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Korea's Investment in ASEAN: An Analysis Linking Foreign Subsidiary Activities and Parent Data

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I. Introduction

China's economic growth, wages on the rise, and continuance of trade friction with the United States have weakened its advantages as a production base and increased the need for post-China production bases. Against this backdrop, Southeast Asia, adjacent to China and with its supply of low-cost labor, has emerged as a major investment destination for global companies. Under this trend, Korean companies are also actively investing in ASEAN. The cumulative investment of Korea in ASEAN from 1980 to 2018 is on par with the cumulative investment in China.

As ASEAN has grown as a major investment region of Korea, there is a need for research on Korea's investment in ASEAN. However, due to a lack of micro data, it is difficult to conduct empirical studies on achievements realized by Korea's investment in ASEAN. Therefore, we tried to overcome these limitations by establishing inte-

grated data linking the data of overseas subsidiaries and domestic parent companies. For our analysis, we have employed the Overseas Enterprise Data released by the Korea Trade-Investment Promotion Agency (KOTRA) and Korea Enterprise Data (KED).

II. Methodology and Basic Statistics of Database

The purpose of this study is to establish microdata linking foreign subsidiaries with their parent companies. Information on overseas subsidiaries and their parent companies by country can be obtained through the KOTRA Overseas Enterprise Data. However, the KOTRA Overseas Enterprise Data lacks detailed financial information on the parent company. Hence, we have combined the KOTRA Overseas Enterprise Data and KED by using parent companies' corporate registration number as a parameter.



Basic statistics of the established data shows that Korean firms mostly advance into foreign markets in the form of independent investment for production, concentrating on manufacturing and business services. In addition, the data on average capital of parent companies with overseas subsidiaries by industry exhibit that utilities companies which provide water supply, sewage, waste management, and materials recovery service show the highest average capital and sales.

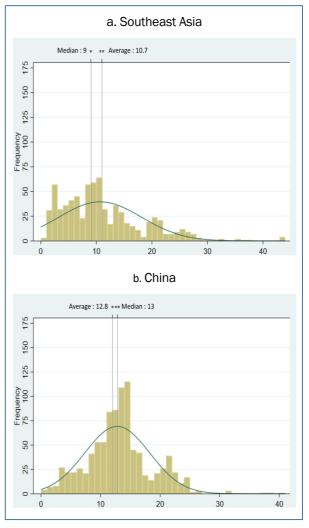
III. Analysis on Korean Firms' Investment in ASEAN: Focus on Manufacturing Industry

We analyzed the current status and characteristics of Korean investment in the Southeast Asian manufacturing sector, based on the combined data of the KOTRA Overseas Enterprise Data and KED. We narrowed down the objects of our analysis to companies for which we could confirm the financial information of parent enterprises. The analysis shows that most of the Korean firms are expanding into China and Southeast Asia. While the number of Korean enterprises entering China fluctuates considerably by year, the number entering into ASEAN shows steady growth. Most Korean firms entering China are producing electronic components, computers, and telecommunications equipment. On the other hand, most of the Korean enterprises which choose to advance into ASEAN are in the garment manufacturing industry. The

fact indicates a difference in the level of capacity as a production base hub between China and Southeast Asia. In addition, the enterprises operating in China are older and more mature than those in Southeast Asian countries.

Figure 1. Comparing Firm Age of Korean Subsidiaries in Southeast Asia and China (2016)

(Unit: number of companies, year)



Note: The above figures include the companies that we can confirm financial information of parent enterprises.

Source: Authors' calculations based on database of this study.

Parent companies expanding into China have the highest operating profit to sales ratio. On the other hand, in particular, the enterprises entering Viet Nam in the electronics and chemical industries recorded lower figures. In addition, companies expanding into both China and Viet Nam have higher average sales than other companies. However, the average sales and profit of parent companies that did not enter both China and Viet Nam are lower than those of companies which only expanded into Viet Nam.

Table 1. Operating Profit to Sales Ratio of Enterprises Expanding into Southeast Asia by Manufacturing Industry (2016)

(Unit: %)

| Classification | | WLD | CHN | SEA | VN |
|----------------|------------------------------------|------|------|------|------|
| C10 | Food products | 5.3 | 4.4 | 5.4 | 3.9 |
| C11 | Beverages | 8.7 | 8.7 | 6.8 | i |
| C12 | Tobacco products | 44.0 | 44.0 | 44.0 | - |
| C13 | Textiles, except apparel | 4.2 | 5.2 | 4.3 | 4.1 |
| C14 | Wearing apparel, clothing | 2.3 | 1.6 | 3.1 | 4.4 |
| C15 | Leather, luggage and footwear | 2.8 | 0.7 | 2.1 | 5.3 |
| C16 | Wood products; except furniture | 4.5 | 6.3 | 6.0 | 9.2 |
| C17 | Pulp, paper and paper products | 4.0 | 2.5 | 1.3 | 1.3 |
| C18 | Printing and recorded media | 7.4 | 23.7 | 6.1 | 7.0 |
| C19 | Coke and briquettes | 9.3 | 8.7 | 9.0 | 7.3 |
| C20 | Chemicals | 4.1 | 7.6 | -1.4 | -5.8 |
| C21 | Pharmaceuticals | 5.0 | 3.7 | 6.4 | 5.6 |
| C22 | Rubber and plastics products | 1.9 | -2.7 | 7.9 | 8.4 |
| C23 | Other mineral products | 6.3 | 7.8 | 5.3 | 4.7 |
| C24 | Basic metals | 4.1 | 4.6 | 3.8 | 3.3 |
| C25 | Fabricated metal products | 5.6 | 7.6 | 3.9 | 6.5 |
| C26 | Electronic components | -3.4 | -0.1 | -4.5 | -7.8 |

| | Classification WLD CHN SEA VN | | | | | |
|-----|-------------------------------|------|------|------|-----|--|
| | Classification | | CHN | SEA | VN | |
| C27 | Medical, precision | 3.4 | 3.3 | 2.8 | 5.7 | |
| C28 | Electrical equipment | 1.3 | 0.6 | 1.4 | 1.7 | |
| C29 | Other machinery and equipment | 1.3 | 2.0 | -2.4 | 4.6 | |
| C30 | Motor vehicles, trailers | 2.8 | 2.1 | 5.0 | 4.2 | |
| C31 | Other transport equipment | 0.2 | -0.4 | 3.7 | 4.5 | |
| C32 | Furniture | 4.3 | 5.0 | 5.3 | 5.3 | |
| C33 | Other manufacturing | -3.8 | 4.0 | 5.4 | 5.6 | |
| | Total | | 2.6 | 2.0 | 2.4 | |

Note: WLD, CHN, SEA, and VN are abbreviated words of world. China. Southeast Asia. and Viet Nam.

Source: Authors' calculations based on database of this study.

Table 2. Average Sales by Manufacturing Industry and Expansion into China or Viet Nam (2016)

(Unit: billion KRW)

| Classification | | ~CHN | ~CHN | CHN | CHN |
|----------------|-------------------|-------|------|------|-------|
| | | ~VN | VN | ~VN | VN |
| C10 | Food products | 411 | 455 | 606 | 1886 |
| C11 | Beverages | - | - | 665 | - |
| C12 | Tobacco | - | - | 2968 | - |
| | products | | | | |
| C13 | Textiles, except | 61 | 72 | 314 | 456 |
| | apparel | | | | |
| C14 | Wearing apparel, | 93 | 244 | 160 | 253 |
| | clothing | ,, | | 100 | 233 |
| C15 | Leather, luggage | 119 | 147 | 74 | - |
| CIJ | and footwear | | | | |
| C16 | Wood products; | 213 | 422 | 6 | - |
| | except furniture | | | | |
| C17 | Pulp, paper and | 329 | 31 | 269 | - |
| | paper products | | | | |
| C18 | Printing and | 22 | 3 | 8 | - |
| C16 | recorded media | | | | |
| C19 | Coke and | 12877 | 465 | 5525 | 17432 |
| CIT | briquettes | | | | |
| C20 | Chemicals | 361 | 47 | 518 | 3534 |
| C21 | Pharmaceuticals | 150 | 328 | 205 | - |
| C22 | Rubber and | 131 | 165 | 205 | 153 |
| | plastics products | | | | 153 |
| C23 | Other mineral | 82 | 293 | 242 | - |
| | products | | | | |
| C24 | Basic metals | 405 | 253 | 1536 | 8197 |

| | | | 1 | | 1 |
|----------------|------------------|------|------|-----|-------|
| Classification | | ~CHN | ~CHN | CHN | CHN |
| | | ~VN | VN | ~VN | VN |
| C25 | Fabricated metal | 163 | 46 | 47 | 238 |
| | products | | | | |
| C26 | Electronic | 402 | 71 | 778 | 6558 |
| | components | | | | |
| C27 | Medical, | 40 | 31 | 49 | 197 |
| | precision | | | | |
| C28 | Electrical | 98 | 257 | 205 | 5135 |
| | equipment | | | | |
| C29 | Other machinery | 125 | 56 | 133 | 66 |
| C29 | and equipment | | | | |
| C30 | Motor vehicles, | 795 | 69 | 721 | 6474 |
| C30 | trailers | | | | |
| C31 | Other transport | 3014 | 743 | 71 | 19541 |
| | equipment | | | | |
| C32 | Furniture | 48 | 255 | 76 | - |
| C33 | Other | 11 | 11 | 37 | 6 |
| | manufacturing | | | | 0 |
| Total | | 410 | 148 | 430 | 4158 |

Note: CHN and VN are abbreviations of China and Viet Nam. Source: Authors' calculations based on database of this study.

The above analysis has limits, but it provides the following policy implications: the information of the parent companies that have overseas subsidiaries shows that expansion by Korean companies into Southeast Asia is steadily increasing within labor-intensive industries. This result can lead to a conclusion that easing trade and investment-related barriers would lower production costs and further increase investment in Southeast Asia. In addition, parent enterprises entering the Southeast Asian countries have shown a low average sales or profit ratio, suggesting that many small and mediumsized companies are expanding into these markets. Therefore, there appears to be a need for government support for small and mediumsized enterprises in ASEAN. At the government level, support for law and accounting service, and market research, which can be classified as fixed costs in the early stages of investment, or support for information sharing with large companies can be effective policy tools.

IV. Conclusion

This study is significant in that it has created a database which enables us to analyze diverse movement of Korean direct investment toward overseas markets. However, the compiled database has limitations to a certain extent, including the lack of precise information to distinguish the parent company. For following policy research, it will be important to gather accurate parent discernment information, augment extra subsidiaries' information in foreign nations, and expand its time series.

By means of this research, we analyzed characteristics of Korean enterprises operating in Southeast Asia and studied the financial performance of their parent firms. A variety of analyses are possible for research in the future based on the database established through this research, such as the effect of foreign direct investment on domestic employment and industrial competitiveness, relation between an increase in overseas production costs and the financial performance of the parent firm, and effectiveness of government policy on overseas firms.

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