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The Effect of Climate Negotiation on Economic Justice in China

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Abstract

Nowadays, climate change is an overwhelming threat to many people who live in the planet. As a result, countries signed the United Nations Framework Convention on Climate Change (UNFCCC) and held rounds of negotiations to curb the increasing temperature. Under the principle of ‘common but differentiated responsibility’ in Kyoto Protocol, the responsibilities of developed countries were emphasized. This situation changed in 2007, when China overtook the United States to become the largest emitter of carbon dioxide in the world. China is criticized for being the culprit of the over-emitting carbon dioxide in the atmosphere and is required to shoulder the main responsibility of cutting emissions in post-Kyoto era. However, these blames and requirements are unfair to china and hamper the economic justice of china. This paper is intended to analyze the impact of climate negotiations on economic justice of china from three different aspects: The right to development of China, Emission transfer and China’s export-oriented industry and Injustice China encounters under Clean Development Mechanism (CDM).

Key words: Climate negotiation; Economic justice; China; United Nations Framework Convention on Climate Change; Developed countries; Greenhouse gas emission; Right to development; Export-oriented industry; Clean development mechanism

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List of Acronyms and Abbreviations:

AWG-LCA -- Ad Hoc Working Group on Long-term Cooperative Action

BASIC -- China, India, South Africa and Brazils

CDM -- Clean Development mechanism

CER -- Certified emission reduction

UNFCCC -- United Nations Framework Convention on Climate Change

GHG -- Greenhouse gas Emission

INTRODUCTION

In this day and age, climate change is an overwhelming threat to many people who live in the planet. As a result, it connects the globe through environmental, political and economic ties. In order to curb the increasing average global temperature through joint efforts, countries signed the United Nations Framework Convention on Climate Change (UNFCCC) at the “Rio Earth Summit” in 1992. It is the first convention in the world that aims to reduce the negative impact of climate change on human society by comprehensively controlling the greenhouse gas emissions, especially reducing the carbon dioxide emission. Also, it is the basic framework to cope with climate change issue through intergovernmental cooperation in the international community.

As a non-binding convention, however, UNFCCC can only “encourage” countries to reduce the greenhouse gas emissions. To assure the provisions’ effectiveness and enhance the global response to climate change, in 1995, they launched the first round of negotiations in Berlin, Germany, whose official name is first session of the Conference of the Parties (COP 1). Two years later, at the COP 3, the delegates from 149 countries and districts adopted the Kyoto Protocol. Holding the principle of “common but differentiated responsibilities”, the Kyoto Protocol placed a heavier burden on industrialized countries concerning emissions reduction.

37 industrialized countries (Annex I countries) commit themselves to reduce gas emissions and all member countries make general commitments. "At negotiations, Annex I countries (including the US) collectively agreed to reduce their greenhouse gas emissions by 5.2% on average for the period 2008-2012." (PBL Netherlands Environmental Assessment Agency, 2011) Under the Protocol, three market-based flexible mechanisms help to reduce the annual emissions to the level of the basic year 1990: emission trading (ET), joint implementation (JI) and clean development mechanism (CDM).

By 2005, the Kyoto Protocol officially came into force. In the same year, at COP11, Montreal Action Plan was hammered out to negotiate future agenda after the expiration of Kyoto Protocol in 2012. A panel named Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) was established to discuss the emissions reduction of Annex I countries in the second commitment period. Also, it was the first time that some rich countries began to complain about the zero-target-demand of large developing emitters as China, India, South Africa and Brazil (BASIC) in the Protocol. The complaint voice became more louder in 2007 since China overtook the United States to become the largest emitter of carbon dioxide in the world. After that, tremendous attention has been brought to China in the following talks. In the meantime, various blocs of countries began to take shape and politically haggle in the arena of climate negotiations for the post-Kyoto regime arrangements. According to the similarity of interests and stances, there are 4 major influential groups: non-EU industrialized countries group consisting of nations like USA, Canada and Japan, which shows great reluctance in making any binding commitment; the 15 member states of EU group, which intend to lead the climate negotiations and profit from their guiding position; the newly-industrializing countries group like China and India, which is in an embarrassed position with the need to emit large emissions and the moral responsibility to reduce it; the last group is G-77, which consists of the Alliance of Small Island States, the Least Developed Countries Group and the African UN regional group.

For the purpose of constructing the Post-Kyoto regime, in 2007, COP 13 of UNCCC drew a future roadmap at Bali and scheduled to finalize a binding agreement about Post-2012 arrangements before 2009. Also, the special panel Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) was set to negotiate the more extensive cooperation among all countries, especially aiming at United States and developing countries (non-Annex I countries). AWG-KP and AWG-LCA are legally separate but politically intertwined (Dimitrov, 2010). They offer a two - track approach in future negotiations. The successful but insufficient roadmap Bali Action Plan focused on four pillars: mitigation, adaptation, technology

and financing. (Peter Christoff, 2008). These four pillars are the basic components of a Post-2012 Agreement and all have a long-standing effect on developing countries, particularly on China. By 2009, COP 15 was held in Copenhagen to fulfill the Bali Roadmap's goal - a framework for a binding agreement after the expiration of Kyoto Protocol should be agreed there. However, the distinct divergences in interests among participant countries, especially the sharp split between China and United States over the 300 billion climate fund, doomed the failure of COP 15 from the very beginning. While the world's attention was justifiably on Copenhagen, the conference perhaps produced the most ambiguous outcome in diplomatic history, leaving governments and observers alike wondering how to assess the result. (Averchenkova, 2010; Egenhofer & Georgiev, 2009) The Copenhagen Accord can only "take note of" issues like the importance to hold the rise in global temperature below 2 °C.

Despite the Waterloo of Copenhagen Summit, in 2010, people pick up their confidence again in COP 16/Cancun Conference, which produced the Cancun Agreements. Though conflicts between BASIC and non-EU industrialized countries still exist, the basis of the world's largest effort to reduce GHG was introduced and the most comprehensive package to help developing countries cope with climate change was included in the Agreements. However, a solid foundation did not sufficient enough to resolve all the political issues concerning the evolution of Post-Kyoto regime. Also, some answers to key issues remained unknown. For example, the exact number of emission reduction for Annex I countries and how to subsidize the CDM program in developing countries was unclear. One year later, in 2011, COP 17 was held in Durban. The outcome of Durban Conference was a deal better than no deal: only securing a consensus to a legally binding treaty, the Durban Platform, to be prepared by 2015 and to take effect in 2020. Another progress is the establishment of Green Climate Fund for implementing the Cancun package. For the first time in the history of climate negotiations, Durban Platform brought developing countries like China and India in the treaty.

Reflecting the marathon process of UN climate change negotiations, it is little wonder that the contents for the talks are definitely not only "environmental"; in the view of Realist, they have indispensable relations with the economic future of a nation and every country wants to maximize their benefits. As a result, the justice, especially the economic justice, will be badly threatened in the climate negotiation game. China, due to its prominent economic development, rising national power and large amount of GHG emissions since 2006, has been put in the center of censures by developed countries in the climate debates. These censures have a substantial impact on the economic justice of China. This paper is intended to analyze the impacts mentioned above.

1. OVERVIEW OF THE FUNDAMENTAL DEBATE CONCERNING CLIMATE NEGOTIATIONS

In order to critically analyze the impact of UNFCCC negotiations on China's economic justice, it is necessary to have a review of the fundamental debates around the climate negotiations. Politicians have difficulty to reach an agreement on whether to negotiate one or two climate change agreements (Dimitrov, 2010). Specifically, it is essential to figure out why some researchers insist on a two-track approach and argue that developed countries should carry the primary responsibility of climate change, while others, in particular scholars from Japan, Russia and Canada, try to find excuses to escape the Second Kyoto Protocol Commitment Period (KP-CP2) unless the two-track approach became a single one - only the AWG-LCA exists and China shoulder the major responsibility for the recent GHG emission.

Generally speaking, the fundamental debate is about who is more responsible for reducing the carbon dioxide emissions, to what degree and what to do with: "policies for mitigation (i.e., reducing GHG emissions), adaptation (to the consequences of climate change), and financing and technological support for developing country actions" (Dimitrov, 2010) since the arriving of KP-CP 2 in recent UNCCC negotiations. Developed countries and BASIC, especially China are the major arguers in the global climate governance stage.

Some researchers insist on a two-track approach because this approach respects the common but differentiated responsibility principle and respective capabilities under Kyoto Protocol. That is, the two-track approach emphasizes developed countries' role in combating climate change problem. After all, it is an indisputable fact that developed countries, notably USA, Japan and EU, have produced the largest share of historical global carbon dioxide emissions during the industrializing period. Because it is those CO₂ accumulated in the atmosphere that results in the global warming, developed countries own an environmental debt to developing countries and have the obligation to pay off their debt by providing funds and resources to tackle climate change problem.

Other scholars (especially those from non-EU industrialized countries) prefer a single approach -- demanding a single global treaty containing all major emitters in the world to entail a long ratification process (Dimitrov, 2010). By doing so, they underscore the role of China in the global labor division of mitigating. Due to the rapid industrialization and the unprecedented economic growth since 2000, large amounts of energy consumption are required in China, resulting in a dramatic increase of its GHG emissions. In 2007, based on the analysis of fossil fuel consumption and cement production

data, China was reported to surpass USA with 1.6 billion metric tonnes in 2006 as the world's largest total annual emitter (Figure 1). According to 2009 datas from the US Energy Information Administration, the top 4 total annual emitters of fossil fuels CO₂ are: China: 7,711 million tones (MT) or 25.4%; US: 5,425 MT or 17.8%; India: 1,602 MT or 5.3%. Some analysts even project that "in 2021 China will have larger cumulative CO₂ emissions than Western Europe, and in 2052 China will surpass the USA as the largest cumulative emitter" (Botzen, Gowdy & Van Den Bergh, 2008). These analysts also argue that the emission peak in China will largely determine when the world emission would reach its apex and it is this expanding amount of emissions that leads to the climate change.

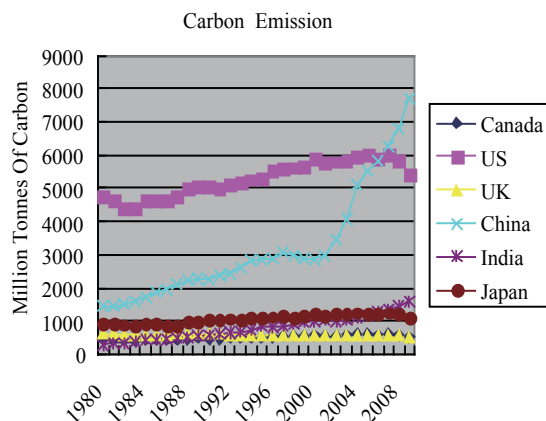


Figure 1
The World Carbon Emissions and Top 6 Emitters During 1980-2008
 Source: Drawn on International Energy Statistics

2. ARGUMENTS REGARDING MY QUESTION

After reviewing the fundamental debates of the climate negotiations, I find that the crux of the disputes steadily involves with China's economic interest. This section will analyze its impact on economic justice in China. Specifically speaking, due to the interwoven relationship between carbon dioxide emissions and economic development, China's right to development will be undermined if emissions limits are put on China. What is more, since China is an export-oriented country, the emission transfer from developed countries to China through global supply chains consists of a large percentage of China's total emission. Besides, the application of clean development mechanism seems to bring more benefits to industrialized countries, rather than China.

2.1 The Right to Development of China

Restraining carbon dioxide emissions to some extent means to cut the energy use and even cap the speed of development, however, emphasizing development right of China does not mean put more weight on economic growth over the climate protection.

To clarify the greenhouse development right in climate-constrained world, knowing the definition of it is necessary. Some scholars from EcoEquity (Baer & Athanasiou, 2007) and from Stockholm Environment Institute (Kartha & Benedict, 2007) define the right as a development threshold. It is a right of 'a modest but dignified level of well-being'. (Baer *et al.*, 2007) Below this threshold, individuals must be allowed to prioritize development, which means a country need to keep the basic living standard of its people before cutting the excess emissions.

In terms of responsibility, although people should not be bogged down in history, the large amount of historic emissions from developed countries cannot be ignored. Dating back to 19 century, when Industrial Revolution started, significant emissions have already been cumulated in the atmosphere due to the overuse of fossil fuel and natural resources. According to statistics of cumulative emissions of the period 1900-2004 from World Resources Institute, the US has the biggest historical share with 314,772 million metric tonnes (MT) of carbon dioxide and accounts for 28.5% of the world total emissions. Germany consists of 6.78% with 73,625 MT and the UK makes up 5.73% with 55,163 MT. This unsustainable and barbarian way of production and consumption contributed tremendously to the economic growth and national power strength of industrialized nations. Although the current emissions of rich countries are much lower than China, the historical cumulative emissions of developed countries are much higher than China and it is these historical emissions that lead to the prosperity of developed countries. However, every country in the world should have an equal access to natural gas, coal and petroleum despite of the time and space. China is experiencing what developed country went through decades ago, its rapid expanding of industry and economy are inseparable with the use of natural resources and certain amount of carbon dioxide emission. If economic justice exists, setting limitation on emission of China at its economic taking off period is against its development right because industrialized countries all perform the same action during the same developing period.

In terms of capacity, despite the overall economy of China is increasing at an unprecedented speed, it still faces numerous challenges that inevitably results in carbon emissions. The vast landscape, large population and unbalanced development among regions of China determine poverty reduction as China's top priority. According to China sustainable development strategy report of 2012, there are 128 million people still lived under the poverty line, which determines the intensive use fossil fuel as the growth model in rural area. On individual level, if burning fossil fuels is the only available means for a person to keep warm or meet other important needs (which are constitutive of a 'modest but dignified level of

well-being'), the right to development implies that they have a right to burn fossil fuels (Harris, 2011). Also, the 2008 data from Energy Information Agency shows that the per capita emissions of China is 4.91 million metric tones (MT), much smaller than US (19.18 MT), Canada (17.12), Russia (12.29 MT) and Germany (10.06). What is more, China is on its way of optimizing economic structure and using the energy more efficiently. The Medium and Long-Term Development Plan for Renewable Energy in China was issued in 2007 to promote energy conservation and mitigate climate change.

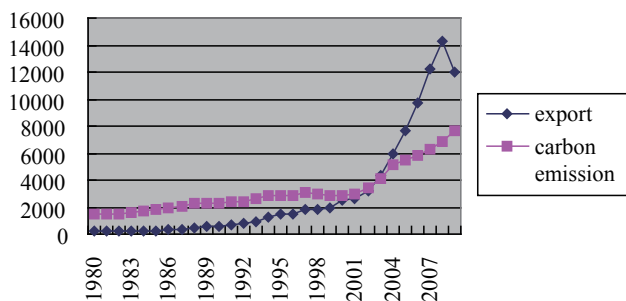
Under this circumstance, it is unfair to shift the blame of the excess missions in the atmosphere to China and it is unjust to compel China cut its emission and make commitment for quantified absolute emissions reduction. It will violate China's naturally unalienable right to economic development as developed countries did in the Industrial Revolution Period. China has voluntarily dedicated itself in the cause of using environment-friendly renewable energy and developing energy-saving technologies, but it will defend its development emissions and survival emissions. Its low overall consumption level and relatively small capacity simply defines one thing: Poverty eradication and internal energy security are always the priority of an emerging country as China.

2.2 Emission Transfer and China's Export-Oriented Industry

According to the Intergovernmental Panel on Climate Change (IPCC) accounting rules, mitigation only applies to greenhouse gas emissions taking place within national territory where the country has jurisdiction (Eggleston, 2008). However, in recent decades, especially since 1990s, our globalizing international community became interwoven than ever before. International trade among countries makes the economic connection between nations become so inseparable. A territorial-based emission accounting system under fragmented mitigation architecture, nevertheless, overlooks these economic ties among countries, which may lead miscalculation in allocating future mitigation tasks. The stabilization of emissions in developed countries and increasing amount of emission in industrializing countries could be a false impression. In other words, the carbon footprint of a country is deeply affected by its industrial structure and its relationship to the global economy.

Since China opened itself to the outside world in 1978 and entered the WTO in 2001, China has achieved great economic development through export-oriented industrialization. Figure 2 indicates the growth trend of Chinese exports. In 2009, China even surpassed Germany and became world top exporter. According to Federal Statistical Office of Germany, German exports amounts to \$1.1 trillion in 2009. In the mean time, data from National Bureau of Statistics of China reported that Chinese exports amounted \$1.2 trillion in 2009.

China Export And Carbon Emission



(Export unit: billion US \$ carbon emission unit: million tons)

Figure 2
The Export and the GHG Emissions in China from 1980 to 2008

Source: Drawn on International Energy Statistics and Chinese Statistics Bureau

Among the astronomical amount of Chinese exports, many goods fell into the category of energy-intensive industry. In the decentralized global supplying chain, developed countries situate in the top of the pyramid with cutting-edge technology and sufficient capital, while China lay at the bottom of the chain, producing manufacture-processing commodities of high energy-consumption, large amounts of greenhouse gas emissions and low added economic value. According to China's Customs Statistics, the top 10 export items in 2009 are: Iron and steel, ships and boats, vehicles, inorganic and organic chemicals, optics and medical equipment, power generation equipment, furniture, electrical machinery and equipment, footwear and apparel. These carbon-intensive products are exported to other countries, especially industrialized countries, for their domestic consumption. China's Customs Statistics also shows that China's major export destinations in 2009 are European Union (\$236.21 billion), United States (\$220.82 billion) and Japan (\$97.91 billion), which altogether accounting for 46.2% of Chinese total export. Obviously, these countries and areas use offshore manufacturing and export from China to hide their carbon flow.

Now that the positive relation between export of China and green house emissions are clear, attributing the excess missions only to China is unjust. Actually, Weber *et al.* (2008) find that in 2005, 33% (1,700 MT) of Chinese domestic emissions were in the production of exports. While calculating the emission of a country, the focus should be on consumption emission, which takes into account of the emission transfer from China to developed countries, rather than simply on production emission. Developed countries have the obligation to own up to these consumption emissions. The need for low price goods from China must coordinate with the responsibility to admit emissions along with the cheap products. Reprobating China in negotiations could do nothing but hamper the climate justice.

Injustice China encounters under Clean Development Mechanism (CDM).

Since its inception, the clean development mechanism (CDM) under Article 12 of the Kyoto Protocol was designed to meet multiple objectives. Through clean development mechanism, governments or firms in developed countries can participate in the financing of projects that reduce six kinds of greenhouse gas emissions in developing countries in exchange for certified emission reductions (CERs) credits that they can use against their targets (Lecocq & Ambrosi, 2007). As a result, CDM can achieve both the targets of assisting developing countries to promote low-carbon economy and sustainable development, as well as helping developed countries to fulfill their commitments to reduce emissions by minimizing the costs.

Admittedly, the vision of CDM is noble and it is beneficial to developing countries by stimulating the technology transfer, improving the energy efficiency and diminishing the harmful effect of climate change. However, the benefits distribution is uneven among developed nations and developing countries. Considering the low investment and high returns of the project financing by chemical gas manufacturers in developed countries, CDM seems bring less benefits to China.

First, technology transfer, which makes CDM appealing to China, did not really work as well as expectation. Initially, the introduction of energy-saving technology under CDM is supposed to be a precious opportunity for China to upgrade its industrial structure, reduce its heavy dependence on fossil fuels and develop low carbon economy. However, most credits issued in China come from the trifluoromethane (HFC-23) and nitrous oxide (N₂O) offset projects. Stanford University Professor Michael Wara has calculated that whereas installing the simple technology to pay producers to capture and destroy HFC-23 in the facilities covered by the CDM will cost \$100 million, these same projects are expected to generate \$4.7 billion CDM credits by 2012 (Michael, 2007). It is simply because one tones of HFC-23 is equivalent to 11,700 tonnes of carbon dioxides and indirectly equivalent to 11,700 CERs (Frank & Philippe, 2007). The effect of N₂O credits goes with the same rationale. These two offset projects can easily achieve large amount of emissions reduction and correspondingly gain numerous CERs by cheap gas scrubbers with little technology advancement, low costs and low risks. Comparatively speaking, there are seldom projects with reduction difficulty, high costs and high technology demand, which make it tough for China to learn the cutting-edge technology in the era of low carbon economy. The absence of high-value technology transfer will result in inequality under CDM and threaten China's economic security.

Second, another problem arise with the failure to introduce high-value technology is the loss of easy-reduction resource. If all projects developed countries invested are characterized by low cost, simple technology and plentiful CERs-producing, the available easy emissions reduction areas will be greatly narrowed down. Once China is forced to accept the quantified reduction target and fulfill compulsory emissions reduction responsibility in post-Kyoto era, the areas China could enter are limited to high investment, high technology demand and scarcely CERs-producing ones. Without effective technology transfer from developed countries, it will take long time for China to master the energy-saving and efficient-improving technology on its own. Although it is beneficial to develop one's own technology to mitigate the emissions in the long term, these high-demanding offset projects will be a fiscal burden to China and will slow down the economic development speed of China before China owns the state-of-art technology.

Third, although China captured nearly two-thirds of the market for project-based transactions (Frank & Philippe, 2007), China fails to manage to set the price for the CERs it provides in the secondary carbon market, where the CERs transaction prices are largely determined by the pricing in the Chicago Climate Exchange and the European Climate Exchange. Lack of sound domestic carbon-trading mechanism, language barriers, unfamiliarity about CDM procedures and limited knowledge about carbon finance give China no alternatives but to passively accept the low price of CER offered by major buyers, rather than voluntarily trade through climate exchange. According to International Energy Agency (IEA), the transactions in global carbon market amounted to \$126 billion. In the drastic contrast, the transactions concerning China only amounts to \$54 billion, accounting for 4.27% of the global carbon market. The little money China de facto gains from CDM and the large amount of CERs it provides are exaggeratedly out of proportion. The price difference between primary carbon market and secondary carbon market leads to great carbon asset loss in China.

Under CDM, the benefits China receives are not as much as developed countries receive. China does not get the cutting-edge energy saving technology through technology transfer. In the mean time, loss of the ease-reducing emissions offset projects will magnify the difficulty of China to shoulder the future mitigation responsibility. Besides, failure to own the ability to influence the price-setting in global carbon transaction market results in huge monetary loss of China. All these inequality originating from CDM are against Chinese economic justice.

CONCLUSIONS

The UN climate change negotiating process is definitely not simply "environmental". Although it brings most countries in the world together to defend against the threat of climate change, it is also an arena where every country wants to maximize their economic and political benefits. As a result, the notions of economic justice will be greatly influenced by this climate negotiation game. In the fundamental debate of climate negotiations, China is criticized for its large amount of GHG emissions this decade; however, these criticisms have a substantial impact against the China right to develop. To do so will violate China's naturally unalienable right to economic development as developed countries did in the Industrial Revolution Period. Poverty eradication and internal energy security are a top priority for China in the next 60 years. What is more, the large amount of GHG emissions in China can be attributed to its export to other countries in the world. As the 'world workshop' for most developed countries in the world, the emission transfers along the offshoring manufacturing line are numerous and it is unfair to only take count of the production emissions instead of consumption emissions. Finally, CDM did not bring equal benefits to developed countries and China. China does not get the cutting edge energy saving technology through technology transfer, lose the ease-reducing emissions offset projects and fails to own the ability to influence the price-setting in global carbon transaction market as the largest CERs provider. However, despite all the economic justice China faces, it shows great willingness to carve out a road of low carbon development.

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