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## Green growth strategies—Korean initiatives

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### ABSTRACT

Korea has embarked on a far-reaching green growth strategy that promises to lay the foundations for a transition from a predominantly 'brown' to a green industrial system. In this paper the key features of the Korean approach to formulating and implementing a green growth strategy are outlined, and the progress achieved so far (2009–2012) is reviewed. Comparisons with China's green development strategy, as embodied in the 12th Five Year Plan (2011–2015), present themselves – in that both strategies are concerned with industrial restructuring and the building of new growth engines designed to create export platforms for the 21st century. Reductions in levels of carbon emissions flow from these industrial policy initiatives. The paper concludes that the Korean strategy is carefully crafted and implemented with full government commitment and leadership, demonstrating that such commitment is feasible in a democracy. What cannot be guaranteed is continuing commitment from successive political administrations.

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### 1. Introduction

The disappointment created by the failure of the UN's Kyoto process to develop effective global strategies to deal with both economic development and global warming issues is palpable. But the enthusiasm of delegates assembled at Copenhagen in December 2009 for the COP 15 event, who imagined that China and India might sign up for carbon emissions reduction targets that would halt their development in its tracks, was misguided – to put it mildly. If the international scene still shows little promise of effective climate action combined with effective action to alleviate poverty and accelerate development, then it is a different story when we look at the national level.

Two countries have now adopted, and are implementing, five-year green growth plans, or strategies. These countries are China and South Korea (henceforth: Korea). Their green growth (or green development) strategies promise not just renewed industrial development and the creation of an export platform for the next decades, but also effective action to deal with carbon emissions at a national level.

China's strategies are relatively well known, through the actions to adopt and implement the 12th Five year Plan (2011–2015) which devotes a large part of its attention, and future investments, to the greening of the Chinese economy. The Korean initiative dates from 2008, when the current President, Lee, Myung-bak, committed his government to a green growth strategy in a speech celebrating the 60th anniversary of the founding of the Korean Republic. President Lee contrasted the first sixty years of the Republic of Korea's development, which saw spectacular improvements in per capita income fuelled by

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fossil fuels, and looked forward to the next sixty years with ‘low-carbon, green growth’ as the pillar of a new vision for the economy.<sup>1</sup> Korea’s green growth (GG) strategy was formulated initially as a 50 trillion won Green New Deal, to help the country get over the 2009 global financial crisis; more significantly it was then framed in terms of a five-year green growth plan (5YGGP) which has been vigorously promoted, over the years 2009–2013, as the centrepiece of the government’s growth and development strategy [1].

The essential characteristic of both Korea’s and China’s approach is that they view climate change not as a cost but as an opportunity, and their strategies for dealing with it are couched as industrial policies, designed to stimulate the development of new green industries equipped with green technologies – conceived as new ‘growth engines’ for the economy. China, with its centralized authoritarian state, has not seen very much public debate devoted to its efforts to find a ‘green development’ strategy – as characterized by one of its leading economists, Dr Hu [2–4]. Korea on the other hand is a vigorous democracy where there is noisy public debate, and where the Lee administration’s policies have been subjected to widespread criticism. In this paper, I wish to analyse the content and achievements of the Korean GG strategy, to put these criticisms into some perspective.

## 2. Outline of Korean commitments

President Lee Myung-bak committed himself and his government in August 2008 to a ‘Green growth’ strategy: “Green growth seeks sustainable growth by reducing GHG emissions and environmental pollution. It is a new development paradigm which creates new growth engines and new jobs from green technologies and clean energies” [5]. The principal objectives outlined covered those associated with a low-carbon society and energy security; new engines of industrial growth; and enhanced quality of life combined with international leadership. Ambitious goals of making Korea the world’s 7th ranking green economy by 2020 (and the 5th green economy by 2050) were also enunciated. A Presidential Committee on Green Growth (PCGG) was subsequently formed, in February 2009, as a high-level coordination committee, bringing together representatives from the principal ministries involved – including Finance, Industry and Resources – as well as from the private sector and academia.<sup>2</sup>

A further step was taken at the Kyoto-process Copenhagen summit in December 2009 (COP 15), when President Lee declared Korea’s GHG emission reduction target to be 30% below BAU by 2020. This is a tough target, and comparable to that espoused by Denmark (with whom Korea shares a green growth alliance) and the UK. Furthermore there is legislative backing for Korea’s GG strategy. The Korean National Assembly passed the *Framework Act for Low-Carbon, Green Growth*, at the end of 2009.<sup>3</sup> This has provided the legal framework for all the subsequent initiatives.

What is distinctive about Korea’s approach to GG is that it is an *industrial strategy* – or a *growth strategy* – in the sense that the Korean strategy is framed around the promotion of key technologies and industries that are viewed as providing the growth engines for the next stage of Korea’s development, and as export platforms for the 21st century, *as well as* means to reduce carbon emissions. Although climate objectives are mentioned prominently, it is fundamentally an industrial upgrading strategy – and in this sense comparable with the far-reaching green development strategy that is being formulated and implemented in China. Both China and Korea are clearly convinced that good industrial policy is needed to shift the energy system which in turn is needed to curb climate change, while at the same time the new energy and low-carbon technologies represent promising export platforms for the future.

The implications of this approach in terms of carbon reductions are real and important (to be discussed below) – but they are not necessarily the driving force behind the strategy. They are instead an outcome of an industry and trade strategy focused on the new engines needed to drive the next stage of Korea’s development. This aligns Korea with China – except that Korea is starting with a more advanced technological level, and with more sophisticated international firms such as Samsung, Hyundai, LG, Doosan and SK (the country’s leading oil refiner and petrochemical producer). Both countries have clear goals of catching up with the technological leaders in green sectors.

Korea is actually a good candidate for such a far-reaching green growth (GG) strategy because (1) it is heavily dependent on fossil fuel and resource imports; (2) renewable energies accounted for only 1.4% of energy inputs when the GG choice was made; and (3) the country depends on many carbon-intensive industries such as steel, automotive, shipbuilding, petrochemical, and cement. The GG strategy is designed to tackle each of these issues head-on.

In administrative terms, the PCGG has emerged as the lead coordinating body driving the framing of the green growth strategy and monitoring its execution. Under the auspices of the PCGG, Korea prepared an initial Green New Deal at the time

<sup>1</sup> This paper is based on field research conducted in Korea over two weeks in March 2012, in Seoul and Ulsan. Thanks to Dr Soogil Young (PGCC), Professor Keun Lee (SNU Economics), Professor Jae-Young Choung (KAIST Business School) and Professor Hung-Suck Park (Ulsan) for arranging very useful meetings. Principal informants were Dr Soogil Young (President, PCGG) and staff; Dr Joon-Hyun Lee (President KETEP) and staff; Mr DongChoon Lee (Executive Director KoFC) and staff; Dr Young-Sup Joo (MKE); Dr Sung-Bock Kim (ETRI); Dr Kyonghwa Jeong (KEEI); Professor Moo-Whan Shin (Yonsei University); Dr Hee Jin Noh (KCMi); Mr Kwang-Sun Kim (KAIARI); Dr Jung-Hoon Kim (KICOX, Ulsan); Dr Seung-Han Park (SK Innovation, Ulsan); Professor Hung-Suck Park (Ulsan University) and staff; and Seok Cho, Vice Minister at MKE. Many of the interviews were conducted jointly with Dr Elizabeth Thurbon (University of NSW, Sydney) and with Professor Linda Weiss (Sydney). Finally my thanks to participants at seminars conducted at the PCGG, SNU (Economics) and KAIST (Business School) for their feedback and insights.

<sup>2</sup> A speech by the Chairman of the PCGG, Dr Soogil Young, at the launch of the UNESCAP/KOICA report on a ‘Low carbon green growth roadmap’ in Seoul on April 25th 2012, gives the background and current appreciation of the Korean GG strategy.

<sup>3</sup> An outline of the contents of the Act, with the 64 chapters summarized in English, is available on the ‘Rio +20’ official webpage, at: <http://www.unccd2012.org/rio20/index.php?page=view&type=99&nr=4&menu=137>.

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