

China's Green Growth Strategy and Implications for Trade between Korea and China

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1. China's Green Growth Strategy

The Chinese green growth is a concept composed of “green,” “transformation,” and “growth,” with “growth” as the foremost priority while the means for that growth is “green transformation.” It is a dynamic process that seeks not only to restore the polluted environment that was an aftermath of industrialization in the course of economic development but to convert development to be resource-saving, environmentally friendly, and harmonious between economic demands

and ecology. Accordingly, the central tenets of China's green growth policy include (a) the restoration of polluted environment and ecological protection, (b) stronger environmental regulation, and (c) the cultivation of environmentally friendly industries.

Currently, China's green growth is in the early stage of being central government-led. Green growth is the basis for sustainable growth, and since it is not possible without “green transformation, a government-centric top-down reform model will be unavoidable in the near future because of the importance of the endeavor.

That is, the Chinese government is likely to enhance assistance policies for environmentally friendly industries; to put in place strict regulatory measures for the restoration of the environment and the protection of ecosystems. Furthermore, it will most likely induce participation by local governments, private corporations, and citizens, and emphasize the common responsibility for the environment.

2. China's Green Growth Policy and Trade Policy

Our research examined the relationship between China's green growth policy and trade policy, China's first environmental regulation policy and then the details of the related import and export bans and limits, and technical barriers to trade (TBT). An analysis of the relationship between environmental and trade policies revealed that China used environmental policy in the past as a substitute for trade policy. With trade barriers falling because of reform and openness policies and entry into the WTO, it slackened its environmental policy in order to attract foreign capital and encourage the growth of local businesses. Recently, facing a backlash in the form of serious environmental pollution, it seems instead to be using trade policy as a substitute for environmental policy. That is, since free trade caused pollution, China seems to be using trade restriction to resolve pollution situations. Therefore it is expected to increase import and export bans and limits relating to the environment with correspondingly higher chances for trade disputes with other countries.

The two main conclusions of a regression analysis of Chinese environmental regulation on exports are as follows: First, considering the effect of human and physical capital as factors of production on trade, Chinese export

industries were shown to be more labor-intensive than capital-intensive. Second, analyzing the relationship between pollution and trade, improvements to the environment because of China's environmental regulation were shown to have a positive effect on export increases.

3. China's Subsidies of Green Industries and Trade Disputes

The research mainly analyzed U.S. and EU countervailing duties against Chinese subsidies of green industries and WTO dispute cases. The central background to these disputes is the Chinese government's aggressive pursuit of its green industries strategy and the response of the U.S. and the EU. According to the case study, the major green industry subsidy paid by China that the U.S. and EU deemed actionable were the favorable policy loans for specific industries, provisions of factors of production at below appropriate prices, and gratuitous subsidies. These were all given as financial benefits to specific businesses, which the U.S. and EU deemed to be specific financial contributions and therefore actionable subsidies. Furthermore, tax breaks, including reduction and exemption of income taxes, were frequently classified as actionable subsidies. The Chinese green industry subsidies thus classified as actionable were usually given by the central government, but there were also cases where gratuitous subsidies paid by local governments were determined to be actionable.

Meanwhile, in contrast to China's proactivity in taking a variety of measures to develop green industries, it has been reluctant to provide information on its policy, leaving open the possibility that disputes because of transparency issues will only be exacerbated in the

future. Therefore, in addition to regulating direct subsidies in disputes over China's green industry disputes, the importance of transparency should not be overlooked. Although China has taken a cautious stance to these developed economies' countervailing measures and has not responded aggressively in the past, it is

recently showing evidence of being willing to respond with greater alacrity. One example of China's new decisiveness is the countervailing measures against polysilicon from the U.S. and EU, a key ingredient in solar batteries. This new stance is expected to intensify disputes surrounding green industry subsidies.

Table 1. China: countervailing measure of Green Industry

Target Country	Product	Timeline
USA	Polysilicon	<ul style="list-style-type: none"> - Initiated countervailing measure investigation (July 20, 2012) - Provisional measures (September 16, 2013); 6.5% provisional countervailing duty levied on 2 American polysilicon producers (Hemlock Semiconductor Corp, AE Polysilicon Corp)
EU	Polysilicon	<ul style="list-style-type: none"> - Initiated countervailing measure investigation (November 1, 2012) - Extended countervailing measure investigation (November 4, 2013); determined that the investigation period would be extended by 6 months by May 1, 2014

4. Green Trade between China and Korea

According to the Chinese domestic market for import data derived using the Chinese customs statistics, the Chinese environmental product import market recorded USD 181.7 billion in 2012, with domestic consumption accounting for 34.3% of that amount at USD 62.5 billion. The main exporters of environmental products to China in 2012 were in order of Japan, German, the U.S., Korea, and Taiwan; Korea, being fourth, accounts for 8.26% and 6.86% in the overall import market and the imports for domestic consumption. Much like Germany whose share of imports for domestic consumption exceed that of the overall import market, expanding its share in the Chinese domestic market should be a core strategy for expansion in the Chinese environmental market.

An analysis of the green industry cooperation cases between Korea and China revealed that Korean businesses that had expanded into the Chinese environmental market were mostly concentrated in the pollution cleanup field. However, it is necessary to take a more diversified approach to this market by discovering niches where Korean businesses may have strengths rather than focus on one field. Furthermore, Korean businesses that are gaining footholds for the first time in the Chinese environmental market should seek cooperative relationships with outstanding Chinese counterparts in each field. They should learn the Chinese system in the particular chosen field and build name recognition in China through cooperation with local joint ventures before converting to independent ventures for autonomous and independent management.

Table 2. Chinese environmental products import market

Country	2006	2007	2008	2009	2010	2011	2012	
World	General Trade	249.2	301.5	368.3	401.3	546.3	645.1	625.0
	Overall Trade	791.7	956.2	1113.1	1003.8	1393.9	1741.6	1817.3
Korea	General Trade	15.22	15.03	18.28	21.43	33.5	41.85	42.9
	Overall Trade	44.16	49.44	52.95	49.69	69.65	83.06	84.76
Taiwan	General Trade	22.15	10.48	11.29	11.17	23.99	27.61	27.31
	Overall Trade	38.8	43.12	46.61	37.24	59.03	61.76	57.83
Japan	General Trade	57.39	62.38	75.46	83.61	132.02	150.88	130.78
	Overall Trade	155.15	151.44	168.54	145.41	218.6	247.3	223.52
USA	General Trade	37.05	43.61	54.97	57.03	69.33	81.72	83.53
	Overall Trade	72.67	75.8	93.68	86.1	104.55	118.61	120.6
Germany	General Trade	51.99	69.66	86.97	89.52	113	140.87	138.37
	Overall Trade	79.1	97.7	126.33	119.92	145.98	177.69	170.09

5. Implications

The implications of the Chinese green growth strategy are as follows: First, since China's green growth strategy is a long-term and inevitable process, requires more time and appropriate economic reform policy. Hence, it is expected to increase Chinese environmental regulations and an outline of related trade prohibitions, restriction policies and TBT in the future.

Second, it is expected to increase green indus-

try subsidy disputes of China. It should primarily review elements that may become the cause for disputes to prevent its occurrence with major trading partners. Also, in order to grasp the extent of China's vast green industry subsidies, Korea should respond on a multilateral level with other WTO members so China will comply in good faith with its subsidy notification obligations. If Korea's own green industry subsidies should become subject to excessive countervailing measures by foreign governments, the Korean central government should then respond aggressively through the

WTO dispute resolution system. It should build standing cooperation channels at the government level between environmental and

trade professionals and establish a body for the resolution of environment and trade disputes through information sharing. 