

# Changes in the Regional Structure of China's Domestic Market and Implications

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## I. Introduction

In response to intensifying conflict with the United States and the shock of Covid-19, China reinforced its strategy to expand domestic demand. Before the outbreak of Covid-19, China focused on economic restructuring (supply-side reform) rather than domestic demand expansion, but now it is pushing ahead with quantitative expansion and quality improvement (restructuring).

In the face of growing external uncertainty, China has been pushing for the strategy of “Dual Circulation” in which the domestic economic cycle plays a leading role for the period of the 14th Five-Year Plan (FYP), aiming to increase economic independence by expanding the industrial/supply chain in China and enhancing the efficiency of its economic cycle. China's domestic market will grow faster if this “Dual Circulation” strategy reduces the

inefficiency of the Chinese economy and revitalizes inter-regional economic and industrial cooperation.

China's domestic market is an important factor affecting Korea's exports and economic growth. Accordingly, a large body of research has been conducted in Korea on China's expansion policy and changes in its domestic market. However, most studies have analyzed changes in China's consumer market, import market and imported items, limiting the overall understanding of China's domestic economy. In addition, most studies on China's regional domestic market have analyzed the market segmented by region.

Recognizing this gap, this study expanded the scope of analysis of the domestic market in China to the entire domestic final demand, and

analyzed inter-regional trade relations and other economic relations based on an inter-regional input-output analysis, which has rarely been attempted in analyses of the Chinese domestic market.

In addition, the changes in the regional structure of the Chinese import market and Korea's competitiveness were analyzed using Chinese trade statistics. In particular, by synthesizing the changes after the global financial crisis (GFC), a turning point in China's economic structure, we project future changes in the regional economic structure of China, which emphasizes the independence of its domestic economy. In addition, in the era of US-China conflict, the study aimed to select regional markets meaningful to Korea, and to present strategic directions toward China focusing on regional cooperation and approaches into the domestic market.

## II. Changes in the Regional Structure of the Chinese Domestic Market: Based on China's Inter-Regional Input-output Analysis

By using the input-output table, the final demand of a country/region can be analyzed by dividing it into the areas of consumption, investment, and exports. Among these, consumption and investment refer to domestic final demand. In addition, inter-regional input-output tables record transactions by industry

between regions, making it possible to identify inter-regional and inter-industry relationships, as well as the industrial structure, by region and industry.

This study analyzed the regional structure changes in China's domestic market using China's inter-regional input-output table.<sup>1</sup> However, due to data constraints, changes were analyzed by comparing 2007 and 2012, before and after the GFC.

After the financial crisis, China's compound annual growth rate of domestic demand stood at 17.9% (nominal, investment 20.6%, consumption 15.3%), far above the export growth rate (7.4%). The final demand structure has also changed significantly, with domestic demand expanding (8.5%p) similarly to the increase in the proportion of investment (8.3%p), while the proportion of exports decreased (-8.5%p).

In particular, the proportion of investment has expanded mainly to the Midwest regions, while consumption has expanded significantly in the eastern and western regions. Meanwhile, the proportion of export in the coastal regions, where exports were concentrated, all decreased, while the Midwest portion increased. As a result, demand for both domestic and export increased in the Midwest, while demand for investment and exports decreased significantly in the coastal areas (consumption increased only in the East).

<sup>1</sup> The inter-regional input-output table for China used in this study is based on a table presented by the Chi-

nese Academy of Sciences (Key Laboratory of Regional Sustainable Development Modeling).

**Table 1. Structural Change in China's Final Demand**

		2012 final demand (%)				Changes compared to 2007 (%p)			2012 final demand (%)			Changes compared to 2007 (%p)		
		Domestic (A)		Ex (B)	total (A+B)	Domestic		Ex	Domestic		Ex	Domestic		Ex
		C	I			C	I		C	I				
East coast	Bohai sea	39.6	42.5	17.9	100	-3.2	10.6	-7.4	17.0	17.0	14.7	-3.3	-0.5	-1.3
	East	33.8	30.6	35.6	100	8.3	0.3	-8.6	18.6	15.6	37.4	2.1	-7.1	-0.9
	South	33.5	28.2	38.3	100	3.9	8.1	-12	14.0	11.0	30.5	-0.9	-0.8	-3.3
Central		42.5	50.9	6.7	100	-6.7	7.3	-0.6	20.4	22.8	6.1	0.3	2.1	2.2
West		42.0	50.2	7.7	100	-8.5	8.4	0.2	21.6	24	7.6	2.0	5.2	3.7
Northeast		40.7	49.9	9.3	100	-4.9	11.4	-6.5	8.4	9.6	3.7	-0.3	1.1	-0.4
<b>CHINA</b>		38.5	41.4	20.1	100	0.2	8.3	-8.5	100	100	100	-	-	-

Note: C means consumption, I means investment, Ex means export demand.

Source: by author (using statistics from the Chinese Academy of Sciences)

In China's domestic market, the Midwest portion (9.6%p) increased significantly, mainly in the investment sector (7.3%p), while the coastal areas portion decreased. In terms of industry, 52% of China's final demand is in the service sector, with the construction industry (investment sector) and other service industries (consumption sector) showing rapid.<sup>2</sup>

The trade volume between regions in China in 2012 was 50 trillion yuan, and its proportion to total output excluding exports decreased from 35.5% in 2007 to 32% in 2012. This indicates that, since the GFC, production in each region of China has grown more de-

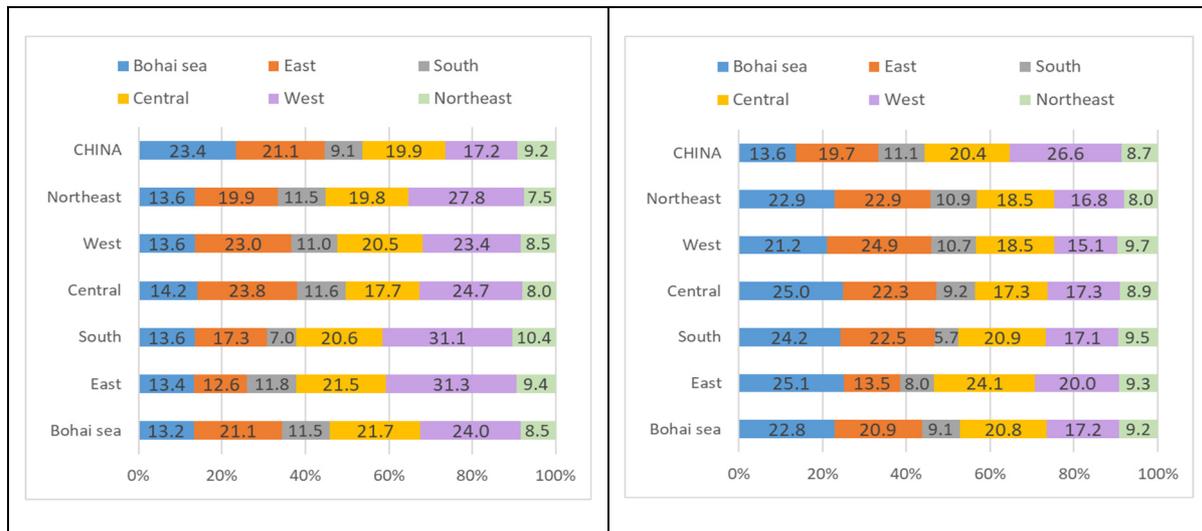
pendent on the final demand in the region (over the same period, the production inducement coefficient for own region has increased, while the inducement effect on other regions has weakened).

In the process of decreasing the share of trade between regions after the GFC, the share of flows into the Midwest region in particular increased and the share of flows out of the eastern and southern areas decreased. This is mainly related to the increase in investment demand in the Midwest and the contraction of production activities in eastern and southern areas, where GVC participation is high.

<sup>2</sup> The classification of industries in this study consists largely of agriculture, mining, manufacturing, power/gas/water production/supply, and services. In

addition, manufacturing was classified into 24 detailed industries, and service was classified into 6 detailed industries.

Figure 1. China's Interregional Exports (left) and Imports (right) Structure



Notes: 1) Exports and imports to the same region means exports and imports to other provinces in the region.

2) The proportion of all China means the proportion of each region of the total exports and imports.

Source: KIEP (2020), "Changes in China's Regional Economic Structure and Strategies to Enter the Domestic Market after the Global Financial Crisis." KIEP Policy Analyses, no. 20-25.

Inter-regional trade moves the imported intermediate goods embedded in the trade products to other regions. When we identified the import base of intermediate goods based on the region from which intermediate goods were directly imported, the proportion of the coastal region exceeded 80%. Compared to the coastal region's proportion of imported intermediate goods embedded in domestic demand (approximately 70%), some intermediate goods imported by the coastal region were supplied to the Midwest as finished products through local processes in the coastal region. This means that in Korea's exports of intermediate goods to China, it is necessary to pay more attention to the changes in the base regions for importing intermediate goods (i.e., production base) than the changes in final demand in each region.

Lastly, the characteristics of inter-regional trade in value-added (TiVA) in China show that the Midwest has a large VA-in, but the scale of VA-out is even larger, resulting in a negative net VA-in. This is mainly due to differences in trade items. Based on its production networks, the coastal region mainly accounted for production in the manufacturing industry and high-end service industry-related items sent to the Midwest region, while the Midwest region mainly produced natural resource-related items in the areas of mining, agriculture, forestry and fishery, food and beverage manufacturing. This resulted in an increase in net VA-in for the coastal region. In other words, domestic demand expanded after the GFC, centered on the investment demand in the Midwest region, but net VA-in increased in the coastal region and decreased in the Midwest.

### III. Changes in China's Import Market and Korea's Competitiveness

Our analysis of changes in China's import market following the GFC and up to 2019 in terms of trading partners, trade methods, industries, and processing stages, yielded the following results.

After the GFC, the import market in China showed signs of diversifying. Although the market share in the coastal region is still in the top ranks, the proportion of other regions such as the western region increased after the crisis (Sichuan, Chongqing, Henan, etc.), and the eastern region also showed signs of diverging to Shandong and Hebei. On the other hand, China's import market for Korean products became more concentrated in traditional top-importing provinces such as Guangdong and Jiangsu, while among other eastern regions Shandong, Tianjin, and Beijing fell significantly after the GFC in terms of their proportion of Korean imports.

Meanwhile, among items such as medical supplies, cosmetics, semiconductors, and automobiles, which are promising import items in the Chinese market,<sup>3</sup> medical supplies and cosmetics are likely to continue to increase in the future due to improved income levels, a preference for imported products, and easing of import restrictions in China. Semiconductor imports are greatly affected by non-economic factors such as

the US-China conflict. Among these items, Korea's exports to China accounted for a higher proportion in the area of medical devices than pharmaceuticals among medical supplies, and a higher proportion of parts than finished automobile products. In addition, Korean products were more favored in the area of cosmetics imports in Shandong and Henan, and in pharmaceutical imports in Tianjin and other regions. Meanwhile, import regions of semiconductors and automobiles were greatly influenced by Korean companies' entry into China.

The results of our analysis of changes in the competitive structure between major countries in China's import market after the GFC are as follows. Korea has maintained comparative advantages in electronics/computers/communication equipment and metal manufacturing, and has a comparative advantages in general/special equipment, electric machinery and non-metallic mineral products, but fewer industries maintain comparative advantages than major advanced countries. In addition, Korea's dependence on the electronics/computers/communication equipment industry in China's import market has intensified, and competition with Taiwan has intensified in that area.

Among major promising import items, medical supplies maintain their share and comparative advantage in advanced countries such as Germany and the United States. However, due to the

<sup>3</sup> Promising items are selected by comprehensively considering changes in all imported items of China

and imported items from Korea.

characteristics of medical supplies, which require the accumulation of specialized technology, each specific item has a different competitive structure. In particular, in the import market for dental implants, Korea's market share and comparative advantage have increased significantly. In the case of cosmetics, Korea's market share has increased rapidly since 2014. In addition, the share of semiconductors in Taiwan and Korea exceeded 50%, while Taiwan's share and comparative advantage continued to rise and Korea's share fell slightly. In automobiles, Korea's share of both finished cars and parts fell and comparative advantage was lost in this sector.

Meanwhile, in the import market of Guangdong Province, where the electronics industry has developed, Korea had the smallest number of electronics-related comparative advantage items among major countries, and the number of industries that maintain comparative advantages was also the smallest. This means that Korea has an unrivaled advantage in some items in the Guangdong's import market, so whether to maintain comparative advantages over those items will have a significant impact on future competitive changes.

In addition, Korea's share of the chemical industry is on the decline in the import market in Jiangsu Province, where the chemical industry has developed, and Korea is comparatively disadvantaged in the pharmaceutical market. In addition, Korea's market share fell significantly in Shandong and Beijing, which were Korea's major export markets.

## IV. Implications

In order to minimize the impact of unstable global governance as a strategy for entering the domestic market in China in the era of US-China conflict, it is necessary to strengthen regional economic cooperation with China.

In particular, Korea, which maintains a cooperative relationship centered on intermediary goods with China, needs to develop cooperation with coastal regions that directly import intermediary goods and some Midwest strongholds. According to our analysis, about 30% of China's imported intermediate goods are imported into coastal regions where production networks are concentrated and then supplied to inland areas through local processing (embedded to Chinese products). Therefore, in order to maintain or enhance the comparative advantage of intermediate goods, Korea needs to deepen cooperation with coastal regions with developed production chain as well as inland hubs where final demand is rapidly increasing and production capabilities are strengthening.

In addition, as a result of the analysis, promising regions and industries for cooperation were selected for each field related to domestic demand expansion.

First, investments in transportation and energy infrastructure and new infrastructure are the initial engines for domestic demand expansion, and cooperation should be expanded in the western and coastal regions. In particular, in the area of

transportation and energy infrastructure, industries such as construction, machinery facilities and transportation facilities are promising. In the new infrastructure area, industries such as 5G technology, electronics/communication facilities/parts, and digital/information technology services are promising.

**S**econd, investments related to strategic new industries, which are emphasized along with infrastructure investment in the 14<sup>th</sup> FYP, are expected to be concentrated in cluster locations designated and managed by the central government. The coastal region (Guangdong, Beijing, Shanghai, Jiangsu, Shandong, etc.), where next-generation information technology, advanced equipment, new materials, biopharmaceuticals, and clusters related to environmental protection and energy saving are concentrated, and some Midwest and northeast regions (Hubei, Anhui, Henan, Shanxi, Sichuan, Liaoning, etc.) need to promote cooperation in new industries.

**T**hird, efforts should be made to expand final consumer goods exports and entry into the domestic consumption market through the use of new consumption models around the coastal region. As demand for non-face-to-face consumption increases rapidly with Covid-19, development of the consumption market through new consumption models such as online and offline

consumption convergence is being urged. In addition, in the process of expanding domestic demand, imports of intermediate goods for investment have slowed, while imports of final consumer goods continue to increase. This trend is expected to continue due to improved income and consumption levels and policy factors. Focusing on promising items where Korea possesses high market share and comparative advantage, such as medical supplies and cosmetics, there is a need to enhance competitiveness and expand entry regions by incorporating new consumption methods. In particular, as the online retail market is concentrated in eastern and southern areas such as Guangdong, Zhejiang, Shanghai, and Jiangsu, and the import of final goods is also concentrated in these regions, these can be used as an entry base into the consumer market. In addition, it is necessary to consider entering the consumption market in some inland areas where the growth of online shopping, education, remote medical care, culture, and leisure services is rapidly growing, as well as pilot zones where tax reductions and license exemptions are applied to a selection of consumer goods.

**F**inally, it is necessary to find new cooperation models, such as cooperation using China's key regional development strategies, expansion of service convergence based on technological superiority and expansion of participation in China's domestic value chain. **KIEP**