

The Effects of Online Export Promotion Policies for SMEs in Korea¹

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I. Introduction

The global e-commerce market is rapidly expanding due to the development of digital platforms. Internationalization through these platforms has significantly reduced the cost of entering overseas markets when compared to traditional methods, opening up new opportunities for small and medium-sized enterprises (SMEs) with limited capital or human resources. Nevertheless, it appears that the online export activities of Korean SMEs are still limited.² About 12% of SMEs registered as telecom-sales business operators in Korea actually performed online exports for the past 3 years (2018-20) according to the Korea Institute for International Economic Policy (KIEP)'s survey in 2021³. Furthermore, the share of online export SMEs with annual online exports of less than 10 million won (roughly equal to 14,000 USD) exceeded 30%.

These statistics implies that, while accessing the global market via a digital platform has become easier, it is still difficult for SMEs to successfully export online. This is because, in order to 'sell well' to overseas consumers beyond just 'posting' your products on a digital platform, they need to accumulate knowledge and experience in using major digital media in addition to the capabilities required for traditional export. According to Koo et al. (2021), Korean SMEs only show a significant improvement in performance after about 3 years of online export, on average. This suggests that SMEs should accumulate relevant experiences and capabilities over a three-year period in order to successfully export online, even if profits are relatively low in the early stages of online export.

¹ This is a summary article based on the third chapter of Koo et al. (2021)

² Online exports are defined as the export of goods or intangibles by receiving orders from overseas buyers

via various digital platforms.

³ Korea Institute for International Economic Policy, 2021. "Survey of SME exports via online platform in Korea"

As a small and medium-sized firm, it is difficult to continuously accumulate complex online export-related capabilities. This is why the development of digital platforms may not work only in favor of online exports of SMEs, and the demand for online export support policies for SMEs has been steadily increasing as the share of e-commerce grows. To meet the demand, various SME online export support policies, particularly since 2017, have been implemented in Korea, with associated budgets significantly increasing. However, in-depth studies on the effect of related policies are still quite limited.

To address the research gap, this study investigates the impact of the Korean government's online export support program for SMEs during 2018-20. Specifically, we focus on the five major programs that the Ministry of SMEs and Startups implemented to examine changes in online export activities of participating SMEs.⁴

II. Empirical Methodology

The firm-level three-year panel data for regression analysis is constructed based on a survey of online exporting SMEs conducted in 2021 by KIEP. The average change in a SME's online exports before and after participation in the online export support program is

then estimated, while controlling for each firm's fixed effect (within-estimation). Here is the detailed econometric model.

$$Y_{it} = \beta D_{it} + \gamma X_{it} + \eta_t + \alpha_i + \epsilon_{it} \quad (1)$$

The dependent variable, Y_{it} , is a performance variable related to firm i 's online export in year t , which includes log sales, a dummy variable indicating whether online export is performed, and the ratio of online exports to sales. D_{it} is a dummy variable indicating whether firm i participated in the online export support program before or in year t . X_{it} is a vector that controls the characteristics of firm i in year t , including quadratics of firm age and dummy variables with respect to the experience of other SME support policies. The quadratics of firm age control the average effect of the firm's growth cycle, while the dummy variables control the impact of other policies, such as financial assistance or export vouchers. η_t is the year-fixed effect, which controls macroeconomic effects for each year, and α_i is the firm-fixed effect, which controls the time-invariant characteristics of firms that can affect each firm's online exports. Regressions are performed using firm-level weights, and standard errors are calculated using firm-level clustering, which are robust to heteroscedasticity and serial correlation.

⁴ The five programs to be analyzed are the major online export support programs of the Ministry of SMEs and Startups in Korea, and refer to ① Online Export

Agency Support Program ② Online Export Start Assistance Program ③ Joint Logistics Support Program ④ Online Mall Development Assistance Program ⑤ Online Exhibition Support Program.

III. Data

For this empirical analysis, the survey data conducted by KIEP on 269 online exporting SMEs in 2021 is used as the main analysis data. The sample specifically refers to SMEs in Korea that are officially registered as telecom-sales business operators and have performed online export at least once in 2018-20.⁵

The variables required for regression analysis are processed using the above survey data, including sales, online exports, firm age, online export start year, resale ratio. The Ministry of SMEs and Startups data are also used to identify whether and when a firm participated in each of the five online export support programs studied.

Out of 269 responding firms in the sample, 160 had participated in at least one of the five online export support programs, while 109 had not. Because the firms taking part in the online export assistance program are oversampled, weights are used in all statistical calculations and regressions. Using weights, for example, the proportion of firms participating in the online export support policy for SMEs among SMEs that exported online between 2018 and 20 is approximately 21.5%.

⁵ The specific population of the survey is SMEs that are officially registered as telecom-sales business operators and have been matched with Korea Enterprise Data (KED), which has information on approximately 8

IV. Results

Table 1 shows the basic statistics for the firms in the sample. On the one hand, regardless of whether they participated in the online export support program, all firms studied are quite similar in size and age. The average firm's sales and employees are approximately 5.7 billion won and 20 people, respectively, with an average firm age of approximately 10 years.

On the other hand, firms participating in the online export support program have a higher average export value than non-participating firms, but a slightly lower online export amount and experience. Furthermore, the share of resellers who do not participate in the manufacturing process of the products and only export finished products sourced from outside, appears to be relatively low among the participating firms.

Table 2 shows the results of the major regression analysis on the effect of the online export support program. First, in columns (1), (2), and (3), the firm's sales do not change statistically significantly after participating in the online export support program. However, the probability of performing online exports and the ratio of online exports to sales significantly increased. Specifically, after participating in the online export support program, the firm's

million companies. Despite being one of Korea's largest firm-level databases, the KED represents micro firms less than small or medium firms in general. As a result, extending the findings of this study to micro firms should be done with caution.

probability of performing online export increased by 21.3%p, and the proportion of online exports to sales also increased by 5.6%p. These results remain robust even after

controlling for whether the firms benefited from financial support policies and export voucher policies (refer to columns (4) to (6) of Table 1).

Table 1. Basic Statistics

Variables	Participants in the online export assistance program (N=160)		Non-participants in the online export assistance program (N=109)	
	Mean	(SD)	Mean	(SD)
Sales (Million Won)	5,707	(11,167)	5,756	(30,641)
Exports (Million Won)	1,680	(4,379)	1,124	(3,798)
Online Exports (Million Won)	451	(1,364)	694	(3,278)
Firm Age (years)	9.9	(6.4)	10.1	(8.0)
Online Exports Experience (years)	2.0	(3.1)	2.7	(3.1)
Employees (persons)	19.5	(33.2)	20.5	(59.8)
Share of Reseller (%)	24.5	(43.1)	28.9	(45.6)

Notes: 1. All statistics are calculated with weights at the firm level.

2: Exports are included in sales, and online exports are included in exports.

3: The statistics for sales, exports, and online exports are based on the 2018~20 data, whereas the others are based on 2020 data.

Source: Survey data for online export SMEs in Korea (KIEP, 2021)

Given that the regression analysis results are from within-estimation using three-year panel data, the analysis results in Table 2 can be interpreted as estimating the short-term effects that appear one to two years after participating in the online export support program. In other words, Table 2 results suggests that the online export support program has at least a short-run effect of increasing both the incentives for firms to begin and increase online export.

Additional regression analyses are conducted to investigate how the online export effects differ depending on sub-program and firm charac-

teristics. First of all, among the five online export support programs, the Online Export Agency Support Program and the Online Export Start Assistance Program appear to have performed exceptionally well. This is most likely due to the fact that the primary purpose of these programs is to assist beginners with online export.

The effects of the online export support program also differ according to the characteristics of participating firms. When the participating SMEs have relatively little online export experience and the smaller the sales volume, the program seems to be relatively more

effective. Furthermore, when participating in the online export support program, firms involved in product manufacturing tend to experience a greater online export enhancement effect than resellers, on average. This shows that

the online export assistance program can be more beneficial to SMEs with a comparative advantage in manufacturing than reseller SMEs that primarily perform wholesale and retail operations.

Table 2. The Effects of Online Exports Assistance Programs on Korean SMEs

	(1)	(2)	(3)	(4)	(5)	(6)
	ln(Sales)	1: Do online exports 0: Otherwise	Online exports over sales	ln(Sales)	1: Do online exports 0: Otherwise	Online exports over sales
Participate in online export assist. program	0.020 (0.144)	0.213*** (0.057)	0.056** (0.024)	-0.024 (0.144)	0.204*** (0.058)	0.055** (0.025)
Firm age	0.395** (0.174)	0.227*** (0.048)	0.019 (0.021)	0.378** (0.171)	0.221*** (0.050)	0.017 (0.021)
Firm age ²	-0.009** (0.003)	-0.001 (0.001)	-0.000 (0.000)	-0.009*** (0.003)	-0.001 (0.001)	-0.000 (0.000)
Get other financial support from Gov't				0.253 (0.388)	-0.020 (0.066)	-0.026 (0.044)
Get Export Voucher from Gov't				0.164 (0.130)	0.054 (0.045)	0.017 (0.014)
Obs.	791	791	791	791	791	791
R ²	0.105	0.237	0.036	0.132	0.240	0.048
# of Firms	269	269	269	269	269	269
Firm fixed effects	0	0	0	0	0	0
Year fixed effects	0	0	0	0	0	0

Note: The numbers in parenthesis are robust standard errors. (***) $p < 0.01$, (**) $p < 0.05$, (*) $p < 0.1$

V. Summary and Policy Implications

This study explores the impact of participating in five major online export support programs currently being implemented by the Ministry of SMEs and Startups on online exports of SMEs in 2018-20. This empirical study differs from previous studies in that it is the first to examine

the direct impact of Korea's online export support program on SMEs' online exports using firm-level panel data.

The main findings of the analysis show that the online export support program appear to significantly have improved the online export-related performance of participating SMEs in a short period of time. In addition, the online export

support program's online export enhancement effect tend to be relatively greater when the participating SMEs have relatively little experience with online export and low sales volume. Manufacturers also appear to benefit from support programs more than resellers. In summary, the findings suggest that Korea's online export support policy has had a significant impact in providing incentives for SMEs to start/increase online exporting.

In turn, it is unclear how effective Korea's online export support policy will be in the long run, when SMEs gain sufficient experience in online export and establish a stable profit structure. This is because, in general, the current online export support program for SMEs in Korea is primarily made up of programs designed for SMEs that are just getting started with online export.

As explained in the introduction, sales and online exports tended to increase significantly three years after the start of online export. This implies that it will take time for online export to establish itself as a stable business model for SMEs and to achieve performance levels above a certain threshold. Thus, the key is to assist online export SMEs in self-accumulating the capabilities required for online export over a sufficient period of time.

To that end, the policy goal should be to create an environment and support system in which SMEs with high potential can continuously and adequately build up online export experience and capabilities. We need to first develop a long-term strategy for fostering SME online export by systematically collecting data on SME online export. With a long-term perspective, more efforts should be made to develop and provide specialized support programs for each skill level of online export.

References

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