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A Study on the Export Competency of International New Ventures Related to the Distribution Industry

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Abstract

Purpose: This study empirically analyzes the factors influencing international new ventures (INVs) export competency during the COVID-19 pandemic. The influencing factors included export market orientation, company size, export network level, and relationship marketing activities. In addition, it analyzes the differences between manufacturing and non-manufacturing, as well as the differences between the INV factors established before and after the COVID-19 pandemic. **Research design, data and methodology:** The empirical model considers the resource-based perspective, network theory, and relational capital utilization. This study uses an existing theoretical framework to conduct multiple regression analysis. Our analysis demonstrates the factors influencing exports using the KOTRA GLC test data. **Results:** Founded during a period of market shock, such as the COVID-19 pandemic, INV should strengthen its overseas market orientation and network with customers, which are related to capital. Additionally, collecting relevant technology and market information positively impacts enhancing competitiveness. **Conclusions:** Previous studies have focused on routine trade environments and firms' export competency. This study empirically investigates the factors affecting INVs' export competence during the period of the market shock of the COVID-19 pandemic. Although the individual value and importance of market shocks, INVs, and export competence have been recognized in this field, an integrated model and theory have not been sufficiently explored.

Keywords : Export Competence, International New Venture, Export Market Orientation, Export Network Level, Relationship Marketing Activities, COVID-19 Pandemic

JEL Classification Code : C12, F14, M16

1. Introduction

The COVID-19 pandemic has caused unprecedented shocks to the global economy and business activities. In particular, restrictions on cross-border movement and the collapse of global supply chains have rapidly transformed the international trade environment, posing significant challenges for companies pursuing various forms of

internationalization, including trade (Seong et al., 2024). To address these challenges, many countries are seeking new paths for economic recovery and sustainable growth. International New Ventures (INVs) refer to companies that target global markets from their inception (Oviatt & McDougal, 1994). INVs generally grow through technological innovation and creative approaches, with international expansion being a key strategy that plays an

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important role in the global economy (Sapienza et al., 2006). However, the global shock of the COVID-19 pandemic has made it difficult for them to enter foreign markets. Increased uncertainty and market volatility have severely affected companies' exports and sustainable management activities, creating a more challenging market environment for INVs (Acikdilli et al., 2022). Export competence refers to a company's ability to compete successfully and achieve results in foreign markets (Farole et al., 2010). Therefore, it is crucial to analyze how new venture companies have attempted to maintain or enhance their export competence.

Previous studies have identified key components of export competence, such as marketing, technological innovation, and network-building capabilities (Pau & Dhiman, 2021). However, there is a lack of systematic research on the importance of these factors and how their influence has changed in the unique context of the pandemic. As globalization continues to elevate the role of INVs, the importance of studying their export competency in response to market shocks like the COVID-19 pandemic has become increasingly critical. Therefore, this study aims to empirically analyze export competence and influencing factors, which can be considered global market competitiveness for the sustainable management of INVs in the market shock situation of the COVID-19 pandemic.

The spread of the COVID-19 pandemic, which began in 2020, has been repeated several times. In particular, during the fourth pandemic period, which began with the spread of the Omicron variant, the number of confirmed global cases reached its peak, and for this reason, the Chinese government locked down major cities, including Shanghai. As a result, the collapse of the global supply chain was further aggravated, and companies had to establish new management strategies. Therefore, this study aims to empirically examine the factors influencing INV's export competency based on corporate data collected during the COVID-19 pandemic from January to April 2022 and verify whether these factors have industry-specific and period-specific differences.

First, from a resource-based perspective, how do INVs' characteristics influence export competence? Second, from the viewpoint of network theory and relational capital theory, how do the network characteristics influence export competence? Third, how do corporate marketing characteristics in marketing strategies affect export competence? Further analysis will also identify differences in factors between INVs established during the COVID-19 pandemic and those established before the pandemic. These results are intended to help INVs manage sustainably by building competitiveness and strengthening export competency in response to market shocks.

2. Literature Review and Hypotheses Setting

2.1. INV and Export Competence

Market growth and sustainable management are basic goals of corporate management. The experience and know-how gained through relatively sequential and gradual internationalization for market adaptation positively influenced corporate growth and development by reducing uncertainty regarding foreign markets (Hult et al., 2020; Johanson & Vahlne, 1977). However, the cost and time required to gather information about global markets and adapt to market environments have decreased dramatically, increasing the proportion of smaller and younger companies in international trade. Such companies are called INVs or born-global firms (Knight & Cavusgil, 2004; Oviatt & McDougal, 1994; Romyantseva & Welch, 2023). The characteristics of INVs include realizing their internationalization through goals and strategies for foreign markets from the early stages of their establishment despite a lack of experience and resources.

INV definitions vary depending on the researchers and research directions (McDougall & Oviatt, 2000; Shrader et al., 2000). Some studies apply a timeframe of three years or less from domestic establishment to initial foreign market entry (Autio et al., 2000; Crick, 2009), while others apply temporal definitions, such as companies that implement IPOs within six years of establishment (Shrader et al., 2000). Although INV-related research is applied slightly differently depending on the purpose and background, they all share the common content of realizing internationalization, with a focus on international markets from the early stages of company establishment.

According to the theory of corporate evolution, companies' resources and competitiveness affect the creation of competitive advantages in the market and sustainable management (Barney, 1991; Nelson, 1985; Wernerfelt, 1984). Export competence is defined as the ability to produce and sell goods and services at competitive prices with global market competitors (Murat & Nisan, 2018; Rahul & Manoj, 2020). Such export competence and competitiveness are important resources for exporting companies and play crucial roles in strengthening both corporate and national competitiveness.

Therefore, countries support corporate exports, and companies strive to strengthen their competitiveness for sustainable management (Mansion & Bausch, 2020). Previous studies have analyzed the external characteristics of companies, such as environmental factors and internal characteristics, to determine export competence, which can be considered the cause of socioeconomic power (Haddoud et al., 2021; Sousa et al., 2008).

The market environment factors, which are the external

characteristics of companies, are factors that companies must adapt to in the changes and trends of national and market environments rather than competitiveness, which companies can proactively strengthen. Another stream of export competence research uses the resource-based view and network theory to argue that the competitiveness of companies' internal competence and assets determines their export competence (Pau & Dhiman, 2021). From a resource-based perspective, investment and management can improve a company's internal competence and assets. Still, mismanagement can decrease competence, showing that these capabilities change according to a company's efforts.

Managerial characteristics, particularly foreign market orientation, related to experience and willingness to enter foreign markets, positively impact export performance and corporate competence (Murat & Nisan, 2018). Additionally, companies' tangible and intangible resources, such as technological competence, company size, and production volume, positively impact export competence (Mejri et al., 2018). From the perspective of network theory, factors such as the relationship, density, and diversity of relational capital possessed by companies with customers and partners are studied to increase the level of internationalization, and by utilizing positive relationships, companies achieve positive corporate performance through the acquisition of external knowledge, information, and technology that they do not possess (Idris & Saridakis, 2018; Puthusserry et al., 2020). Thus, companies' export competence enables sustainable management in the market and improves national competitiveness.

In this study, to empirically analyze the determinants influencing the export competence of INVs, we utilize export market orientation factors from resource-based theory as company characteristics, the export network characteristics based on network theory, and the level of foreign marketing activities from foreign marketing theory as influencing factors.

2.2. Company Characteristics and Export Competence

Export market orientation, a company characteristic, is also a strategy for efficient resources possessed by and approaching foreign markets through selection and focus, considering the demands and characteristics of the external market.

In a study on the performance of international export ventures targeting Taiwanese manufacturers, export market orientation, export strategy, and export marketing effectiveness were found to contribute to the export market and financial performance positively influenced through the effective implementation of planned export marketing strategies and marketing competence enables effective marketing (Morgan et al., 2012). In research on corporate

export performance, strong leadership for export knowledge, information, and experience about foreign markets create a high level of foreign market orientation, developing organizational competence within the company and strengthening internationalization. Companies with high entrepreneurial orientation are equipped with high coping abilities for market risks and unfavorable situations and seek new business opportunities (Gonçalves et al., 2021; Haddoud et al., 2021). Ultimately, export market orientation positively influences competitiveness and corporate performance (Cadogan et al., 2009; Malca et al., 2023).

From the perspective of human capital theory, an increase in the level and amount of human capital within a company serves as an intrinsic competency by leveraging expertise and experience, ultimately acting as a positive factor in corporate performance (Haltiwanger et al., 2013). Similarly, a study of Chilean companies found that managers' lack of international experience and knowledge posed a significant barrier to entering foreign markets (Bianchi & Wickramasekera, 2016). However, the impact of human capital varies depending on a company's internationalization speed. First, in the case of gradual internationalization companies, the increase in human resources and internationalization has a low level of influence because workers internalize market information and experience, and internationalization is realized when they become confident about it (Sapienza et al., 2006).

Conversely, for companies engaging in radical internationalization, human capital plays a crucial role, and a relatively high level of human capital investment leads to more aggressive international expansion (Onkelinx et al., 2016). Additionally, a study on Malaysian companies found that larger companies benefited from relatively higher competitiveness, and their ability to implement various strategic choices based on this competitiveness positively impacted their performance (Ayob et al., 2015).

Based on previous research, this study considers that a company's export market orientation and size will act as positive influencing factors on export competence and thus sets the following hypotheses:

- H1-1:** Company characteristics act as positive (+) influencing factors on export competence.
- H1-2:** Export market orientation acts as a positive (+) influencing factor on export competence.
- H1-3:** Company size acts as a positive (+) influencing factor on export competence.

2.3. Network Characteristics and Export Competence

Companies realize business activities by connecting with various stakeholders. They are organisms that operate and grow in a market composed of suppliers, demanders,

and consumers (Wernerfelt, 1984). Network theory focuses on the relationships formed through the interactions between various stakeholders in the market and their mutual influence (Yoon et al., 2018). In the past, companies realized and grew their businesses by targeting limited local markets. However, in the era of globalization, companies acquire efficient resources and various technologies and information from overseas markets through interactions with stakeholders and develop technologies and capabilities to realize sustainable management (Crick, 2009).

In previous research on the performance of knowledge-based industries, companies have used relational capital among their intangible assets to disseminate and acquire technology- and knowledge-based assets. This process enhances competitiveness and competence, and corporate performance increases (Mansion & Bausch, 2020). Leveraging networks to gain information and resources about market opportunities and risks can be the first step to a firm's stable internationalization, and even after market entry, efficient resource access and information sharing through the global community increases the possibility of market expansion (Ferreras-Méndez et al., 2019). Additionally, strong customer interactions strengthen a company's capabilities and help it access efficient resources (Yeniaras & Gölgeci, 2023). Eventually, the utilization of acquired resources, shared expertise, and technology will act as positive factors in increasing a company's export competence and competitiveness and improving performance (Gassmann & Keupp, 2007).

Based on these previous studies, this study considers a company's ability to build and effectively utilize foreign market networks as a positive factor influencing corporate competence, proposing the following hypothesis:

H2: Export network characteristics acts as a positive (+) influencing factor on export competence.

2.4. Marketing Strategy and Export Competence

Companies use strategies for market responses and modify their marketing strategies by collecting and analyzing market information to identify needs and preferences. Many companies implement strategies based on past sales data and actual customer and market requirements (Ateke & Didia, 2017). From this perspective, market information collected through a company's marketing activities increases corporate competence and competitiveness, thus positively affecting business performance (Acikdilli et al., 2022). Moreover, capital and information are often limited for new companies. From the perspective of learning theory, the competence possessed at the time of company establishment starts with the founder's experiential learning and goes through trial and error and

repeated mistakes in experiential learning. Companies can achieve sustainable management by providing products and services to the market through highly refined competence and competitiveness (Tuomisalo & Leppäaho, 2019).

One way to get information about overseas markets is an internalized corporate network, such as subsidiaries scattered throughout the global market. However, it is not easy for INVs or SMEs to possess internalized corporate networks. In such cases, companies use their networks with their customers. Through this, they can efficiently access knowledge about foreign markets, customer-related information, and information about market opportunities and obtain information about new opportunities (Child et al., 2017).

In an empirical study on the internationalization of Polish furniture companies, the acquisition of various tangible and intangible assets and information collection by companies is found in the utilization of external networks and the vicarious learning effect through participation in overseas exhibitions, and these results are evaluated to have a positive impact on strengthening corporate competence and performance (Ciszewska-Mlinarič & Wójcik, 2020). The other one of Due to the special circumstances of the COVID-19 pandemic, it may not be the same as the general market situation, but information is collected through methods such as non-face-to-face online contact or intermittent face-to-face contact. Information acquired through various means becomes an essential asset to a company (Puthusserry et al., 2020).

Based on these previous studies, considering that a high level of marketing activities could positively influence a company's export competence, we propose the following hypothesis:

H3: The level of marketing activities acts as a positive (+) influencing factor on export competence.

3. Research Methods and Data

3.1. Research Model and Measurement

Based on a literature review, this study analyses the effects of firm, network, and marketing characteristics on the export competence of INVs. A firm's export competence (FEC) is a concept that includes the physical, financial, and managerial resources possessed by a company, which are necessary abilities and knowledge to gain export competitiveness in the global market and serve as an indicator of a company's overall export ability (Pau & Dhiman, 2021).

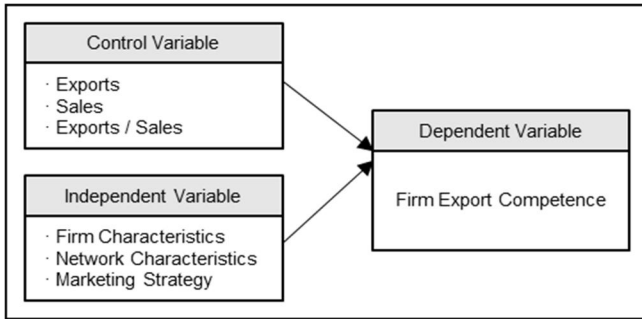


Figure 1: Research Model

In this study, the FEC of INVs was measured using the KOTRA GCL Test scores. KOTRA's Global Competency Diagnosis (GCL) survey is conducted to evaluate the global capabilities of registered domestic companies and to suggest effective support projects. For an accurate survey, it is recommended that the CEO, executives, or managers who are familiar with the company's management situation complete the survey.

Table 1: Measurement of Variables

Variable	Abbreviation	Description
Firm Export Competence	FEC	Firm's Export Competence
Firm Characteristics	EMO	Export Market Orientation
	FNW	Firm's Number of Workers
Network Characteristics	ENL	Export Network Level
Marketing Strategy	RMA	Relationship Marketing Activities
Annual Exports	AE	Annual Export Amount (log)
Annual Sales	AS	Annual Sales Amount (log)
Annual Exports / Annual Sales	ES	Annual Export / Annual Sales (%)

Note: Dependent Variable(FEC), Independent Variable(EMO, FNW, ENL, RMA), Control Variable(AE, AS, ES).

The survey is conducted primarily online, but if necessary, data is collected through fax or mail surveys. It is a single score given after evaluating globalization readiness, utilization, and corporate competence measured on a scale from 0 to 100 points. Among the firm characteristics, export market orientation was measured by questions about company-wide strategy formulation and implementation for exports, management, executives' willingness to expand exports, possession of overseas standard certifications, capacity of overseas marketing personnel, and level of information collection for customer discovery. Firm size was measured as the number of employees. Network characteristics were measured by the level of network building, activities, competitiveness of global customers, and securing orders from global customers. The marketing strategy was measured by the degree of business trips for

marketing activities and the utilization of exhibitions and trade shows.

Responses to the questions used a 4-point scale (1 very low, 2 somewhat low, 3 somewhat high, 4 very high), while items for overseas standard certifications, customer acquisition, and overseas business trip experience used a 5-point scale where a score of 1 was given if there was no performance. The control variables for firm characteristics included the previous year's sales, export amount, and the ratio of exports to total sales (export amount/sales amount). Additionally, INVs were categorized into manufacturing and non-manufacturing groups, and divided into groups established before the COVID-19 pandemic and during the pandemic to analyze the mean differences by factor.

3.2. Research Sample

The definition of INV varies slightly depending on the research purpose and background, the commonly used definition refers to a company that has achieved internationalization by targeting the international market from the beginning of its establishment.

The INVs were defined in this study as those established and internationalized two years before the COVID-19 pandemic and two years after the pandemic began. The survey targeted 282 companies; however, 22 companies with insufficient responses were excluded, resulting in an analysis of 260 companies. The characteristics of the collected data are presented in Table 2.

Table 2: Characteristics of Data

Variable		Mean	Max.	Mini.	
Firm (260)	Firm's Export Competence	FEC	62.82	91.45	34.7
	Export Market Orientation	EMO	3.18	4.2	1.6
	Number of Workers	FNW	7.22	320	1
	Export Network Level	ENL	2.62	4.2	1
	Relationship Marketing Activities	RMA	2.16	4.5	1
	Annual Export Amount (log)	AE	4.28	7.60	1.48
	Annual Sales Amount (log)	AS	8.39	11.65	6.06
	Annual Export / Annual Sales (%)	ES	25.83	100	0.01

4. Analysis Results

4.1. Factor Analysis and Reliability Analysis

Factor analysis was conducted to verify the construct validity of the research, and reliability analysis was performed to check internal consistency. The results are summarized in Table 3. Principal component analysis was used for factor extraction, and the varimax method was used for factor rotation. The Kaiser–Meyer–Olkin (KMO)

measure of sampling adequacy was 0.891, and Bartlett's test of sphericity showed a p-value of < 0.001. These results, with a KMO measure above 0.5 and Bartlett's significance level below 0.1, indicate that the factor analysis results are valid. Three factors were extracted from the factor analysis, with a total variance of 59.874%. Among the factor loadings of each item, the ENL-5 had a minimum loading of 0.573, whereas the EMO-2 had a maximum of 0.844. Harmon's single-factor test was conducted as a post hoc analysis to test for common method bias in sample collection.

Table 3: Factor and Reliability Analysis

Variable		Component		
Independent	Cronbach's α	Factor1	Factor2	Factor3
EMO2	.653	.844	.222	.084
EMO4		.833	.250	-.012
EMO3		.713	.250	.388
EMO5		.710	.300	.287
EMO1		.675	-.015	.255
ENL3	.869	.043	.625	-.211
ENL2		.343	.616	.200
ENL4		.293	.615	.180
ENL1		.017	.590	.328
ENL5		.323	.573	.294
RMA2	.608	.177	.075	.767
RMA1		.241	.197	.759
Eigen Value		3.279	2.131	1.780
Pct of Var		27.271	17.771	14.832
Cum Pct		27.271	45.042	59.874
KMO(Bartlett's test of sphericity)		0.891(p<0.001)		
Notes: 1. Extraction Method: Principal Component Analysis 2. Rotation Method: Varimax with Kaiser Normalization* 3.* Convergence of factor rotation achieved after 5 iterations				

The results showed three factors with eigenvalues greater than 1, with the export market orientation factor among firm characteristics having the greatest explanatory power. The variances explained by network characteristics and marketing strategy factors were 27.271%, 17.771%, and 14.482%, respectively. These results do not violate the finding that common method bias exists if the sum of squared loadings extracted by maximum likelihood has only one factor value or is classified into more factors but has absolute explanatory power by one factor value (Podsakoff et al., 2003).

Cronbach's α values for each independent variable were 0.653 for export market orientation(firm characteristics), 0.869 for network characteristics, and 0.608 for marketing strategy. All Cronbach's α values were above 0.6, meeting the acceptable level of reliability and indicating no issues with internal consistency for variable measurement (Drost, 2011).

4.2. Correlation Analysis

Prior to the hypothesis testing, a correlation analysis was conducted on the measurement items used in the empirical analysis. The results are summarized in Table 4. The highest correlation coefficient was 0.873** between the dependent variable FEC and the independent variable ENL, and the lowest was 0.166** between FEC and FNW. As all other factor correlation coefficients were below 0.85, there were no issues with the discriminant validity of the variables used in the correlation analysis. Multicollinearity was tested using variance inflation factor (VIF) values, with the highest VIF of 3.745 between FEC and ENL. The other variables had lower VIF values, indicating no multicollinearity issues among the variables.

Table 4: Correlation Analysis

	M	S.D.	FEC	EMO	FNW	ENL	RMA	AE	AS	ES
1	62.82	11.51	1							
2	3.18	.60	.790**	1						
3	7.22	27.46	.166**	.074	1					
4	2.62	.75	.873**	.569**	.137*	1				
5	2.16	.95	.636**	.437**	.132*	.490**	1			
6	4.28	.92	.310**	.125*	.227**	.308**	.076	1		
7	8.39	.79	.114	-.015	.418**	.108	.000	.515**	1	
8	25.83	30.86	.243**	.104	-.053	.240**	.107	.538**	-.234**	1

4.3. Regression Analysis

This study empirically analyses the relationship between the factors affecting INVs' export competence by examining the influence of export market orientation and firm size on firm characteristics. It also seeks to verify the impact of network and marketing strategy characteristics on export competence. Table 5 presents the results of the multiple regression analysis for hypothesis testing.

Regression model 1 ($F=9.951^{***}$, $R^2(\text{adj. } R^2)=0.104$ (0.094)) examines the influence of the control variables (annual export amount, annual sales, and annual export amount/annual sales ratio) on INVs' export competence. Annual export amount showed a positive (+) relationship with export competence within the significance level (Standard $\beta=0.229$, $t=-2.033^*$, $VIF=3.635$). The standardized coefficient β value of 0.229 indicates that higher export volumes positively affect a firm's export competence. Annual sales and annual export amount/annual sales ratios exceeded the significance level.

Regression model 2 ($F=713.291^{**}$, $R^2(\text{adj. } R^2)=0.918$ (0.917)) analyses the relationship between the independent variables (export market orientation and firm size as firm characteristics, network characteristics, and relationship marketing activity level as marketing strategy characteristics) and INVs' export competence. Export

market orientation showed a positive (+) relationship with export competence (Standard $\beta=0.391$, $t=17.466^{**}$, $VIF=1.557$). Firm size also showed a positive (+) relationship with export competence (Standard $\beta=0.051$, $t=2.758^*$, $VIF=1.063$). These results align with those of previous studies from the perspective of human capital theory, suggesting that increased human capital leads to enhanced knowledge and experience, resulting in improved intrinsic capabilities and overall firm competence (Haltiwanger et al., 2013; Murat and Nisan, 2018). The network characteristic, showed a positive (+) relationship with export competence (Standard $\beta=0.543$, $t=23.015^{**}$, $VIF=1.732$).

Table 5: Regression Analysis

Constructs	Model 1		Model 2		Model 3	
	Standard β (t-value)	VIF	Standard β (t-value)	VIF	Standard β (t-value)	VIF
AE	.229 (-2.033)*	3.635			.012 (.361)	3.746
AS	.026 (0.263)	2.731			.068 (2.244)*	3.051
ES	.125 (1.260)	2.826			.065 (2.215)*	2.878
EMO			.391 (17.466)**	1.557	.399 (18.307)**	1.580
FNW			.051 (2.758)*	1.063	.012 (.610)	1.243
ENL			.543 (23.015)**	1.732	.521 (22.170)**	1.830
RMA			.193 (9.145)**	1.384	.196 (9.520)**	1.411
F	9.951**		713.291***		438.000***	
R ² (adj. R ²)	.104(.094)		.918(.917)		.924(.922)	

This result suggests that building and utilizing export networks positively affect export competence through the use of relational capital in foreign markets. Additionally, the level of activity in foreign markets, a marketing strategy characteristic, showed a positive (+) relationship with export competence (Standard $\beta=0.193$, $t=9.415^{**}$, $VIF=1.384$). Marketing activities in relationship with partnerships provide opportunities to acquire market needs, technology, and various types of information. These activities are believed to enhance market competitiveness and strengthen export competence.

Regression model 3 ($F=438.000^{**}$, $R^2(\text{adj. } R^2) = 0.924 (0.922)$) empirically analyzed the impact on INVs' export competence using an integrated relationship model with all control variables and independent variables affecting INVs. Among the control variables, annual sales (Standard $\beta=0.068$, $t=2.244^*$, $VIF=3.051$) and annual export amount/annual sales ratio (Standard $\beta=0.065$, $t=2.215^*$, $VIF=2.878$) were found to positively influence INVs' export competence.

This result suggests that firms with higher financial capabilities are likely to have higher market competitiveness and can employ various strategic choices when entering foreign markets (Ayob et al., 2015). Among firm characteristics, the export market orientation factor (Standard $\beta=0.399$, $t=18.307^{**}$, $VIF=1.580$) was found to positively influence export competence. This aligns with previous research on firm evolution theory and resource-based view, suggesting that firms make decisions about strategic resources to achieve sustainable competitive advantage, leading to growth and development (Barney, 1991; Wernerfelt, 1984).

From this perspective, export willingness develops organizational capabilities and collects market information, and consumers need to respond to the market, thus building firm competence that realizes competitive advantage (Cadogan et al., 2009; Malca et al., 2023). The export network factor, a network characteristic (Standard $\beta=0.521$, $t=22.170^{**}$, $VIF=1.830$), positively influenced export competence. This result is consistent with network theory, which suggests that relationships are formed through interactions among various stakeholders in the market and that firms influence each other (Crick, 2009; Yeniaras & Gölgeci, 2023). Using international networks with customers and strengthening inter-firm relationships, such as relational capital among intangible assets, enables efficient resource access and information sharing (Ferrerias-Méndez et al., 2019; Mansion & Bausch, 2020; Yoon et al., 2018). The relationship marketing activity factor, a marketing strategy characteristic (Standard $\beta=0.196$, $t=9.520^{**}$, $VIF=1.411$), positively influenced export competence. Collecting and analyzing market information to identify consumer needs and preferences enables the implementation of market response strategies and positively affects sustainable management (Acikdilli et al., 2022; Ateke & Didia, 2017; Tuomisaalo & Leppäaho, 2019).

For INVs with relatively limited capital and information, marketing activities through various external learning channels help strengthen the company's competitiveness by obtaining and utilizing information on the global market (Puthusserry et al., 2020). The annual export amount and firm size were outside the significance level.

4.4. T-test

For additional analysis, we conducted a t-test. This was done to confirm the existence of differences in corporate characteristics between INVs established before COVID-19 and INVs established during the COVID-19 pandemic. Table 6 shows the variables that have significant results after omitting variables outside the significance level in the analysis results.

Table 6: Independent Sample T-test

MF(188) vs. NMF(72)		Mean	S.D.	t(p)
FNW	MF	8.74	32.11	1.45(.021)
	NMF	3.24	3.42	
ES	MF	19.21	25.95	-5.95(.001)
	NMF	43.13	35.81	
CEP	MF	1.32	.47	-3.28(.001)
	NMF	1.54	.50	
EB(160) vs. FEA(100)		Mean	S.D.	t(p)
ES	FEB	22.54	28.86	-2.19(.029)
	FEA	31.10	33.30	
CFM	FEB	1.21	.41	-3.28(.001)
	FEA	1.39	.49	

Note: 1. MF(Manufacturing, 188 Firms), NMF(Not Manufacturing, 72 Firms)
 2. FEB(Firms established before the COVID-19 pandemic, 160 Firms), FEA(Firms established after the COVID-19 pandemic, 100 Firms)
 3. CEP(Classification by Establishment Period), CFM(Classifying Firms by Manufacturing)

First, in the comparison between manufacturing and non-manufacturing INV groups, out of 260 total INVs, 188 were manufacturing firms, and 72 were non-manufacturing firms. Manufacturing firms had an average of 8.74 employees, whereas non-manufacturing firms had 3.24 employees. However, non-manufacturing firms have higher export ratios of total sales. Second, in the comparison between INVs established before and after the COVID-19 pandemic, out of the 260 total INVs, 160 were established before, and 100 were established after the pandemic. The INVs established after the pandemic had a higher export ratio of total sales. In addition, INVs established before the pandemic had a higher proportion of manufacturing firms than those established after the pandemic. These results suggest that market shocks such as the COVID-19 pandemic are perceived as significant risk factors for firm establishment and sustainable management.

The difference between manufacturing and non-manufacturing is thought to be the difference in management difficulties due to supply chain issues caused by the pandemic. As a result, non-manufacturing companies with high flexibility and responsiveness to online utilization are judged to be relatively less affected by the market shock. Consequently, INVs established during the pandemic tended to be non-manufacturing firms with relatively lower fixed costs than manufacturing firms requiring higher capital and human investment. This may explain why INVs established before the pandemic had a higher export ratio than those established after. The other analysis results did not have significant results.

5. Analysis Results

5.1. Result Summary

This study empirically analyses the factors affecting the

export competence of INVs during the COVID-19 pandemic. Based on firm evolution theory and the resource-based view, we use export market orientation and firm size as firm characteristic variables. For network characteristics, we used the export network factor, drawing on relational capital theory and network theory. Regarding marketing strategy characteristics, we include marketing activities as an influencing factor based on learning theory, intellectual capital theory, and relationship marketing perspectives.

Moreover, we compared differences between manufacturing and non-manufacturing INV groups, as well as INVs established before and during the COVID-19 pandemic market shock. This study utilized the KOTRA GCL Test Data from 2022. Our research aimed to answer two main questions. What factors influenced INVs' export competence during the COVID-19 pandemic? Are there differences between the INV groups established during and before a market shock period, such as during the COVID-19 pandemic, and between the manufacturing and non-manufacturing INV groups? The empirical results are as follows: First, regarding firm characteristics, export market orientation positively influences INVs' export competencies.

However, firm size was not significant. Second, the overseas market network factor, a network characteristic, positively influenced INVs' export competence. Third, relationship marketing activities, a marketing strategy characteristic, positively influence INVs' export competence. Finally, the manufacturing INV groups were larger than the non-manufacturing INV groups and had a lower establishment rate during the market shock period. Non-manufacturing INV had a higher sales-export ratio than manufacturing INVs. Additionally, INVs established during the COVID-19 pandemic period had a higher proportion of non-manufacturing firms and a higher sales-export ratio than those established before the pandemic.

5.2. Contribution and Implication

This study has several empirical and analytical implications and academic significance. The academic implications of this study are as follows: First, to enhance firm competence in the sustainable management of INVs, CEOs, and executives should establish company-wide strategies for export expansion from an export market orientation perspective. They should strive to increase their information and relevant standard certifications to enter overseas markets. This requires efforts to analyze trends and develop products and services that reflect the needs of local customers. Additionally, efforts should be made to educate and cultivate marketing personnel with knowledge and expertise in export markets. Second, from the perspective of intellectual capital and relationship marketing, efforts should be made to build networks with global customers and

secure a wide and diverse customer base in overseas markets.

We will need to work to strengthen our position in the market by expanding our online and offline networks to build relationships with overseas buyers, distributors, investors, etc., and by cooperating local markets with partners overseas. INVs with relatively low corporate and internal information learning assets need a marketing strategy that utilizes external learning channels to acquire diverse information. This requires continuous monitoring to understand market trends, information and technology, and market flows of global buyers, suppliers, and competitors. INVs should acknowledge that they possess relatively lower levels of tangible and intangible resources than traditional and gradual internationalizing firms and strive to strengthen competitiveness and export competence for sustainable management in the market.

5.3. Limitation

Although this study has both empirical and analytical implications and academic significance, it has some limitations. First, although the attempt to integrate academic research using KOTRA GLC test data is highly valued, there are constraints on research expansion owing to the difficulty in accessing and structural limitations of the data. Future research will require the construction of supplementary data and additional studies to address this issue. Second, to construct various research models for export competence analysis, additional research is needed on the comparative analysis between sequential Uppsala internationalization model firms and INVs. Further research using additional model constructions and supplementation is required.

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