

Toward the Sustainable Corporation: Challenge of Japanese Electronics and IT Industry

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Abstract

In Japan, as well as in most industrialized countries, the concept of sustainability becomes essential issue for a company to keep or strengthen its competitiveness. In addition to clean technology development, many Japanese companies have introduced environmental management systems such as ISO14001, published environmental reports, and tried to calculate environmental accounting. And most of these companies have regarded themselves to do necessary efforts corresponding with request of stakeholders. However, being the green corporation becomes insufficient even in Japan, because of stakeholders' emerging interest in sustainability. Some Japanese companies are now trying and struggling to check their sustainability and publish corporate sustainability reports, considering to the harmonization of Japanese business circumstances with globally standardizing concepts for sustainability.

This paper describes current Japanese business movement toward the sustainable corporation from the green corporation, with a case study of Japanese electronics and information technology (IT) industry. The key issue for the electronics and IT industry is to provide solution services with IT technology for establishing the sustainable society, as well as to be itself the sustainable industry.

1. Introduction

Most Japanese companies believed that they did necessary efforts corresponding with stakeholders' requests for environmental issues, and they also considered that they were simply needed to improve their environmental performances and eco-efficiencies. With regard to environmental friendly business activities, many Japanese companies have made their efforts to be green so far. Their activities would be regarded as the top level in the world. Needless to say, with regard to clean technology development, Japan has competitiveness in some business fields, such as low emission vehicles including hybrid vehicles and fuel cell vehicles, energy efficient manufacturing systems, photovoltaic systems, and so on. As for environmental management system, Japanese firms have the most ISO 14001 certifications around the world. As of the end of 2002, the number of ISO 14001 certificates in Japan was 10,620, approximately three times of that in the second country, Germany (3,700). Also, according to the survey of KPMG (2002), Japanese companies were the most likely to produce "sustainability" reports with 72% of top 100 firms doing so, followed by UK companies (49%). Furthermore, the Ministry of Environment (2003) reported that 19.3% of major Japanese companies used environmental accounting systems, from the questionnaire survey for about 3,000 firms in December 2002.

However, being the green corporation becomes insufficient for a desirable corporation that coexists with society, because of stakeholders' emerging interest of sustainability even in Japan. As well as companies with advanced thinking in the world, Japanese major companies become to consider about the concept of sustainability consisting of the triple bottom line: economic priorities, environmental objectives and social concerns. Now Japanese companies take attention to sustainability as essential to keep or strengthen its competitiveness in the 21st century: the era of sustainable development.

When a company realizes the importance of sustainable business activity, what should it do next? In general, a company to be sustainable would have to establish its vision and clarify its sustainable policy. Then the company can design its strategy and implement it. In order to work such sustainable business cycle effectively, it would be necessary not only to change its corporate governance viewing all aspects of triple bottom line, but also to change its management system for

sustainable business activity. And communication with stakeholders would become more important than ever. While these efforts would improve sustainability of business activities, it would be recommended to seek business opportunities to improve sustainability of the society.

Besides, in order to establish the sustainable society, we should consider effective use of information technology (IT) that has become more central to the world's economy and culture for the past twenty years. Waage et al. (2003) argue that there is potential for IT to transform modern business into a more efficient cyclical, networked, and sustainability-oriented system that pays returns through economic, ecological, and social prosperity. According to Tobias et al. (2003), applications of information and communication technologies and their integration into business process offer enormous potential for shaping sustainable development, although the implementation in society poses certain problems with respect to sustainable development. Thus contribution of the IT industry is especially important for sustainable future.

With the consideration of above issues, this paper describes current Japanese movement toward the sustainable corporation from the green corporation, focusing a case study of Japanese electronics and IT industry, one of industries that can provide some solution services toward establishing sustainable society with IT.

2. Current movement toward sustainable corporation in Japan

Many Japanese companies recognize importance of corporate social responsibility (CSR). Keizai Doyukai, the Japan Association of Corporate Executive, published the 15th Corporate White Paper, titled "'Market Evolution' and CSR Management", March 2003. This White Paper proposes the new standard for corporate evaluation, as a tool both for acting CSR and establishing corporate governance. This standard consists of 110 items through the main five dimensions: market, environment, human, society, and corporate governance. The White Paper implies that Japanese major corporate executives have wills to change their business models into more sustainable ones. In addition, according to the questionnaire survey for corporate executives in this White Paper (N=634), 79% consider that CSR is important for corporate profitability; also 82% think that priority for CSR is not low even under current inactive economic conditions. However, only 8% set CSR at their core business strategies, plan the strategies connecting to their profits, and implement. These results indicate that actual practice is not so easy as understanding of CSR.

Comparing to other industrialized countries, the influence of investors on sustainable business activities is not strong yet in Japan. For example, the history of social responsible investment (SRI) is very young and its market size is quite small. There are seven products of SRI funds with Japanese domestic stocks. Among them, only one product deals with entire CSR attributes of corporate performance, and the others focus on more environmental issues. The first type of SRI fund, Nikko Eco Fund, was launched in August 1999. And total asset of these funds as of the end of July 2003 is 62 billion Japanese Yen (approximately 520 million US Dollars). The evaluation of performance of these Eco- or SRI funds is unclear. For example, compared to the change of Nikkei 225 Index between July 2002 and July 2003, four SRI funds show better performances in the same period, but one shows even and the other two show worse. Meanwhile, the interest for SRI is gradually growing. Morningstar Japan has published its own SRI Index since July 2003, like Dow Jones Sustainability Index or FTSE4GOODS. Also Sumitomo Trust Bank started a Japanese first SRI fund for corporate pension funds in this summer. These movements would be expected to accelerate sustainable business behaviors.

In order to learn current condition how Japanese companies try to shift from the environmental management to the sustainable management, integrating corporate environmental, economic and social values, Fujitsu Research Institute surveyed the change of contents of environmental reports published by Japanese major companies listed on the First Section of Tokyo Stock Exchange (TSE First). There were 1520 companies on the TSE First as of the end of June 2003. Shown in Table 1, 818 (54%) companies reported at least their environmental activities. In these companies, 468 (30% of the total) companies published environmental reports. Among them, 83 (6% of the total) only disclose their environmental performances and activities (Category 1), 268 (18% of the total) publish additional information such as voluntary environmental activities in regional communities (Category 2). And 65 (4% of the total) companies add health and safety information, and/or social contribution more

systematically in their report (Category 3). The rest 42 (3% of the total) companies published sustainability (or like) reports (Category 4), with mention of their understandings of sustainability and trying to compose their reports, according to the triple bottom line and/or the guidelines of Global Reporting Initiative (2002). When we see the difference of sustainability-concerned business activities in industry type, there is a difference between manufacturing industries (807 companies) and the other industries (713 companies). That is, regarding to the ratio of publishing environmental reports (average is 30% as mentioned above), 42% companies of the manufacturing industry published the reports, while 17% companies of the other did. As for disclosure beyond the environmental report (Category 1 and 2), 10% of manufacturing companies are defined as Category 3 or 4, while 4% of the others are.

Table 1: Number of the TSE First Companies Reporting Environmental Activities

Type of reporting	Number		In manufacturing industries		In the other industries	
Reporting	818	54%	539	67%	279	39%
Indicating only vision and plan	360	24%	202	25%	158	22%
Publishing environmental report	458	30%	337	42%	121	17%
Category 1 <i>Reporting simply environmental performance and activities</i>	83	5%	58	7%	25	4%
Category 2 <i>Adding some social (regional) activities</i>	268	18%	200	25%	68	10%
Category 3 <i>Adding health, safety and/or social issues</i>	65	4%	53	7%	12	2%
Category 4 <i>Trying to report corporate sustainability</i>	42	3%	26	3%	16	2%
No reporting	702	46%	268	33%	434	61%
Total	1520	100%	807	100%	713	100%

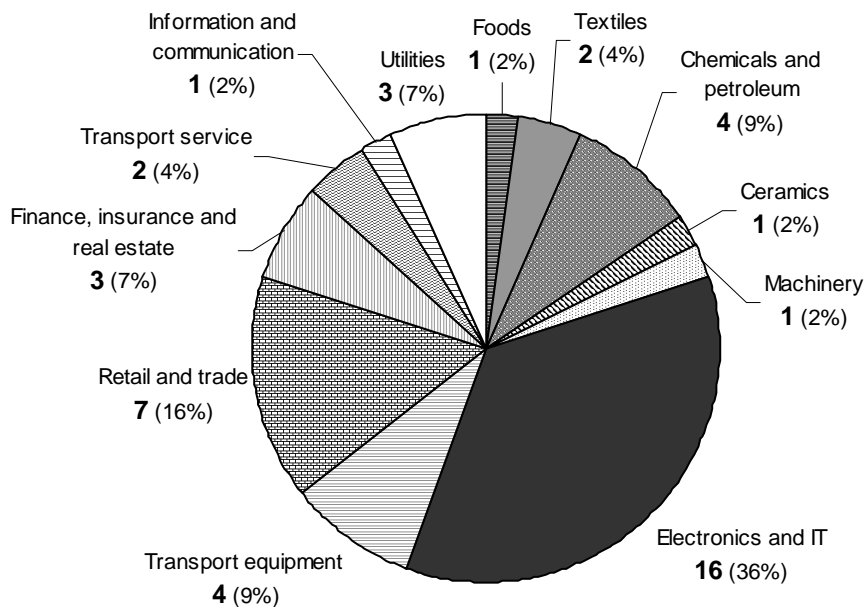
From the above survey, 42 companies published sustainability or like (Category 4) reports. However, since there were two companies in a same company group and both activities were reported within one sustainable report, number of the reports comes to 41. And then we add four other sustainable reports published by other companies that are major but unlisted on the TSE. Now we have 45 sustainability reports for the detail survey as follows. These companies would be regarded as the first movers toward the sustainable corporations in Japan. Among the 45 reports, 16 reports were published from electronics and IT companies, followed by six reports from retail and trade companies, four reports from transport equipment industry such as automobile makers, as well as four reports from chemical and petroleum companies (Figure 1).

The outcome in Figure 1 would suggest two kinds of backgrounds about business interests in sustainability. One is that global business activities would require companies to concern about its sustainability. For example, Japanese major electronics and IT companies and automobile makers have gained numerous sales from overseas, and foreign investors own significant share of their stocks. According to the Ministry of Economy, Trade and Industry (2003), fiscal 2001 sales from overseas business activities of the transport equipment industry was 44.1% of total sales and that of the electronics and IT industry was 27.6%, while that of whole manufacturing industry was 16.7% on average. Therefore, those industries would be serious about what is internationally required by stockholders, customers, public authorities, and so on. The other background would be found in proactive reporting of retail and trade companies. Except an international trading company, the other

five companies mainly do their retail businesses to the domestic final consumers. That is, these retailers seem to be concerned about emerging interests of Japanese consumers in sustainability. In addition, most of 45 companies have just started to publish the Category 4 reports. In 2001, there are only seven companies that disclose their sustainability in their reports. 18 companies started to report sustainability in 2002, and then 20 companies joined in 2003 as of the end of July 2003. Many companies have not published their 2003 environmental report yet. Although there were 345 companies with notes of the publishing year, in the Category 2 and 3, 273 companies disclosed 2002 report as of the end of July 2003. Therefore, it is assumed that number of the sustainability-concerned companies would increase till the end of 2003.

In the next section, we focus on current behavior of the Japanese electronics and IT Industry, one of the sustainability-concerned industries.

Figure 1: Companies Publishing Sustainability Report in Japan (as of July 2003)



* Total 45 companies including four non-TSE First companies

3. Case of Japanese Electronics and IT Industry

As mentioned above, there were 16 electronics and IT companies that published sustainability reports in Japan (Table 2). Nine of these companies have changed the name from the environmental report to the sustainability report, the CSR report and so on; the other seven companies have not changed the names such as environmental report but the contents now include social and economic dimensions. Whether the report is named as a sustainability report or not, most of these companies just started to introduce the concept of sustainability into their business activities, and they are still struggling. From our careful review for these 16 reports, most reports seem to put the economic and social statements in addition to their conventional environmental statements. It could be said that these are handy reports to learn economic, social and environmental activities of the company at the same time, but the three issues are reported as relatively independent. For example, there are different viewpoints about the concept of sustainability. Although all 16 companies stated that they recognized the “sustainability” and/or triple bottom line, some companies focus on environmental sustainability such as zero waste emissions, climate neutral or recycling-based society.

Table 2: Report of Sustainability-concerned Japanese Electronics and IT Companies

Hitachi	Environmental Sustainability Report (2003 ~)
Toshiba	Environmental Report
Mitsubishi Electric	Sustainability Report (2003 ~)
Fuji Electric	Environmental Report
Omron	Environmental Report
NEC	Annual Environmental Report
Fujitsu	Sustainability Report (2003 ~)
Seiko Epson	Sustainability Report (2003 ~)
Matsushita Electric Industrial (Panasonic)	Sustainability Report (2003 ~)
Sharp *	Environmental Report
Sony **	CSR Report (2003 ~)
Pioneer	Environmental Report
Matsushita Electric Works	Sustainability Report (2003 ~)
Canon	Sustainability Report (2003 ~)
Ricoh	Sustainability Report (2002 ~)
IBM Japan *	Environment & Well-Being Progress Report

* Sharp and IBM Japan did not publish 2003 reports as of the end of July.

** Sony published Social and Environmental Report in 2002.

However, there are some trials to be sustainable corporations. With regard to the corporate governance, some companies established new divisions aiming to unify their CSR or compliance activities that different divisions had used to deal with individually. For example, Ricoh¹ launched the CSR Division January 2003, and Sony² followed two months later. In this case, the CSR division generally supervises environmental management sections, together with other sections related to CSR. Other companies try to expand the function of environmental management sections to take account of sustainability. For example, Matsushita Electric Works³ renamed its Corporate Department for Global Environmental Issues to the Sustainability Promotion Department, and Fujitsu⁴ set the Sustainable Development Planning Division in the Corporate Environmental Affairs Group. It would not be easy to evaluate the corporate performance from the viewpoints of sustainability. Most companies reported their performance separately for economy, society and environment. Meanwhile there are some unique trials. Hitachi⁵ introduced its environmental evaluation indicator “GREEN 21 Version 2” as the Sustainability Progress Indicator that calculates total points for eight categories based on its Sustainability Compass including stakeholder collaboration and sustainable business models. Matsushita Electric Industrial (Panasonic)⁶ did a sustainability analysis for its recycling facility by Europe environmental NGO, the Natural Step, and published the outcome. Furthermore, IBM Japan⁷ published its original Japanese Environment & Well-Being Progress Report considering CSR issues, with the reference of corporate policy, vision and activities of IBM.

As a case study of these Japanese Electronics and IT companies that have made great efforts to be

¹ <http://www.ricoh.co.jp/ecology/e-/index.html>

² <http://www.sony.net/SonyInfo/Environment/index.html>

³ <http://www.mew.co.jp/e-eco/index.html>

⁴ <http://eco.fujitsu.com/en/>

⁵ <http://greenweb.hitachi.co.jp/en/>

⁶ <http://matsushita.co.jp/environment/en/index.html>

⁷ <http://www-6.ibm.com/jp/company/environment/2002/index.html> (Japanese only)

sustainable, we focus on Fujitsu Group's current work, with viewpoints not only of compliance and risk consciousness derived from society's sustainability concerns, but also of seeking solution business for sustainable society. As for general information about Fujitsu Group, it conducts a total solutions business offering superior products and services supported by powerful technologies in the worldwide business fields of software services, platforms and electronic devices. Its consolidated net sales were 4.6 trillion Japanese Yen and the consolidated employees were 157 thousands as of March 31, 2003. In 2002, Fujitsu Group announced new statement "The FUJITSU Way" that presents sustainable development or environment issues as the source of motivation for daily action by individual employees and as a set of values they all share. It thus positions the sustainable development as the driving force behind its corporate strategy.

In July 2003, Fujitsu Group published its first sustainability report, replacing the former environmental report since 1995. In this report, Fujitsu Group describes its sustainability concept and ideas to pursue sustainability, with stressing its position as an IT company:

"We consider it vital to apply corporate ethics to every activity in which we engage in relation to the environment, economy and society in addition to the provision of better products."

"We accept our social responsibility for assuring the security of the network society and common access to information that are specific concerns of IT corporations."

"We recognize the importance of achieving financial transparency and corporate growth, and we intend to contribute to formation of a sustainable society as well as to reduction of the environmental burden."

And then Fujitsu Group set up the new Environmental Protection Program by the end of fiscal 2006. While this action program mainly focuses on environmental activities, the biggest change from the former program by the end of fiscal 2003 is the new slogan, "environmental management to sustainable management". That is, this action program is designed by the consideration of social and economic viewpoints in addition to conventional environmental management, in order to contribute social sustainable development. The Program consists of four pillars:

- Promotion of sustainable group management in every Fujitsu Group
- Reduction of carbon dioxide emissions in all areas about Fujitsu Group activities and its products
- Provision of the solutions and the products that reduce environmental costs at the clients' systems
- Establishment of global Fujitsu Recycling Network

According to the new Environmental Protection Program, Fujitsu Group is now seeking to develop and provide solution business and products for improving sustainability of the society by means of IT, not only for environment concerns but also for social and economic aspects. Indeed, Fujitsu Group has shown progress in the field of environmental sustainability, such as software services contributing environmental burden reduction and notebook computers with biodegradable plastic parts made from corn. Also, in order to assess environmental improvement effects quantitatively for its green product development, Fujitsu Group is studying and trying to introduce an eco-efficiency index, "factor X", expressed as the change of environmental burden of products divided by the improvements in services such as functions and performance. However, harmonization of social and economic aspects with the environment, for developing solution services and products, is the first voyage. Such effort for sustainable business development may consequently require the Group to consider new concept about its governance, management, and/or assessment systems to be more sustainable.

4. Conclusion

As mentioned in this paper, Japanese major companies become aware of sustainability. And some companies start to absorb the sustainable concept into environmental management and/or to set the thoughts of sustainability onto the center of business. Indeed, these days would be regarded as an initial stage by trial and error to move toward the sustainable corporation in Japan. Thus, there

would be a lot of obstacles to get over. For example, there is no consensus about the standardization of evaluation methods for the sustainable business activity. And it is often difficult for most companies to harmonize an environment management sector with compliance or risk management ones. Also public support for sustainable business is weak, partly due to the Japanese government's small interest, comparing to those of European countries.

The most important thing to consider is that sustainable business activity would not result in cost burden for a company but would bring new business opportunity and corporate competitiveness as stakeholders' interests in sustainable society become strong. And such sustainable business with innovation would surely contribute to realize sustainable society.

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