ECONSTOR
Make Your Publications Visible.

A Service of

ZBW Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Kim, Minho

Research Report

The SME-suitable industry reservation policy: Economic effects and policy direction

KDI Policy Forum, No. 289

Provided in Cooperation with:
Korea Development Institute (KDI), Sejong

Suggested Citation: Kim, Minho (2022) : The SME-suitable industry reservation policy: Economic effects and policy direction, KDI Policy Forum, No. 289, Korea Development Institute (KDI), Sejong, https://doi.org/10.22740/kdi.forum.e.2022.289

This Version is available at:
https://hdl.handle.net/10419/279692

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

WWW.ECONSTOR.EU

Mitglied der Leibniz-Gemeinschaft

KDI
Policy Forum

KDI Policy Forum
August 3, 2022 (No. 289 (2022-04), eng.)

For Inquiry: KDI Communications Unit
Address: 263, Namsejong-ro, Sejong-si 30149, Korea
Tel: 82-44-550-4030 **Fax:** 82-44-550-0652

Authors | Minho Kim, Fellow at KDI (044-550-4144)

The views and opinions expressed by contributors are their own and do not necessarily represent or reflect the views and opinions of KDI.

The SME-Suitable Industry Reservation Policy: Economic Effects and Policy Direction

Minho Kim, Fellow at KDI (minhokim@kdi.re.kr)

* Based on Kim, Minho and WooRam Park, *Designing the Criteria on the SME Support Policy: Focusing on the Definition of SME and Small-Scale Reservation Policy,* Research Monograph 2022-01, Korea Development Institute, 2022 (in Korean).

Summary

- After marking the ten-year milestone since the adoption of the SME-suitable industry reservation policy, this study investigates whether the policy has enhanced the competitiveness of SMEs by safeguarding them as intended and offers implications for its future implementation.
  - This SME policy involves the selection of specific products to protect the business territories of SMEs and limit the entry or expansion of large enterprises; however, evidence-based discussions on its effectiveness have been limited.
  - While the production and employment of large businesses decreased after the adoption, the business activities of SMEs did not change much.
- This reservation policy aimed to "ensure the competitiveness of SMEs through their protection." It successfully fulfilled its protective role by reducing the likelihood of SMEs exiting the market. However, the reservation policy had limited impact in terms of improving their performance or competitiveness.
  - Following the designation of a set of industries (products) reserved for SMEs, the probability of exit for SMEs engaged in the production of those specific products significantly decreased. However, these SMEs did not show significant differences compared to other product producers in terms of most performance and input indicators.
  - The industry-level analysis shows that the policy contributed little to the performance of overall industries to which the designated products belong.
- The disappointing outcomes of the policy's stringent measures highlight its limited effectiveness, as the restrictions on the expansion or entry of large enterprises did not lead to significant improvements in the performance of SMEs.
- Based on the findings, it is recommended to suspend new applications for the designation of SME-suitable industries and gradually phase out the already designated reserved industries.
  - In any business field, when there is greater uncertainty about future market restrictions, firms are less incentivized to engage in that market and invest in domestic production facilities.
  - A policy that restricts production activity in a specific business area solely based on firm size may inadvertently undermine the efficiency of resource allocation in the broader economy.
- Instead of protecting specific business areas, a win-win policy between SMEs and large firms should prioritize providing effective support for the growth of capable SMEs through appropriate regulatory measures to address anti-competitive and unfair practices.

1.

Introduction

- Even after reaching the ten-year milestone since the adoption of the SME-suitable industry reservation policy, or the reservation policy, in 2011 with the specific aim of protecting SME business territory, this policy has not generated informed debates on its policy effectiveness.

- Restrictive policies that impose entry or expansion limitations on large enterprises in order to protect SMEs are relatively uncommon in advanced countries.
- Given its abundant workforce, India adopted a protective measure for SMEs by reserving certain products exclusively for their production to ensure employment security. However, amid emerging trade liberalization and changing consumer preferences, India took steps to dismantle the policy starting in the early 2000s and eventually eliminated all items from the reserved list in 2015.

■ **This study analyzes the reservation policy's contributions to enhancing SME competitiveness through its protective measures and offers implications for its future operation.**

- The policy's objective is to improve the competitiveness of SMEs through protective measures.[1)]
  - Upon receiving an application for designating an SME-suitable industry or product filed by small and medium-sized business organizations (associations, etc.), the Korea Commission for Corporate Partnership (KCCP) initiates a fact-finding process and its working committee's review. Then, the KCCP conducts deliberations, determines the designation, and issues official recommendations to market participants.
- At the time of its introduction in 2011, the policy designated a wide range of industries and products: multiple foods and beverage products, including gim (dried seasoned seaweed), kimchi, dubu (tofu), noodles, sundae (black pudding), and eomuk (fishcake), as well as various manufacturing areas and products like ready-mixed concrete (RMC), laundry soap, and antifreeze.
- Using the Mining and Manufacturing Survey from 2008 to 2018 by Statistics Korea, this study identifies establishments that manufacture SME-suitable products and analyzes the economic effect on those producers after the policy's adoption.
  - The Mining and Manufacturing Survey provides representative datasets on Korean manufacturing establishments with ten or more employees, excluding those with fewer employees.
  - Unlike the prior studies limited to the markets for packed tofu or ready-mixed concrete, this study analyzes the economic effects on the overall manufacturing industries, including those designated as SME-suitable.[2)]

2.

Changes in the Share of SME-Suitable Product Producers

■ **Since the introduction, large enterprises have experienced a decline in production and employment, but not much has changed for SMEs.**

- The 2008-2018 shipment data shows that the share of reserved products made by large enterprises decreased by more than half, from 1.2% to 0.5%, while the share by SMEs remained about the same from 7.9% to 7.6% (Table 1).

1 The Korea Commission for Corporate Partnership (KCCP)

2 Lee (2015), Chun *et al.* (2018)

<Table 1> Shares of the Shipments of Reserved Products

(%)

Year	All business enterprises	Large enterprises	SMEs
2008	4.2%	1.2%	7.9%
2009	4.4%	1.5%	7.8%
2010	4.2%	1.2%	7.7%
2011	3.7%	0.8%	7.4%
2012	3.8%	0.8%	7.7%
2013	3.6%	0.6%	7.2%
2014	3.8%	0.7%	7.3%
2016	4.3%	0.7%	7.7%
2017	4.1%	0.6%	7.8%
2018	4.0%	0.5%	7.6%

Note: 1) Large enterprises refer to establishments with 300+ employees.
2) Excluding data on the shipments of reserved products for 2015, the year the Economic Census was conducted.

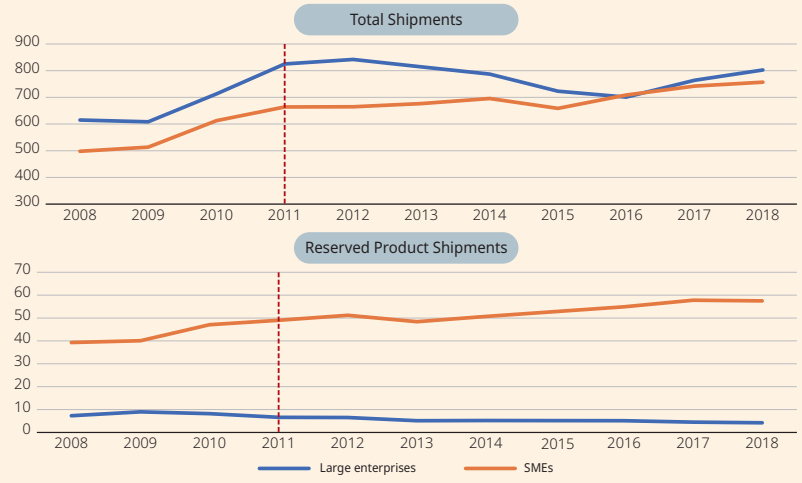
Source: Author's calculations using the 2008~18 Mining and Manufacturing Survey by Statistics Korea.

○ The shipment value of reserved products manufactured by large firms fell more than half from 7.3 trillion won in 2008 to 4.2 trillion won in 2018, while that by SMEs slightly rose from 39.3 trillion won to 57.5 trillion won in the same period. However, other products also experienced a similar rate of increase.

- From 2008 to 2018, large enterprises posted a loss of 42% in the shipment value of reserved products but a gain of 31% in other product shipments.
- Over this period, SMEs posted 46% and 52% gains in the shipment values of reserved and other products, respectively.

[Figure 1] Changes in Shipments by Firm Size: Total vs Reserved Products

(1 trillion won)



Note: 1) Large enterprises refer to establishments with 300+ employees.
2) Excluding data on the shipments of reserved products for 2015, the year the Economic Census was conducted.

Source: Author's calculations using the 2008~18 Mining and Manufacturing Survey by Statistics Korea.

○ In 2008, 10.6% of all manufacturing establishments with 10+ employees were manufacturers of SME-suitable reserved products. These companies contributed 15% of the total value added and 12.5% of the total number of employees. A decade later, in 2018, the proportion of reserved product producers had not changed much, but their contribution to the total value added and the total number of employees decreased to 10% and 10.9% (Table 2).

- By establishment size, the decrease in the share of value added and employment was primarily attributed to the decline in the proportion of large enterprises.

<Table 2> Shares of Reserved Product Producers by Firm Size

(%)

Year	Share of reserved product producers			Share of total value added			Share of the number of employees		
	Total	Large enterprises	SMEs	Total	Large enterprises	SMEs	Total	Large enterprises	SMEs
2008	10.6	10.7	10.6	15.1	18.9	10.8	12.5	17.1	10.9
2009	10.6	11.2	10.6	14.3	17.5	10.6	12.5	17.0	10.9
2010	10.2	11.3	10.2	13.7	16.2	10.6	11.8	15.9	10.4
2011	9.8	9.3	9.8	10.8	11.7	9.7	11.0	14.1	10.0
2012	10.3	9.9	10.3	12.9	14.6	10.7	11.5	14.6	10.4
2013	9.5	8.8	9.5	11.8	13.5	9.8	10.4	13.7	9.4
2014	9.7	8.8	9.7	11.5	12.8	10.1	10.7	14.5	9.5
2016	10.5	8.8	10.5	10.7	10.5	11.0	11.6	15.2	10.5
2017	10.5	8.4	10.6	11.0	10.6	11.4	11.5	14.6	10.5
2018	10.3	8.1	10.4	10.0	9.1	11.1	10.9	13.0	10.2

Note: 1) Large enterprises refer to establishments with 300+ employees.
2) Excluding data on the shipments of reserved products for 2015, the year the Economic Census was conducted.
Source: Author's calculations using the 2008~18 Mining and Manufacturing Survey by Statistics Korea.

3.

Effects of the Reservation Policy on Business Performance

■ This paper aims to empirically examine the economic effects of the reservation policy at the establishment level to assess whether the policy has achieved its intended objectives. Furthermore, it analyzes the impact of the policy on the overall industry and provides implications based on the findings.

○ Notwithstanding insignificant changes in production and employment by smaller producers of reserved products, this study employs statistical methodology to analyze the impact of the policy on both establishments and the industry as a whole.

○ It discusses implications for its future implementation.

■ This study identifies SME producers of the initial list of reserved products in 2011 and examines the policy's effect on their business performance and production activity.

○ The samples for analysis are constructed by combining industry and product data from the Mining and Manufacturing Survey and identifying manufacturers of reserved products.

- The author obtained the 2008~2018 data from the Mining and Manufacturing Survey of Statistics Korea's Microdata Integration Service (MDIS).

○ The sampled business establishments are divided into the treated group of reserved product producers and the control group of others.

- To enable comparisons within similar industries, the analysis excludes the 3-digit industries where the reserved products are not included.
- SME policies are typically implemented for specific purposes, such as financial support, and are directed at specific firms. However, the reservation policy is unique in that it targets all SMEs belonging to selected industries.
- Because this policy intends to protect SMEs and secure their competitiveness, its effect at the establishment level is analyzed using SMEs with less than 300 workers.
- The analysis also excludes those producing newly designated products after 2013, which accounts for approximately 0.6% of all establishments.

■ Business performance indicators include production output, value added, labor productivity, and total factor productivity. Indicators for production inputs take into consideration employment, tangible assets, per employment labor cost, and direct production cost. Also, the analysis employs the difference-in-difference (DID) method.

- ○ Labor productivity is real value added per employee. Total factor productivity represents production efficiency and measures the extra value created by a firm using capital and labor inputs.
- ○ Per employee labor cost can be interpreted not only as an input indicator but also as a proxy variable for the human capital of a business establishment.
- ○ By applying the DID method, the author controls the effects of an establishment's unique unobservable characteristics on dependent variables. Also considered is a year-fixed effect.

■ According to the analysis, the reservation policy fulfilled its protective role by reducing the likelihood of SMEs exiting the market. However, improving their performance or competitiveness yielded limited outcomes. (Table 3).

- ○ After reserving a catalog of suitable products for SMEs, their probability of market exit decreased significantly. Still, they did not show meaningful differences from other product producers for most performance and input indicators.
- ○ Nevertheless, reserved product producers showed a 1.3% drop in labor cost per employee after designation.
  - − It is likely that reserved product producers might not have raised the wage for existing employees or provided low wages for new hires.

<Table 3> Effects of Designating SME-Suitable Industries: SME Business Performance and Production Input

Dependent variables	(a) Production output	(b) Value added	(c) Labor productivity	(d) TFP
Coefficient estimates (Designated industry × since 2011)	0.004 (0.013)	0.007 (0.016)	0.009 (0.017)	0.018 (0.017)
Adjusted coefficient of determination (R^2)	0.948	0.919	0.825	0.868
Nobs.	399,881	399,772	399,490	351,602

Dependent variables	(e) Number of employees	(f) Tangible assets	(g) Per employee labor cost	(h) Direct production cost	(i) Exit
Coefficient estimates (Designated industry × since 2011)	-0.003 (0.006)	-0.032 (0.023)	-0.013** (0.005)	0.008 (0.014)	-0.344*** (0.074)
Adjusted coefficient of determination (R^2)	0.919	0.938	0.699	0.945	
Nobs.	399,889	349,171	392,454	389,356	109,472

Note: 1) Results from the difference-to-difference method.
2) Coefficient estimates in which each indicator serves as a dependent variable refer to the effect of introducing the reservation policy. The level of statistical significance is as follows: *** p<0.01 and ** p<0.05.
3) Firm-level and year-fixed effects were considered.
4) Figures in parentheses are clustered robustness standard errors at the establishment level.
5) In the individual panel regression model, the weights of (a), (b), (e), (f), and (h) are given as dependent variables. The weights of (c) and (g) are the number of employees, and that of (d) is the value added. (i) is a coefficient estimated by the panel logit model in which its dependent variable is whether exit occurs in the next year or not.
6) Exit refers to business establishments that do not exist in the survey data.
7) As for the Economic Census years, fixed assets and productivity indicators were excluded in 2010, and for 2015, they were excluded from the analysis.

Source: Author's calculations using the 2008~18 Mining and Manufacturing Survey by Statistics Korea.

- In addition, this study analyzes the policy effect by focusing only on products that fall under more stringent recommendations: business transfer and reducing business size. The results show that this policy has a negligible impact on business performance. Instead, it leads to a decrease in the number of employees and per-employee labor costs, without a significant impact on the survival of the product producers.
  - Four recommendations are available under the policy: entry and expansion restrictions, business transfer, and reduction in business size. The last two are more stringent in the sense that they advise large businesses to transfer or downsize in a market where they are already operating.
  - The outcomes of the policy's stringent measures indicate that it is difficult to conclude that the reservation policy positively influenced the competitiveness or protection of these SMEs.

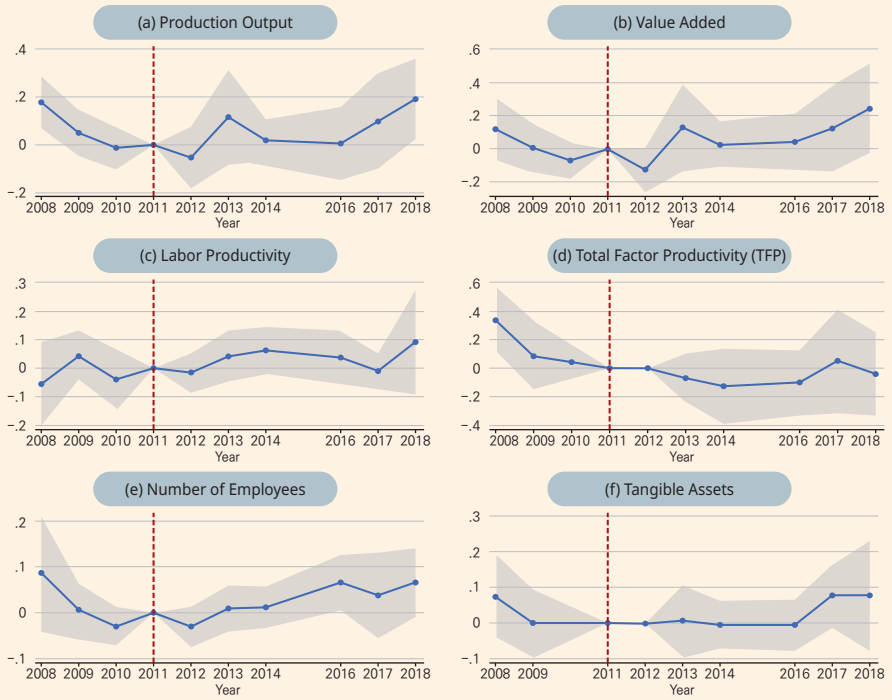
4.

Effects of the Reservation Policy on Industries

- Presented so far covers the effect of the reservation policy on SMEs involved in the production of reserved products. This section will examine the broader impact of the policy on related industries.
  - This section conducts an industry-level impact analysis by considering the production activities of both large firms and SMEs.
  - At the 5-digit industry level, this section sets industries of reserved products and others as treated and control groups, respectively.
    - As in the earlier analysis of the establishment-level effect, this analysis excludes the 3-digit industries where the reserved products are not included.
    - The industry-level analysis uses the same performance and production inputs (dependent variables) as the establishment-level analysis. Industry-level productivity was calculated by aggregating establishment-level estimates.

- The industry analysis finds that the reservation policy did little to the overall performance of the industries to which the reserved products belong.
  - [Figure 2] represents the policy effects on related industries each year, with 2011 as the base year of its introduction.
    - The recommendations remain in effect for up to six years, expiring from 2017 onward.
  - There are no significant differences found between the control and treated groups in terms of production output, value added, employment, and tangible assets. The treated group shows an uptrend after recommendations start expiring in 2017.
    - Productivity does not show notable changes in trend as well.
  - Even though the reservation policy may positively affect the production activity of SMEs during the protection period, this influence does not extend to related industries as the production of large enterprises contracts during the same period.

[Figure 2] Effects on Reserved Industries: Business Performance and Production Input



Note: 1) Results from the difference-to-difference method.

2) In a 95% confidence interval, estimated coefficients on dummy variables for reserved industries are displayed by year, where each indicator serves as a dependent variable.

3) Relative to the base year of 2011.

4) Robust standard errors clustered at the industry level.

5) In the individual panel regression model, the weights of (a), (b), (e), (f), and (h) are given as dependent variables. The weight of labor productivity is the number of employees, and that of total factor productivity is value added.

6) Excluding the data on the shipments of reserved products for 2015, the year the Economic Census was conducted.

Source: Author's calculations using the 2008~18 Mining and Manufacturing Survey by Statistics Korea.

5.

Policy Recommendations for Moving Forward

- **Considering the lack of significant impact on the performance of SMEs despite the strong measure of restricting the expansion or entry of large enterprises, it can be concluded that the effectiveness of the policy operation is low.**
  - With similar objectives and means, Korea implemented another reservation policy for over 20 years, from 1982 until its termination in 2006, as doubts about its effectiveness grew.
  - In the absence of empirical discussions on the effects of its previous policy, the government introduced the reservation policy as part of a new policy narrative for promoting shared growth between SMEs and large firms.
  - The two main goals of the current policy are protecting SME business territory and securing their competitive advantage. The first goal has been met to some extent as it helped SMEs remain operational in the market, but enhancing their performance or competitiveness proved futile.
    - What is more, it turned out to be of little help to the growth of relevant industries.
- **The reservation policy for SMEs needs to consider the potential downsides: hindering industrial growth, reducing efficiency in investment and resource allocation due to uncertainty over the selection of reserved products, and adverse effects on consumer welfare.**
  - While the policy may benefit smaller producers by providing them with a safeguarded market, the overall growth of associated industries is likely to be undermined.

3 Ministry of Economy and Finance, "Measures to Promote a Win-Win between SMEs and Large Companies," Sep. 29, 2010.

- Martin *et al.* (2017) find that the dismantling of India's Small Scale Reservation Policy led to increased employment and production in the region, driven by the growth and entry of businesses that were restricted by the reservation policy.

- The products reserved for SMEs, though not many, involve a wide range of industries. This creates uncertainty as it implies that almost any industry can potentially be designated as SME-suitable and subjected to market regulations. This uncertainty poses a significant challenge to the policy.
  - The greater the uncertainty about the market, the less incentivized businesses are to engage in that market and invest in domestic production facilities.
- A policy that restricts production activity in a specific business area solely based on firm size may inadvertently undermine the efficiency of resource allocation in the broader economy.
  - Another negative consequence is that SMEs have an incentive to stay small, as policy protection for SMEs is no longer available for those growing into large enterprises.
  - Enterprises of all sizes should be encouraged to contribute to job creation and industrial growth.
- Other considerations should include restricting consumer choice and welfare, losing opportunities for shared growth through partnerships between SMEs and large enterprise, and potential reverse discrimination against domestic companies when importing foreign products.

■ On the one hand, the reservation policy should be gradually phased out by suspending new applications. On the other hand, supporting the growth of competent SMEs should be set as a goal of the shared growth policy by establishing effective measures to regulate anti-competitive and unfair practices.

- Policy implementation strategies for the shared growth among small, medium, and large-sized companies[3] came amid the interplay of multiple factors. One is criticism of the Lee Myung-bak administration's deregulatory corporate agenda that resulted in a reckless expansion of conglomerates since its inauguration in 2008. Others are escalating polarization between SMEs and large firms and unfair trade practices, such as large firms' requests to lower unit prices for suppliers.
- Improving the effectiveness of the shared growth policy that has been under implementation for over ten years requires revisions through substantive reviews of existing policies as well as beneficiary-centered evaluations of performance and outcomes.
  - Recent disruptions in global supply chains have highlighted the importance of a resilient and robust corporate ecosystem. In addition, strong partnerships and networks between firms have emerged as key to winning the global competition.
  - The effectiveness of existing policies like the win-win world (Sang Saeng Nuri) and the partnership profit-sharing initiative should be examined, together with providing full support for independent technological development and cooperation between SMEs and large companies.
- The policy direction should focus on the two aspects. Firstly, the government needs to strengthen public remedial measures that can be instituted by the Korean Intellectual Property Office and the Korea Fair Trade Commission. Secondly, a fair competition ecosystem should be fostered by strengthening the system of intellectual property creation and protection.
  - Efforts should be made to address improper practices like technology theft, idea duplication, and the pirating of services developed by startups. Manipulation of price competition by acquiring technical data from subcontractors as a delivery condition and inducing OEM partners to manufacture similar products must also be rectified.
  - In an effort to bring out the full potential of SMEs to innovate, the European Union is actively pushing for the Intellectual Property Action Plan, which intends to strengthen the system for creating and protecting intellectual property (European Commission, March 2020).

References

- Chun, Hyunbae, Hailey Hayeon Joo, Jisoo Kang and Soo Hyung Kim, "Reviving Small-Scale Reservations: Evidence from the Korean Ready-Mixed Concrete Industry," 2018.
- European Commission, "An Intellectual Property Action Plan to Support the EU's Recovery and Resilience", Nov. 25, 2020.
- Kim, Minho and WooRam Park, *Designing the Criteria on the SME Support Policy: Focusing on the Definition of SME and Small-Scale Reservation Policy,* Research Monograph 2022-01, Korea Development Institute, 2022 (in Korean).
- Lee, Jinkook, *The Economic Effects of Designating Suitable Businesses for SMEs: the Case of Korean Tofu Market,* Policy Study 2015-01, Korea Development Institute, 2015 (in Korean).
- Martin, Leslie A., Shanthi Nataraj, and Ann E. Harrison, "In with the Big, out with the Small: Removing Small-scale Reservations in India," *American Economic Review,* 107(2), 2017, pp.354~386.
- Ministry of Economy and Finance, "Measures to Promote a Win-Win between SMEs and Large Companies," Sep. 29, 2010 (in Korean).

<Websites and Sources>

- Statistics Korea, "Mining and Manufacturing Survey," 2008~18 (https://mdis.kostat.go.kr, RAS(RAS19021002), last access: Dec. 10, 2021).
- The Korea Commission for Corporate Partnership (KCCP), "Announcements on Industries Designated as SME-suitable," (https://www.winwin growth. or.kr/03_business_01_02_01_ outline.do, last access: Dec. 17, 2021).