
Abstract

Global Production · Innovation Networks and Innovative Growth

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The concept of “innovative growth” is emerging as central to the government’s economic agenda but it has been pointed out that it lacks a clear concept and implementation plan for its objectives. The government has recently begun to discuss strategies and propose tasks on innovation in earnest but faces criticism that specific policies are not clearly differentiated from those of previous administrations. Despite the recent emergence of new technologies and the expectation that the Fourth Industrial Revolution (4IR) based on them will dramatically change the existing economy, the government’s discussion of innovative growth is limited to R&D investment in the science and technology sector and has not seriously weighted the economic implications of 4IR.

This research is aimed at discussing and determining the

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implications carried by important changes in the global economy resulting from 4IR for government economic policy. In doing so, we argue the need for supplemental policies that address recent developments in globalization in discussions on innovation growth centered on the development of new technologies. To this end, this study attempts to discuss the problem in three main aspects. First, in the 4IR, we explain why and why global production methods for innovative growth are needed. Second, we evaluate new policies for production and innovation through current Korean global networks. Through this process, it provides implications for the current government's global strategy for innovation policy and policy supplementation.

The report comprises five chapters: Chapter 1 introduces recent government announcements regarding innovative growth and presents the need for globalization strategies to supplement existing innovation policies. Chapter 2 describes the importance and implications of changes in global production during 4IR and the importance of enhancing global competitiveness in response to changes in global production through a discussion on the path from innovation, productivity and global competitiveness that leads to economic growth.

Chapter 3 evaluates the current network between the global economy and the domestic economy with empirical data and discusses policy implications for responding to new challenges in the global economy. Finally, Chapter 4 proposes strategies and policy directions to support the establishment of new global production and innovation networks for enhancing global competitiveness in response to changes

in the global value chain during the 4IR. Chapter 5 summarizes the findings of the research, discusses its limitations and suggests future directions for study. The details of Chapters 2 to 4, including the main research content, are as follows

Chapter 2 argues for the need to complement global economic policies that respond to changes in the global economy to achieve innovation growth and enhance competitiveness. We do this by describing recent policy innovations aimed at innovation growth based on prior research. In recent discussions on innovation, the emergence of new technologies is an essential factor in innovation, but in order for such innovations to result in increased productivity and thus economic growth, innovation activities by firms using new technologies are emphasized. In addition to the efficiency of new product development and production phases utilizing new technologies, these innovative activities have expanded to include marketing and organizational aspects.

Chapter 2 also discusses the path that leads from innovation to increased productivity to economic growth. Through this process, we point out that productivity improvements through innovation are a necessary condition that leads to economic growth, and that from a global perspective productivity must accompany global competitiveness to ensure growth. Furthermore, emphasizing that the emergence of new technologies in the previous industrial revolutions created new methods of production in the global economy and thus enhanced the competitiveness of countries, we demonstrate a need to supplement global competitiveness policy for innovation in the 4IR era.

Chapter 3 assessed global production and innovation networks

through an empirical analysis to derive the implications they carry for Korea's global competitiveness. We observe evidence of the relationship between the output of overseas subsidiaries by industry and the production activities of domestic companies as they relate to production and employment, especially at subsidiaries in developing countries such as China. However, evidence also shows that this production network is disappearing. While the innovation network was generally difficult to observe, some evidence of an innovation network with the United States and Europe estimated based on the intangible assets of domestic firms observed in the empirical analysis. These results have maintained global competitiveness through the establishment of production networks through offshoring to developing countries in the existing global value chain, but also suggest that these production networks have recently disappeared. On the other hand, innovative networks stress the importance of establishing networks with advanced countries.

Chapter 4 provided suggestions on strategy and policy directions for new global network for innovation growth in the 4IR era based on the discussions of the contemporary studies from Chapter 2 and empirical analyses from Chapter 3. In this report, these policy proposals were limited to foreign direct investment policies and outbound overseas investment strategies, which are most relevant to global companies. We also describe the recent global status and trends that inform our supplemental policy proposal.

Policy proposals related to the overseas investment strategy highlighted the conversion from utilizing resources in host countries such as low labor costs to acquiring production capacities such as

technologies and intangible assets. The shift of the second policy direction reflects the renewed importance of M&A over greenfield investments. Finally, there should be a shift in policy focus from developing to developed countries for investment destinations.

Regarding the new policy proposal on foreign direct investment, it should first provide a full-scale and flexible system of incentives for attracting investment firms and promoting business, differing in significant ways from currently-defined incentives. Second, in addition to the direct effect of investment entities on the economy in attracting investment, it should also focus on the ripple effects of investment entities on those industries and regions. Finally, we propose a transition to focus on attracting key companies, fully weighing the characteristics of each industry and region instead of focusing on specific industries.

Through this research, this study emphasizes the need for supplementing new global policies amid changes in the global value chain, in addition to enhancing the productivity of R&D investment focused on current technologies to achieve the government's goals for innovative growth.