

Title: Invention, Productivity, and the Evolution of East Asia's Innovation Systems

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Abstract: In the 1980s, the rapid emergence of Japanese firms as technology leaders in a range of industries previously dominated by American firms stunned executives, worried government officials, and prompted a flood of academic studies designed to explain the promethean strength of the Japanese innovation system. Japan today remains a highly developed economy with pockets of innovative strength, but the rapid decline of a number of Japan's most technology-intensive industries and the sharp slowdown in recorded total factor productivity growth and labor productivity growth has raised important questions about the longer run performance of the nation's innovation system. Drawing upon a series of papers that have used firm level microdata to compare and contrast the innovative performance of Japanese and American firms across the past several decades, this chapter will argue that some of the features of the Japanese innovation system that made it so dynamic and vigorous in the 1970s and early-to-mid 1980s became impediments to success in more recent years as Japan's internal and external conditions changed. Public policies pursued during Japan's rapid growth era reinforced and strengthened some of the aspects of Japan's innovation system that became liabilities in more recent decades. This chapter will focus in particular on policies that exacerbated Japan's "pro-incremental" bias and its "pro-incumbent" bias. The evolution of innovation systems in South Korea and Taiwan has differed from that of Japan, but this paper will argue that some of the lessons drawn from the senescence of formerly successful Japanese high-tech industries are useful in explaining the challenges facing the high-tech sectors in South Korea and Taiwan. The chapter will argue that policies adopted in those country's rapid growth eras also reinforced a "pro-incremental" bias and a "pro-incumbent" bias, with similarly negative effects in the longer run.