

The Policy Paper about Global warming

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Recently, we might accomplish industrialization, and get convenient stuff and circumstances. On the other hand, our earth might be suffering from the stuff which we throw away and hit the earth with.

Our human activity has been increasing the atmospheric concentration of greenhouse gases, and greenhouse gases are affecting the earth in bad way more and more: global warming.

I had been interested in the governmental or international policy which supports to prevent from the global warming. Corporate social responsibility is an increasingly pervasive phenomenon on the European and North American economics and political landscape (Doh&Guay, 2006, p.47). Even though, there are difficult issues between the cost performance and reducing greenhouse gases when we try to decide a policy. I'd like to analyze the relationship between reducing greenhouse gases and cost performance from the micro economical perspective. And I'd like to think about the policy which we should take in the corporate social responsibility.

Why should the government intervene?

In this past a few decades, we have accomplished industrialization a lot. But this industrialization had the environmental negative externality. Since the industrial revolution, we have emitted greenhouse gases such as carbon dioxide and methane.

Indeed, the National Academy of Sciences (NAS) has suggested that by the middle of the twenty-first century, greenhouse gases could be double the levels they were in 1860 and that global temperatures could rise by 2°F to 9°F (Miller&Benjamin&North, 2008, p.183&184). And also, according to Zedillo (2007), rising average temperatures constitute a serious global threat meriting immediate and drastic action. It claims that lack of such action will commit the world to overall costs--due to natural disasters of increasing ferocity, damage to food production, the spread of diseases and the destruction of ecosystems--equivalent to a loss of between 5% and 20% of global GDP each year . To prevent these catastrophic consequences, emissions need to be reduced soon so that the stock of greenhouse gases in the atmosphere never rises beyond twice the level it was prior to the Industrial Revolution (p.35).

However, normally private factories' or individuals' ends are maximizing their profit. And it's very hard to expect them to discard a profit for "being nice to the earth." Even when we drive a car, heat a house, or use an aerosol hair spray, greenhouse gases are produced. This is the environmental negative externality in the market. And then the government needs to intervene and decrease greenhouse gases to prevent from global warming.

How might the government intervene? And what are the effects?

The means which are most widely used in the world to intervene in the market to

adjust negative externality are government regulation and taxation. There's a big trial to deal with greenhouse gases: Kyoto protocol. The 1997 Kyoto conference on climate change, attended by representatives from 160 nations proposed that by 2012, thirty-eight developed nations should cut greenhouse emissions by 5% relative to 1990 levels (Miller&Benjamin&North, 2008, p. 184).

The Kyoto Protocol proposed new three innovative "flexibility mechanisms" to lower the overall costs of achieving its emissions targets. These mechanisms enable developed nations to access cost-effective opportunities to reduce emissions, or to remove carbon from the atmosphere in other countries. While the cost of limiting emissions varies considerably from region to region, the effect on the atmosphere of limiting emissions is the same, irrespective of where the action is taken (United Nations Framework Convention on Climate Change (UNFCCC)).

We can divide this "flexibility mechanisms" into three categories: 1)Clean Development Mechanism (CDM), 2)Joint Implementation (JI) and 3)Emissions Trading.

1) Clean Development Mechanism (CDM)

The clean development mechanism (CDM) is the mechanism that developed countries transfer their technologies of reducing greenhouse-gas emissions to developing countries to help them to reduce their emissions. And then, the developed countries which transfer their technologies count the amount of emissions which they help developing countries to reduce as their own amount of emissions reduced. A CDM project activity

might involve, for example, a rural electrification project using solar panels or the installation of more energy efficient boilers. Developed countries are to refrain from using the amount of emissions through nuclear facilities to meet their emission targets (UNFCCC).

In my opinion, the CDM is a useful measure to reduce greenhouse-gas emissions. Because transferring of technology of reducing greenhouse-gas emissions lead not only developed countries to meet their own emission targets, but also developing countries to deter their emission in the long run. Usually, developing countries tend to emit numerous greenhouse-gas emissions, but not care about reducing greenhouse-gas emissions in the process of developing. Because developing and installing a new technology will cost them too much, and basically, they can't afford to do so.

So the CDM helps developing countries to install a new technology, and which leads the world to reduce greenhouse-gas emissions greatly in the long run.

2) Joint Implementation (JI)

Joint Implementation (JI) is similar to CDM, but this is the mechanism which is taken among developed countries. Under the JI, if a developed country meets its own emission target, the country can help to other developed countries to reduce the amount of emissions and can count the amount of emissions as their own amount of emissions reduced (UNFCCC).

Normally, developed countries tend to keep their technologies secret. And they

don't want to share those with other countries. However, the JI gives them an incentive to share technologies of reducing greenhouse-gas emissions among developed countries. In its turn, sharing a technology of reducing green-gas emissions leads to hold down the emissions.

3) Emissions Trading

Emissions trading provides for developed countries to acquire units from other countries and use them towards meeting their emissions targets under the Kyoto Protocol. This enables developed countries to make use of lower cost opportunities to reduce emissions in order to lower the overall cost of reducing emissions(UNFCCC). In other words, developed countries can buy the emissions by money to meet their emission targets. And also, if developed countries could reduce emissions more than their emission target, they can sell it, too. It may give them an incentive to reduce their emissions.

How should the government choose to intervene?

Governmental intervention with emissions trading looks efficient economically .And it looks that it gives both developed countries and developing ones a huge economical benefit since developed countries can reduce the cost to meet the emission target and developing countries can get benefits from the trading.

However, we have to realize that this mechanism just leans on developing countries and money. We have to remember that every country in this world has corporate

social responsibility. Why don't we try to reduce the amount of emission which we produce within our own country instead of buying the "number" of emission with money just to meet the target under Kyoto protocol? Unless developed countries start to reduce their own emissions by replacing old technologies by new efficient technologies, we cannot reduce the total amount of greenhouse gases in the long run. Emission trading means just a transportation of the emission from one country to the other one. That might not a fundamental solution of global warming. We need to consider the way to reduce our own emissions with taking a cost-benefit aspect into account.

First of all, we can introduce a carbon tax. According to Pearce (2003), there are mainly two types of taxation: the climate change levy (CCL) and the fuel duty escalator (FDE) (p.362). The CCL is a tax on fossil and electricity, and the rate is different among coal, gas and electricity. On the other hand, the FDE's tax rate is decided depending on how much you use the fuel and depending on the marginal damage on climate change.

Second, we can try to change or renew the fuel for producing electricity or for cars from more marginal-damage one to less marginal-damage one. For example, biomass fuel made from corn is being developed recently as a gas for cars.

Third, we can plant and try to make a forest to reduce the amount of CO₂. It might take several decades to raise trees from seeds to trees. But we should better consider this climate-change situation in the long run. It is just like a gift from our generation to the next generation. It might mean a compensation for destroying the environment with

industrialization by our generation.

Conclusion

Recently, the global-warming situation has already got to the point that we need to stop to think about how to reduce the greenhouse gases from the bottom.

Every country in this world has corporate social responsibility. And we have to do our best to reduce the amount of emission which we produce within our own country without just leaning on developing countries and money.

We need to consider the way to reduce our own emissions with taking a cost-benefit aspect into account by introducing a carbon tax, renewing the fuel, planting and using the CDM and JI mechanisms under the Kyoto protocol. I hope not only developed countries but also developing countries will agree on tackling global warming more positively in the G8 Hokkaido Toyako summit which is going to be held from this July 7 2008 in Japan.

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