

NEGOTIATED AGREEMENT FOR GHG EMISSION REDUCTION IN JAPAN AND REPUBLIC OF KOREA: IMPLICATIONS TO ASIAN DEVELOPING COUNTRIES

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Overview

Regulators and industries are seeking adequate measures to reduce greenhouse gas (GHG) emissions at the lowest cost. This has led to the use of more flexible measures as market-based mechanism and voluntary approaches. However, opinions differ concerning the usefulness of voluntary approaches to achieve environmental targets. Voluntary approaches may offer a chance to address environmental problems in a flexible manner at a low cost, based on consensus building between the different stakeholders, the process which developing country is lacking usually. Such approaches, however, may provide few environmental improvements beyond what would have occurred anyway, while both administrative and abatement costs could be greater than using other instruments (OECD, 2003). There are questions about the environmental effectiveness of voluntary approaches but earlier studies concluded that voluntary approaches would be better than traditional command and control regulations, in particular as they can provide increased flexibility in terms of how a given target is to be met. Voluntary Action Plan by Nippon Keidanren, a voluntary agreement with industry has been a major climate change policy in Japan since 1997 while Japan has legally binding GHG reduction target by Kyoto Protocol. In Korea, GHG and energy target management system (TMS) has been introduced from 2011 as a command and control regulation while it had been developed as a Negotiated Agreement at the beginning. Taking two experiences, Japan's Voluntary Action Plan and Korea's GHG and energy target management system (TMS) as examples, this study aims to identify advantages and shortcomings of NAs approach and provide some implications to lead NA approaches to successful implementation in Asian developing countries.

Methods

The each scheme design features have been analyzed. Then qualitative analysis focusing environmental effectiveness, economic efficiency and administrative costs was done. A comparative analysis of each scheme draws critical factors for the successful implementation of voluntary approaches as a GHG reduction measure through literature survey and interview with related stakeholders.

Results

In 1997, Nippon Keidanren (Japan Business Federation) took the lead in formulating Voluntary Action Plan on the Environment, and established the target of controlling CO₂ emissions in 2010 below 1990 levels. Individual businesses in sectors including commercial and other and transport, both affiliated and unaffiliated with Nippon Keidanren, have set up GHG emissions reduction plans. Japanese government have promoted and reinforced Voluntary action plans as a central GHG reduction countermeasures in the industrial sector. In order to improve the transparency, credibility and probability of targets achievement, Japanese government has implemented periodic follow-ups by governmental councils as assessments and verifications of these plans.

In 1998 the Korean government introduced the Voluntary Agreement (VA) system in order to promote energy conservation in the industrial sector. In line with the steep rise of energy price and growing global pressure of GHG emissions reductions as an OECD country, it was determined the introduction of the sector-wide target management system to effectively deal with climate change and attain energy independence. This system is expected to enforce

the effectiveness of the current VA by applying the Negotiated Agreement (NA). Then finally a regulative TMS has been developed.

In Voluntary approach, scheme participation is not an obligation generally. Government intervention has direct influence on increase of participation for Japan and Korea's case. Industry groups have played an important role in Japan's Voluntary action plan. Industry groups are the platform where realizes energy saving potential in the industry sector by the cooperation between the companies who are competitors usually. They also provide an assistance to each member companies for designing, monitoring and reporting. For Korea's TMS, these kinds of cooperative effect would hardly be realized for there is few room for industry group's intervention.

Table 1 Comparison of scheme

	Japan	Korea
Title	Voluntary Action Plan (1997)	Voluntary Agreement (1998) Greenhouse Gas Energy Target Management System (TMS) (2011)
Scheme participants	Industry group	Company, Business site
Sector wide Target	CO ₂ emissions 1990 level annual average emissions from 2008-2012	CO ₂ emissions Coordinate with national mid-term target of 30% reduction from 2020 BAU
Sector Target	Optional among Energy specific Unit, Energy consumption, CO ₂ specific Unit, CO ₂ emissions	CO ₂ emissions in principle, power sector (CO ₂ specific Unit)
Target Setting	Industry group leading	Government leading (prior consultation with Company)
Aim	Alternative of regulative measure	Building regulative infrastructure
Third party involvement and information disclosure	Industry Group (Keidanren) check and disclose information annually, Expert committee by Keidanren, Review of Government council	Third party verification, Government disclose information
Penalty	None	Surcharge

Conclusions

Korea has developed VA from 1998 but shifted to a command and control regulation which had a feature of implementation-based VA to cope with international request to reduce GHG emissions. Japan's Voluntary action plan was introduced from 1997 and government intervention has a direct influence to the increase of scheme participants and further development.

While VA can provide increased flexibility in terms of how a given target is to be met and can be introduced with shorter preparation time and lower administrative costs in comparison with command and control regulation. Experiences in two countries indicate that there are several critical factors for the successful implementation of voluntary approaches.

First, incorporating a comprehensive target setting with a time frame and a structured process organization are important success factors. Second, monitoring procedures and methodologies are an important feedback mechanism to ensure compliance. Third, external incentives and sanctions as well as the integration in a policy mix leads to a successful implementation of the policy instrument. Forth, a policy culture of mutual trust between government and industry and homogeneousness of industry sector is supportive factors.