



# An Analysis of Factors Affecting Intention of Farmers to Participate in Integrated Export Organizations\*

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## Abstract

**Purpose:** The integrated export organization for agricultural products is an export marketing organization established by joint participation of farmers, farmer organizations, and exporters. The purpose of this study is to analyze the factors affecting the intention of farmers to participate in integrated export organizations. **Research design, data and methodology:** The multiple regression analysis was used to identify factors affecting intention of pear and mushroom farms to participate in the integrated export organizations. **Results:** It is shown that the lower farm age, the higher the need for consolidation of export companies, and the lower the government support for the integrated export organizations, the higher the willingness to participate in integrated export organizations. However, export experience, export scale, awareness level of integrated export organizations, and check price level did not significantly affect the intention to participate in integrated export organizations. **Conclusions:** It is desirable to promote export organizations of agricultural products among relatively young farmers and to reform their consciousness through emphasizing education for them. In addition, integrated export organizations should avoid disorderly competition by consolidating export companies. Lastly, governmental policies should be pursued in a direction that enables farmers and export companies to strengthen their competitiveness on their own.

**Keywords :** Export, Integrated Export Organization, Pear, Mushroom

**JEL Classification Code** F19, Q13, Q17

## 1. Introduction

Export organization is expected to contribute to stabilization of export volume by implementing quality control of agricultural products, and stably expanding exports while avoiding excessive competition among exporters (Kim, 2019). In order to organize export farms, the government has fostered advanced export organizations since 2009, and formed an export council between exporters to prevent excessive competition among exporters and to

promote consolidation of export accounts. Since 2018, the government started to support the integrated export organization for agricultural products to strengthen export infrastructure by enhancing quality, cooperative marketing, and prevention of excessive competition. The integrated export organization includes not only export farms but also export companies across the country.

In order to foster integrated export organizations, the Korean government is providing fund for infrastructure development project, export revitalization and export

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stabilization incentives, and etc. Government subsidies are used for organization of farmers and exporters, operation management, marketing, quality improvement, and R&D.

The integrated export organization is an export marketing organization established through the joint participation of farmers, farmer associations, and exporters by item of fresh agricultural products. The government states that this organization is an organization that has a binding contract with farmers for shipment, accounts for more than two-thirds of the total export of the product to the country, and can autonomously control and manage export volume, price, quality, and etc. According to the operation guidelines for the agrifood export organization fostering project, the purpose of this project is to establish domestic and foreign export infrastructure for fresh agricultural products and to strengthen quality competitiveness. It also aims to strengthen export infrastructure, such as preventing excessive competition through transparency in export unit prices (Ministry of Agriculture, Food and Rural Affairs, 2021).

Specifically, the integrated export organization ensures that agricultural exporters sign mutually binding contracts with farmers and consistently manages the entire process from selection of varieties to cultivation, harvesting, safety and quality control, sorting, packaging, and export. It is expected to increase export and to serve as a marketing board for the relevant items, such as joint branding, joint quality control, and overseas market development.

The activities conducted by integrated export organizations include receiving and payment of export logistics costs, ID management of export farms, joint marketing for export, promotions, establishment of market order and quality management, R&D to strengthen export competitiveness, and etc. Integrated export organizations also are in charge of setting check prices (a system that sets the export unit price for peak and off-season by export item, country, and period in advance, and ensures compliance with this guide), and etc.

As of the end of December 2021, there are eight integrated export organizations, including paprika, mushrooms, strawberries, grapes, cut flowers, pears, tomatoes, and tangerines. The Paprika and Mushroom integrated export organization was first established in March 2018, and the most recent, the tangerine integrated export organization was established at the end of 2021. As of the end of 2021, mushroom organization accounted for the largest number of members with 223, followed by grapes with 176, pears with 137, paprika with 94, strawberries 81, tomatoes with 66, cut flowers with 35, and 26 tangerines in that order. Looking at the proportion of farmer groups among the members, the tangerine export integrated organization has the highest at 84.6%, with tomatoes 80.3% and paprika 75.5%, which mostly exceeds 50%, and only

strawberries (44.4%) are lower than 50%. In terms of export amount, paprika is the largest with \$80.4 million, followed by pears with \$63.7 million and strawberries with \$62.1 million. The number of full-time employees in the integrated export organization ranges from 3 to 9, the capital is 120 million won to 300 million won, and the annual budget is 587 million won to about 4.8 billion won.

Although there is a great need for the integrated export organization to respond to changes in circumstances, such as the abolition of support for export logistics expense, it is still in the initial stages of establishment, and the participation of exporters and exporting farmers is insufficient, and the results are not clearly visible. In order for the integrated export organization to settle successfully and show the desired results, measures to enhance the participation of farmers as well as the analysis of situation of the integrated export organization should be actively prepared.

There exist gaps between situation of integrated export organization and academic research. Although we need diverse and comprehensive research for designing plans or strategies for activating export organizations, there are not many research outcomes in this area. In order to develop export organizations and consequently to increase export of agrifood, it is desirable to have more research in this field.

Although four years have passed since the integrated export organization was introduced, research on the integrated export organization has not been activated. On export organization, Kim and Han (2015), Kim (2020)) conducted research. On integrated export organization, only the research conducted by Lim et al. (2021) is published. Focusing on pears and mushrooms, this study analyzes the operational situation of integrated export organizations and the determinants of the intention of farmers to participate in integrated export organization.

In order to analyze the operational situation of the integrated export organization and the intention of farmers to participate, an extensive survey was conducted on exporting farmers, farmer organizations, and exporting companies with a focus on pears and mushrooms.

## 2. Literature Review

Research on agrifood export was done in many aspects. A group of researchers focused on identifying factors affecting agrifood export and suggesting policy programs for promoting export of agrifood, Im and An (2010) suggested the policy direction for promoting agrifood export in Korea. This study investigated the value and importance of agrifood export in Korea. The analysis of external and internal environments around the Korean agrifood export are also conducted, particularly with the analysis of trade

pattern and major factors affecting the export. Based on empirical analysis, they point out that Korean agrifood trade patterns show the increase of specialization and the decrease of intra-trade with major trade partners. It is also shown that Korean agrifood export tends to increase by reducing the distance from Korea to major trade partners. Therefore, Im and An (2010) insists that it is necessary to make an effective action plan to enhance the Korean agrifood export in terms of diversification of export products and countries, decrease in high dependence on overseas Koreans, differentiation of export marketing by trade partner, expansion of R&D on agrifood industry and change of the concept on agrifood export.

Kang et al. (2022) identified export determinants by constructing panel data related to the export of the six major fruits (apples, pears, peaches, grapes, tangerines, sweet persimmons) from 2005 to 2020. They estimated an export equation with export volume by fruit as a dependent variable, and recent fruit supply and trade conditions as explanatory variables. As a result of empirical analysis through the fixed-effect model, it is shown that the relative prices (wholesale price/export price), production, GDP per capita in the exporting country, number of exporting countries, labor cost share, and distribution margin rate have significant impacts on fruit exports. Based on these empirical results, strategies and measures to enhance the export competitiveness of six major fruits are presented. More FTAs to be signed in the future could be an opportunity to increase exports of Korean fruits. In addition, it is important to improve export competitiveness because an increase in fruit exports can lead to an increase in the income of fruit farmers. Therefore, specific empirical research and effective policy support should be continued.

Besides research focusing on factors affecting agrifood export and suggesting policy programs for promoting export of agrifood, a group of researchers intended to identify factors affecting success of export organizations. Korea government is now promoting export of agrifood by nurturing export organizations in which exporting farms and companies are collaborate each other in exporting agrifood.

Kim et al. (2016) suggested directions and implications for improving performance of agrifood export organizations by identifying significant performance impact factors. As an analytical tools, a seemingly unrelated regression (SUR) model was estimated using data from a survey conducted among 120 exporters including 16 leading export organizations. In the SUR estimation, the export volume and price are used as dependent variables and securing the quantity of products ordered and exported, quality management, and marketing activities are considered as explanatory variables. From estimation results, it was shown that the export volume is greater with a greater amount of

farmer education and greater manpower in charge of marketing from the perspective of quality management. When the export price is estimated as a dependent variable, the manpower in charge of marketing is shown to have a significant impact on the export price.

Based on empirical results, they suggested policy recommendations as follows. The analysis indicated that the education of and consulting with farmers, and the manpower number in charge of marketing are key factors in the operation performance of export organizations. Therefore, supporting export organizations in expanding their human resources in charge of marketing can increase the export volumes for agrifoods. On the other hand, it was shown that the joint payment, human resources specialized in quality management, and the amount of participation in export exhibitions are not significantly affect export volumes. Thus, they insist that expanding manpower in charge of marketing is essential for increasing both export volume and export prices.

Lim et al. (2022) investigate factors affecting satisfaction of farmers who participate in integrated export organizations. This study aimed to analyze the factors influencing grape export farmers' satisfaction with the integrated organization for grape export, and to propose improvements in operation of the integrated organization. A binary logit model was used for the foregoing, while the analysis data used the results of a survey conducted on farmers with export experience belonging to the integrated organization for grape export. As a result of the analysis, factors that have a great influence on the satisfaction of grape export farmers in the integrated organization are individual education and consulting, and contribution to income growth in order. Considering that farmers who have not received individual training and consulting for export, that is, farms with relatively high levels of cultivation technology, are highly satisfied with the integrated organization, it is important to improve the level of cultivation technology. In addition, since it is important to increase the contribution to income increase, more attention should be paid to the increase in farm income when operating export support projects.

Referring to the results from various previous studies, this paper tries to analyze current situation of integrated export organizations and to identify farmers' intention to participate in it by developing multiple regression analytical models. While Lim et al. (2022) dealt with satisfaction of farmers participating in integrated export organizations, this paper focus on factor affecting intentions of farmers to participate in integrated export organizations. In this sense, this research seems to be unprecedented and original.

### 3. Research Methods

#### 3.1. Survey Design

In order to investigate the operation situation of integrated export organizations, exporting farms, farmer organizations, and exporting companies were surveyed. The outline of the survey is shown in <Table 1>.

**Table 1:** Overview of the Survey

	Number of samples	Survey date	Survey methods
Export Farms	Pear: 59 Mushrooms: 51	Aug. 2022	Interview and telephone survey
Export companies	Pear: 11 Mushrooms: 20	Aug.-Sep. 2021	interview, email, telephone survey

#### 3.2. Analytical Models

Multiple regression analysis was performed to identify the factors that affect intention of farmers to participate in the integrated export organization of pear and mushrooms. The model for analyzing the intention of farmers to participate in the integrated export organization is as follows.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9$$

Where, Y: intention of farmers to participate in the integrated export organization, X<sub>1</sub>: farmer age, X<sub>2</sub>: export experience, X<sub>3</sub>: export volume, X<sub>4</sub>: export items, X<sub>5</sub>: experience in participating in the leading export organization, X<sub>6</sub>: awareness of the integrated export organization, X<sub>7</sub>: demand for organizational unification, X<sub>8</sub>: sufficiency of government support, and X<sub>9</sub>: check price level.

The sample farms used for the analysis were 110 export farms surveyed and analyzed above, with 59 pear and 51 mushroom farms. The average age of the sample farms surveyed was 57.2 years old, and the average experience in export participation was 11.7 years. The descriptive statistics of the variables used in this analysis are shown in <Table 2>.

### 4. Results and Discussion

#### 4.1. Situation of Integrated Export Organizations

**Table 2:** Descriptive Statistics of the Sample used for Analysis

Name of Variables	Contents of Variables	Average	Standard Deviation
Age of farmers	age of farmer who export pear or mushroom	57.2	9.9
Experience of export	years of exporting experience	11.7	7.6
Export quantity	unit: Kg	110.4	240.5
Export item	Pear: 1, mushroom: 0 (dummy variable)	.54	.50
Experience in Advanced Organization	participation: 1, non-participation: 0 (dummy variable)	.44	1.14
The Degree of Awareness of Integrated Export Organization	1~5 point Likert scale	3.51	1.15
The Need for Consolidation of Export Companies	1~5 point Likert scale	3.72	1.17
Sufficiency of Governmental Subsidies	1~5 point Likert scale	2.46	.91
The Level of Check Prices	1~5 point Likert scale	2.79	1.51

##### 4.1.1. Situation of Pear Integrated Export Organization (K-pec)

The Korean Pear Export Corporation (K-PEC), an integrated pear export organization, was launched on April 1, 2020. Under the general meeting there are 12 executives, including 1 CEO, 9 directors, and 2 auditors. All executives are made up of farmer groups. K-PEC has a Steering Committee which has 24 members, and half of them is exporters. The Steering Committee is an organization that discusses major issues such as the annual business plan, budget and settlement of accounts, project budget allocation, and setting and adjustment of the lowest export price. For these functions, the steering committee include export companies to reflect their opinions. K-PEC's member companies consist of 137 corporations as of the end of 2021. Among them, farmer organizations accounted for 78 members (34 agricultural cooperatives, 44 agricultural cooperative corporations) and 59 exporters. In 2021, K-PEC's export value was \$63.7 million, accounting for 88.8% of the country's total pear export. As of the end of 2021, the number of pear-producing farms nationwide is 15,309, and among them, the number of farms participating in export is

3,286, which is 21.5% of the nationwide pear farms (Chun, 2021).

Among sample farms, 36.6% of pear exporting farms were familiar with the integrated export organization. Regarding the consolidation of exporters or unification of export channels, 72.9% of farm households responded positive to prevent excessive competition among exporters. On the contrary 63.7% of export companies answered that there was no need for unification of export channels. As for measures for reacting abolition of export logistics expenses, both farmers and companies answered that indirect support for export logistics expenses was the most 'necessary' (50.8% and 63.6%, respectively). The second important measure is 'price stabilization and check-price system'. Regarding government support, about half (49.2%) of pear export farms answered that the government support for integrated export organizations was not sufficient, while the proportion of exporters was relatively low at 36.4%. Regarding level of the check price (setting the lowest price applied for export), export farms answered 'generally low' at 39.0%, but companies responded with 0%, indicating sharply divided opinions. This seems to be because the lower the price, the more advantageous the company is in selling and realizing profits.

As for the activities of the integrated export organization, more than 50% of farmers, farmers' organizations, and exporters evaluated them as essential. About 30% of members of integrated export organizations reserved evaluation because it was still in the initial stages of its establishment. However, 27.3% of exporters said they did not know the necessity. As a problem for K-PEC, 16.6% of farm households cited lack of publicity for the integrated export organizations. The farmer organizations point out the problem of the lack of autonomy.

In addition, it was pointed out that the trade-related knowledge of the employees of the integrated export organization was not sufficient. Exporters do not properly reflect the reality of the current concept of integrated organizations, which allows exporters to be in one organization. It was also pointed out that communication between members is very insufficient. For development of integrated export organizations, export farms mainly suggested expansion of support. The farmer associations suggested not only support for farms, but also support for exporters. The exporters said that the integrated export organization was necessary in the long term, and suggested that the integrated export organization should be improved so that exporters could receive as much support as farmers from the government.

In addition, 79.6% of pear exporting farmers are willing to participate in various activities of the integrated export organization. 23.7% of farm households indicated that they were very willing to participate. This trend reflects the

participation ratio in export product quality control activities of the integrated export organization is 78.0%, and participation ratio in the implementation of the supply contract is 79.6% and the participation ratio in the arena of communication between farms, exporters is 81.3%.

#### **4.1.2. Situation of Mushroom Integrated Export Organization (K-mush)**

'K-mush Inc.' (K-mush), an integrated mushroom export organization, was established in 2018. As of the end of December 2021, there were 223 total members, including 148 farmer organizations and 75 exporters, with farmers accounting for 66.4% of the total members. There are 10 directors (7 from farmer organizations, 3 export companies), 2 auditors, CEO, managing director, and 3 teams (export pioneering team, quality control team, R&D business group).

The main role of K-mush is as follows. 1) designation of check price (a system that sets the minimum export unit price for peak and off-season by export item, country, and period in advance, and ensures compliance with this guide), 2) brand unification, 3) unification of export accounts, 4) ID number management, 5) receiving and payment of basic logistics costs and incentives, 6) export promotion, joint marketing, exhibitions, and etc. 7) establishing market order and quality management, 8) management of payment of export, and controlling the supply and demand of exports in the off-season.

The export volume of K-mush is 40.6 million dollars as of the end of 2021, which is about 90.1% of the country's total mushroom export. K-mush conducts the activities such as promotion of overseas marketing and market development business, enhancement of export competitiveness by strengthening quality management, participation in mushroom export research group, establishment of ERP system, production of quality management manual and promotional video, support for export expansion of member farms and exporters. The establishment of a cooperative network with related organizations for business promotion and export expansion is being promoted.

When looking at the intention of farmers to participate in various activities of K-mush, 82.4% of mushroom exporting farmers are willing to participate in various activities of the integrated export organization. 35.3% of the farm households indicated that they were willing to participate very actively. While 76.5% of mushroom farmers showed intention to participate in export product quality control activities of the integrated export organization, 82.4% of farmers showed intention to participate in the implementation of the supply contract with the integrated export organization even if the domestic price rises. 84.3% of farmers showed intention to participate in active communication between farms, exporters.

### 4.2. Estimation Results

The intention to participate in the integrated export organization was analyzed in four models (Table 3). In addition to the overall intention to participate in the integrated export organization (Model 1), they are the intention to participate in quality management (Model 2), the intention to participate in export volume control (Model 3), and the intention to participate in communication (Model 4). First, the effects of age on participation in integrated export organizations was estimated to be negative and fit the hypothesis, but it was significant only in Models 2 and 3. This means that the hypothesis that the higher the age, the lower the intention to participate in the integrated export organization is partially accepted. On the other hand, coefficients of export experience, export volume, and export items were not significant, and these variables did not appear to affect the intention to participate in the integrated export organization.

The hypothesis that the experience of participating in the advanced organization has a positive effect on the intention to participate in the export integrated organization was accepted only in Model 2 (intention to participate in quality management). The effect of the level of awareness on the integrated export organization on the intention to participate was found to be significant only in Model 3. In all models except for Model 3, the hypothesis that the higher the need for integration of export channels was, the higher the intention to participate in the integrated export organization was accepted. In all models except for Model 3, it was found that the intention to participate in integrated export organizations is negatively affected by the level of government support. The hypothesis that the higher the check price level, the higher the intention to participate in the integrated export organization was accepted only in Model 3.

**Table 3:** Estimation Results of the Whole Farm Models (n=110)

	Model 1	Model 2	Model3	Model 4
Dependent Variable	Intention to participate	Intention to participate in Quality Control	Intention to participate in Quantity Control	Intention to participate in Communication
Constant	4.489 (0.704)***	5.082 (.692)***	4.992 (.641)***	4.822 (.665)***
Farmer's Age	-.016 (.009)	-.019 (.009)**	-.028 (.009)***	-.010 (.009)
Export Experience	-.009 (.013)	-.009 (.013)	.019 (.012)	-.003 (.012)
Export Quantity	.000 (.000)	.000 (.000)	.000 (.000)	.001 (.000)

Export Item	.239 (.230)	.084 (.226)	-.115 (.209)	.019 (.217)
Experience in Advanced Organization	.113 (.110)	.158 (.081)*	.041 (.075)	.112 (.078)
The Degree of Awareness of Integrated Export Organization	.140 (.087)	.024 (.086)	.161 (.079)**	-.013 (.082)
The Need for Consolidation of Export Companies	.166 (.081)**	.195 (.079)**	.092 (.073)	.127 (.076)*
Sufficiency of Governmental Subsidies	-.316 (.099)***	-.284 (.098)***	-.122 (.091)	-.161 (.094)*
The Level of Check Prices	-.027 (.066)	-.017 (.065)	.121 (.060)**	-.081 (.063)
R <sup>2</sup>	0.225	.252	.285	.137

Note: Standard errors are reported in parentheses.

\* significant at the 10 percent level.

\*\* significant at the 5 percent level.

\*\*\* significant at the 1 percent level.

In order to analyze the effects on the participation in the integrated export organization by item, a regression analysis was performed by dividing the pear exporting farms and the mushroom exporting farms (Table 4 and 5). The results which were estimated by separating samples based on items were not significantly different from the estimation results for all farms. The hypothesis that the higher the farm age, the lower the willingness to participate in the integrated export organization was accepted in Models 3 and 4 in the case of pear farms and Models 2 and 3 in the case of mushroom farms. The hypothesis that the need for integration of export channels positively affects the intention to participate in the integrated export organization was accepted in Models 1, 2, and 4 in the case of pear farms, but was not accepted in all models in the case of mushroom farms. The hypothesis that the willingness to participate in the integrated export organization decreases as government support for the integrated export organization is felt is sufficient was also accepted in Models 1, 2, and 4 in the case of pears, but only in Model 1 in the case of mushroom farms.

In summary, it was shown that farm age and the level of government support is negatively related to intention to participate in integrated export organizations and the need for integration of export channels is positively related to intention to participate in integrated export organizations. However, it was shown that export experience, export quantity, awareness level of export integrated organization, and check price level did not have much effect on intention to participate in integrated export organization.

**Table 4:** Estimation Results of the Pear Farm Models (n=59)

Dependent Variable	Model 1 Intention to participate	Model 2 Intention to participate in Quality Control	Model3 Intention to participate in Quantity Control	Model 4 Intention to participate in Mutual Communication
Constant	3.228 (1.018)***	3.942 (.976)***	4.541 (.986)***	4.322 (.827)***
Farmer's Age	-.013 (.010)	-.009 (.010)	-.040 (.010)***	-.019 (.008)**
Export Experience	-.010 (.012)	-.008 (.012)	.028 (.012)**	.004 (.010)
Export Quantity	.004 (.004)	.001 (.004)	-.006 (.004)	-.002 (.003)
Experience in Advanced Organization	.015 (.170)	.073 (.067)	.011 (.068)	.064 (.057)
The Degree of Awareness of Integrated Export Organization	.138 (.121)	-.012 (.116)	.228 (.117)*	.015 (.098)
The Need for Consolidation of Export Companies	.488 (.149)***	.428 (.143)***	.201 (.144)	.403 (.121)***
Sufficiency of Governmental Subsidies	-.441 (.137)***	-.415 (.132)***	-.096 (.133)	-.263 (.112)**
The Level of Check Prices	.072 (.067)	.027 (.064)	.113 (.065)*	-.050 (.054)
R <sup>2</sup>	0.458	.382	.403	.415

Note: Standard errors are reported in parentheses.  
 \* significant at the 10 percent level.  
 \*\* significant at the 5 percent level.  
 \*\*\* significant at the 1 percent level.

**Table 5:** Estimation Results of the Mushroom Farm Models (n=51)

Dependent Variable	Model 1 Intention to participate	Model 2 Intention to participate in Quality Control	Model3 Intention to participate in Quantity Control	Model 4 Intention to participate in Mutual Communication
Constant	5.202 (1.207)***	5.733 (1.199)***	5.129 (1.129)***	5.048 (1.232)***
Farmer's Age	-.012 (.018)	-.030 (.017)*	-.036 (.016)**	.001 (.018)
Export Experience	-.047 (.037)	-.046 (.036)	-.005 (.034)	-.050 (.037)
Export Quantity	.000 (.001)	.000 (.001)	.001 (.001)	.001 (.001)

Experience in Advanced Organization	.391 (.330)	.738 (.328)**	.273 (.309)	.106 (.337)
The Degree of Awareness of Integrated Export Organization	.112 (.136)	.036 (.135)	.183 (.127)	.015 (.139)
The Need for Consolidation of Export Companies	.038 (.110)	.108 (.109)	.058 (.103)	.018 (.112)
Sufficiency of Governmental Subsidies	-.265 (.152)*	-.162 (.151)	-.122 (.142)	-.168 (.155)
The Level of Check Prices	-0.150 (.134)	-.038 (.133)	.109 (.125)	-.164 (.137)
R <sup>2</sup>	0.199	.312	.226	.101

Note: Standard errors are reported in parentheses.  
 \* significant at the 10 percent level.  
 \*\* significant at the 5 percent level.  
 \*\*\* significant at the 1 percent level.

## 5. Conclusions

The integrated export organization for agricultural products is an export marketing organization established by joint participation of farmers, farmers' associations, and exporters. The government states that this organization is an organization that has a binding contract with farmers for shipment, accounts for more than two-thirds of the total export of the product to the country, and can autonomously control and manage export volume, price, quality, and etc. The goal of fostering integrated export organizations is to strengthen export infrastructure, such as strengthening quality through integrated organization in which export farms and companies across the country participate, and preventing excessive competition through joint marketing and transparent export unit prices. As of the end of December 2021, there are eight integrated export organizations, including paprika, mushrooms, strawberries, grapes, cut flowers, pears, tomatoes, and tangerines.

The results of the survey on the operation situation of the integrated export organization focusing on pears and mushrooms are as follows. In both cases, awareness of integrated export organization is relatively high. Regarding the consolidation of exporters or integration of export channels, most of farmer members agree with that but most export companies are against it. Responding to the abolition of export logistics expenses in 2024, it is shown that indirect support for export expenses such as logistics costs was the most necessary for both farmers and exporting companies. Regarding government support, about half of farmers answered that the government support for integrated export organizations was insufficient. On the check price (the

lowest price applied for export), farmers and exporters have divided opinions. While farmers answered that check price is generally low, export companies thought it is not low.

In this study, multiple regression analysis was performed to identify the factors that affect farmers' intention to participate in the integrated export organizations of pear and mushrooms. The dependent variable is the intention to participate in the integrated export organizations, and explanatory variables are farm household age, years of export experience, export volume, export items, experience in participating in advanced export organizations, awareness of integrated export organization, demand for consolidation of export companies, sufficiency of government support, and check price level. The sample size used in the analysis was 110 farms including 58 pear and 51 mushroom farms.

Estimation results showed that farm age and the level of government support is negatively related to intention to participate in integrated export organizations and the need for integration of export channels is positively related to intention to participate in integrated export organizations. However, it was shown that export experience, export quantity, awareness level of export integrated organization, and check price level did not have effects on intention to participate in integrated export organization.

In an academic aspect, this research is expected to contribute to developing econometric models to explain factors affecting farmers' intention to participate in farmer organizations. Developing further research methods and econometric models applied in this study, we can design more realistic and elaborate economic models to explain behavior of exporting farms.

To compliment limitations of this research, it is necessary to increase the number of sample farms. It is also necessary to develop the variable representing attributes of farmers and exporting firms. It is also desirable to include some explanatory variables which represent characteristics of integrated export organizations.

Based on these results, we can also draw some practical implications regarding policy measures for developing export organizations.

The results of this analysis suggest that the willingness to participate in the integrated export organization is higher among young farmers. Young farmers want to establish a strong export organization aiming for integration of export companies to avoid unnecessary competition among exporters. It is therefore necessary to promote integrated export organizations by strengthening education for young farmers.

Second, the empirical results suggest that farmers are willing to participate in integrated export organizations to avoid unnecessary competition among export companies. It is therefore necessary to design policy measures avoiding

disorderly competition among export companies and to integrate export channels.

Third, the estimation results also imply that farmers are willing to participate in integrated export organizations as means of securing government support. However, excessive government involvement in fostering export organizations could lead to strong dependency on the government. It is therefore desirable that governmental policies should be pursued in a direction that enables farmers and companies to strengthen their competitiveness on their own.

In this study, analysis on the intention to participate in integrated export organizations was performed with a focus on pears and mushrooms. In the future, it is expected that study on the integrated export organization expand to other items. Accumulating more comprehensive research on integrated export organizations, it is expected that the government is able to design more useful policy tools for developing export organizations which help to increase agricultural export.

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