The Impact of Corporate Capabilities on Management Performance : Focusing on the Korean Distribution Industry during the COVID-19 Pandemic

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Abstract

Purpose: This study analyzed the relationship between corporate capacity and management performance in the Korean distribution industry during the COVID-19 pandemic. **Research design, data and methodology:** The data for this study used the 2021 KOTRA GCL Test Data, and multiple regression analysis was performed using SPSS 26. As corporate competency, human capital and related capital of intellectual capital theory were utilized, and the global network level of social network theory was also utilized. As an additional analysis, corporate characteristics factors were used. **Results:** First, the level of global mindset of human capital acted as a positive factor in management performance, and the level of professional manpower did not achieve significant results. Second, related capital acted as a positive factor in corporate performance. Third, from the perspective of social network theory, the global network level of companies acted as a positive factor in management performance. Finally, the relationship between corporate characteristics and management performance was marginally significant. **Conclusions:** In order to improve the business performance of a company in a market shock such as the COVID-19 pandemic, it is required to strengthen the level of network construction with customers and increase the level of intellectual capital that a company has.

Keywords : Management Performance, Intellectual Capital, Social Network Theory, Distribution Industry, COVID-19 Pandemic

JEL Classification Code : C12, F14, F23, M16

1. Introduction

From 1950 to 2022, global trade volume increased by 4,500%, and the value of global trade surged almost 400 times from 1950 levels. As of 2022, global trade volume and trade volume have increased by 4% and 6% on average since 1995 when the WTO was first established (WTO, 2023), respectively. However, the increasing global trade volume decreased by –8.8% from January to May 2020 due to the COVID-19 pandemic. Global port container traffic decreased by 6.4% (as of April) compared to 2019. Global trade has contracted because of the slowing growth of the global economy and the trade dispute between the U.S. and China, as well as each country's lockdown policies and

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increased trade costs due to the COVID-19 pandemic (UNCTAD, 2020). UNCTAD explained that trade volume has decreased as problems such as port and border closures, air travel and transport restrictions, and delays in customs processing have occurred, and export restrictions on medical supplies and food have been implemented in each country. According to the International Air Transport Association, The decline in cargo demand in 2020 fell to the largest level since the global financial crisis in 2009. Moreover, it is down 9.7% from 2019 (IATA, 2021). Various studies are being conducted on the economy, distribution, transportation, industries, and companies of the global market, which are external factors to the companies of this market shock (Barbero et al., 2021; Wei et al., 2021; Xu et al., 2020). Research related to the government's policies and responses to trade flows and changes between countries in the global market was conducted (Barbero et al., 2021). There is also a study that analyzed the impact of import and export changes on industries and economies in the context of the COVID-19 pandemic (Wei et al., 2021). In another area of research, a study was also conducted that linked industrial damage and problems to global supply chain disruptions (Xu et al., 2020). Existing studies focus on the government's trade policy or changes in macroeconomic and industrial aspects. Moreover, despite the need for research at the corporate level, which is the center of the market economy, research is insufficient due to the limitations of collecting and analyzing data from individual companies during the COVID-19 pandemic. Therefore, this study aims to study the internal capabilities of companies that affect the management performance of exporters in charge of distribution in the global market to cope with new market shocks such as the COVID-19 pandemic in the future. Moreover, by empirically analyzing the competitiveness of a company using intellectual capital theory and social network theory, it has increased its differentiation from existing studies.

Therefore, this study proposes the following questions to demonstrate the factors influencing corporate management performance based on the 2021 corporate data, which is the period in the middle of the COVID-19 pandemic. First, what influence factors will human capital and related capital act on management performance from the perspective of intellectual capital theory during the COVID-19 pandemic? Second, from the perspective of social network theory, what influence will the level of global network construction act as on management performance? Third, how will corporate characteristics affect management performance? This study seeks to find the answers to these questions and find answers to strengthen corporate capabilities to respond to future market changes and improve management performance.

2. Literature Review and Hypotheses Setting

2.1. Literature Review

A company's sustainable management and capturing of market opportunities are important areas for researchers studying business administration. If a company utilizes and accumulates its resources to build core competencies and utilize its capabilities, it increases its possibility of sustainable management. Eventually, only companies that adapt to market changes and seek new opportunities can sustainable management and growth (Meschi et al., 2017). This is because the resources and capabilities of a company act as important factors that greatly influence corporate performance and market competitiveness. This resource-based perspective is a theory that emphasizes resources and capabilities as factors that determine the competitive advantage of a company or organization, and resources refer to material and immaterial resources that the company has (Barney, 1991). It includes factors such as financial assets, production capacity, technology, brand, patent, and manpower, and capability refers to the company's ability to manage, organize, and utilize these resources. This means that companies that better utilize specific resources or capabilities and continue to develop can maintain a continuous competitive advantage in the market (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984). Therefore, companies must respond flexibly according to the market environment or changing competitive conditions and utilize resources effectively. The performance of a company that has entered the global market is influenced by its global market entry strategy, and these market entry strategies change according to the company's resources (Chen et al., 2016; Kolbe et al., 2022; Lee & Wang 2023). Social Network Theory is a theory that is connected through interactions between socially connected companies and organizations, and based on this, continuous change and development (Fuhse, 2020; Li et al., 2021). From this point of view, the connection between companies and companies, which is a result of various social capital, is a relationship that is created, changed, and developed into a social network. Accordingly, the level of global network construction in the overseas market of a company has a significant impact on the business performance of the company (Boateng et al., 2022; Lages et al., 2009; Ogasavara et al., 2016).

Therefore, this study aims to analyze how the level of global network construction from the perspective of the company's intellectual capital and social network theory, which measure companies that realize global market exports from a resource-based perspective, affects management performance.

2.2. Hypotheses Setting: Intellectual Capital and Management Performance

Galbraith 1967, who first proposed the concept of intellectual capital, argues that intellectual capital should be used to explain the capabilities of companies and to use it for market opportunities (Sharma, 2013). In many subsequent studies, intellectual capital is described as the value of knowledge, skills, business education, and proprietary information that provides a company's competitive advantage in the market (Ahmed et al., 2020; Bontis, 1998; Ling, 2013; Lee & Wang, 2023; Mukaro et al., 2023; Sharma, 2013; Xu & Li, 2022). Such intellectual capital is considered an asset of a company and can be broadly defined as a set of all information resources that a company can use to generate profits, acquire new customers, create new products, or improve its business. There is no standardized method of measuring intellectual capital used in various areas so far, but in many studies, intellectual capital has been studied as a factor that positively affects the performance of a company (Ahmed et al., 2020; Gupta & Chauhan, 2021; Pucar, 2012). Moreover, the importance of the relationship between intellectual capital and management performance is increasing. The most common types of intellectual capital are classified into three categories: human capital, relational capital, and structural capital. Human capital includes all the knowledge and experience of members of the organization and consists of education, life, and work experience. This knowledge and experience can be enhanced through education. Relational capital includes all relationships an organization has, including employees, suppliers, customers, shareholders, etc. Last structural capital refers to the organization's core beliefs and systems, such as corporate goals, policies, corporate culture, and organizational structure. After all, a company's intellectual capital acts as a differentiated factor in market competition and is an important factor for continuous management and growth in fierce market competition. Lee and Wang (2023) analyzed the impact of export performance through human, structural, and relational capital, which is intellectual capital, for 197 companies in charge of exporting high-tech products in China. As a result, intellectual capital served as a positive factor in creating a competitive advantage in the field of high-tech exports by promoting corporate innovation and creativity. In the study of Ahmed et al. (2020), the relationship between the potential of corporate intellectual capital and the mediating effect of realized absorption capacity on corporate performance was studied. As a result, it was studied that the potential intellectual capital of a company acts as an actual absorbed capability and has a positive effect on the performance of the company. Xu and Li (2022) study explains the relationship between intellectual capital held by Chinese manufacturing companies and performance related to revenue and productivity. These studies analyze that intellectual capital held by manufacturing companies in emerging markets acts as a positive factor in creating management performance. Mukaro et al. (2023) studied the relationship between intellectual capital and performance, focusing on secondary data from companies in Türki. Unlike previous studies, intellectual capital has a negative effect on asset returns. These results are interpreted as a result of excessive employment of skilled employees, which leads to excessive expenditure of salary costs, lowering the rate of return. For this reason, it is analyzed that it is important for companies to employ skilled and unskilled workers in a balanced manner. Freixanet et al. (2018) drew the results that the positive attitude, vision, and commitment to the overseas market, which are factors of global orientation of corporate managers, have a positive effect on the export performance of a company. It is analyzed that the level of global mindset of managers and managers increases the level of internationalization of a company and network construction with overseas partners and increases profitability.

Based on these studies, the relationship between corporate intellectual capital and corporate performance is generally thought to have a positive effect. Therefore, the hypothesis of this study was established as follows.

H1-1: The global mindset(human capital) will have a positive (+) effect on management performance.
H1-2: Knowledge(human capital) will have a positive (+) effect on management performance.
H2: A Firm's relational capital will have a positive (+) effect on management performance.

2.3. Hypotheses Setting: Network and Management Performance

Social network theory is a useful theory in social science that is used to study the relationship between individuals and groups, organizations, or society as a whole. Early studies using social network theory created various hypotheses and basic theories through social relations and structural research and later spread to various social science fields (Barnes, 1954; Borgatti et al., 2009; Granovetter, 1973; Xiong et al., 2022). Granovetter's (1973) research utilized social network theory as a research tool to analyze areas at the microscopic and macroscopic levels. This was described as an important factor in determining the strength of the tissue's interaction. In the end, it is argued that social relationships are formed in a network structure, and the formed networks influence people's behavior and decision-making. Borgatti et al. (2009) study describes various academic applications of network theory. It shows that

network analysis can provide new insights and answers to various topics and problems in social science. To this end, it summarized and discussed the results and implications of network research conducted in various fields such as trust and cooperation, knowledge and learning, creativity and innovation, leadership and power, influence and diffusion, and performance and efficiency. Therefore, studying the characteristics of social interactions and relationship networks helps to understand and explain decision-making and communication within and outside the organization. The study of Xiong et al. (2022) has evolved into a research area that characterizes users' behavior and seeks and utilizes hidden patterns within social networks through data-based and theoretical modeling.

In a recent study by Dwivedi et al. (2021), a study on corporate management performance using social networks, social media was used to create corporate value and achieve competitive goals. The use of social media has had a positive effect on achieving relational sales goals for companies. Moreover, it has been studied that it has the effect of shortening business hours by increasing customer concentration and understanding and increasing customer service levels. Saleh & Harvie (2010), who studied the case of Malaysian SMEs, found that business networking, including knowledge sharing and information exchange, had a positive impact on corporate performance. This acted as a positive factor in lowering various constraints between buyers and sellers and is interpreted as affecting the performance of the company. In a study by Emmanuel et al. (2022), it is analyzed that customers access product information through social media platforms, communicate with companies, and share opinions on products or services. A company's business strategy using social networks increased customer loyalty and increased customer satisfaction. These results eventually served as a positive factor in establishing long-term customer relationships with companies. The implications of Kongar and Adebayo (2021) study argued that recent social network trends are changing rapidly, so companies need to analyze agilely and adapt quickly to market conditions. This is because the tendency of network users is very fluid and is easily affected by events or social flows. Monitoring such a changing market and keeping up with the pace of change are also analyzed as important factors affecting corporate performance in marketing research. In the end, from the perspective of social network theory, it acts as a factor that determines the intensity of interactions between companies and affects management performance.

Based on these studies, a hypothesis was established that the degree of corporate network construction would act as a factor that positively affects management performance. As an additional analysis, hypotheses on corporate performance and corporate characteristics were also established.

H3: The global network level will have a positive (+) effect on management performance.

H4: The firm`s characteristics will have a positive (+) effect on management performance.

3. Research Methods and Materials

3.1. Research Model and Measurement

Based on the literature, this study focuses on analyzing the impact of intellectual capital and global network level on corporate management performance. Figure 1 summarizes the research model.
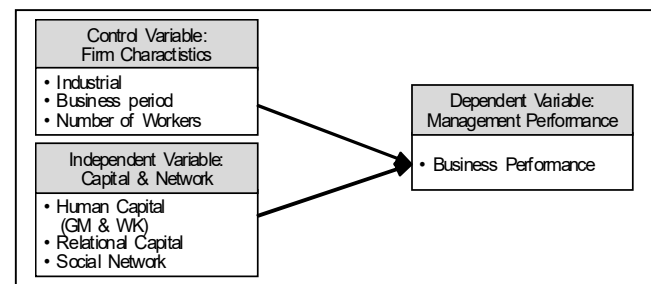

Figure 1: Research Model

The variables used in this study used the GCL (Global Competency Level) test results of the Korea Trade-Investment Promotion Agency (KOTRA) in 2021. Variables are shown in Table 1. First, the dependent variable was measured as a single item as a management performance variable. The survey asked about the level of management performance achievement of a company's global market entry strategy (1 very poor to 4 very good). The intellectual capital of the independent variable consisted of human capital and related capital. Human capital was measured by dividing it into a global mindset evaluated by a company's willingness and efforts to expand exports and the level of professional manpower evaluated by securing export personnel. The global mindset is measured by the willingness of CEOs and executives to expand exports, the investment and efforts of companies to expand exports, and the collection of information to find customers in overseas markets. Relational capital was measured by the level of possession of global promotional materials (English catalog, English homepage), the frequency of customer meetings for export and opinion collection, the frequency of overseas business trips for overseas marketing, and the level of brand recognition. The level of the global network is measured by the level of network construction with global companies, the contribution of current overseas customers to global competitiveness and export activities, and the level of securing global customers.

Table 1: Measurement of variables

Variable	Abbreviation	Description
Management Performance	MP	Business Performance
Industrial	IN	Manufacturing or Not
Business period	BP	Business Period(log)
Number of Workers	NW	Number of Workers (log)
Human Capital	HC(GM)	Global Mind Set Level
Human Capital	HC(WK)	Workers`Knowledge Level
Relational Capital	RC	Relational Capital
Social Network	SNW	Global Network Level
Note: Dependent Variable(MP), Control Variable(IN, BP, NW), Independent Variable(HC(GM), HC(WK), RC, SNW).		

Among the control variables used in previous studies, the company size (number of workers), industry classification (with or without manufacturing), and business period of the company were analyzed as positively affecting the business performance of the company. Therefore, it was also used as a control variable in this study.

3.2. Research Sample

To analyze the corporate capabilities of the domestic distribution and logistics industry, the 2021 GCL (Global Competency Level) test data of the Korea Trade-Investment Promotion Agency (KOTRA) was used. Among the 2,837 GCL data companies, 384 companies registered as export brokerage businesses in the Korean Standard Industrial Classification (KSIC) were used as targets for analysis. Of the 384 companies in total, 141 (36.72%) were manufacturing at the same time, and 243 (63.28%) were registered only as export brokerage businesses, not manufacturing.

Table 2: Characteristics of data

Variable		Mean	Max.	Mini.
Firm (384)	Manufacturing	141 (36.72%)	Biz. Period	8.58	46	1
			Emp. No.	10.87	275	1
	Not Manufacturing	243 (63.28%)	Biz.Period	7.45	45	1
			Emp. No.	6.95	115	1

It is investigated that companies that realize businesses such as manufacturing and exports at the same time have a relatively long business period and employ many workers.

4. Analysis Results

4.1. Factor Analysis and Reliability Analysis

To verify the construct validity of the study, factor analysis and reliability analysis were performed to confirm internal consistency. The results of the analysis are shown in Table 3. First, the factor extraction method of factor analysis used principal component analysis, and the factor rotation method used the varimax method. The standard formation adequacy KMO measure was investigated as 0.825, and the significance probability p-value of the Bartlett sphericity test was investigated as 0.000. These results can be evaluated as valid for the factor analysis with a KMO measure of 0.5 or more and a Bartlett significance level of 0.1 or less.

Table 3: Factor and reliability analysis

Variable		Component			
Independent	Cronbach'α	Factor1	Factor2	Factor3	Factor4
SNW3	.832	.875	-.003	.082	.063
SNW2		.799	.052	.100	.132
SNW4		.741	.231	.224	.123
SNW1		.673	.440	.167	.114
RC4	.696	.172	.842	.016	.045
RC1		.014	.703	.179	.154
RC3		.174	.679	.123	.225
HC(GM)1	.633	.011	.025	.814	.113
HC(GM)2		.247	.147	.769	.057
HC(GM)3		.379	.307	.547	-.027
HC(WK)2	.683	.139	.080	.042	.885
HC(WK)1		.145	.374	.129	.750
Eigen Value		2.710	2.174	1.713	1.489
Pct of Var		22.584	18.117	14.275	12.409
Cum Pct		22.584	40.701	54.976	67.385
KMO(Bartlett's test of sphericity)		0.825(0.000)			

In the factor analysis, a total of four factors were extracted(RC2 excluded), and the total variance value of the extracted factors was 67.385%, which had an explanatory power of 67.385%. To test the Common Method bias for sample collection, a total of four factors with an eigenvalue of 1 or more for factor analysis were analyzed as a result of post-testing. The total variance explanatory power of global network construction factors, which have the greatest explanatory power, was 22.584%; related capital was 18.117%, global mind was 14.275%, and professional manpower was 12.409% among human capital. This is contrary to the research assumption that the same method bias exists if the sum of squares loaded value extracted by the maximum likelihood has a one-factor value or is classified as more than one-factor value (Podsakoff et al., 2003). The maximum value of Cronbach'α value is 0.832, which is the SNW factor, and the minimum value is 0.633, which is the HC(GM) factor. The Cronbach'α values of the investigated factors are all 0.6 or higher, meeting the level of acceptance of reliability, and it is judged that there is no problem with the internal consistency required for variable measurement (Drost, 2011).

4.2. Correlation Analysis

Before hypothesis verification, a correlation analysis was performed between the measurement items put into the empirical analysis, and the results are shown in Table 4. The value of the correlation coefficient between the dependent variable, management performance, and SNW, was investigated as a value of 0.618**, and the HC(GM) and SNW factors were investigated as a confidence level of 0.045**. As a result of the analysis, in this study, the correlation coefficient between all factors has a value of 0.85 or less, so it is judged that there is no problem with the discriminant validity of the variables used in the correlation analysis. The multicollinearity problem confirmed that there was no problem with multicollinearity between variables because all VIF values were lower than 1.73.

Table 4: Correlation analysis

	M	S.D.	MP	IN	BP	NW	HC (GM)	HC (WK)	RC	SNW
1	2.62	.815	1							
2	.37	.483	-.045	1						
3	.72	.402	.043	.106*	1					
4	.60	.493	.190**	.220**	.418**	1				
5	3.50	.488	.465**	.057	-.118*	.100	1			
6	2.35	1.001	.295**	.014	.264**	.547**	.265**	1		
7	2.65	.836	.368**	.166**	.183**	.310**	.372**	.433**	1	
8	2.72	.732	.618**	-.064	.088	.150**	.045**	.326**	.388**	1

4.3. Regression Analysis

The purpose of this study is to analyze the impact of corporate capabilities on management performance in the global market. Table 5 shows the results of multiple regression analysis for the hypothesis test of this study. In Model 1 (F=6.135***, R2(adj.R2)=0.050(0.042)), the relationship between the presence or absence of manufacturing industry, age, company size, and management performance, which are characteristics of companies, was analyzed. The presence or absence of the manufacturing industry was investigated as a negative (-) influence relationship (Standard β=-0.095, t=-1.766*). When a company performs business with a standardization coefficient β value of -0.095, it was analyzed that the management performance was relatively lower than that of companies that only mediate exports. His was thought to be due to the same result as the study of Mukaro et al. (2023), which evaluates manufacturing companies as having lower performance from exports than various expenditures. But the second, business period exceeded the significance level. In Model II (F=42.238***, R2(adj.R2)=0.463(0.452)), the number of workers and management performance, which are characteristics of the company, were investigated as positive influences (Standard β=0.100, t=1.925*). The presence or absence of the manufacturing industry, the age of the company, and the amount of human capital (WK) exceeded the significance level. HC(GM) has a positive (+) effect on management performance (Standard β=0.226, t=4.755***). Relationship capital and management performance were investigated as a positive (+) influence relationship (Standard β=0.083, t=1.733*). Finally, the level of global network construction, such as securing customers and the competitiveness of overseas customers and the level of network construction, has a positive effect on the business performance of a company (Standard β=0.482, t = 10.143***). In Model III (F=11.809***, R2(adj. R2) = 0.362(0.331)), which analyzed only manufacturing companies, SNW factors (Standard β=0.453, t=5.255**) > HC(GM) factors (Standard β=0.199, t=2.327**) acted as significant factors. In Model IV (F=38.662***, R2(adj. R2)=0.522(0.509) analyzed for non-manufacturing companies, SNW factors (Standard β=.498, t=8.773***) > Human capital GM (Standard β=.227, t=3.971***) > Number of workers (Standard β=.154, t=2.525**)>Related capital (Standard β=.126, t=2.167**)>Business period (Standard β=-).038, t=-0.727***) was analyzed as a significant level of factor. The difference compared to manufacturing companies is that business period, company size, and RC factors additionally act as positive influencing factors. In particular, the global network level was the most influential factor in management performance at a time when the global market was shrinking due to the COVID-19

Table 5: Regression analysis

Constructs	Model 1(384)		Model 2(384)		Model 3(141)		Model 4(243)	
Independent	Standard β (t-value)	VIF	Standard β (t-value)	VIF	Standard β (t-value)	VIF	Standard β (t-value)	VIF
Industrial	-.095(-1.766)*	1.050	-.052(-1.243)	1.123				
Business Period(log)	-.064(-1.109)	1.212	-.041(-.897)	1.304	-.044(-.506)	1.449	-.038(-.727)***	1.243
Number of Workers(log)	.243(4.141)***	1.259	.100(1.925)*	1.729	-.010(-.108)	1.764	.154(2.525)**	1.642
HC(GM)			.226(4.755)***	1.444	.199(2.327)**	1.432	.227(3.971)***	1.457
HC(WK)			-.005(-.100)	1.731	.070(.778)	1.568	-.059(-.917)	1.840
RC			.083(1.733)*	1.473	.017(.196)	1.383	.126(2.167)**	1.498
SNW			.482(10.143)***	1.444	.453(5.255)***	1.454	.498(8.773)***	1.428
F	6.135***		42.238***		11.809***		38.662***	
R2 (adj. R2)	.050(.042)		.463(.452)		.362(.331)		.522(.509)	

pandemic and business-to-industry transactions were shrinking. Another peculiar thing was that the business period acted as a negative influence factor. In addition, unlike companies belonging to the manufacturing industry, the higher the level of possession of global promotional materials and brand awareness, the higher the management performance, due to the nature of export intermediaries.

5. Conclusions

5.1. Result Summary

This study analyzed the impact relationship between corporate capacity and management performance of the domestic distribution industry during the COVID-19 pandemic. As corporate competency, human capital (global mind and professional manpower) of intellectual capital theory, relational capital, and the level of global network construction of social network theory were used. In addition, the characteristics of the company, which are factors of manufacturing and non-manufacturing, business period, and company size, were additionally used for the analysis. The data for this study used the 2021 KOTRA GCL Test Data. The questions presented in this study are as follows. First, what influence factors will human capital and relational capital act on management performance from the perspective of intellectual capital theory during the COVID-19 pandemic? Second, from the perspective of social network theory, how will the level of global network construction act as an influencing factor on management performance? Third, how will corporate characteristics factors affect management performance? The empirical results for this question are as follows. First, the level of global mind of human capital acted as a positive factor in management performance. However, the level of professional manpower in human capital did not obtain results that fell within the significance level. Second, the level of publicity and communication with customers, which is the relational capital, acted as positive factors in corporate performance. Third, the global network level built from the perspective of social network theory acted as a positive factor in management performance. Finally, the relationship between corporate characteristics and management performance was analyzed to have a partial effect as shown in Table 5.

5.2. Contribution and Implication

This study has the significance and several implications of empirical analysis. First, an empirical analysis was conducted using corporate-level data for the development of the distribution and logistics industry during the COVID-19 pandemic. Second, the development of converging and

analyzing with university research was created by using the data from the Global Competency Diagnostic Test (GCL Test) of the Korea Trade-Investment Promotion Agency, which had low academic utilization. In the situation of market shock such as the COVID-19 pandemic, the implications of improving management performance through strengthening corporate capabilities are as follows. First, investment and efforts are needed to expand the exports of management. Reinforcing the competitiveness of a company's human capital becomes the power to overcome market shock and enable sustainable management. Second, various marketing efforts are needed to construct and utilize promotional materials for global customers and to increase brand awareness. These marketing efforts are used as tools to maintain and strengthen continuous competitiveness in the market. Third, in terms of social network theory, efforts to secure competitive customers are urgent, and in situations such as the COVID-19 pandemic, building a strong network and establishing relationships with global market customers are a great strength for the company's sustainable management. In particular, companies in the early stages of internationalization that begin to enter overseas markets are not satisfied with their initial performance and must constantly increase their corporate capabilities in various aspects. From this point of view, strengthening a company's capabilities eventually becomes the energy for sustainable management and the power for stable management.

5.3. Limitation

This study has the significance and implications of empirical analysis but also has limitations of research at the same time. First, due to the structural limitations of GCL data, there are no questionnaire questions on structural capital used as a component of intellectual capital theory and financial data that are quantitative data for measuring management performance. In the future, the construction of data that compensates for these shortcomings and additional research analysis are required. Second, it has a limitation in not being able to compare and analyze data before and after the COVID-19 pandemic. In the future, it is thought that additional research is needed to secure data and supplement research through continuous efforts. Through this, it is expected that advanced research beyond the limitations of this study will emerge.

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