntary Action Plan by Japanese Business Federation
- Roles of the Government
- Stakeholders (Investors, NGOs, Commercial Buyers etc) play an important role.