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Organizational Capabilities, Export Growth and Job Creation: An Investigation of Korean SMEs

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Abstract: In the new global economy, export promotion and job creation have become two central issues for economic sustainability. This study aims to raise awareness of the importance of organizational capabilities in job creation through exports. By emphasizing the role of exports in shaping a linkage between organizational capabilities and job creation, this research focuses on how to improve exports that benefit employment creation in the context of Korean small- and medium-sized enterprises (SMEs). Using survey data of 414 SMEs collected by jointly working with the Korea Federation of SMEs and the Ministry of SMEs and Startups, this study employs a structural equation model to investigate a mediation model that links organizational capabilities to job creation through export growth. The main findings of this study are that both technological and manufacturing capability positively influence export growth; export growth has a positive effect on job creation, fully mediates a positive linkage between technological capability and job creation and also plays a partial mediating role in the relationship between manufacturing capability and job creation. Finally, the present study contributes to the literature on exports and job creation and also provides useful information for SME operators and policymakers.

Keywords: export growth; job creation; organizational capabilities; economic sustainability; SMEs

1. Introduction

The notion of economic sustainability had to include the goal of export promotion and job creation, while several empirical studies on the effects of firm size on employment show that small- and medium-sized enterprises (SMEs) are an important driving force behind job creation [1–3]. According to the 2017 *employment statistics report* of Statistics Korea, SMEs created 2.5 million jobs during 2017, accounting for about 93% of the increase in Korea's total employment that year. These figures emphasize the crucial role SMEs play in increasing employment levels. For this reason, when the South Korean government was recently facing a recession, with no signs of recovery in the labor market and a high unemployment rate, it focused its policies on employment for SMEs. In fact, the Korean government is presently undertaking favorable measures toward SMEs, including introducing subsidies for SMEs so as to create more jobs. However, the mechanisms around the central role SMEs play in the process of job creation are not well understood.

A particularly important issue in the mechanism of job creation is the contribution of export growth to employment generation, at least in an export-driven economy such as Korea's. In recent years, there has been increased interest in the relationship between exports and job creation in SMEs, because the number of workers employed in SMEs is very high in terms of total manufacturing employment worldwide. For instance, Voulgaris et al. [4] used firm-level data on Greece and found that SMEs' exports positively affect employment growth in that country. Using industry-level analysis, Whang [5] identified that the causal link between exports and employment is positive, although this

relationship is inconsistent across different industrial structures. Whang (2018) also showed that an industry with a higher the proportion of SME exports had a greater effect on employment.

The role of organizational capabilities is also an important factor in the mechanism of job creation. Organizational capabilities (that is, how organizations do things) significantly influence export performance [6–9]. According to the classic study of Collis [10], the resource-based view (RBV) points to organizational capabilities as a source of sustainable competitive advantage. However, there has been little previous discussion about the relationship between organizational capabilities, export growth and job creation, although several studies found that various organizational capabilities (e.g., technological, innovative and product development capabilities) could improve export performance through an increase in sustainable international competitiveness [11–13]. In fact, organizational capabilities can have an impact on job creation either directly or indirectly through exports. Job creation may potentially benefit from organizational capabilities because a firm's capabilities create a competitive advantage and thereby lead to growth in exports and employment. In this context, we develop a mediation model that may shed light on the role of exports in the relationship between organizational capabilities and job creation.

The primary objective of this research is to demonstrate the importance of organizational capabilities in export performance and job creation. First, the direct effect of organizational capabilities on the growth of exports and jobs is examined. Second, we quantify another direct impact of exports on job creation. Finally, the mediating role of export growth in influencing the link between organizational capabilities and SMEs' job creation is investigated. Overall, the aim of this study is to explore the relationships among organizational capabilities, export growth and job creation, and as well as offer some insights into the organizational capabilities of firms.

The findings of our research are closely related to the literature on exports and jobs in the following respects. First, both technological and manufacturing capabilities positively influence export growth. Second, we find that the effect of export growth on job creation is positive. Third, export growth fully mediates the relationship between technological capability and job creation. Fourth, export growth also plays a partial mediating role in the relationship between manufacturing capability and job creation.

The rest of this research is organized as follows. Section 2 presents an overview of the related literature and proposes some hypotheses about the relationship between the variables of interest (i.e., organizational capabilities, exports, and job creation). Section 3 includes the research methodology and the data. Section 4 estimates the proposed effects and describes the results. The last section provides concluding remarks, including policy implications and limitations, and recommendations for future research.

2. Literature Review and Hypotheses Development

This section reviews the literature on both exports and job creation in SMEs. It then proposes some hypotheses to examine the role of exports as a mediator in shaping relationships between various organizational capabilities and job creation. The following literature review can be classified into two broad categories: the factors that increase employment in SMEs and the determinants that improve the export performance of SMEs.

2.1. Literature Review

Job creation, also known as employment creation or employment generation, is defined as the sum of all new employment generated in an economy [1,3–5,14,15]. For the purposes of this paper, the focus is on job creation in SMEs. In the initial research on how to generate more employment, the relationship between firm size and job creation has attracted policy makers' attention. This research was also triggered by the empirical work of Birch [15], who proposed that SMEs play a central role in job creation in the United States.

Although a debate on job creation within SMEs has emerged, most evidence shows SMEs as the main driving force behind employment generation in many nations, especially in emerging

markets [3,5,16–19]. Following this evidence, along with economic development, how to generate more jobs within SMEs became an important issue in societies. According to previous studies, employment growth in SMEs can be influenced by factors that are both internal and external to firms. For internal factors, such as firm age and firm size, types of businesses, location, firm strategies, innovative policy, technology intensity, and operational performance are likely to influence employment generation within SMEs [14,17–22]. Furthermore, the economic and business environments as external factors also are found to affect job creation. External factors include access to finance, quality of infrastructure, business regulations, industrial structure, degree of corruption, business subsidies (e.g., loan subsidies, hiring subsidies, etc.), foreign direct investment, free trade agreements, and government supports [1,5,19,23–26].

Interestingly, the employment effects of firms' innovation as it relates to the production process are mixed. Using data on the Uruguayan manufacturing sector, Aboal, Garda, Lanzilotta and Perera [14] show that process innovation and development displace part of the unskilled labor force and thereby decrease employment. In contrast, an empirical study by Argentina by Castillo, Maffioli, Rojo and Stucchi [17] found that both the process and product innovation have positive effects on job creation due to improvements in productivity and, thus, market power. These two strands of the literature extend the debate on the argument that technological change could displace jobs through the substitution effect of capital for labor, while innovation-related firms' capabilities can increase their competitive advantage and market share. In this context, it is important to shed light on the role organizational capabilities play in determining job creation where these capabilities provide firms with competitive advantages that may influence their employment and export growth. Nevertheless, there is little empirical evidence on the relationship between organizational capabilities and job creation, at least for Korea.

Improving export performance is not only one of the most important targets for firms, but it is also a key strategic mission for government organizations that wish to enhance national economic sustainability and social sustainable development. Indeed, an important issue for economic sustainability is how to improve SMEs' export performance. The related literature on exports can be classified into three categories. A first strand of literature examines the firm-level factors that influence exports. For instance, Gashi, Hashi and Pugh [12] show that "the physical capital, technological capabilities—R&D expenditures and innovativeness—and technological sophistication of SMEs in transition countries are positively related both to the decision to export and to the intensity of exporting." Lages, et al. [27] further found evidence that innovative capability and relationship capability positively influence export performance.

A second stream of literature examined the effect of industrial characteristics on exports, with several scholars suggesting that industrial structure, industry specialization, and industry competitiveness affect export growth [5,28,29]. A third strand of literature on exports explores the role of the government supports in improving export performance: a set of related studies proposed that aid for trade, various business subsidies, international trade fair support programs, computerized trade lead-matching programs, and free trade agreements may increase exports [25,30].

Otherwise, the perspective of knowledge diffusion process also suggests that organizational capabilities play an important role in sustainable job creation, although the propositions are different due to the different economies [31–33]. Indeed, employment growth can benefit from both demand-side influences and knowledge diffusion in relation to human capital. For instance, Hoogstra and Van Dijk [34] argue that knowledge diffusion in relation to human capital has an important impact on regional employment growth.

Our study is closely related to the review paper by Loch et al. [35], except that these authors considered the context of the European manufacturing sector and proposed that industrial competitiveness can make substantial contributions to organizational performance and job creation, whereas we consider the circumstances in Korea and investigate the relationship between organizational capabilities, export growth, and job creation, where we emphasize the role of exports in shaping a linkage between organizational capabilities and job creation.

2.2. Theoretical Foundation

Adopting the resource-based view as a guiding theoretical lens, this study explains the mechanism in which SMEs develop competitive advantages that are based on organizational capabilities, thereby leading to export performance and job creation. The RBV is one of the most important management theories; it explains the organizational capabilities that are responsible for generating sustained competitive advantage [36–39]. To be more specific, a firm can be deemed to be a set of resources and capabilities, while organizational capabilities are crucial in establishing sustained competitive advantage and explaining a firm's performance [37,38,40–42]. Following the RBV rationale, our research considers that organizational capabilities are a firm's competitive advantages, and as such, they should contribute to export performance and significant employment growth. Based on the foregoing, this study develops a mediation model (see Figure 1) that examines the important relationships between organizational capabilities, export growth, and job creation at the firm level. In this study, we focus on the job creation mechanism determinants among SMEs by applying RBV theory. Overall, organizational capabilities are unique combination of resources, which may enable a SME to achieve not only competitive advantages but also job creation capacity.

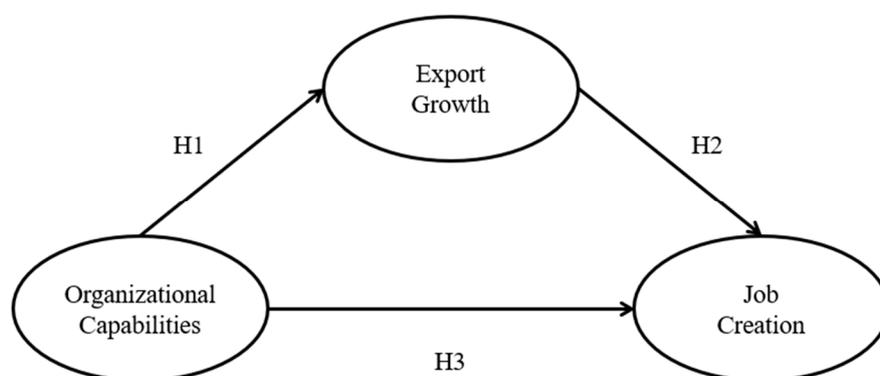


Figure 1. Mediation model linking organizational capabilities with job creation.

2.3. Hypothesis Development

The relationship between organizational capabilities and export growth. Our study seeks to investigate the impact of organizational capabilities on export growth. The key argument in the literature that supports organizational capabilities is export competency, which is one of the determinants of export growth [43,44]. Research on SMEs' export performance shows that export growth can be influenced by various organizational capabilities, such as communication capability [43], marketing capability [7], technological capability [12], innovative capability [11,27,45,46], informational capability [13], product development capability [13], and relationship capability [13,27]. For instance, Hwang, Hwang and Dong [22] used Korean manufacturing data to show that both product and process innovations have a positive relationship with export performance. Moreover, Cavallaro, Esposito, Matano and Mulino [44] argued that high-skill firms can gain a share of global markets through competition on product quality. Accordingly, we expect organizational capabilities to positively affect export growth, and we measure organizational capabilities according to three underlying sub-constructs: technological capability, manufacturing capability, and design capability. Thus, we hypothesize the following:

Hypothesis 1 (H1). *A firm's organizational capabilities have a positive relationship with its export growth.*

Hypothesis 1a (H1a). *A firm's technological capability have a positive relationship with its export growth.*

Hypothesis 1b (H1b). *A firm's manufacturing capability has a positive relationship with its export growth.*

Hypothesis 1c (H1c). *A firm's design capability has a positive relationship with its export growth.*

The relationship between export growth and job creation. There is strong agreement on the importance of exports as a catalyst to generating employment growth [4,5,47,48]. In earlier research, Leontiep [48] proposed that exports play an important role in employment. A recent Korean industry-level study by Whang [5] also indicates exports' positive influence on job creation, although structural factors moderate this relationship. Furthermore, foreign demand and international trade can generate more jobs due to the extension of product sales into overseas markets [47,49]. In addition, Voulgaris, Papadogonas and Agiomirgianakis [4] stated that SMEs' export activity significantly contributes to employment generation in Greek manufacturing industries. Thus, to determine the role of export growth in the mechanism of job creation, we propose the following hypothesis:

Hypothesis 2 (H2). *A firm's export growth has a positive relationship with its job creation.*

The relationship between organizational capabilities and job creation. This hypothesis mainly builds on the research on the relationship between competitive advantage and job creation [35,50]. In these studies, the authors concluded that a firm's international and industry-level competitiveness have a positive impact on employment growth, though the effects are inconsistent in different contexts. According to the RBV theory, establishing a sustained competitive advantage in an international market setting is based on a firm's current capabilities [37,41,42]. Therefore, we propose that organizational capabilities are a competitive advantage that should improve job creation, as follows:

Hypothesis 3 (H3). *A firm's organizational capabilities have a positive relationship with its job creation.*

Hypothesis 3a (H3a). *A firm's technological capability has a positive relationship with its job creation.*

Hypothesis 3b (H3b). *A firm's manufacturing capability has a positive relationship with its job creation.*

Hypothesis 3c (H3c). *A firm's design capability has a positive relationship with its job creation.*

The mediating role of export growth in the relationship between organizational capabilities and job creation. Based on the theory of RBV, we expect that a firm's organizational capabilities will lead to job creation through exports. According to the RBV, organizational capabilities allow SMEs to increase their exports by enhancing their sustainable competitive advantage so as to facilitate their job creation [50–52]. For example, SMEs are required to develop their organizational capabilities to satisfy the wider variety of needs of foreign customers, which results in extending their market to those overseas. As the small business's market continues to expand, its scale of operations and production also expand, thereby providing more jobs through hiring more workers. To understand the mechanism of job creation in SMEs, we propose the following hypotheses on organizational capabilities and job creation through export growth:

Hypothesis 4 (H4). *The relationship between organizational capabilities and job creation is positively mediated by export growth.*

Hypothesis 4a (H4a). *The relationship between technological capability and job creation is positively mediated by export growth.*

Hypothesis 4b (H4b). *The relationship between technological capability and job creation is positively mediated by export growth.*

Hypothesis 4c (H4c). *The relationship between design capability and job creation is positively mediated by export growth.*

3. Methodology

3.1. Data Description

The survey data used in this study is confidential data that was collected by the Korea Federation of SMEs (K-BIZ) and the Small and Medium Business Administration on Korean SMEs in 2014. To provide crucial information for the Korean government's support programs for SMEs, two government agencies jointly performed a questionnaire survey entitled SME Technology Statistics. We used the data collected in this survey for two reasons. First, the questionnaire is a commonly used survey method for SME research, due to the lack of an SME database for exports and employment statistics. Second, this survey data consists of Korean exporting SMEs and includes detailed information related to firm characteristics, organizational capabilities, export growth, and job creation. Third, this questionnaire survey was designed and collected by the government agencies; thus, we believe that the non-response bias is not a serious concern in this dataset. Therefore, this confidential data is appropriate for an analysis on the relationship between organizational capability, exports, and job creation. In this study, a sample of 414 SMEs were incorporated into the analysis; we excluded those SMEs with missing values. Table 1 presents the descriptive statistics for the 414 SMEs in the sample. The SME characteristics include CEO gender and age, and firm age, size (total employees), and life cycle.

Table 1. Descriptive statistics for the sample.

Variables	n	%
CEO gender	Male	394 95.2
	Female	20 4.8
CEO age	Under 30	0 0
	30–39	12 2.9
	40–49	93 22.4
	50–59	192 46.4
	60–69	91 22
	70+	26 6.3
Firm age	Under 10	100 24.1
	10–19	199 48.1
	20–29	62 15
	30–39	32 7.7
	40+	21 5.1
Firm size (total employees)	Under 10	43 10.4
	10–29	134 32.4
	30–49	76 18.4
	50–69	37 8.9
	70–99	36 8.7
	100+	88 21.2
Firm life cycle	Introduction	18 4.3
	Growth	219 52.9
	Maturity	174 42
	Decline	3 0.8

Notes: n refers to the number of SMEs categorized into a particular group for each variable; Firm life cycle: the stage of introduction (1) refers to the business's starting operations as in when it launched new products or services; the stage of growth (2) refers to companies experiencing rapid sales growth; the stage of maturity (3) refers to the time at which sales are beginning to slowly decrease; the stage of decline (4) refers to the time at which sales and profits are all declining.

3.2. Variables

The study is composed of five main variables and various control variables. Table 2 shows the five main variables in our model; these are classified into 11 sub-variables.

Table 2. Summary statistics of the variables.

Variables		Obs.	Mean	Standard Dev.
Export growth (EG)		414	3.06	1.2
Job creation (JC)		414	2.88	0.95
Technology capability	New Tech. development capability (TC1)	414	4.11	0.82
	Tech. commercialization capability (TC2)	414	4.18	0.78
Manufacturing capability	Manufacturing/processing capability (MC1)	414	3.98	0.96
	Test and inspection capability (MC2)	414	4.3	0.81
	Test and inspection capability (MC3)	414	4.24	0.8
	Maintenance capability (MC4)	414	4.22	0.81
Design capability	Design capability (DC1)	414	4.03	0.87
	Product design capability (DC2)	414	4.15	0.83
	Component and process design capability (DC3)	414	4.06	0.94
Firm characteristics	Firm age	414	16.93	11.01
	Firm size	414	61.72	66.44
	Firm life cycle	414	2.39	0.58

Notes: Obs. refers to the number of observations.

The independent variables are related to organizational capabilities. Organizational capabilities are sub-categorized into three underlying constructs in terms of their nature: technological, manufacturing, and design capabilities. These capabilities were originally measured as ranging from 1% to 100%, which explains the level of a firm's capability compared to the highest level of capability in the world. The percentage scale can be monotonically transformed to a five-point scale without affecting the SEM analysis, if a covariance matrix is used to generate the model [53]. In this study, these measurements are transformed to five-point Likert scales (ranging from 1 being "very low" to 5 being "very high"). Table A1, in the Appendix A, provides the survey methodology about how to measure the SMEs' organizational capability levels.

The dependent variables are related to exports and jobs. Export growth refers to the increase in a firm's export sales over the past year; and job creation refers to the increase in a firm's number of new jobs (job generation) over the past year. In this study, both export growth and job creation were measured as ranging from 1, being "very small", to 5, being "very large", which explains the increase in export growth and job creation over the past year. To be more specific, if the respondents answered 1 in the questionnaire on an item that asked for the level of job creation, then this means the firm created close to no new jobs over the past year. Table A2, in the Appendix A, provides the survey methodology on how to measure export growth and job creation.

The control variables are associated with firm-specific characteristics. To control for the internal effects of organizational capability, we selected several firm-specific characteristics (firm age, size, and life cycle) as control variables, because both a firm's export performance and employment growth are likely to be influenced by these control variables [12,14,17,20,54]. We measured firm age as the number of years since establishment, firm size as the number of employees, and firm life cycle as a dummy variable. The Table 2 presents the summary statistics of the main variables of interest, including the control variables.

3.3. Common Method Bias

Harman's single-factor analysis is widely conducted to estimate the possibility of the common method bias in social science research [55]. In line with the guidelines of Podsakoff et al. [56], who proposed that a single factor must be extracted if there is less than a 40% variance in order to establish the controlled level of the common method bias within the major constructs, this study carried out Harman's single-factor analysis before data analysis, and the results showed that the variables that were extracted accounted for less than 40%. Therefore, common method bias was not a serious concern for this study.

3.4. Data Analysis

To simultaneously assess the important relationships between organizational capabilities, export growth, and job creation, we employed the partial least squares structural equation modeling (PLS-SEM) approach, using SmartPLS 3.0 (SmartPLS GmbH, Bönningstedt, Germany). PLS-SEM is a method that allows for the complete and simultaneous testing of all the relationships between the independent and dependent variables [57,58]. The PLS-SEM is a second-generation multivariate data analysis that is primarily used to develop theoretical underpinnings in exploratory research [59]. There are several advantages to using the PLS-SEM in social sciences research. It not only performs well with a model with multivariate measurements, but it also primarily evaluates a model that uses single-item constructs, such as the one in our study, which has two dependent variables [60,61]. Moreover, the PLS-SEM has also been widely employed in social science research [52,62,63]. Therefore, it is an appropriate statistical method for our study.

Based on guidelines provided by Hair, Hult, Ringle and Sarstedt [59], our analysis was conducted in three main steps to analyze and interpret the PLS-SEM results: (1) we evaluated the reliability and validity of the measurement model; (2) we employed the PLS algorithm to calculate the path coefficients; (3) we used the bootstrapping procedure with 5000 resamples and 414 cases to identify the significance of these path coefficients; (4) we performed a mediator analysis to examine the mediating effects of the variance accounted for (VAF). In the mediator analysis, we identified whether the indirect effect was significant. If this relationship is significant, the mediator may absorb some of this effect or the entire effect. Then we employed VAF analysis to determine the size of the indirect effect in relation to the direct effect. Specifically, $VAF = \text{indirect effect} / (\text{indirect effect} + \text{direct effect})$ is the mediation criterion; $VAF > 80\%$ indicates full mediation, $20\% \leq VAF \leq 80\%$ shows partial mediation, and $VAF < 20\%$ indicates no mediation. Finally, we summarized the direct, indirect and total effects for the relationship between organizational capabilities and job creation.

4. Results

Tables 3 and 4 present the evaluation of the measurement model, Table 5 shows the results of the path analyses, and Table 6 shows the results of the mediation analyses that indicate the impact of organizational capacities on job creation both directly or indirectly through exports.

Table 3. The reliability and validity of the measurement model.

Construct	Items	CR	Cronbach's α	AVE	Loading	SE	T-Stat.
Technological capability		0.905	0.797	0.827			
	TC1				0.877	0.033	26.503
	TC2				0.941	0.012	81.291
Manufacturing capability		0.896	0.844	0.685			
	MC1				0.858	0.028	30.667
	MC2				0.718	0.045	16.126
	MC3				0.874	0.026	33.349
	MC4				0.852	0.037	23.177
Design capability		0.891	0.817	0.732			
	DC1				0.830	0.039	21.324
	DC2				0.883	0.027	32.985
	DC3				0.854	0.035	24.740
Export growth	EG	1.000	1.000	1.000	1.000	0.000	N.A
Job creation	JC	1.000	1.000	1.000	1.000	0.000	N.A

Notes: CR: composite reliabilities; AVE: average variance extracted; Loading: outer loading; SE: standard error; T-stat.: *t*-value. This table was generated by SPSS 25.0 and Smart PLS 3.0.

Table 4. Discriminant validity.

Construct		1	2	3	4	5
1	Technological capability	0.910				
2	Manufacturing capability	0.625	0.828			
3	Design capability	0.690	0.664	0.856		
4	Export growth	0.320	0.271	0.209	1	
5	Job creation	0.247	0.269	0.180	0.527	1

Note: This table was generated by Smart PLS 3.0 using the Fornell-Larcker Criterion method.

Table 5. Estimation results of the path analyses.

Path	Result			
	Estimate	SE	T-Stat.	Decision
H1a. Technological capability → Export growth	0.270 ***	0.062	4.329	Supported
H1b. Manufacturing capability → Export growth	0.153 *	0.068	2.232	Supported
H1c. Design capability → Export growth	−0.090	0.061	1.467	Rejected
H2. Export growth → Job creation	0.489 ***	0.049	9.908	Supported
H3a. Technological capability → Job creation	0.029	0.024	0.500	Rejected
H3b. Manufacturing capability → Job creation	0.149 **	0.057	2.603	Supported
H3c. Design capability → Job creation	−0.039	0.054	0.727	Rejected

Notes: * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$; Estimate: path coefficient; SE: standard error; T-stat.: *t*-value; the estimation results of the path analyses was generated by Smart PLS 3.0 using the bootstrapping method.

Table 6. Estimation results of the mediation analyses.

Path	Result					
	Type	Effect	SE	T-Stat.	VAF	Decision
H4a. Technological capability → Export growth → Job creation	Direct	0.029	0.024	0.500		
	Indirect	0.132 ***	0.033	4.023	82.0%	Supported
	Total	0.161 **	0.062	2.605		
H4b. Manufacturing capability → Export growth → Job creation	Direct	0.149 **	0.057	2.603		
	Indirect	0.075 *	0.034	2.175	33.5%	Supported
	Total	0.224 ***	0.062	3.590		
H4c. Design capability → Export growth → Job creation	Direct	−0.039	0.054	0.727		
	Indirect	−0.044	0.030	1.451		Rejected
	Total	−0.083	0.062	1.352		

Notes: * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$; Effect: the effects (direct, indirect, and total) of the paths. SE: standard error; T-stat.: t-value; VAF: variance accounted for; the VAF determines the size of the indirect effect in relation to the direct effect. $VAF = \text{indirect effect} / (\text{indirect effect} + \text{direct effect})$ is the mediation criterion; $VAF > 80\%$ indicates full mediation; $20\% \leq VAF \leq 80\%$ shows partial mediation; and $VAF < 20\%$ indicates no mediation.

4.1. The Evaluation of Measurement Model and Model Fit

Table 3 shows the reliability and validity of the measurement model. The results are as follows: First, the composite reliabilities (CR) values range from 0.891 to 0.905, and the Cronbach's α ranges from 0.797 to 0.844, which indicates that our measurement model holds for a relatively high internal consistency reliability. Second, the average variance extracted (AVE) ranges from 0.685 to 0.827, thereby providing evidence of convergent validity for the three constructs. Third, all of the outer loadings in the measurement model are well above the critical value of 0.70, so the criteria for reliability and convergent validity were well satisfied. Finally, as shown in Table 4, discriminant validity holds for the model because the square root of each construct's AVE is greater than its highest correlation with any other construct [64]. Overall, our measurement model holds in terms of both high reliability and validity.

The overall quality of the research model was evaluated using the standardized root mean square residual (SRMR) and the explained variance R^2 . For the indices for an approximate fit, the SRMR of our model is 0.054 (less than 0.10), indicating that the path model provides a sufficient fit for the empirical data [65]. Moreover, the explained variance R^2 values of the two dependent variables are 0.142 and 0.311, respectively, which also shows that our model performed well with the data [66]. The two measures indicate a good fit for this study.

4.2. Direct Effect

As shown in Table 5, we examined H1–H3 by testing the path relationships. First, we tested the direct relationship between organizational capabilities and export growth. H1, which predicts a positive relationship between organizational capabilities and export growth, is partially supported, depending on the types of capabilities. In fact, the influence of technological capability on export growth is positive and statistically significant ($\beta = 0.270$, $p < 0.001$); thus, H1a is strongly supported. H1b is also supported at the 5% level of significance ($\beta = 0.153$, $p < 0.05$), which means that manufacturing capability has a positive impact on export growth. This finding is consistent with that of Hwang, Hwang and Dong [22] and Cavallaro, Esposito, Matano and Mulino [44], who suggest that both technological and manufacturing capabilities may contribute to export performance. However, H1c, which predicts that a firm's design capability has a positive relationship with its export growth, is found to be rejected. In sum, both technological and manufacturing capability were found to be positively associated with export growth.

Second, we quantified the direct relationship between export growth and job creation for H2. Export growth was found to have a positive and significant ($\beta = 489, p < 0.001$) relationship with job creation. Our results are in line with Whang [5], and Los, Timmer, and de Vries [47], who pointed out that export growth plays an important role in employment generation.

Third, H3 predicts that organizational capabilities positively relate to job creation. The result with respect to H3a shows that technological capability is linked to a positive path coefficient but is statistically insignificant. In contrast, manufacturing capability has a positive and significant relationship with job creation ($\beta = 0.149, p < 0.01$), so H3b is statistically supported. Our findings corroborate the ideas of Loch et al. [35], who proposed that competitive advantages can lead to more job opportunities. Finally, the effect of design capability on job creation is negative and insignificant. Based on the above results, only manufacturing capability was found to have a direct effect on job creation.

4.3. Mediation Analyses

Following the guidelines of Hair Jr, Hult, Ringle and Sarstedt [59] and Preacher and Hayes [67], we quantified the mediating roles of export growth in the relationship between organizational capabilities and job creation. Table 6 shows the results of the mediation analyses, including the effects (direct, indirect, and total) of the paths, standard error, *T*-statistic, and the variance accounted for (VAF).

H4a (that is, the positive relationship between technological capability and job creation through exports as a mediator) is found to be supported. As shown in Table 6, the indirect effect of technological capability on job creation via export growth is positive and significant ($\beta = 0.132, p < 0.001$). We also calculated the VAF that determines the size of the indirect effect in relation to the direct effect [59]. The VAF indicates that export growth explains 82.0% of the total effect of technological capability on job creation. This implies that the mediation role of exports in shaping the positive relationship between technological capability and job creation is significant.

H4b, which predicts that the positive relationship between manufacturing capability and job creation is mediated by export growth, is also found to be statistically supported. The indirect effect of manufacturing capability on job creation is significantly positive ($\beta = 0.075, p < 0.05$). In addition, the value of the VAF, 33.5%, indicates that export growth partially mediates the positive link from manufacturing capability to job creation.

In contrast, H4c (that is, the mediating role of export growth in the relationship between design capability and job creation) is found to be rejected. This indicates that export growth does not play a mediating role in the relationship between design capability and job creation [59].

5. Conclusions

Using insights from the resource-based view as a guiding theoretical lens, our study builds on the prior research on job creation and exports in SMEs and considers the relationships between organizational capabilities, export growth, and job creation. Based on a sample of Korean SMEs, the importance of organizational capabilities for both export growth and job creation was examined. Overall, this research offers several valuable insights regarding the literature on trade and employment; it also provides significant information for both SMEs and policymakers.

The main findings in this research are as follows. First, technological capability has a positive impact on export growth. This finding is consistent with Gashi, Hashi and Pugh [12], who highlight the particular importance of technology-related factors in export performance. Second, the positive relationship between manufacturing capability and export growth was found to be significant, which confirms the importance of manufacturing for export performance. This result is similar to Hwang, Hwang and Dong [22], and Cavallaro, Esposito, Matano and Mulino [44], who point out that a higher capability manufacturing process can lead to improvements in outcomes related to SMEs' exports; however, no statistical relationship between design capability and export growth was found. This implies that it is difficult to use design capability to bring about a competitive advantage for exports.

It should be noted that most Korean SMEs are in the stage of original equipment manufacturing processing, while only a few firms can successfully transit to original brand manufacturing.

Our work contributes to the emerging literature that focuses on the impact of export performance on employment generation [5,47]. The current study provides empirical evidence of the positive association between export growth and job creation. Accordingly, our research confirms the important role of export growth as a mechanism of job creation in SMEs.

Another contribution is related to the empirical evidence on the relationship between organizational capabilities and job creation. This extends the prior work of Loch, Chick and Huchzermeier [35] and Moser, Urban and di Mauro [46], who emphasized that firm competitiveness has a positive relationship with job creation. By using insights from the RBV, we assessed and confirmed the positive association between manufacturing capability and job creation. This shows that manufacturing capability can be considered an effective factor for increasing employment.

In this paper, we emphasize the mediating role of export growth plays in shaping the relationship between organizational capabilities and job creation. First of all, the results indicate that export growth fully mediates the relationship between technological capability and job creation. Moreover, we also found that export growth plays a partial mediating role in the relationship between manufacturing capability and job creation. These findings improve our understanding of job creation in SMEs, emphasizing the important role of technological and manufacturing capabilities in creating firms' competitive advantage and national economic sustainability.

Our study has several implications for both SMEs and policymakers in emerging economies. For SMEs, the first implication is that both technological and manufacturing capabilities can help these firms improve their export performance. To embed global markets, SMEs are therefore encouraged to develop their technological and manufacturing capabilities and thereby achieve international competitiveness. Second, the government needs to implement more policy measures that aim to improve SMEs' manufacturing capability as they relate to job creation. In this study, we also found that technological capability can improve job creation either directly or indirectly through exports. Therefore, in order to improve economic sustainability, policies that aim to promote both technology and exports should be implemented to create more jobs. In addition, considering the fact that Korea has been experiencing a continuous slump in labor market, Korean government should pay more attention to ways of improving SMEs' export performance, because empirical evidence shows that employment growth can also benefit from the improvement of exports. Overall, our findings provide useful information for both SME operators and policymakers who are looking to achieve significant growth in exports and employment.

Although the current research provides important insights for firms' organizational capabilities, exports and job creation, there exist limitations associated with the data. First, an analysis that excludes industry-level characteristics may be problematic in that a relationship between organizational capabilities, exports, and job creation may differ across industries. Second, we only focus on the job creation mechanism in SMEs. Future researchers might thus collect data on large corporations to provide insights for more companies. Third, only three organizational capabilities (that is, technological, manufacturing, and design) were included in this analysis. However, exports and firms' employment are also closely related to other firm-level capabilities (e.g., innovation activity) or foreign investment. In this context, it is crucial to include other variables, such as innovation abilities or (inward/outward) foreign direct investment to fully capture the impacts on exports and/or employment. For further research, it is crucial to develop qualitative contributions that are based on the understanding of job creation mechanism in SMEs. Although our study builds on RBV theory, some other theories (e.g., resource dependence theory) are also welcome.

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Appendix A

Table A1. Survey questionnaire for organizational capabilities.

New Tech. development capability (TC1)	%
Tech. commercialization capability (TC2)	%
Manufacturing/processing capability (MC1)	%
Test and inspection capability (MC2)	%
Test and inspection capability (MC3)	%
Maintenance capability (MC4)	%
Product design capability (DC2)	%
Component and process design capability (DC3)	%
Product design capability (DC2)	%

Notes: The percentage scale was transformed to a five-point scale. As of the end of December 2013, if the world's highest organizational capability level is set to "100", please describe in percentage (%) the level of each capability.

Table A2. Survey questionnaire for export growth and job creation.

Performance Type	Very Small	Somewhat Small	So-So	Somewhat Large	Very Large
Export growth (EG)	1	2	3	4	5
Job creation (JC)	1	2	3	4	5

Note: Please list the performance improvement over the past year.

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