

Chapter 16

Sectoral System of Innovation and Technological Upgrading Strategies: A Comparative Study of the Automotive Industry in South Korea and Turkey

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ABSTRACT

Latecomer sectors in late-industrializing economies follow different patterns in their development and growth processes, which largely determine the share acquired from the global value chain. The development and growth process of the sectors are generally argued to be the result of the interaction of a macro-level specific institutional context (e.g., system of intellectual property rights, labor market regulations) and micro-level firm strategic choices. In this study, the authors argue that meso-level sectoral systems also play a critical role in the development and growth process of latecomer sectors. Accordingly, they attempt to integrate three theoretical perspectives: Resource-Based View (RBV) of the firm, Sectoral System of Innovation (SSI) perspective, and Technological Capability Perspective (TCP) for late industrializing economies to explain the relative developmental failure of the Turkish automotive industry compared to other successful latecomer industries such as the South Korean automotive industry. In light of theoretical framework, the authors investigate sectoral technological upgrading trajectory and compare Korean and Turkish automotive industry development paths using the case study method. They conclude by discussing how a multilevel framework that takes into account the systemic factors can guide research on sectoral development in late-industrializing countries. In light of a comparative historical analysis of development of the Turkish and Korean automotive industries, it is argued that a pace of industrial transformation can be accelerated by multilevel proactive state intervention.

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1. INTRODUCTION

While the Asian Newly Industrialized Economies (NIEs) were similar to other developing countries in the sense that they were all late-industrializing countries in the global economy (Hikino & Amsden, 1994; Wong, 1999), some sectors in these economies such as the South Korean automotive industry exemplify a success story while others, such as the Turkish automotive industry, encounter developmental failures (Erdoğan, 1999). The automotive industry in Malaysia is perhaps a success story of the automotive upgrading process in the Association of Southeast Asian Nations (ASEAN) region. Malaysia is the third South-East Asian automaker of more than half a million vehicles per year developed by Japan and Korean assistance. The Malaysian automotive sector is characterized by a domestically developed manufacturing structure geared towards the production of passenger vehicles. The sector has been heavily subsidized and protected to produce national champions and automobile components and parts suppliers.” The literature on performance of different latecomer sectors in late-industrializing economies suggests that they follow different patterns in their technological catch-up processes (e.g., Lee & Lim, 2001).

Explanations of this performance heterogeneity between sectors generally focus on the interaction of macro level specific institutional context and micro level firm strategic choices (Hobday, 2003). However, a quick overview of the literature reveals a surprising lack of an integrative approach which takes into account not only macro and micro level perspectives, but also a meso-level sectoral systems approach. In this study, I argue that meso-level sectoral systems also play a critical role in the development and growth processes of latecomer sectors. Therefore, an integrative framework considering the meso-level sectoral systems is needed to provide a more comprehensive explanation of sector level performance heterogeneity. Accordingly, I propose to integrate three theoretical perspectives: Resource-

Based View (RBV) of the firm, Sectoral System of Innovation (SSI) perspective, and research on institutional context for technological capability development for late industrializing economies to explain the performance heterogeneity of latecomer sectors.

Specifically, this paper focuses on the Turkish automotive industry with the goal to understand and explain the developmental failure it encounters compared to other successful latecomer industries such as that found in the South Korean automotive industry. In this study, the path dependent sectoral evolution and lock-in dynamics of the Turkish automotive industry will be investigated (David, 1985; Arthur, 1990) by focusing on the local and global linkages, organizational learning and capabilities, interaction among actors, success and failure examples, external and internal knowledge sources, and the roles of new actors.

The foundation of the automotive industry in South Korea and Turkey began in approximately the same period during the early 1960s. Progress of this industry in Turkey outdistanced the domestic Korean performance until the second half of the 1970s. Afterwards, due to flourishing industrial policies implemented by the state, the Korean automotive industry experienced booming growth and developed into a prominent industry capable of producing and marketing to every corner of the globe its own global brand that we know today. However, the same industry in Turkey remained localized as a production base developing parallel to the strategic decisions of global brands, culminating in the lack of a global automotive industry capable of manufacturing its own brand. The automotive industries of these two countries which were inaugurated under similar initial conditions followed utterly different paths and scored distinct performance. This study explores the causes underlying these distinct outcomes reached by two late industrialization experiences via a multilevel theoretical framework. Root causes of these two discrete performances are believed to be the governmental incentive policies towards

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