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Achieving Inclusive and Innovative Growth with Competition Policies

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I. Introduction

In recent years, inequality has grown worse worldwide. For example, the share of income possessed by the top 1% in major countries is increasing, together with a rise in the inequality index. Recent studies have pointed out weakening market competition and deepening industrial concentration as one of factors for this phenomenon. Therefore, the role of competition policies in promoting market competition should also be considered as a countermeasure against deepening inequality beyond the traditional view about competition policies. Against this backdrop, in our forthcoming study "Competition Policies for Inclusive and Innovative Growth (KIEP Policy Analyses 21-19)," we empirically analyze cases of the US, the EU and Korea, and then propose a competition policy direction to achieve inclusive and innovative growth pursued by the Korean government. In this brief, we summarize the main findings of our study.

II. Changes in the Industry Concentration and Competition Policy Direction of Major Countries

1. US and EU

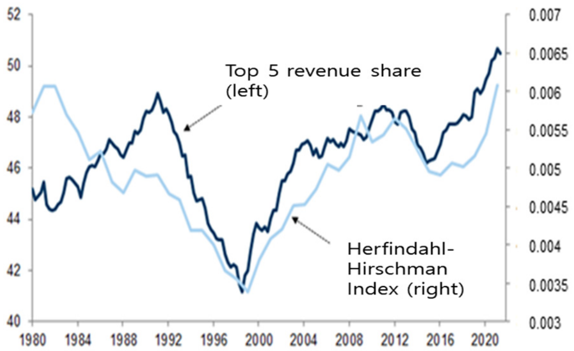
In both the US and the EU, industrial concentration has generally increased. We begin our study with a case of the US where the first antitrust law—the Sherman Act—was enacted in the world. Previous studies document that the market concentration has intensified, based on statistics from the US Department of Commerce. According to an analysis by Goldman Sachs,[1] the weighted average of the top five companies in terms of revenue has steadily increased since the late 1990s, accompanied by an increase in the Herfindahl-Hirschman Index (hereafter HHI) as well (see Figure 1). Industries with higher HHI compared to 1998 accounted for 70% of all industries in the US,

1 "Concentration, Composition, and the Antitrust Policy Outlook" (July 2021).

with about 20% exceeding the threshold considered by the Department of Justice and the Federal Trade Commission. Overall, a majority of the US industry tends to be highly concentrated.

Figure 1. US's Market Concentration

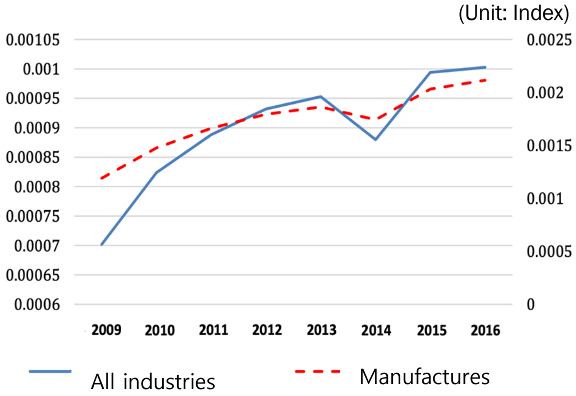
(Unit: left - %, right – Index)



Source: Goldman Sachs US Economic Analyst (July 2021)

Figure 2. EU's Herfindahl-Hirschman Index

(Unit: Index)



Source: Bighelli et al. (2021).

The situation in the EU, another pillar in the history of global competition policies, is not very different from that in the US. According to Bighelli et al. (2021)[2], industrial concentration in the EU has increased by more than 50% since 2009. Furthermore, in the manufacturing sector alone, industrial concentration has nearly doubled. Nevertheless, the concentration of industries by country appeared in a wide variety due to the cross-country differences in the structures of industry and market and the economic size.

In addition, in both the US and the EU, stiffer enforcement of competition laws is accompanying the recent proliferation of the digital economy. Along with this, the direction of competition policies is changing toward regulating not only anti-competitive actions that directly affect consumer welfare but also actions that can indirectly affect social welfare. For example, the US has issued an Executive Order on Promoting Competition in the American Economy, calling for a whole-of-government effort to prevent damage to workers, entrepreneurs, and consumers across the industry, and promote profits and competition. The EU has also proposed legislation to strengthen regulations, including regulating corporate unions, restricting participation in public procurement, and initiating ex officio investigations in order to block various circumventive attempts to distort market competition. We can also see a more proactive response to the expansion of the digital economy in the US, where five bills under the title of "Stronger Online Economy: Opportunity, Innovation, Choice" has proposed. We also see an implementation of a regulatory bill that strengthens fair competition for digital platforms in the EU.

2 "European Firm Concentration and Aggregate Productivity," IWH-CompNet Discussion Papers No. 3/2021

2. Korea

Korea's competition policies have undergone significant changes in the enactment and enforcement of laws over the past 40 years. Among others, we identify three major changes in competition policies. First, the number of high-level sanctions shows a decreasing trend in the field of measures to curb economic concentration. Meanwhile, law enforcement performance itself decreased in traditional competition promotion policies. These changes would be attributed to the concentration of human resources and capabilities of policy authorities in other areas, such as the fair trade policies for small and medium-sized enterprises. In addition, the reduction in enforcement in the field of traditional competition promotion policies appears to be due to the complexity of incidents and the difficulty of demonstrating economic effectiveness, rather than due to a reduction in unfair practices. Second, there is also a tendency to focus more on handling large-scale cases with large market ripple effects. This can be interpreted as the policy authorities trying to efficiently utilize their limited human and physical resources. Finally, in the field of fair trade policies for small and medium-sized enterprises, we can see a tendency to strengthen both institutional discipline and law enforcement.

III. Impact of Deepening Industrial Concentration on Inclusive and Innovative Growth

Indeed, the past competition policies have focused on the direct effect of reducing markup and lowering prices to increase consumer welfare. However, more recent studies argue that competition policies could affect income redistribution as well as aggregate variables such as GDP and employment (Dierx et al., 2017; Aghion et al., 2021)[3]. In this regard, we empirically analyze the impact of deepening industrial concentration on inclusive and innovative growth, using national and industry-specific panel data from a global perspective.

In this first regression analysis, we use the labor income share as an index of inclusiveness and total factor productivity as an index of innovation. At the same time, relying on the methodology of Battiati et al. (2021)[4], we estimate the national and industrial markup, using the estimated markup as an index of industrial concentration. Finally, we also include other control variables such as trade dependence, R&D costs, foreign direct investment, financial openness, etc. in our regression.

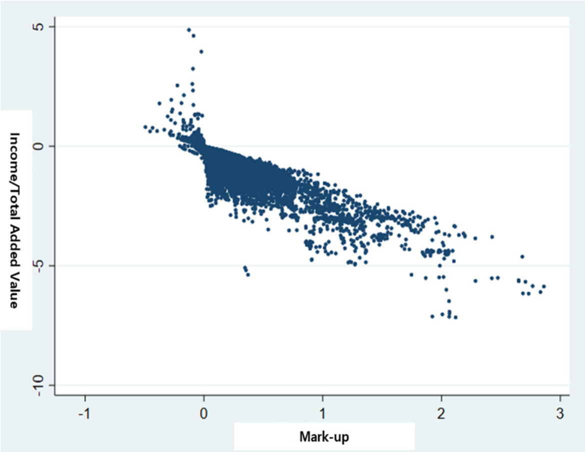
According to our empirical analysis using EU Klems data from 1995 to 2017, the deepening of industrial concentrations tends to increase

3 "Does EU Competition Policy Support Inclusive Growth?" Journal of Competition Law and Economics, 13(2), pp. 225-260.; "Competition, Innovation, and Inclusive Growth," IMF WP/21/80.

4 "Market Power and Productivity Trends in the European Economies: A Macroeconomic Perspective."

TFP. But the estimate is not statistically significant. On the other hand, the effect of industrial concentration on labor income share is negative and the estimate is significantly different from zero. Based on the results of this empirical analysis, we argue that the deepening of industrial concentration has a negative effect on inclusiveness while we do not find a clear association between concentration and innovation.

Figure 3. Markup and Labor Income Share



Source: Author's calculation.

IV. Korea's Case: Impact of Competition Policy Changes on Inclusive and Innovative Growth

To examine the impact of changes in Korea's competition policy enforcement, we first divide policies into four areas: traditional competition promotion policies (TRAD), economic power concentration suppression policies (POW), consumer policies (CONS), and fair trade policies for small and medium-sized enterprises (SMEs). At the same time, as the "inclusive and innovative growth index," we propose three indices—industrial concentration index, factor income distribution index and future growth engine index—and then empirically analyze the impact of competition law enforcement in the four areas on these inclusive and innovative growth indices.

The results of our empirical analysis are summarized as follows. First, regarding the effect of easing industrial concentration, only fair trade policies for small and medium-sized enterprises consistently reduce industrial concentration. In addition, we find that only these policies reduce all profitability-related estimates—net return on capital, net profit, and operating profit—for large companies relative to small ones. These results imply that law enforcement in the field of fair trade policies for small and medium-sized enterprises tend to reduce profit of large firms relative to SMEs, thereby easing concentration.

Second, strengthening law enforcement in the field of fair trade policies for small and medium-sized enterprises significantly reduce total factor income, labor income, and capital income of large enterprises compared to SMEs. These results suggest that competition policies can contribute to strengthening inclusion by narrowing the gap in income earned in return for supplying production factors between large firms and SMEs. At the same time, we also find that the traditional competition promotion policies also contribute to strengthening inclusion at the 10% significance level.

Table 1. Competition Policies and HHI

	(1)	(2)	(3)	(4)	(5)
TRAD	-0.000				-0.000
CONS		-0.006			-0.003
SMEs			-0.008 ***		-0.008 ***
POW				0.013	0.020
Sample size	384	384	384	384	384
R-squared	0.923	0.923	0.924	0.923	0.925

Notes: 1) Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.
2) Columns (1)-(4) show the relationship between enforcement and HHI in each field.
3) Column (5) shows the estimated result when the execution status in all four fields is simultaneously included in the regression equation.
Source: Author's calculation.

Table 2. Competition Policies and Total Factor Income Distribution

	(1)	(2)	(3)
TRAD	0.003	0.003	0.001
TRAD* Total capital	-0.000	-0.000	-0.000
CONS	-0.055	-0.037	-0.031**
CONS* Total capital	0.006	0.003	0.003**
SMEs	0.045**	0.020*	0.015*
SMEs* Total capital	-0.005**	-0.002*	-0.001**
POW	0.058	-0.090	-0.038
POW*Total capital	-0.006	0.007	0.003
Sample size	6,596	12,279	19,341
R-squared	0.750	0.833	0.826

Notes: 1) Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.
2) Column (1) for the relatively small size company group and column (2) for large size company group
3) Column (3) for all companies
Source: Author's calculation.

Lastly, regarding the future growth engine index, we find strengthening competition policies could reduce R&D investment in large companies relate to SMEs especially in the field of fair trade policies for SMEs (Table 3). Nevertheless, we also find that average companies' R&D expenditure does not tend to decline with the enforcement of competition policies.

Table 3. Competition Policies and R&D Expenditure

	(1)	(2)	(3)
TRAD	0.000	-0.001	0.001*
TRAD* Total capital	-0.000	0.000	-0.000*
CONS	-0.026**	-0.017**	-0.008**
CONS* Total capital	0.003**	0.001**	0.001*
SMEs	**0.023*** **	**0.012*** **	**0.011*** **
SMEs* Total capital	**-0.002*** **	**-0.001*** **	**-0.001*** **
POW	0.004	0.003	-0.004
POW*Total capital	-0.001	-0.000	0.000
Sample size	8,053	14,138	22,722
R-squared	0.911	0.959	0.966

Notes: 1) Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.
2) Column (1) for the relatively small size company group and column (2) for large size company group
3) Column (3) for all companies
Source: Author's calculation.

We caution that our analysis does not support the claim that only law enforcement in the field of fair trade policies for SMEs is effective. For example, in the case of traditional competition promotion policies, there is a good possibility that the defined market itself is narrower than the industry classification in our empirical analysis. In addition, as regards policies to suppress the concentration of economic power, the objective of our analysis is to verify not the concentration of ownership but the industrial concentration.

Importantly, the policy goals pursued by individual policies and the channels through which they affect the industrial concentration may differ across areas of policies. Therefore, although our study find that only the fair trade policies for SMEs tend to have a significant effect on inclusiveness, it is worth noting that these results do not imply that other policies have no effect on inclusiveness.

V. Policy Suggestions

Based on our empirical results, we suggest the following policy direction of competition policies to pursue the sustainable, inclusive and innovative growth of Korea.

First, the direction of competition policies must be re-established at the government-wide level. For example, it is necessary to expand the scope of Korea's competition policies and expand it in a direction that allows accurate evaluations of industrial policy and macroeconomic effects by more actively considering values such as fairness, inclusion, and social welfare, along with existing micro-competition restrictions. To re-examine the importance of competition policies at the pan-government level, we use the competition authority as the control tower and, thus, re-establish a new direction for competition policies in domestic economic policies.

Second, policy capabilities should be focused more on improving competition-restricting regulations to alleviate monopoly and oligopoly market structures. We have to understand that there is a limit to discovering and improving regulations that have a great impact on the market due to the non-cooperation of related ministries with regulatory authority. Therefore, at the national economic level, it is necessary to focus on inclusive and innovative growth and make efforts to reform monopoly and oligopoly market structures while empowering competition authorities.

Finally, in response to the transition to the digital economy, we have to implement and adjust the paradigm of competition policies and continuously discover competition law issues in the digital economy field. To do that, more human and material resources of the competition authorities would be necessary. For example, we can consider structural countermeasures beyond behavioral countermeasures against acts that distort market competition in the digital economy. It is also possible to consider introducing a shift in the burden of proof when conducting reviews of business combination in the digital field as well, thereby having business operators prove the competition-friendly effect of their operations when determining whether or not competition laws have been violated. KIEP