## A Review of Books

## Reflections on Catch-up: The Spread of Catch-up and the Middle-Income Trap

Nayer, Deepak (2013). Catch Up – Developing Countries in the World Economy, Oxford University Press.

Lee, Keun (2013). Schumpetrian Analysis of Economic Catch-up – Knowledge, Path-Creation, and the Middle-Income Trap, Cambridge University Press.

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If the twentieth century was the American century, then the twentyfirst century is for emerging market economies. The twentieth century began with the 'forge-ahead' of the United States. According to Maddison (1991), the income gap between the US and other advanced countries continued to widen, with the average income of the latter reduced from approximately 60% to 50% of that of the former during the first half of the twentieth century. During the second half of the twentieth century, certain countries, including Western European countries, Japan, and the 'East Asian tigers' successfully advanced. However, the catch-up remained a local phenomenon rather than a global one, applicable only to a small number of countries. The overall income gap between advanced countries and emerging market economies remained the same, and the US maintained its economic hegemony during the period (World Bank 2003; Shin 1996).

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However, the twenty-first century started with a strong catch-up by emerging market economies. The two most populous economies in the world, namely, China and India, are advancing rapidly and continuously. If they continue the current pace of the catch-up, China will soon replace the US as the number one economy in the world (in terms of size, but not in terms of per capita income), and India will also grow larger than the US by the middle of this century. Other emerging market countries from Southeast Asia, Latin America, and Africa are also staging their catch-up with advanced countries.

As a result, "the rise of the middle class in emerging markets" has already become a new phenomenon that global companies cannot ignore in the conduct of their businesses (Mahbubani 2013).

The books of Deepak Nayer and Keun Lee are timely and they address this important historical change in the world economy. While Nayer paints a long-term and broad historical picture of the catch-up phenomenon, Lee focuses on the detailed processes of catch-up and draws policy implications for catch-up economies.

The book of Nayer reads more like Maddison's (1991; 2007) comprehensive presentation of macro aspects on the dynamics of the world economy than Kennedy's (1989) sweeping narrative on the historical movement of the world. Nayer begins with "an untold story" of longterm "falling behind" of the current emerging market economies during the period from 1820 to 1950, which occurred largely because of the imperial aggression of the West and the colonial submission of the East (Chapter 1). The book then explained the catch-up phenomenon afterwards by dividing the period into two sub-periods, from 1950 to 1980 when the catch-up of developing countries began its long march and from the 1980s to 2010 when their catch-up gathered "further momentum" (Chapter 2).

Nayer is different from Maddison because he included international migration as an important aspect of the long-term progression of the world economy. Unlike Madison who was only concerned with the growth-related macro figures, Nayer also explored issues on inequality and poverty. The inclusions seem to have both pros and cons. By including broader issues, the book draws the attention of the readers to those issues that were often neglected in the catch-up debate. However, he did not clarify the questions, such as the role of these issues in the catch-up or how they influenced the outcome, how they can be understood in relation with other macro variables, and so on. The result was a decrease in clarity in the explanation of the catch-up phenomenon.

By contrast, Lee narrows the scope to technological aspects of catchup and discusses what he refers to as "the middle-income trap." To my knowledge, this book is the first to analyse the catch-up by building comprehensive data based on the knowledge component of catch-up, mainly on patents. Lee also conducts analyses at three levels, namely, country, sector, and firm. Based on these empirical analyses, Lee identifies the existence of "the middle income trap" as a stumbling block for catch-up countries and the "short-cycle technology sectors" as promising areas for the latecomers to overcome the trap. Then, he suggests that catch-up countries develop their technological capabilities to enter the short-cycle technology sectors. He also extends his analyses to explain (current and future) the catching up and leapfrogging of China and India.

The approach of Lee is both Schumpeterian and Abramovitzian. Schumpeter (1934; 1939; 1943) puts the interaction mechanism between forerunners and latecomer at the center of his analysis of capitalist dynamics. Lee elaborates this dynamics by analyzing patent data. Following Abramovitz (1979; 1986), Lee emphasizes the importance of the interaction between technology gap and technological capability. Technology gap is open to all latecomers, but only those who have appropriate technological capabilities can seize the opportunities arising from the technology gap. His analyses are therefore geared strongly toward drawing policy implications on how to develop technological capabilities.

In his framework, technological capabilities include not only institutional capabilities, but also strategies to detect promising areas for catch-up. Drawing mainly from the catch-up experience of Korea and Taiwan, he suggests a detailed policy and institutional map for other catch-up countries by providing an "Action plan to enter short-cycle technology-based sectors" (Figure 7.1, Chapter 7). He also applies his prescriptions to China and India to deal with future "technological turning points." This book is ambitious in deriving "a clear-cut criterion for the technological specialization of middle-income countries" (p. 227). Whether the criterion is clear-cut as the contention of the author may be controversial. By suggesting unequivocal policy implications for catchup economies, however, the book positively contributes to advance the catch-up debate and the global search for developmental strategies and institutions.

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