

CSR paradox caused by gently harmful corporation

Introduction

Towards the solution of environmental problems many business corporations are becoming more conscious about corporate social responsibility (CSR) for sustainability of environment. CSR is now one of the most important factors to solve the environmental problems. Market mechanism can not completely exclude negative externality even if the market accepts emissions trading system or environmental tax. Similarly regulations can reach only a limited level of solution because regulations are a result of compromise between international competitiveness of industries and perfect countermeasure for problem solution.

CSR is an attitude of not only to be compliant with rules and regulation but also to take more positive stance to contribute for environmental issues. Therefore, spread of CSR is essential factor of the problem solution. Many excellent companies are so CSR conscious that they impose on themselves more severe goal than regulation.

For example, corporations of automobile industry are selling or developing “environmental-conscious car” or “eco car” which can attain more severe emission rate than regulation. Toyota is succeeding to get the biggest market share of automobile by establishing higher brand image as car maker of the famous hybrid car “prius”. Also Swedish automobile company Volvo is a famous in terms of environmentally conscious company.

Another industry such as office equipment, household equipment, and even service sector of super market are trying to decrease environmental load from their business activities. As a result of their efforts the environmental load per product is decreasing. The oil consumption per kilometer and the electricity consumption per hour are decreasing considerably. However, automobiles or household electric equipment are environmental load generating machines, not environmentally neutral machines. In other words, increase of eco-products

means increase of less harmful but still harmful products. Therefore, if Increase rate of production volume of eco car or eco office machine exceeds the reduction rate of environmental load per product, the increase of eco-products means environmental load as a total increases.

Let's understand this situation with metaphor of a husband of domestic violence. His physical force of beating his wife has become gentler than before. But frequency of beating has become more than before. Corporation produces less harmful product in terms of environment. But the corporation produces larger volume of the product. This means the corporation assault the earth more gentle but assault more frequent.

My presentation will discuss this paradox that despite of increasing number of CSR conscious corporation the environmental problems such as global warming are becoming more serious.

1. Example of TOYOTA

Toyota established its reputation as advanced environment-conscious corporation by sending the hybrid-car “prius” to auto market. However, in 2007 the share of the “prius” in Toyota’s total sales – Japan and foreign countries- is only 3.3%. The share of energy consuming 4WD-four wheel drive- is much bigger-8.35%- than “prius”. In 2007 the sales volume of “prius” was 281,300 unit – Japan and foreign countries- compared to the domestic production volume of 712,223 unit of “ Land Cruiser” and RAV4.

Table 1 Volume, ratio and CO2 emission of TOYOTA vehicles

	2007 year	ratio	CO2 g/km
Total production volume	8, 534, 690 *a	100%	Corolla 139
Japan	4, 226, 137		
foreign	4, 308, 553		
“prius”	281, 300 *b	b/a 3. 30%	66
Japan	58, 300		
Foreign	223, 000		
4WD	712, 223 *c	c/a 8. 35%	
Land Cruiser	323, 596		263. 8
RAV4	388, 627		184. 3

Source: http://www.toyota.co.jp/jp/environmental_info/
: http://www.toyota.co.jp/jp/news/08/May/nto8_032.pdf
: http://www.toyota.co.jp/jp/about_toyota/monthly_data/j001-07.html

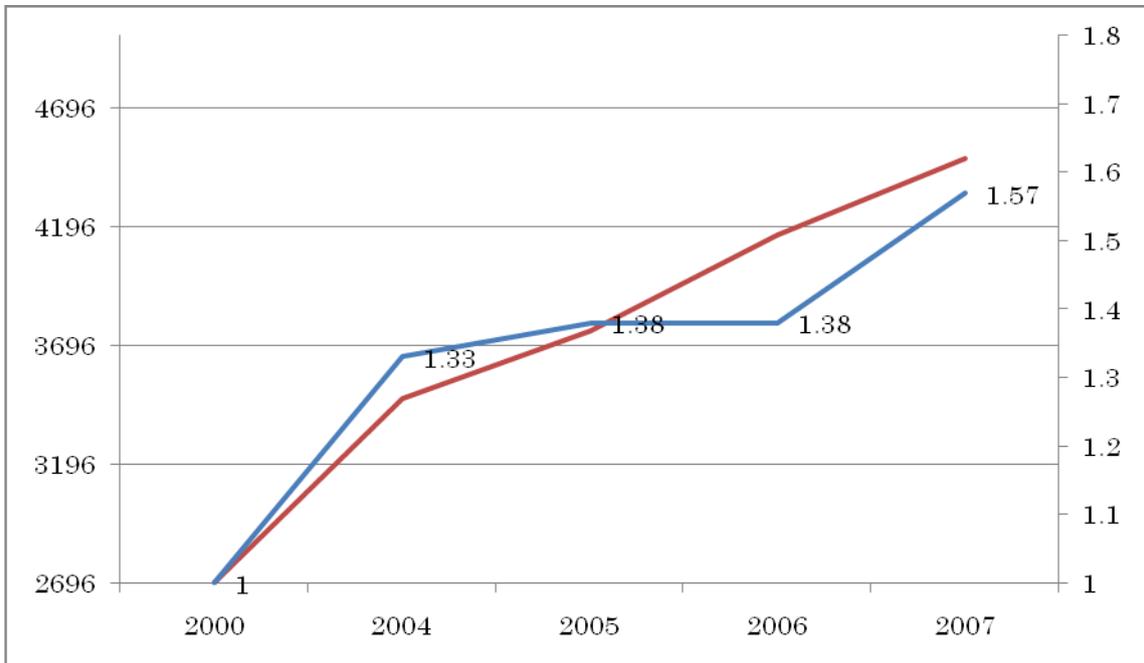
The Toyota's total production volume increased from 5.64 million in 2002 to 8.53 million in 2007, i.e. increase of 51%. If Toyota wants to reduce the total emission of CO2 Toyota have to reduce 51% of CO2 emission. Sure, the "prius" realized 53% reduction of CO2 emission compared to typical sedan type car "Carolla". But , as referred above, the share of the "prius" in Toyota's total production volume is only 3.3% and the share of 4 wheel drive is 2.5 times of the "prius". In consideration of that "Carolla"'s fuel consumption has stayed around 17km/L, we can estimate the total CO2 emission of Toyota corporation increased around 50 % during 2002 and 2007.

2. Example of Canon

Canon is a famous maker of office equipment and one of the most prominent corporation as environment-conscious corporation. In 2003, for the problem of global warming, Canon put its CO2 reduction goal in the name of "Factor 2" which means that Canon doubles its "environment efficiency" of 2010 compared to 2000.

The "environment efficiency" means [consolidated sales / CO2 emission in LCA]. In 2007 Canon introduced energy-saving equipment in its production processes and innovated energy-saving smaller and lighter products. As a result environmental load of transportation and usage of the products decreased improving the "environment efficiency" to 1.57 from 1.38 of the previous year.

Diagram 1 Environment Efficiency of Canon



Source: Canon Sustainability Report 2008, P.15

Though, in its sustainability report 2008-page55- , Canon is proud of its 31% reduction of CO2 emission at the stage of products usage and Canon's environment efficiency improved to 1.57 in 2007 from 1 in 2000, sales expanded to 1.66 [$4481346 / 2696420 = 1.66$] times in 2007 compared to 2000 year- cf. Table 2-. Then we can also estimate that the total CO2 emission of Canon corporation increased at least 9 % during 2000 and 2007.

Table 2 Sales of Canon

	Office imaging equipment	Computer Surrounding equipment	Business Information equipment	camera	Optical Equipment , others	total
2000	861594	1050329	198487	318234	267776	2696420
2007	1290788	1537511	107243	1152663	393141	4481346

Source: [http: www.canon.co.jp/corppoutline/10years_group.html](http://www.canon.co.jp/corppoutline/10years_group.html)

3. Some considerations

We now recognize that, even when CSR or environment conscious corporations reduce environment load per product, the total environment load of the corporation can increase if the increase rate of production volume exceeds the reduction rate of environment load. Many advanced environment conscious corporations gain more of market share based on their good brand image or actual merit of energy cost saving.

Of course the bigger market share of environmentally excellent corporation is preferable in the sense that otherwise the environment load should be bigger because of bigger load discharge emitted by less environmentally efficient corporation.

However, for overcoming global environment problems, the most important thing is total reduction of environment load at global level. Not the per product reduction of environmental load. Solution of the global environmental problems depends on whether the total environment load is below the sum of natural and artificial purification capacity or not. Here the “natural purification capacity” means, for example of CO₂ as a warming-causing substance, capacity of the forest and ocean which absorb and fix the CO₂. On the other hand, the “artificial purification capacity” means capacity of carbon fix by technological methods like the underground storage of CO₂.

No doubt the reduction of per product environment load must be the goal worthy to pursue. The situation, in which world population is growing and consumption level of per head is also growing, requests the reduction of environment load per product as a necessary condition for problem solution. However, we must not forget that the reduction per product is not sufficient condition for solution. For survival of human beings we need the reduction of total discharge of environmental load at global level.

Although argument of CSR is so animated that, in their “environment report” “sustainability report” or “CSR report”, many corporations refer to their achievement for environmental problem. A not-negligible defect of those reports is , in many cases, they don't refer to the total reduction of CO₂ emission of the company.

Both of Toyota and Canon are one of the most advanced corporations in terms of environment conscious management. Every year, NIKKEI -The biggest Japanese newspaper for economy- publishes the ranking of management conscious corporations and in 2007 Toyota got the first ranking and Canon got 16th among the 521 Japanese listed companies which published “environment report”.

In this rough analysis I showed even the top group corporations like Toyota and Canon do not succeed reduction of the total volume of CO2 emission. From the worldwide viewpoint they are surely advanced corporations for environmental management. They are implementing their CSR to tackle the environmental problem like global warming. Still their total CO2 emission has not decreased in spite of decrease of per product emission.

As host country of KYOTO Protocol Japan has strong desire to achieve the goal of minus 6 % of CO2 emission. Now the achievement of Japan is around plus 7 % i.e. 13 % behind from the goal. We are becoming unconfident to achieve the goal.

Conclusion

1. Prominent companies like Toyota and Canon achieved a considerable reduction of per product CO2 emission.
2. Companies with good achievement of the reduction of per product CO2 emission increase their production volume.
3. Those companies have not succeeded to reduce their total volume of CO2 emission.
4. Japan are not achieving the goal of Kyoto protocol.
5. If we want to solve the global warming the concept of CSR should be extended to the responsibility of total reduction of CO2 emission.