

Supply Chain Resilience and Market Performance Amid COVID-19 Disruptions: the Role of Relational Capital and Supply Chain Disruption Orientation in South Korean Firms

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Abstract

The COVID-19 pandemic has catalyzed unprecedented disruptions across global supply chains, necessitating a thorough examination of the implications for organizational performance. This research aims to fill this knowledge gap by investigating the intricate relationships between supply chain dynamism, disruption orientation, relational capital, supply chain resilience, and market performance. Grounded in event systems theory and social network theory, we propose a comprehensive model that details the dynamics shaping organizations' responses to disruptions. This study employs PLS-SEM to analyze data collected from a diverse sample of Korean organizations. The findings underscore the critical role of supply chain dynamism, revealing its positive association with both supply chain disruption orientation and relational capital. Moreover, supply chain resilience is positively linked with both supply chain dynamism and relational capital, highlighting its central importance. This study also unveils the mediating roles of supply chain disruption orientation, relational capital, and supply chain resilience in enhancing market performance. These results not only contribute to theoretical advancements but also offer valuable insights for practitioners. As managers adapt their supply chain strategies in response to the pandemic, our research emphasizes the long-term value of cultivating resilient relationships and embracing disruption as a catalyst for organizational growth. This nuanced understanding contributes to academic knowledge and managerial decisions amid unprecedented disruptions.

Keywords: Supply chain disruption orientation; Supply chain dynamism; Relational capital; Market performance; Supply chain resilience

1. Introduction

The recent COVID-19 pandemic and subsequent geopolitical events have significantly highlighted the impact such anomalies can inflict on the performance of firms across international supply chains (Ivanov, 2020). Further, the economic costs of pandemic-related disruptions may well continue to influence the performance and resilience of firms for years to come (Scala & Lindsay, 2021). For this reason, the argument encompassing disruptions in global supply chains following the pandemic demands further discussion. The impact of these types of unfortunate events has financially predisposed firms. This requires managers and researchers to place a greater emphasis on organizational capabilities that build efficiencies during supply chain disruptions (Wong et al., 2020). Supply chain disruptions cause performance issues (Gölgeci & Ponomarov, 2013) and the commercial failure of organizations (Im et al., 2021). Consequently, the administration of disruptions remains a decisive issue to examine as firms refine capabilities to safeguard their supply chain functions and improve business performance (Wong et al., 2020).

Amidst the recent pandemic, supply chain performance and disruptions literature suggest that a great deal of

deliberation revolves around the understanding of supply chain risk prevention (Zhu et al., 2020), disruption vulnerabilities (Ivanov & Dolgui, 2020), and contentions related to the occurrence of disruptions (Li et al., 2021). While these topics remain noteworthy contributions to the literature, authors (Wong et al., 2020; Yu et al., 2019) have contended that the effects of supply chain disruptions must be studied through the lens of organizational learning (Aldrighetti et al., 2021). This concept suggests that firms can learn from and benefit from knowledge associated with encountering disruptions. Following a disruption, organizations can progress mechanisms to diminish the effects of future disruptions (Craighead et al., 2020). To advance an understanding of organizational learning, the current research describes a strategic orientation (supply chain disruption orientation), focused on advancing sustainable growth for organizations during periods of disruption (Oh et al., 2020). Supply chain disruption orientation is seen as a learning competency firms can utilize when enhancing strategic competitiveness, as they gain knowledge from supply chain interruptions (Ambulkar et al., 2015). Facilitators of organizational learning and supply chain performance have been confirmed by others. For example, Wong et al. (2020)

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advocated for the conditioning of a supply chain through information processing to reinforce supply chain resilience and performance (Reimann et al., 2017). Polyviou et al. (2019) stressed the importance of learning through social capital to build resilience in smaller organizations during periods of supply chain disruptions. Also, Yu et al. (2019) mentioned the need to consider supply chain dynamism when measuring the performance aspects of organizations during supply chain disruptions. Further, these authors' suggestions have renewed interest regarding supply chain performance antecedents (Craighead et al., 2019), such as supply chain dynamism (frequency of supply chain change) (Kumar & Bhatia, 2021), relational capital (Rutten et al., 2016), and supply chain resilience (Gölgeci & Kuivalainen, 2020; Wong et al., 2020), during the COVID-19 pandemic.

To contribute to the supply chain literature, an extensive review of prior research related to this study's variables, focusing on the areas of supply chain disruption orientation, relational capital, and supply chain resilience, was conducted. This review revealed several studies that have explored these variables individually and their interrelationships. Notably, the work of Robb et al. (2022), Stephens et al. (2022), and Kanwal & Rajput (2016) have provided insights into supply chain disruption orientation, while Rutten et al. (2016), Wang (2016), and Gligor et al. (2019) have contributed to an understanding of relational capital. Similarly, studies by Ponomarov & Holcomb (2009), Liu (2020), and Zhao et al. (2019) have elucidated supply chain resilience.

While previous studies have made significant contributions to these areas, this manuscript takes a unique approach by integrating these variables within a cohesive framework that investigates their combined effects on firm performance during disruptive events in the context of South Korea. Unlike existing research that often explores these variables individually, our study examines their interplay and how they collectively influence an organization's ability to navigate and thrive amid disruptions. This integrated approach provides a novel perspective and offers insights into the complex relationships that emerge in dynamic business environments. Significantly, the current study aims to provide solutions to the following research questions: (1) To what degree do factors such as supply chain disruption orientation, supply chain resilience, and supply chain dynamism impact firm performance? (2) Does relational capital play a role in supply chain success? (3) Do the research variables complement one another and inform the performance of organizations amid the COVID-19 pandemic? To achieve these objectives, data from a sample of 200 firms located in South Korea were collected to analyze the convictions set forth by the framework of the research. As one of the countries most affected by the pandemic, South Korea offers valuable insights into the effects of COVID-19 on supply chain disruption and dynamism. According to Im et al. (2021), South Korea was able to reduce new infections significantly without

resorting to a total lockdown, thus providing practitioners and researchers with an important market to investigate the effects of the pandemic on commercial activities. Given its significant reliance on the export market for economic growth (Kim et al., 2020), South Korea provides an important environmental context for observing the effects of supply chain disruptions (Im et al., 2021).

To improve or maintain the overall efficiency and performance of an organization, symmetry between inbound and outbound operations is required (Craighead et al., 2019). However, recent disruptions in supply chains have made the current commercial environment far less stable. Consequently, this paper leverages existing theories to supplement the conceptual model of the study. According to Craighead et al. (2016), dramatic events force organizations to experience behavioral changes, and these deviations from the status quo are explained by event systems theory (EST). EST, as noted by Morgeson et al. (2015), is a unique theory that indulges an exceptional approach to investigating the impact of intrusive events in the context of supply chains (Reimann et al., 2017). This theory also encourages the utilization of firm approaches that facilitate organizational learning to mitigate the influence of supply chain disruptions. According to Craighead et al. (2020), EST attempts to strengthen the development of firm behavior during a critical or disruptive event, as these firms are more likely to transform their supply chain processes. Consequently, firms are expected to deliver strategies geared toward advancing their supply chains if another unexpected event (e.g., a pandemic) should occur. Recent literature (Craighead et al., 2020; Wong et al., 2020) advocates for the development of theories dedicated to the development of relational capital practices in supply chain studies (Yu & Huo, 2019). Research (Mubarik et al., 2022; Wong et al., 2020; Yu et al., 2019) contends that relational capital enables firm performance during periods of supply chain disruptions (Gligor et al., 2019). To produce a greater understanding of the importance of relational capital in a supply chain, the current research incorporates social network theory (SNT) into the supply chain literature. This theory allows for a rigid comprehension of how interactions in a supply chain impact the overall performance of firms; allowing for an in-depth analysis of how firms interrelate with one another to create value (Gligor et al., 2019). For instance, Gölgeci & Kuivalainen (2020) propose that relational capital in the context of supply chain management may facilitate firm performance. Therefore, theories advancing relational capital in supply chain literature provide value (Yu & Huo, 2019).

With the inclusion of novel theory, the current research strives to contribute to the existing supply chain literature regarding supply chain disruptions during the COVID-19 pandemic. First, this research offers new contributions to supply chain literature by evaluating the antecedents that lead to market performance, recorded during a specific period of disruption (COVID-19 pandemic). Second, the study supplements insights into relational and event theory

as a means of supporting supply chain discussions (Craighead et al., 2020). This research also explores the importance of relationship-oriented capabilities that organizations can leverage when creating core competencies. Third, this paper indicates a deeper understanding of the mediating roles between supply chain dynamism, relational capital, supply chain disruption orientation, and supply chain resilience. Finally, the context of this research provides a unique perspective on supply chain disruptions. Research conducted in South Korea is respected, as supply chain studies remain somewhat scarce in nations such as South Korea (Im et al., 2021), which could offer meaningful outcomes in supply chain examinations and complement the growing body of knowledge on the topic (Im et al., 2021; Wong et al., 2020). A review of the literature and theoretical analysis of the research will follow the introduction. Thereafter, a discussion of the conceptual model, methodology, analysis, and results of the empirical analysis will be further explored. Subsequently, an investigation of the results and concluding remarks will recommend the managerial implications of the findings. Finally, the study will highlight certain limitations of the research and provide instructions for future research.

2. Literature Review

2.1. Theoretical Underpinning

Event system theory (EST) is a theory that has garnered significant attention amidst the irregularities of the current supply chain environment (Craighead et al., 2020). The theory's underlying assumption is that major or invasive events (sometimes considered complete outliers) within the global business environment induce significant disruptions for organizations. EST is conceptualized across three dimensions: the strength of the event, the space of the event, and the time of the event (Morgeson et al., 2015). Notably, EST is prescribed as a preferred theoretical framework for studying the most recent pandemic (Craighead et al., 2020). Furthermore, several papers have adopted EST to frame empirical studies involving the event (the COVID-19 pandemic), the breadth of its impacts, and its effects in various areas of business (Hu et al., 2021; McFarland et al., 2020). EST allows for contextual framing of the impacts and effects of the event. This empirical study, like others related to the pandemic, is relevant due to its timing and the far-reaching impacts of the pandemic. EST underpins each aspect of the event (pandemic), according to Morgeson et al. (2015): time, space, and strength. EST thus serves as the theoretical adhesive binding this empirical study to the pandemic.

Event strength is dichotomized by novelty, criticality, and disruption (Morgeson et al., 2015). Novelty refers to the newness of the event. Criticality refers to the importance of the event. Disruption reflects the degree to which people must change and adapt (Morgeson et al., 2015). In this research, the event's strength (COVID-19 disruptions) is central to framing the empirical model. As COVID-19

supply chain disruptions are novel in the 21st century, extremely important (critical), and highly disruptive to supply chains, it is fitting to stress the strength of the event before other aspects (time or space) that are designated as moderators of strength (Morgeson et al., 2015). Hu et al. (2021) also implemented event strength as the core dimension, with time and space as moderators. Supply chain dynamism can refer to the strength of the event (COVID-19 supply chain disruptions). Event space and event time are two additional dimensions of EST (Morgeson et al., 2015). Hu et al. (2021) adopted event space and event time as moderators of event strength. More spatial dispersion within an organization means a greater impact on the event. Additionally, a longer duration of the event is equivalent to additional strength. Event space and event time are implied as moderators for this empirical research, though they are not explicitly emphasized in the framework.

Lastly, the current research employs an additional theory to enhance the proposed model and contribute to the literature. Social network theory (henceforth SNT) views social relationships throughout the supply chain in terms of both nodes and ties (Gligor et al., 2019). The significance of this theory enables a deeper understanding of how specific personal relationships impact the entire supply chain process. According to SNT, various associations and connections between actors in the supply chain assist firms in significantly contributing towards creating value for the firm's stakeholders (Gölgeci & Ponomarov, 2013), while this value is often internalized through improved firm performance (Kim, 2009). Furthermore, SNT suggests that relational links often strengthen during unforeseen changes in the business environment as various stakeholders rely on knowledge acquisition to support their operations (Gligor et al., 2019). Supply chain change is therefore unique since organizations are interrelated with numerous other firms in a system (Lawson et al., 2008). Therefore, incorporating relational capital as a construct to measure social interactions amidst changing environmental demands provides the study with an enhanced framework (Rutten et al., 2016). Further, Yu & Huo (2019) found that change during unanticipated events drove firms to connect and cooperate to better compete, as ardor in the supply chain leads to cooperation among actors to adapt accordingly (Im et al., 2021). Thus, the authors examined the significance of both theories in developing the conceptual framework for the current research.

2.2. Supply Chain Disruptions

The recent influence of COVID-19 has created events (Scala & Lindsay, 2021) that require firms to greatly focus on mitigating disruptions (Wong et al., 2020) in organizational supply chains, while simultaneously strengthening their supply chains if such incongruities occur again (Craighead et al., 2019). As illustrated by Morgeson et al. (2015), supply chain dynamism, or the degree of product and process change (often brought about

by novel, disruptive, or critical events) in a supply chain, threatens stability and acts as both a mainspring for feature and behavioral outcomes in firms (Yu et al., 2019). As a result, firms are encouraged to orient themselves toward circumnavigating their operations around disruptions as a means of reducing any negative effects that such dealings could inflict upon firm procedures (Robb & Stephens, 2021). For example, Morgeson et al. (2015) noted that an orientation toward understanding supply chain disruption through EST could help organizations create new procedures or policies (implemented during COVID-19) that could continue long after the pandemic, becoming routine operations (Craighead et al., 2020). Hence, EST contributes to the principles that allow this research to conceptualize these constructs into the study model. Furthermore, grounded in the fundamentals of EST is the argument that organizations require resilience in their supply chains (Craighead et al., 2016). It is supply chain resilience that subsidizes firm performance (Ivanov, 2020), committing to both the understanding of dynamic or novel events and the ability of organizations to greatly embrace change catalysts based on the strength or length of events (Craighead et al., 2019; Reimann et al., 2017).

2.3. Supply Chain Dynamism

Current literature focused on the vitality of an organization's supply chain has tended to highlight aspects of dynamism as a constant and inevitable unpredictability associated with the nature of business (Ivanov, 2020). Though this pattern of thinking is justifiable, authors such as Craighead et al. (2020) have noted the importance of considering that certain outlier occasions may warrant a more in-depth analysis in light of more current influential and volatile events (Wong et al., 2020). While dynamism in supply chains has regained interest in recent years, the construct's connection with supply chain resilience (Wong et al., 2020) and relational capital (Wang, 2016) has recently attracted more attention (Yu et al., 2019). Supply chain dynamism is concerned with the frequency of change involved in a supply chain (Zhou & Benton, 2007), either through variations regarding firm processes or products (Yu et al., 2019). Concerning alterations to organizational processes or procedures, Kumar & Bhatia (2021) found that a relationship exists between supply chain dynamism and organizations' determination to implement measures for mitigating supply chain disruptions. Additionally, Yu et al. (2019) concluded that supply chain dynamism compels firms to adjust their strategic focus towards a pre-emptive supply chain disruption orientation.

Wang (2016) considered supply chain management to be an inclusive effort. Consequently, firms are required to rely on other firms to successfully perform, particularly amid dynamism in the environment (Reimann et al., 2017). Chung et al. (2021) concluded that dynamism in a commercial environment encourages organizations to adopt a more proactive stance. This proactive 'push' impelled organizations to pursue capabilities related to

relational aspects (Chung et al., 2021) to improve their competitive competencies and help them deal more effectively with environmental changes (Gligor et al., 2019). Also, Wu et al. (2014) found that relational proficiency in an organization was established as a decisive factor within the supply chain that both determined and strengthened partnerships in the system. This relational ability also improved supply chain activities such as planning, delivery of products, and sourcing (Thi Mai Anh et al., 2019). These developments in supply chain activities create internal firm competencies during periods of disparity, which further illustrates the need for established relationships throughout the supply chain ecosystem (Wu et al., 2014).

Moreover, supply chain dynamism, according to Yu et al. (2019), proceeds to improve supply chain resilience. This assumption is based on the fact that firms are obligated to familiarize their processes with the external environment where new situations are presented (Wong et al., 2020). Accordingly, supply chain resilience represents a dynamic capability available to an organization during environmental pressures (Yu et al., 2019). This argument suggests that resilience, by its nature, includes reconfigurations in a company that is employed when disruptions alter the general processes of the organization (Kim et al., 2020). These redesigns are manifested in numerous ways (e.g., through financial, process, or procedure restructuring) depending on the company and allow for better preparedness during times of dynamism (Wong et al., 2020). Consequently, firms cultivate new capabilities related to the dynamic situation, requiring the development of agile processes for rapid adaptation to new circumstances (Morgeson et al., 2015). It has been noted in past literature (Zhou & Benton, 2007) that the improvement of effective initiatives related to supply chains requires a greater understanding of supply chain dynamism (Kumar & Bhatia, 2021). Thus, concerning the above literature regarding supply chain dynamism, the study presents the first three hypotheses:

H1: Supply chain dynamism leads to improvements in supply chain disruption orientation.

H2: Supply chain dynamism leads to improvements in relational capital.

H3: Supply chain dynamism leads to improvements in supply chain resilience.

2.4. Supply chain disruption orientation

Previous research (Rutten et al., 2016) on the topic of relational capital distinguished that organizations can develop core competencies from relationships when these interactions encompass mutual respect and trust between members (Wright & Grace, 2011). Moreover, it has been noted that supply chain disruption orientation becomes a catalyst for the strengthening of intimate relationships and informal social relations (Wang, 2016). The reasoning behind this expectation lies in the argument that supply

chain disruption orientation encourages and strengthens the level of mutuality between partners in supply chains (Reimann et al., 2017). Similarly, Oh et al. (2020) argued that a focus on managing disruptions in an organization was hindered by the firm's inability to progress meaningful relationships in the supply chain ecosystem. Support for the connection between supply chain disruption orientation and relational capital tends to assume that organizations develop collaborative relationships as a way of bolstering investments in supply chain systems (Zhu et al., 2020). This collective integration has also been determined to positively influence operational performance when these systems become more established (Oh et al., 2020).

Event system theory accomplishes major changes in the supply chain arrangements of firms across the globe (brought about by disruptions). This creates opportunities for firms to foster new approaches, which allow them to better cope with future pandemics (Ambulkar et al., 2015; Reimann et al., 2017). Therefore, a crisis (such as COVID-19) offers an opportunity for managers to change the way they think and act under unfamiliar circumstances (Craighead et al., 2020). According to Bode et al. (2011), a supply chain disruption orientation is predominantly focused on extenuating disturbances to an organization's operations involved in its supply chain processes. As a result, supply chain disruption orientation can be viewed as a strategy through which an organization creates stakeholder value by managing competitive advantages during supply chain interruptions (Ambulkar et al., 2015). Hence, disruption orientation may contribute to company success through process reconfigurations (Bode et al., 2011). For firms to adopt a supply chain disruption orientation, these organizations must recompose their processes and operations throughout their supply chain (Parast & Shekarian, 2019). Noting these issues in the literature, the current research considers the following two hypotheses, listed below.

H4: Supply chain disruption orientation leads to improvements in relational capital.

H5: Supply chain disruption orientation leads to improvements in supply chain resilience.

2.5. Relational capital

Organizations' ability to shape, maintain, and advance relationships with other actors in their commercial ecosystem has advanced significantly in recent years (Thi Mai Anh et al., 2019). Further, the ability of an organization to cultivate both formal and informal relations has been associated with increased levels of knowledge acquisition and salient information sharing (Wang, 2016), all of which have a positive impact on firm market performance (Rutten et al., 2016). Craighead et al. (2020) acclaimed that disruptive events would bring about changes to the organization's status quo (such as those resulting from the COVID-19 pandemic) and would lead to the procurement of and sharing of valuable industrial

information between supply chain actors. Furthermore, this could result in greater levels of shared organizational problem-solving and thus diminish uncertainty (Chabowski et al., 2011), while possibly improving firm performance (Wang, 2016). Additionally, Wright & Grace (2011) observed that due to the nature of relational capital, organizations were able to appreciate additional benefits such as cost efficiencies and profitability (Wang, 2016). These authors argued that under the premise of social networking, the characteristics of individual members play a less important role than the actual relationships developed, compounding the number of ties with other individuals within the network (Rutten et al., 2016).

Relational capital within the supply chain is highlighted as a premise of external relationship capital (Yu & Huo, 2019). Moreover, the capacity of an organization to manifest under the lens of SNT suggests that associations and connections between firms benefit the performance of these organizations, as these numerous connections within the network manifest into further interactions, hence building opportunities for greater collaboration throughout the supply chain (Chabowski et al., 2011). The concept of relational capital emphasizes factors such as mutual respect, trust, friendship, and the contextual obligation of firms to work together in the business environment (Thi Mai Anh et al., 2019). Also, Wu et al. (2014) noted that factors related to relational competencies, such as trust and mutual understanding in the supply chain, facilitated knowledge sharing and cooperation between partners. For instance, opportunism has been identified (Yu & Huo, 2019), leading to more significant costs for a large majority of the supply chain actors partaking in those transactions (Yu et al., 2019). In seminal work on the issue of transaction incompetence, Dyer & Singh (1998) established that relational capital was able to reduce the cost of transactions and diminish opportunistic behaviors. Consequently, relational capital is measured to be an essential element in improving supply chain cooperation. This cooperation encompasses aspects like knowledge sharing, asset integration, and resource exchanges between firms (Lawson et al., 2008). In the situation of disruptions, sharing information and cooperation can 'fix' the incurable impact of anomalies and minimize the effects of turmoil (Mubarik et al., 2022). As a result, collaboration contributes to improvements in the reduction of operational costs for firms and the development of firm performance (Robb & Stephens, 2021). Also, relational capital was found to provide firms with leverage with which to focus on common goals and create further meaningful partnerships (Zacharia et al., 2011). Consequently, based on the literature, the following hypotheses are noted in the study.

H6: Relational capital improves supply chain resilience.

H7: Relational capital improves market performance.

2.6. Supply chain resilience

Earlier in this discussion, EST implied that organizations should proactively consider the distinct attributes of a pandemic (Morgeson et al., 2015). For instance, Craighead et al. (2020) suggest that organizations can bolster their resilience by simulating pandemics with varying degrees of strength and duration (Reimann et al., 2017). This strategic approach, often categorized as 'scenario planning' or risk/crisis management (Wright & Grace, 2011), underscores the need for managers to establish comprehensive programs aimed at assessing and preparing for potential future pandemics (Wong et al., 2020). Recent research findings indicate that as organizations cultivate resilience within their supply chains, they simultaneously experience heightened levels of overall firm performance. Ponomarov & Holcomb (2009) assert that supply chain resilience is often gauged by a firm's capacity to sustain core operations and retain control over functions and structures during disruptive or unforeseen events (Gölgeci & Kuivalainen, 2020). In a study involving 276 companies in China, Liu (2020) observed that firms with robust supply chain resilience promptly adapt to uncertainties, thus gaining distinct competitive advantages. Furthermore, Yu et al. (2019) suggest that supply chain resilience translates into improved financial performance (Zhao et al., 2019). Research consistently indicates that supply chain resilience significantly influences marketing success (Williams et al., 2019). This supposition is well-founded, given that resilience shapes the execution of marketing operations by influencing the behavior of marketing personnel within an organization (Williams et al., 2019). Based on the aforementioned scholarly insights, the present study posits the following assumptions:

H8: Supply chain resilience improves market performance.

2.7. Mediation effects

The model's indirect effects warrant evaluation to potentially uncover additional findings. Testing these indirect effects can reveal stronger, latent relationships among variables that may not be readily apparent through direct effects alone. Mediation signifies that a construct enhances the relationship between other variables. Consequently, we hypothesize the presence of significant mediation effects due to the close theoretical and empirical links between the variables. Three mediating variables are postulated to mediate the relationships within the model. Prior research has identified supply chain disruption orientation as a mediator of relationships across various variables (Robb et al., 2022; Stephens et al., 2022). In this model, supply chain disruption orientation is likely to function as a robust mediating variable, as it serves as a proxy for an organizational culture prepared to navigate supply chain disruptions. The impacts of supply chain dynamism are expected to be accentuated by a firm that is equipped to handle them (as indicated by supply chain disruption orientation). It follows logically that a firm well-prepared for a dynamic supply chain would demonstrate

enhanced relational capital and supply chain resilience. Therefore, it is proposed that supply chain disruption orientation is a strong mediator between supply chain dynamism and the following variables supply chain resilience and relational capital:

H9a: Supply chain disruption orientation will mediate the relationship between supply chain dynamism and relational capital.

H9b: Supply chain disruption orientation will mediate the relationship between supply chain dynamism and supply chain resilience.

Relational capital has also been found to mediate several different relationships (Robb et al., 2022). Dynamic supply chains and their impacts ought to be mediated by good partner relationships. Good supply chain relations mean a firm can communicate well with its partners to better visualize solutions when problems do arise (Kang & Stephens, 2022). Therefore, good relational capital amid supply chain dynamism would indicate improved resilience and market performance. Additionally, relational capital should also facilitate market performance when a firm's organizational culture is prepared for disruption. Accordingly, relational capital is hypothesized as a mediating variable in this model.

H10a: Relational capital will mediate the relationship between supply chain dynamism and market performance.

H10b: Relational capital will mediate the relationship between supply chain dynamism and supply chain resilience.

H10c: Relational capital will mediate the relationship between supply chain disruption orientation and market performance.

Supply chain resilience was also found to be a mediating variable (Stephens et al., 2022). Firms that deal with dynamic supply chains and develop a degree of supply chain resilience are also likely to exhibit enhanced market performance as a result; therefore, it is likely that supply chain resilience mediates the relationship between supply chain dynamism and market performance. Additionally, a firm that is well prepared for disruptions would also likely establish better market performance with improved supply chain resilience. Finally, firms with solid relational capital and supply chain resilience should also exhibit better market performance. Thus, it is proposed that supply chain resilience is a significant mediator:

H11a: Supply chain resilience will mediate the relationship between supply chain dynamism and market performance.

H11b: Supply chain resilience will mediate the relationship between supply chain disruption orientation and market performance.

H11c: Supply chain resilience will mediate the relationship between relational capital and market performance.

3. Methodology

3.1. Sample

This is an empirical examination utilizing extant literature to theorize the relationships between variables. For this research, PLS-SEM is employed to analyze the inner and outer structural equation model SEM; the results can be reviewed in the following section. Both the sample and measurement instrument are further explained here.

Data collection took place throughout the month of April 2021 using an online survey process distributed by email to companies deemed to fit the sample requirements. To begin with, 1000 companies were contacted to partake in

the study. After the initial contact, a total of 227 responses were received within the designated collection period. Of these 227 responses, 200 responses were deemed acceptable for use in the current research; as the remaining questionnaires were excluded due to either unengaged responses or missing data. To further improve the reliability of the data, all questionnaires were completed by individuals in management or ownership positions of the firm, thus representing a more holistic view of the organization’s responses. A detailed description of the sample is provided in Table 1.

Table 1
Firm Demographics.

Parameters	Details	Frequency	Percent (%)
No. of employees	Less than 20	63	31.5
	21-149	60	30.0
	150-249	27	13.5
	250-499	16	8.0
	Above 500	34	17.0
Firm age	Less than 5 years	26	13.0
	6 to 15 years	50	25.0
	16 to 25 years	71	35.5
	26+ years	53	26.5
Industry type	Machinery, Vehicles aeronautics	15	7.5
	Building materials	21	10.5
	Chemical and petrochemical	10	5.0
	Electronics and Electrical	31	15.5
	Packaging and office supplies	4	2.0
	Telecommunications and IT	38	19.0
	Food and consumer goods	25	12.5
	Pharmaceutical and medical	13	6.5
	Logistics and transport	10	5.0
Other	33	16.5	
Annual sales (hundred million won)	Below 56	59	29.5
	56-112	27	13.5
	112-224	27	13.5
	224-560	33	16.5
	560-1120	29	15.5
	Above 1120	25	12.5
Product type	Service	15	7.5
	Durable consumer	84	42.0
	Non-durable consumer	39	19.5
	Industrial	60	30.0

Initially, the questionnaire was developed in English and thereafter translated into Korean to enhance the respondent response rates and reliability. The translation was completed by bilingual professors located at a Korean university. After the translation process, the questionnaires were back-translated to English to ensure conceptual equivalence. To improve the reliability of the questionnaire further, a pilot study was performed beforehand using a sample of local Korean companies (n=13) to identify and eliminate any possible clarification issues. Following the pilot test, feedback was received from the participant companies. Thereafter, three university professors assisted with the development of the final questionnaire.

3.2. Measurement instrument

The measurement instrument consisted of a questionnaire of psychosomatic questions that combined the study variables to form an empirical model (see Figure 1). Each question was adopted from extant literature and modified for supply chain management research. For this research, the questions were translated into Korean; then back-translated for accuracy. The demographic questions were set in a multiple-choice format while the psychosomatic questions were measured on a 5-point Likert scale. The following paragraphs describe the measurement of each variable. The research variables are presented in detail in Table 2 which can be found.

Table 2
Operationalization of the Research Instrument

Variable	Operational Definition	Measurement Items	Prior Research
Supply Chain Disruption Orientation	The degree to which an organization learns from and prepares for SC disruptions.	(SCDO1) At my company, we are alert for possible supply chain disruptions at all times.	Bode et al. (2011)
		(SCDO2) At my company, we expect supply chain disruptions are always looming.	
		(SCDO3) At my company, we think about how supply chain disruptions could have been avoided.	
		(SCDO4) At my company, after a supply chain disruption has occurred, it is analyzed thoroughly.	
Supply Chain Dynamism	The degree to which supply chains are changing.	(SCD1) At my company, new products account for most of the total revenue.	Zhou & Benton (2007)
		(SCD2) At my company, products, and services are changed frequently.	
		(SCD3) At my company, operations become outdated quickly.	
		(SCD4) At my company, unexpected and disruptive events happen frequently (e.g., shocks, disruptive technologies).	
Relational Capital	The degree to which an organization develops and maintains good relations with its partners.	(RC1) Our relationship with our partners is characterized by close interactions.	Carey et al. (2011)
		(RC2) Our relationship with our partners is characterized by mutual trust.	
		(RC3) Our relationship with our partners is characterized by mutual respect.	
		(RC4) Our relationship with our partners is characterized by high levels of reciprocity.	
Market Performance	The degree to which this firm can perform well within the market.	(MP1) Compared with our major competitor(s), our firm has higher/better customer loyalty.	Kim (2009); Wong et al. (2020)
		(MP2) Compared with our major competitor(s), our firm has higher/better customer satisfaction.	
		(MP3) Compared with our major competitor(s), our firm has higher/better company image.	
		(MP4) Compared with our major competitor(s), our firm has higher/better growth in market penetration.	
		(MP5) Compared with our major competitor(s), our firm has higher/better growth in industry competitiveness.	
Supply Chain Resilience	The degree to which a firm maintains its supply chain operations even amid disruptions.	(SCR1) Our firm's supply chain can quickly return to its original state after being disrupted.	Gölgeci & Ponomarov (2013)
		(SCR2) Our firm's supply chain can maintain a desired level of connectedness among its members at the time of disruption.	
		(SCR3) Our firm's supply chain can maintain a desired level of control over structure and function at the time of disruption.	
		(SCR4) Our firm's supply chain has the knowledge to recover from disruptions and unexpected events.	

Supply chain dynamism is an evaluation of the changes within a focal firm's supply chain (Zhou & Benton, 2007). According to Zhou & Benton (2007), supply chain

dynamism should quantify four aspects of change: (1) new product contribution to revenue; (2) the frequency of change for products and services; (3) the frequency of

change regarding operations; and (4) the frequency of disruptions within the supply chain. Combined, these aspects of change offer a sense of the dynamism that firms are experiencing within their supply chains. Yu et al. (2019) more recently utilized this measurement while assessing the supply chain resilience of Chinese firms. Additionally, Stephens et al. (2022) considered the construct during the investigation of U.S. firms.

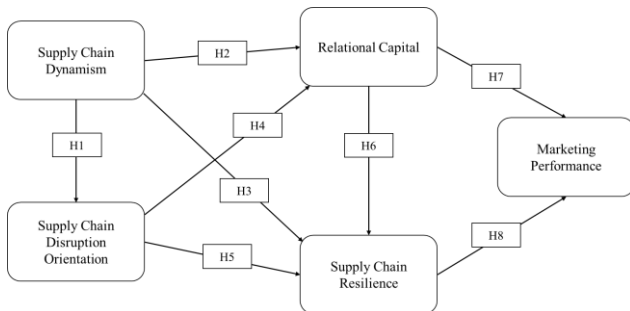


Fig. 1. Hypothesized Model

It is further theorized that when supply chains are continuously bombarded with change, they develop an innate ability to adapt to those changes; that ability is termed supply chain disruption orientation (Bode et al., 2011). Accordingly, the psychosomatic instrument should note multiple factors, including a sense that disruptions are looming in addition to alertness, experience in solving disruptions, and a sense that the organization has learned from disruptions (Bode et al., 2011). This strategic orientation has been positioned while observing Chinese and U.S. firms (Stephens et al., 2022; Yu et al., 2019).

Carey et al. (2011) termed relational capital as the feelings between partner firms. In this research, that definition is extended to and focused on supply chain partners. There are five points regarding relationships between partners that should be deliberated according to Carey et al. (2011): close interaction, trust, respect, friendship, and reciprocity. Since its introduction, several authors have adopted relational capital (Robb et al., 2022; Yu & Huo, 2019).

Supply chain resilience is understood as a firm's ability to maintain normal operations or quickly recover from disruptions, particularly amid supply chain disruptions (Gölgeci & Ponomarov, 2013). According to Gölgeci & Ponomarov (2013), there are traditionally six points of concern for supply chain resilience: (1) the ability of the focal firm to return to normal after a disruption; (2) the ability to maintain connectedness amid disruption; (3) the ability to maintain control amid disruption; (4) the knowledge necessary to recover from a disruption; (5) the financial capability to recover; and (6) the ability to improve after a disruption. Multiple scholars have adopted supply chain resilience as a construct (Wong et al., 2020; Yu et al., 2019).

Finally, market performance was introduced to the study as a dependent variable to test the influences of both relational capital and supply chain resilience on the possible performance implications for the firms. Market

performance is defined as a firm's ability to operate within the marketplace where it sells its products or services (Kim, 2009; Wong et al., 2020). Three measures for market performance were approved by Wong et al. (2020), including customer loyalty, customer satisfaction, and corporate image.

4. Results

Smart PLS 3.0 is the software of choice for SEM analysis, especially if there are not enough responses to satisfy the required quantity for VBSEM analysis with SPSS and AMOS (Hair et al., 2021); thus, Smart PLS 3.0 was employed for this research. According to Hair et al. (2021), the outer model (the ability of the psychosomatic questions to measure the variables) should be assessed before the inner model (the relationships between the variables) can be examined. Finally, any SEM analysis should scrutinize the indirect effects through mediation analysis.

4.1. Outer model assessment

An outer-model assessment utilizing PLS-SEM should establish internal consistency reliability (composite reliability CR or Cronbach's alpha), convergent validity, average variance extracted (AVE), and discriminant validity (Fornell and Larcker Criterion test) before proceeding with an inner model assessment (Hair et al., 2021). Internal consistency reliability is the degree of the ability of the questions to reliably assess the variables; it can be examined through either composite reliability or Cronbach's alpha (Hair et al., 2021). Values for composite reliability are acceptable when above 0.5 while studying company-level data (Nunnally & Bernstein, 1994). Additionally, values for Cronbach's alpha above 0.6 are considered acceptable (Nunnally & Bernstein, 1994). Internal consistency reliability is proven since all corresponding values are above the aforementioned thresholds (see Table 3: Outer-Model Assessment).

The validity of the model should be verified with convergent validity and discriminant validity. Convergent validity is validated with average variance extracted (AVE), and values above 0.5 display convergent validity (Hair et al., 2021). Discriminant validity can be substantiated through one of two statistics. The Fornell & Larcker (1981) has emerged as the strictest and most common measure of discriminant validity (Henseler et al., 2009). According to Fornell & Larcker (1981), the squared correlations should be less than the squared AVE values as indicated in Table 4. As all statistics demonstrate both the reliability and validity of the outer model, it is appropriate to move forward to assess the inner model.

An issue often noted when research is conducted using a survey approach is common method bias. A common method variance problem can result from various factors including the collection of dependent and independent variables from the same respondent in the same survey (Fuller et al., 2016) or the implicit social desirability

associated with answering questions in a questionnaire in a particular way (Kock, 2015). A notable measure employed to examine the presence of common method bias is Harman's single-factor test (Fuller et al., 2016). Accordingly, Harman's single-factor test was performed by running an un-rotated EFA of all items selected for the study model by constraining the number of factors to one (Fuller et al., 2016). The results indicated that a single factor of 48.054% explains less than 50% of the variance,

therefore, common method bias does not exist. Due to this single factor being rather high, a second test was performed to measure common method bias using a full collinearity assessment (Kock, 2015). According to Kock (2015), a model can be checked for the existence of both vertical and lateral collinearity (Kock & Gaskins, 2014). Kock (2015) found that the variance inflation factors (VIF) for reflective and formative constructs can also be utilized to assess common method bias.

Table 3
Outer Model Assessment

Variable	Factors	Standard load	Outer VIF	AVE (AVE > 0.5)	Construct Reliability (C.R > 0.7)	Cronbach's Alpha (α > 0.6)
Supply Chain Dynamism	SCD1	0.860	2.176	0.689	0.899	0.850
	SCD2	0.812	1.892			
	SCD3	0.825	1.787			
	SCD4	0.822	1.857			
Supply Chain Disruption Orientation	SCDO1	0.792	1.904	0.671	0.890	0.838
	SCDO2	0.779	1.934			
	SCDO3	0.856	2.098			
	SCDO4	0.846	1.950			
Market Performance	MP1	0.861	2.627	0.733	0.932	0.909
	MP2	0.863	2.868			
	MP3	0.855	2.798			
	MP4	0.860	2.901			
	MP5	0.842	2.646			
Relational Capital	RC1	0.849	2.280	0.762	0.927	0.896
	RC2	0.886	2.671			
	RC3	0.889	2.804			
	RC4	0.867	2.488			
Supply Chain Resilience	SCR1	0.760	1.841	0.673	0.925	0.902
	SCR2	0.826	2.335			
	SCR3	0.850	2.564			
	SCR4	0.805	2.195			
	SCR5	0.823	2.256			
	SCR6	0.854	2.604			

VIF: variance inflation factors; C.R: composite reliability; AVE: average variance extracted.

Table 4
Fornell-Larcker Criterion

	MP	RC	SCD	SCDO	SCR
MP	0.856				
RC	0.765	0.873			
SCD	0.668	0.658	0.830		
SCDO	0.704	0.736	0.708	0.819	
SCR	0.818	0.818	0.751	0.765	0.820

MP: Market Performance; RC: Relational Capital; SCD: Supply Chain Dynamism; SCDO: Supply Chain Disruption Orientation; SCR: Supply Chain Resilience

Kock (2015) notes that the occurrence of a VIF greater than 3.3 is proposed as an indication of pathological collinearity, and also as an indication that a model may be contaminated by common method bias. Therefore, if all VIFs resulting from a full collinearity test are equal to or lower than 3.3 (Kock & Gaskins, 2014), the model can be considered free of common method bias (Podsakoff et al., 2003). Table 3 provides an overview of the VIF values for the current research. Overall, these results suggested little threat of common method bias and provided support for the validity of the measurements used in the study.

4.2. Inner model assessment

To assess the inner model, various statistics should be evaluated including pathway coefficients (the relationships between the variables), endogenous variable statistics: coefficient of determination (R²) and cross-validated redundancy (Q²), and finally, a measure for goodness-of-fit (Hair et al., 2011). A summary of the results of the inner-model assessments can be reviewed in Figure 2.

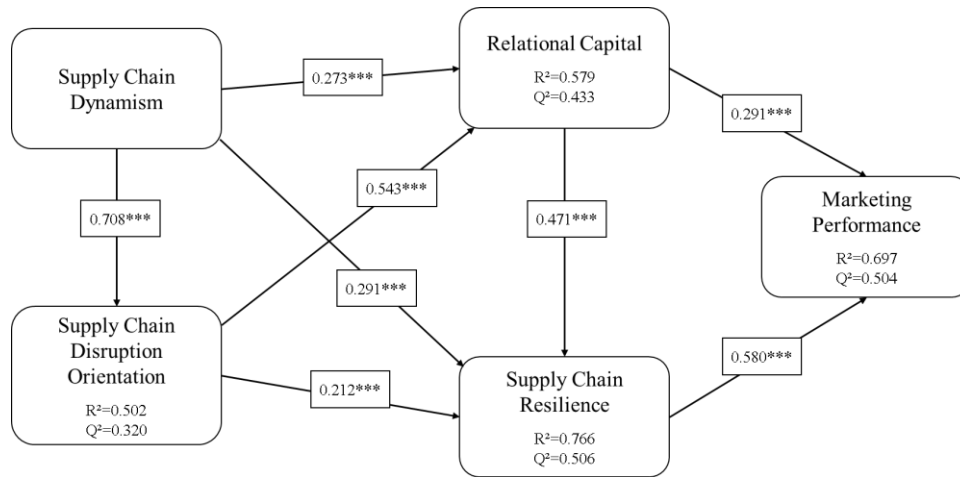


Fig. 2. Conceptual model and results.

The magnitude of impact between variables is primarily interpreted through pathway coefficients; higher values imply greater influence; moreover, significant values indicate whether or not the pathway/hypothesis should be accepted or rejected. All hypotheses were accepted based on their significance and corresponding values, which can be reviewed in Table 5: Pathway Assessment. The corresponding pathway coefficients are as follows: H1: supply chain dynamism to supply chain disruption orientation 0.708; H2: supply chain dynamism to relational capital 0.273; H3: supply chain dynamism to supply chain resilience 0.291; H4: supply chain disruption orientation to relational capital 0.543; H5: supply chain disruption orientation to supply chain resilience 0.212; H6: relational capital to supply chain resilience 0.471; H7: relational capital to market performance 0.291; and H8: supply chain resilience to market performance 0.580.

Additionally, the inner model assessment should include both predictive accuracy (R²) and predictive relevance (Q²) for endogenous variables (Hair et al., 2021); both values can be reviewed in Table 6: Structural Model Assessment. Accordingly, the values for predictive accuracy include 0.502 for supply chain disruption orientation, 0.579 for relational capital, 0.766 for supply chain resilience, and 0.697 for market performance. Values for predictive accuracy can be interpreted accordingly: below 0.25 is weak, 0.25 to 0.50 is moderate, 0.50 to 0.75 is strong, and above 0.75 is substantial (Hair et al., 2011; Henseler et al., 2009). Acceptable values for predictive relevance are anything above 0; moreover, higher values are better (Hair et al., 2021). Values for predictive relevance are as follows: supply chain disruption orientation 0.320, relational capital 0.433, supply chain resilience 0.506, and market performance 0.504.

Table 5
Pathway Assessment

Hypotheses	Pathways	Pathway Coefficient	t-stats	p-value	Results
H1	SC Dynamism → SC Disruption Orientation	0.708	19.057	0.000	Accepted
H2	SC Dynamism → Relational Capital	0.273	3.598	0.000	Accepted
H3	SC Dynamism → SC Resilience	0.291	5.599	0.000	Accepted
H4	SC Disruption Orientation → Relational Capital	0.543	7.281	0.000	Accepted
H5	SC Disruption Orientation → SC Resilience	0.212	2.967	0.002	Accepted
H6	Relational Capital → SC Resilience	0.471	7.907	0.000	Accepted
H7	Relational Capital → Market Performance	0.291	3.205	0.001	Accepted
H8	SC Resilience → Market Performance	0.580	7.237	0.000	Accepted

Finally, regarding the inner model, goodness-of-fit should be quantified. There are multiple methods of goodness-of-fit regarding PLS-SEM; furthermore, there is also much

debate on which option is best (Hair et al., 2021; Sarstedt et al., 2014; Wetzels et al., 2009). To capture a holistic picture of goodness-of-fit (GoF) regarding this model, two

methods are adopted. Wetzels et al. (2009) proposed a procedure that is also categorically based upon the final number; values less than 0.1 are rejected while values between 0.1 – 0.25 specify weak GoF, values between 0.25 – 0.36 indicate moderate GoF, and values above 0.36 suggest a large GoF. Wetzels et al. (2009) propose that GoF is equal to the square root of the cut-off for AVE minus the average R2 values; accordingly, the GoF for this model is 0.4158. That infers a large GoF.

Table 6
Structural Model Assessment

Endogenous variables	R ²	Q ²
Supply Chain Disruption Orientation	0.502	0.320
Relational Capital	0.579	0.433
Supply Chain Resilience	0.766	0.506
Market Performance	0.697	0.504

Hu & Bentler (1999) advocate an additional measure of GoF, the standardized root mean squared residual (SRMR). This has emerged as a popular measure where the cut-off has been indicated at values above either 0.09 liberally or 0.08 conservatively (Hair et al., 2021; Henseler & Sarstedt, 2013; Hu & Bentler, 1999). The SRMR value for this model is 0.064; thus, GoF is comfortably confirmed.

4.3. Mediation effects

The indirect effects of the model should also be evaluated; thus, it is suitable to test the model for the mediation effects (Hair et al., 2021). The results of the mediation effects can be reviewed in Table 7 which provides an overview of the mediation effects and the Sobel test. The Sobel test is an

Table 7
Mediation Effects of the Sobel Test

Mediating Pathways	Mediation Effect (Z-value)	P-value
H9a: SC Dynamism → SCDO → Relational Capital	6.7715	0.000
H9b: SC Dynamism → SCDO → SC Resilience	2.9502	0.001
H10a: SC Dynamism → Relational Capital → Market Performance	2.3884	0.000
H10b: SC Dynamism → Relational Capital → SC Resilience	3.2663	0.000
H10c: SCDO → Relational Capital → Market Performance	2.9251	0.001
H10d: SCDO → Relational Capital → SC Resilience	5.7422	0.000
H11a: SC Dynamism → SC Resilience → Market Performance	4.4299	0.000
H11b: SCDO → SC Resilience → Market Performance	2.7609	0.000
H11c: Relational Capital → SC Resilience → Market Performance	5.3260	0.000

Note: Mediating variables are in bold. SCDO is short for Supply Chain Disruption Orientation. SC is short for Supply Chain.

Importantly, the study highlights a positive relationship between supply chain dynamism and resilience, aligned with the findings of Wong et al. (2020). This underscores the interplay between dynamic capabilities and resilience-

applicable measure of mediation effects while employing PLS-SEM; additionally, mediation implies the indirect effects are amplified by the mediating variable (Cepeda-Carrion et al., 2019; Hair et al., 2021; Nitzl et al., 2016). Significance scores show mediation effects in the model. Accordingly, mediation was specified in all tested pathways representing a strong and well-connected model.

5. Discussion

This study centers on the market performance of organizations in relation to their supply chain resilience and associations forged during the COVID-19 pandemic. It also explores the influence of supply chain disruption orientation and supply chain dynamism. The conceptual framework was developed by integrating novel supply chain theory and pertinent literature. Notably, event systems theory underpins the research model, introducing a novel perspective that holds promise for the supply chain research community. The methodology and hypothesis testing gave insight into the crucial role of supply chain dynamism. This construct, encompassing innovation frequency and proactive practices, proved to have a substantial impact. The study revealed a positive correlation between supply chain dynamism and disruption orientation, aligned with previous work by Yu et al. (2019) that highlighted how dynamism fosters competencies in supply chain disruption orientation. Furthermore, relational capital emerges as a key factor that complements and amplifies the impacts of dynamism.

Drawing from the study by Gligor et al. (2019), this research underscores how organizations equipped with relational capabilities are better prepared to navigate environmental changes. The positive relationship observed between relational capital and supply chain dynamism suggests that trust and information sharing are key factors in managing uncertainties and disruptions.

enhancing practices, allowing organizations to effectively prepare for and respond to disruptions while maintaining optimal performance levels. Supply chain disruption orientation, as explored in this study, contributes positively

to relational capital and supply chain resilience. Building upon the work of Reimann et al. (2017), this orientation fosters mutuality in supply chain partnerships and becomes even more vital as disruptions intensify. Thi Mai Anh et al. (2019) propose that empathy and knowledge-sharing are integral to supply chain survival during disruptions, further underscoring the importance of disruption orientation. Relational capital, a key factor in supply chain relationships, has been demonstrated to significantly impact both market performance and supply chain resilience. Drawing insights from Wu et al. (2014) and Mubarik et al. (2022), the study emphasizes the role of trust and information sharing in enhancing cooperation among supply chain partners, thereby mitigating the effects of disruptions. Intriguingly, mediation analysis reveals the reinforcing effects of supply chain disruption orientation, relational capital, and supply chain resilience. These constructs amplify the positive impacts of dynamism on market performance, adding depth to our understanding of their interconnected roles. Additionally, this research contributes to the supply chain literature by integrating event systems theory and social network theory. The study illuminates the dynamic interplay between supply chain dynamism, disruption orientation, relational capital, and supply chain resilience, offering a holistic view of how organizations can thrive in disruptive environments. Future research avenues could delve deeper into collaborative practices and the enduring impacts of disruptions on supply chain structures and strategies.

The study offers actionable insights for managers and organizations grappling with disruptions. The pandemic has underscored the need for adaptive strategies and organizational culture shifts, as highlighted by Bode et al. (2011). This paper encourages managers to focus on enduring features that bolster supply chain resilience, advocating for the cultivation of strong relationships based on mutual trust and respect. Incorporating the findings of this study, managers are presented with several insights to bolster their supply chain strategies. Firstly, harnessing data-driven insights enables informed decision-making, optimizing supply chain practices, and adaptability (Craighead et al., 2020). Cultivating collaborative relationships with suppliers emerges as a key strategy, enhancing resilience and enabling swift responses to disruptions (Dyer & Singh, 1998). Furthermore, fostering innovation in both products and processes can elevate dynamic capabilities, facilitating agile responses to evolving market dynamics. Embracing a long-term perspective by adopting enduring adaptations derived from pandemic-induced changes ensures sustained supply chain performance (Aldrighetti et al., 2021). Investment in employee development and training plays a role in nurturing proactive organizational culture and equipping personnel to navigate uncertainties effectively. Lastly, establishing mechanisms for continuous learning and improvement fosters seamless transitions during disruptions, further enhancing supply chain resilience (Ivanov & Dolgui, 2020). Collectively, these insights

empower managers to navigate dynamic market landscapes with resilience and agility.

6. Conclusion

This research unveils critical insights into the intricate relationships between supply chain dynamism, disruption orientation, relational capital, and supply chain resilience in the context of the COVID-19 pandemic. The study's unique integration of event systems theory and social network theory provides a fresh perspective on how organizations can navigate disruptive environments to enhance their market performance. The findings underscore the fundamental role of supply chain dynamism in shaping firm behavior and fostering disruption readiness. Moreover, the study highlights the symbiotic relationship between disruption orientation and relational capital, showcasing how organizations can fortify partnerships to effectively manage uncertainties. The mediating effects of disruption orientation, relational capital, and supply chain resilience further elucidate the mechanisms through which these constructs amplify the positive impacts of dynamism on market performance. As businesses grapple with the ongoing challenges posed by disruptions, this research serves as a roadmap for managers seeking to strategically position their organizations by fostering resilient supply chains and nurturing robust relationships, ultimately enhancing their competitive edge in an ever-evolving landscape.

On the topic of events as promoters of change in the environment, Morgeson et al. (2015) illustrated that impending research warrants a more holistic approach to the outcomes of events such as COVID-19 (Craighead et al., 2020). While the current research considered how the current pandemic would affect the performance of firms through their market practices, the forthcoming study should investigate the elements of the event itself. For example, it has been observed that the level of change generated by an event's strength is moderated by both the event space (effects of the event) and time (duration) of the event (Morgeson et al., 2015). As a result, future research could incorporate longitudinal assessments to monitor the effects of COVID-19 on the supply chains of organizations over time. Also, caution should be observed concerning the theory incorporated in this study. While EST provides a multidimensional approach in which to investigate disruptive events, an assessment regarding the methodological qualities of the theory may necessitate supplementary considerations in the impending examination that exploits the theory. Regarding the period of this work, Reimann et al. (2017) suggest that novel empirical explorations should embrace longitudinal data for pandemic-induced examinations, as changes in the environment are better captured over time, giving more concrete evidence of causality.

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