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# CSR, Risk Management Practices, and Performance Outcomes: An Empirical Investigation of Firms in Different Industries

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**Abstract:** This article presents a research model that defines how external drivers impact financial performance outcomes, and the role played by strategic practices (especially CSR) in reducing the negative impact of such external influences. Applying strategic orientation theory, risk management theory, and CSR theory as the encompassing theoretical rationale, the conceptual framework defines the research idea and the research model provides the empirically testable model that identifies key variables with valid instrument measures. The results indicate that although external supply chain risk drivers do negatively impact a firm's financial performance, the influence of these risk events can be mitigated if firms adopt focused strategic practices. The results highlight the significant role played by CSR strategic practices in enabling firms to develop resilience from disruption events. In our research model, CSR, as an organizational linkage practice, is positioned in between upfront strategic flow and back-end performance flow. It suggests that CSR success is only possible when CSR is implemented broadly throughout organizational processes. Based on the empirical results, lessons and implications are presented for theoretical and managerial insights and future research.

**Keywords:** corporate social responsibility; risk management practices; performance outcome; strategy; supply chain

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## 1. Introduction

In recent years there has been an increased research attention on environmental, social, and governance (ESG)-focused investing, wherein socially conscious investors are identifying companies based on their behaviors within the ESG categories (Avramov et al. 2022; Gillan et al. 2021; Zhao et al. 2019). Organizations have accordingly responded to such changes in investor behaviors and stakeholder expectations with a renewed emphasis on corporate social responsibility (CSR) to fulfill ESG requirements (Roberts and Dowling 2002). Corporate social responsibility aims to create and deliver value for firms to a larger world beyond customers who purchase their products and services (Lindgreen and Swaen 2010; Matten and Moon 2004). Naturally, the debate on CSR business practices centers on "doing what is right" and "achieving the right results" (Matten and Moon 2004; Latapí Agudelo et al. 2019). Successful CSR implementation requires effective translation of CSR intention (e.g., social and environmental goals), business processes, and comprehensive performance outcomes (Singh and Hong 2020; Wang et al. 2016; Bozos et al. 2022).

As firms try to integrate CSR goals into expanded shareholder expectations (e.g., environmental, equity, and governance issues), the scope of risk management is naturally enlarged (Baker et al. 2021; Shakil 2021; Singh 2021). CSR is a positive flow to build up and support a business reputation, whereas risk management is a proactive business flow to mitigate potentially harmful and damaging effects of business (Parajuli et al. 2017; Sawik 2017; Kim et al. 2021). In this sense, both CSR and risk management are very closely related. Consequently, firms increasingly regard CSR as an important element of their

strategic and operational business processes to fulfill ESG goals (Brower and Rowe 2017; Liu et al. 2021; Zhao et al. 2019). Porter and Kramer (2006) therefore suggest that the role of CSR within an organization should now be considered within more innovative frameworks than it traditionally has been. Accordingly, scholars have started to focus on identifying how CSR can enable firms to achieve superior customer satisfaction, improved financial performance, and empower an organization to develop a sustainable competitive advantage (Roberts and Dowling 2002; Roehrich et al. 2014).

Emerging research on supply chain risk management (SCRM) considers how firms plan to reduce the impacts of supply chain disruptions on business processes and overall performance outcomes (Choudhary and Sangwan 2019; Nooraie and Parast 2016; Parajuli et al. 2017). In the context of rising complex and uncertain supply chain risks, firms find it quite challenging to integrate CSR and risk management into their strategic and operational processes, with empirical research in this area still rare (Baker et al. 2021; Kim et al. 2021; Shakil 2021; Singh and Hong 2020). Furthermore, research on the impact of CSR on organizational outcomes, such as reputation and financial performance, has been inconclusive (Aguilera-Caracuel and Guerrero-Villegas 2018). As more firms operate using their global production and marketing network, more research is called for in relation to supply chain risk management practices (Albuquerque et al. 2019; Bhattacharya et al. 2021; Singh 2021).

In response to such a current research trend, this article aims to examine how firms effectively implement CSR (1) to mitigate supply chain disruption events, (2) to achieve competitive performance outcomes, and (3) to fulfill socially desirable goals. We first develop a conceptual framework that provides the theoretical rationale of this study. This paper is organized in the following sequence. A research model presents key variables that interact through business processes to achieve desirable performance outcomes. For an empirical investigation, this study uses an original benchmark instrument that tests the key relationships and reports the findings of firms of different industries from Asia, North America, Latin America, and Europe. Based on the empirical results, lessons and implications are presented for theoretical and managerial insights and future research. The main contribution of this article is how firms use CSR as a critical linkage mechanism between strategic planning processes and operational implementation practices. The results are to achieve multiple organizational goals—economic, environmental, and social dimensions.

## 2. Conceptual Framework

A conceptual framework describes how key ideas are related. Conceptual frameworks are developed based on theoretical rationale and thus provide the basis for a further literature review and analysis (Hong et al. 2019; Nader et al. 2022; Flaig et al. 2021; Zhang 2013). Figure 1 presents three theoretical bases and key concepts such as drivers, risk-mitigating practices, CSR practices, and performance outcomes. Three theory streams provide the research context and research design. First, strategic orientation theory (SOT) explains how firms choose their long-term business direction which provides their overall purpose and business principle (Day and Wensley 1983; Chaganti and Sambharya 1987). SOT is useful in understanding how firms choose their set of principles to guide their organization-wide activities in the long term to aim for a competitive advantage in their target markets (Saebi et al. 2017; Brower and Rowe 2017). Second, risk management theory (RMT) suggests how firms adopt their proactive approaches to anticipate and prepare for the potential risk factors in prudent and realistic business action programs (Aven 2016; Ho et al. 2015). RMT explains how firms choose their practices related to utility, regression, and diversification to mitigate the negative impacts of risk drivers on organizational outcomes (Bolton et al. 2011; Hoyt and Liebenberg 2011; Tang and Musa 2011).

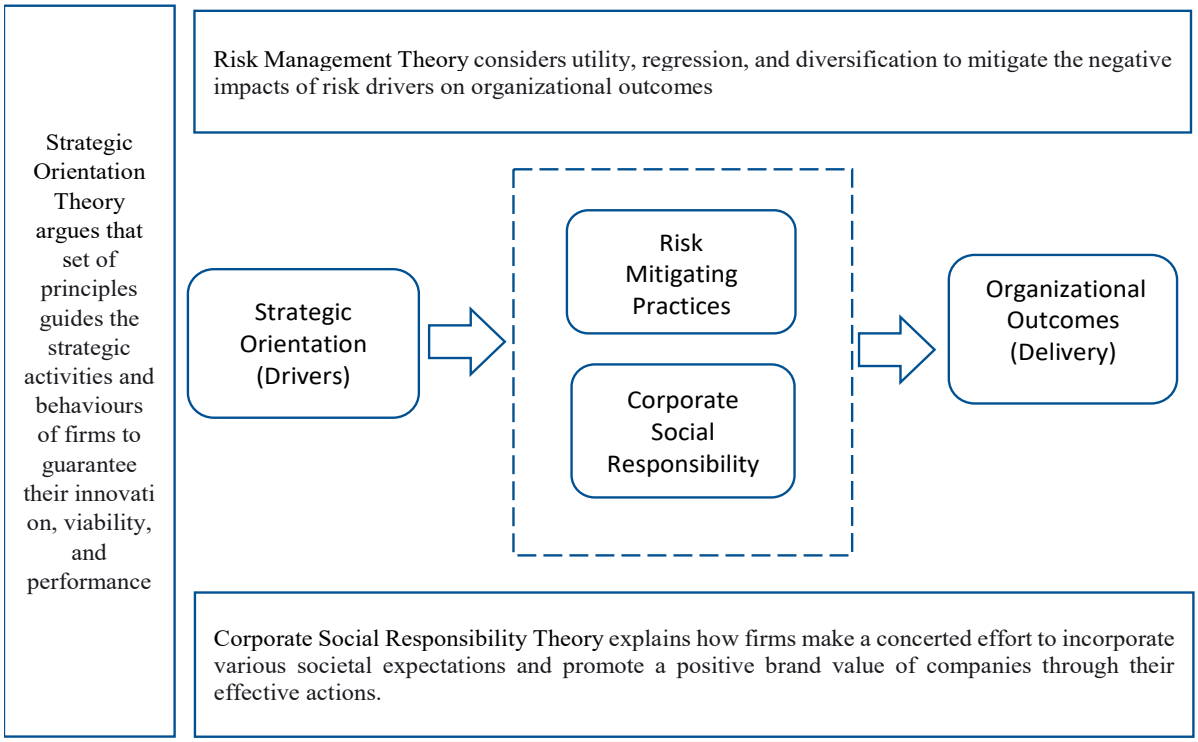


**Figure 1.** Conceptual Framework.

Third, CSR theory explains the role of CSR in relation to other business practices that are critical to achieving desirable organizational outcomes (Matten and Moon 2004). CSR considers how firms make a concerted effort to integrate societal expectations into their business processes and promote a positive brand value of companies (Singh and Hong 2020; Wang et al. 2016; Latapí Agudelo et al. 2019). In summary, a conceptual framework (Figure 1) shows a general model of how firms incorporate strategic intent, risk management requirements, and corporate social responsibility dimensions into their overall business practices. In the next two sections, we conduct a literature review to identify gaps within the literature and follow it up by developing a specific research model that shows how firms pursue their value propositions into viable practices and desirable performance outcomes.

## 3. Literature Review

Recent supply chain literature has examined how firms manage diverse risks within their supply chain through their risk-resilient capabilities (Khan and Burnes 2007; Kwak et al. 2018; Nader et al. 2022; Parker and Ameen 2018; Zimon and Madzík 2020). The numerous types of risks are classified into different categories in the form of offshoring risk, quality risk, safety performance risk, managerial performance risk, and product risk, and firms considered and devised systematic responses (Baryannis et al. 2019; Brusset and Teller 2017; Zimon and Madzík 2020; Fan and Stevenson 2018).

The earlier discussion suggests that scholars have not only attempted to characterize the term SCRM but also assessed how these risks impact firm performance, and consequently attempted to develop strategies to mitigate supply chain risk (Parajuli et al. 2017; Sawik 2017; Bradley 2014; Nooraie and Parast 2016). Scholars further argue that it is important to identify the negative impact of disruption events on a firm's supply chain, as well as identify strategies adopted by these firms to mitigate the negative influences of such disruption events (Shen and Li 2017; Revilla and Saenz 2017). They ultimately suggest that a supply chain disruption orientation by itself does not necessarily translate into supply chain risk resilience. It is also important for firms to identify capabilities and strategies that

are sustainable and can proactively enable them to mitigate the negative influences of these disruption risks.

Although numerous perspectives have been developed on how firms can develop risk resilience, a research area that has garnered significant attention is how organizations integrate their strategic intent with operational practices to adopt CSR as a vital mechanism to mitigate the impacts of supply chain disruptions and sustain their reputation (Gillan et al. 2021; Kim et al. 2021; Liu et al. 2021; Singh 2021). The core argument is that CSR can be a strategic orientation that promotes vibrant innovation and flexible responsiveness to market changes and thus sustain competitive advantage (Cannon et al. 2020; Du et al. 2011; Nyuur et al. 2019; Porter and Kramer 2006). However, the lack of credible and conclusive evidence about the vigorous roles of CSR on broad organizational outcomes calls for more empirical research in this area (Aguilera-Caracuel and Guerrero-Villegas 2018; Cannon et al. 2020; Dupire and M'Zali 2018). In response to such research needs, this article aims to provide a sound research model that defines relevant variables and examines how firms effectively adopt CSR to achieve desirable organizational outcomes with empirical tests.

## 4. Research Model and Hypothesis Development

### *4.1. Supply Chain Risk and Organizational Impact*

As organizations function in an increasingly globalized and uncertain business environment, supply chain disruptions have started to emerge as one of the most significant factors impacting firm performance, reputation, and profitability (Singh and Singh 2019; Dubey et al. 2019; Punniyamoorthy et al. 2013). Supply chain disruption can therefore be categorized as supply chain risk events that negatively impact organizational performance at several levels. Such disruptions can occur both upstream and downstream of the organizational value chain (Park and Singh 2022). "From the point of view of a buying firm, the upstream supply chain can be viewed as an organization" (Bode and Wagner 2015). Choi and Hong (2002) reframed this concept into a supply chain context and suggested that an upstream supply chain comprises several suppliers, several tiers of suppliers, and the extent of the dispersion among members within the network. Scholars have therefore argued that from a supply chain disruption perspective, it is important to identify the role played by suppliers, and how small failures at their end may magnify supply chain risk factors for the buyer firm (Kim et al. 2019; MacKenzie et al. 2014).

Risk incidences emanating from disruption at the supplier end are therefore conceptualized in this article as supply chain risk drivers that have a negative impact on a firm. The ability of firms to manage resources and reconfigure them according to the environmental setting is extremely important for a firm's survival and long-term financial performance (Sirmon et al. 2007; Davis et al. 2009; Singh and Hong 2020). Therefore, scholars have argued that due to these factors, network-based supply chain disruptions negatively impact a firm's financial performance (FO) (Zsidisin et al. 2016). Such supply chain risk events also have a tangible and direct impact on the strategic activities that firms undertake as part of their regular operations (Singh and Hong 2020). Kaplan (2008) further suggests that the cognitive behavior of decision-makers is influenced by the frames that individuals operate in, and hence it can be argued that these frames are impacted by the organizational environment. Supply chain risk drivers (SCRD) therefore also negatively impact firms' practices, including strategic innovative practices (SIP). Thus, the following hypotheses are stated as:

**H1a.** *Supply chain risk drivers are negatively related to financial outcomes.*

**H1b.** *Supply chain risk drivers are negatively related to strategic innovative practices.*

Supply chain risk drivers may also divert the attention of organizational members to focus more on the detrimental risk events rather than societal concerns, and therefore they also negatively impact organizational CSR activities (Singh 2021; Lim 2020; Zhou and Ki 2018). Furthermore, as organizations witness incidences of supply chain disruption events, they develop an institutional memory that enables them to effectively respond to such

disruption activities (Maitland and Sammartino 2015; Osiyevskyy and Dewald 2015; Khatri and Ng 2000). Therefore, as firms encounter incidences of supply chain disruption events, they not only improve upon their existing risk management practices but also develop new risk management practices. Hence, it can be argued that supply chain risk drivers positively impact risk management practices (RMP). Thus, the following hypotheses are stated as:

**H1c.** *Supply chain risk drivers are negatively related to CSR organizational practices.*

**H1d.** *Supply chain risk drivers are positively related to risk management practices.*

### *4.2. Strategic Innovative Practices and Their Impact on Organizational Practices*

Within the strategic management literature, scholars have long argued that strategic practices have a direct impact on organizational performance. Child (1972) suggested that organizations do not simply react to their environment, but dynamically interact with it through the actions of top managers. Therefore, firms may develop a competitive advantage by developing competencies that are incrementally innovative relative to other organizations but in aggregate play an important role in enabling firms to develop dynamic capability (Golgeci and Ponomarov 2013; Barney 1991). Hence, in pursuit of competitive advantage, firms focus on developing strategic practices that aim to develop capabilities within the organization that can help reduce business risk, and enhance corporate reputation, while simultaneously achieving superior financial performance. Long-term innovative strategic practices thus consider how the organization can prepare for current and future risk events, and therefore play an important role in enabling the firm to develop risk management capabilities (Hussy 1999; Agarwal and Ansell 2016). Furthermore, such innovative strategic practices also aim to ensure that organizations are able to develop and enhance their reputation among customers, who as a result of positive firm perception are willing to continue to purchase products and services from these firms (Louro and Cunha 2001; Saeidi et al. 2015). Strategic innovation practices are therefore more likely to engage in socially respectful activities which are closely related to the goals of CSR practices (Lin-Hi and Blumberg 2018; Ham and Kim 2019; Carroll 1979; Hou 2019). Strategic practices also intend to bring value to organizations through constructive changes within the organization by enabling the firm to improve various aspects of its value chain that enhance productivity, reduce costs, and effectively develop and retail products that result in positive financial outcomes (Certo et al. 2006; Seifzadeh and Rowe 2019; Lestari et al. 2020). Thus, the following hypotheses are stated as:

**H2a.** *Strategic innovative practices are positively related to risk management practices.*

**H2b.** *Strategic innovative practices are positively related to CSR organizational practices.*

**H2c.** *Strategic innovative practices are positively related to financial outcomes.*

### *4.3. Impact of Risk Management Practices*

As firms function in a dynamic business environment, the high uncertainty resulting from business disruptions creates ambiguity about the value and utility of existing resources to generate capabilities that aid in recovering from disruption. A firm that is able to effectively utilize its resources in a dynamic environment will have a better chance of developing capabilities to reduce the impact of disruption events (Craighead et al. 2007; Scheibe and Blackhurst 2018). Such strategic practices assist decision-makers within an organization to mount an effective and rapid response to manage the adverse impact of business disruption events that have both reputational and financial impacts on a firm.

From an organization's perspective, corporate reputation represents the stakeholders' overall evaluation of a company (Kim et al. 2019), and particularly demonstrates the extent to which organizational stakeholders identify the company as being good or bad (Lin-Hi and Blumberg 2018). When attributing a positive or negative reputation to a company, stakeholders look at several aspects such as the firm's past corporate activities,

and extrapolate from these activities their assumption of the company's future behavior (Lin-Hi and Blumberg 2018). One aspect of corporate activity that has steadily gained in relevance as having a positive impact is CSR practices. Carroll (1979) defined CSR as "the social responsibility of a business which includes the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time". This idea was further extended by Snider et al. (2003) who argued that "CSR implies that companies have a moral obligation to the society in which they operate to behave ethically, beyond the limits of legal requirements, and beyond their obligations to traditional stakeholders, such as employees, consumers, vendors, and the local community" (Snider et al. 2003, p. 175). Thus, the following hypothesis is stated as:

**H3a.** *Risk management practices are positively related to CSR organizational practices.*

The ability of firms to manage resources and reconfigure them according to the environmental setting is extremely important for organizational growth and long-term financial performance (Sapienza et al. 2006; Sirmon et al. 2007; Davis et al. 2009). As the environment under which firms operate cannot be controlled, organizations must contend with various risks during the normal course of business operations. Risk management practices are therefore strategic initiatives adopted by companies to reduce the negative influence of broad, rare, and adverse supply chain events that have a negative impact on the organization's operational and business capability (Ho et al. 2015). Risk management practices are therefore strategic initiatives adopted by firms to reduce the negative impact of environmental uncertainty on firm performance, thereby reducing costly errors and preventing damaging wastes of organizational resources, and ultimately have a positive impact on organizational financial outcomes. Thus, the following hypothesis is stated as:

**H3b.** *Risk management practices are positively related to financial outcomes.*

### *4.4. Influence of CSR Practices on Firm Financial Performance*

In recent years the role of CSR as a strategic business tool to achieve tangible business outcomes has become better understood by both practitioners and academics alike (Zhao et al. 2019). A common consensus that has emerged among scholars is that by adopting and effectively implementing CSR practices, firms can exhibit increased customer satisfaction, improved reputation, and develop a sustainable competitive advantage (Roberts and Dowling 2002). Scholars have further identified that the adoption of CSR practices has a direct impact on corporate reputation. Research shows that when customers are provided an option of choosing between two competing products with similar price points and quality levels, they tend to prefer products from organizations that have made the strategic choice of adopting CSR practices (Saeidi et al. 2015). These arguments lead us to suggest that CSR practices adopted by organizations enable the company to achieve tangible benefits, and therefore assist the firm in mitigating the negative impact of business disruption events on corporate reputation.

As firms have expanded the scope of their CSR initiatives, academic research focusing on the wide-ranging impact of CSR practices on business organizations has also increased. Significant work on this topic was performed by Cruz and Matsypura (2009) and Cruz (2013), when they attempted to bridge the theoretical gap between CSR practices, supply chain risk, and SCRM practices. These scholarly works suggest that organizations with CSR practices can decrease operational inefficiencies, production costs, and business risk, while simultaneously enabling the firm to increase sales, enter new markets, and improve brand value. A direct impact of these benefits is the organizational ability to decrease costs, lower risk, and improve profitability (Cruz 2013). Therefore, it can be argued that CSR organizational practices enable the creation of a positive environment for the organization, allowing it to offsets risks from potential supply chain disruption events and therefore exhibit positive financial outcomes. Thus, the following hypothesis is stated as:

**H4.** *CSR organizational practices are positively related to financial outcomes.*

## 5. Methodology

### 5.1. Research Methodology

The study adopts quantitative methodology which involves the development of a survey instrument and the use of covariance-based structural equation modeling (CB-SEM) to examine the hypothesized relationships. The first step that we adopted in this study was to develop the relevant constructs through a comprehensive literature review. We used the existing literature base to develop the model identified in Figure 2 and create the survey instrument (Moore and Benbasat 1991; Bagozzi et al. 1991; Churchill 1979). We adopted a questionnaire-based survey method as it allows us to increase the generalizability of the results by testing the relationships between various constructs on a large sample base (Miller 1992; Straub et al. 2004). The unit of analysis in our study is the firm level.

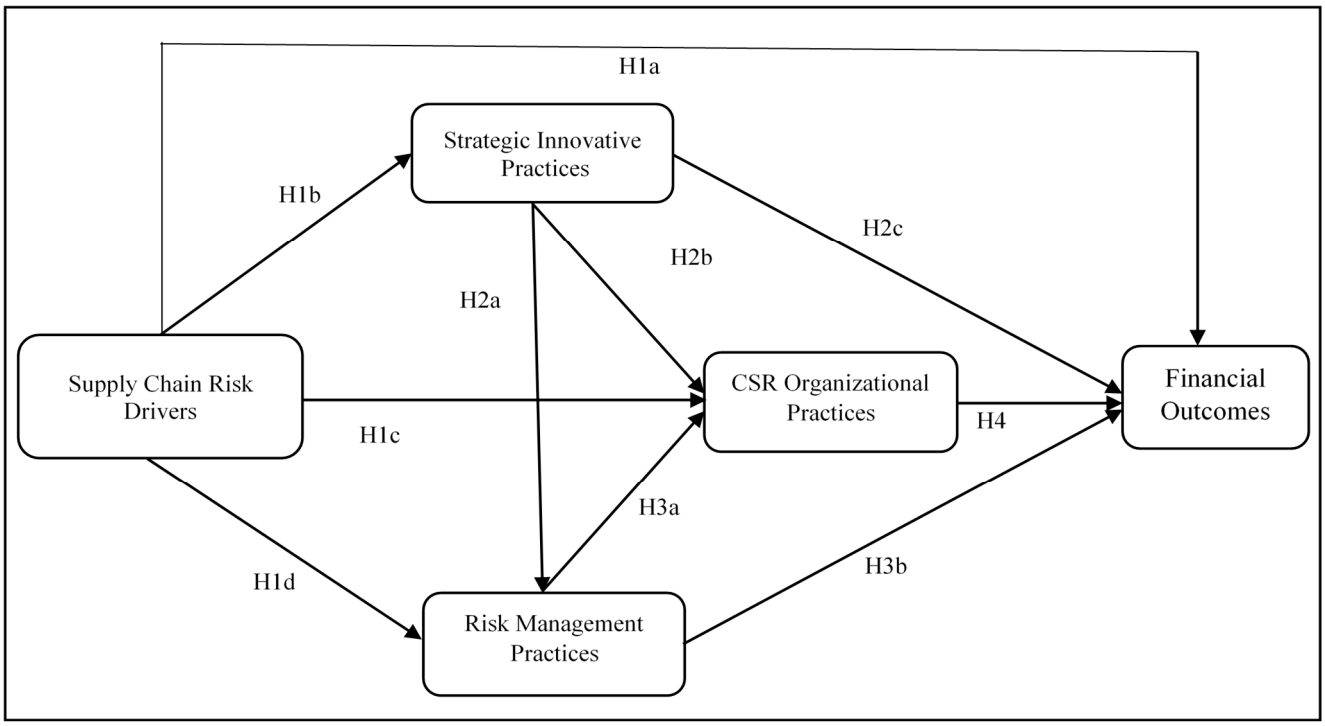


**Figure 2.** Theoretical Model.

### 5.2. Data Collection and Sample Characteristics

Items for the constructs were developed from established scales altered to the context of our study (Singh and Hong 2020; Singh 2021). The survey adopted a 5-point Likert scale to capture respondent feedback on various constructs ranging from 1 (strongly disagree) to 5 (strongly agree). The starting point for data collection was Lexis-Nexis Academic. SSIC codes were used to identify managers from the target industry and develop a database of 1728 managers. For key informants criteria, the selected survey respondents were senior and middle management professionals who had experience in supply chain management, risk management, and strategy development for their respective organizations (Kumar et al. 1993). We then contacted all the managers, shared with them the topic of our research, and solicited their willingness to participate in our research. To test the quality of the model and ensure the reliability and validity of measurement scales, we also conducted a pilot study with 40 executives from the industry. After obtaining adequate respondents from the pilot study, we tested for reliability and validity. The scale exhibited acceptable accuracy as the observed corrected item total correlation (CITC) scores were greater than 0.3, and the Cronbach alpha values were greater than 0.7. We also assessed the scores of factor loadings (Hair et al. 2010).

Having refined the survey instrument, we proceeded toward the final data collection. We uploaded the survey onto Qualtrics and shared the survey link with all the potential respondents. To ensure a high response rate, continuous communication was maintained with all likely respondents during the data collection time period (Dillman 2007). Such continuous engagement resulted in us receiving feedback from 328 managers, giving us a response rate of 18.98%. To check the distribution of missing responses, Little's MCAR test was applied (Little 1988) and the analysis showed that values in the database were missing completely at random ($p > 0.05$). This study followed Lin and Wu (2014) in checking for normality of the data distribution and outliers. Using the currently acceptable methodological practices (Hair et al. 2010; Li 2013), responses that had missing data were removed from the final database. Mahalanobis distance was used to check for outliers within the data. The Mahalanobis distance scores were between 0 and 1 for the majority of the observations, indicating that the data conformed to normality and that the dataset included only a few outliers (Lin and Wu 2014). The final database, after deleting missing variables and outliers, comprised 271 usable responses. Hair et al. (2010, p. 175) suggested that to ensure reliability, validity, and generalizability of results, the sample size should be in the ratio of 50:1 (50 observations per variable). In our study, the sample size is above this threshold level and therefore signifies a high level of data representativeness and reliability to the research questions. The final tests focused on assessing reliability and validity. Each scale (Appendix A) demonstrated acceptable levels of convergent validity and reliability. The demographic profile of the organizations in the final database is shown in Table 1.

**Table 1.** Demographic Profile of Companies.

| Measure | Category | Frequency | Percentage (%) |
|---|---|---|---|
| Industry | Chemical Manufacturing | 6 | 2 |
| | Pharmaceuticals | 11 | 4 |
| | Healthcare Manufacturing | 11 | 4 |
| | Automotive Manufacturing | 11 | 4 |
| | Technology Manufacturing | 19 | 7 |
| | Food Manufacturing | 28 | 10 |
| | Service | 39 | 14 |
| | Logistics | 48 | 18 |
| | General Manufacturing | 98 | 37 |
| Organization Size (Number of Employees) | >1000 | 105 | 38 |
| | 500–1000 | 83 | 30 |
| | 100–500 | 61 | 24 |
| | 1–100 | 22 | 8 |
| Years Company in Existence | >10 years | 271 | 100 |
| Geographic Location | North America | 127 | 47 |
| | Europe | 61 | 23 |
| | Asia | 58 | 21 |
| | South America | 25 | 9 |

To ensure the robustness of the model, we also include firm size as a control variable in our model. We measure firm size by considering two parameters: (1) the number of employees within an organization and (2) the annual turnover of the firm (Saeed et al. 2019). The consideration of these control variables is justified as the circumstances under which supply chain disruption events negatively impact a firm's financial performance are contingent on the size of the firm (Pleshko et al. 2014). The inclusion of these control variables in the

model helps extract the associated variance. As the survey respondents had self-identified the organization that they were working for, secondary data related to the total number of employees and annual revenue of the firm were collected through COMPUSTAT, and in some cases directly from the company's website. As the data range was extremely broad, we used log values (base 10) for standardizing the values of both variables. In addition to the survey data, such use of secondary data further adds to the robustness of the model and the validity of the empirical investigation.

### 5.3. Data Analysis and Results

We used AMOS covariance-based structural equation modeling to test our research hypotheses (AMOS 25.0). Scholars have argued that a CB-SEM approach is a superior approach and is better suited when dealing with complex models (Rönkkö et al. 2016). The complete sample of 271 respondents was used for the estimation. For testing potential response bias, we followed the suggestions of Armstrong and Overton (1977). We compared the findings of early respondents and late respondents. Using the late respondents as a proxy for non-responders, we randomly selected a sub-sample of 50 respondents from the initial contact list and statistically tested for response bias (Choudhary and Sangwan 2019). The result of the Student's t-test showed no significant difference between early and late respondents, implying that response bias was not a source of concern in our findings.

### 5.4. Assessing Potential Common Method Bias

To ensure the robustness of the study, detailed tests were conducted to examine potential common method bias (CMB) within the dataset (Podsakoff et al. 2003). We followed the most widely accepted methodological approaches to deal with common method bias, both ex-ante and ex-post (Chang et al. 2010; Tourangeau et al. 2000; Hu et al. 2019). First, during the item construction phase, we involved two academics and two practitioners well versed in supply chain risk management and strategy development and used their feedback to refine the survey instrument. Second, during the data collection process, respondents were assured of anonymity and confidentiality of their responses. Third, several scholars (Pavlou et al. 2007; Hu et al. 2019) have suggested that common method bias would exist if the correlations between the constructs were higher than *0.90*. In our study (Table 2), the highest correlation coefficient was *0.73*. Harman's single factor test (Shen et al. 2019; Podsakoff et al. 2003) also indicates that no single component accounts for most of the variance.

**Table 2.** Reliabilities and Inter-item Correlations.

| Constructs | CR | AVE | Supply Chain Risk Drivers | Strategic Innovative Practices | Risk Management Practices | CSR Organizational Practices | Financial Outcomes |
|---|---|---|---|---|---|---|---|
| Supply Chain Risk Drivers | 0.820 | 0.605 | 1.00 | - | - | - | - |
| Strategic Innovative Practices | 0.850 | 0.587 | −0.167 | 1.00 | - | - | - |
| Risk Management Practices | 0.802 | 0.578 | −0.067 | 0.534 | 1.00 | - | - |
| CSR Organizational Practices | 0.738 | 0.414 | −0.310 | 0.739 | 0.602 | 1.00 | - |
| Financial Outcomes | 0.857 | 0.545 | −0.290 | 0.492 | 0.553 | 0.604 | 1.00 |

Note: CR = Composite Reliability; AVE = Average Variance Extracted; $n$ = 271.

### 5.5. Measurement Model

The measurement model was evaluated prior to the structural model to ascertain whether we have construct reliability, discriminant validity, convergent validity, and unidimensionality. As factor loadings for almost all items in the scale were found to be above *0.4*, all scale items were used for confirmatory factor analysis (CFA). Unidimensionality was reflected through high internal loadings and high Cronbach's α (CA), which exceeded 0.8 for all constructs (Nunnally 1978), and high (*>0.7*) composite reliability for each construct (Segars 1997; Hair et al. 2010). We also tested the model for multicollinearity using variance inflation factors (VIF). The constructs' VIFs ranged from *1.14 to 2.81*, which is lower than the threshold of *3.33* (Hu et al. 2019). These estimates indicate that no multicollinearity exists within the model.

We evaluated the measurement model using CFA (Anderson and Gerbing 1988). CFA was operationalized in two stages—first through a measurement model and second through a structural model (James et al. 1982). Values were calculated for composite reliability (CR), average variance extracted (AVE), Cronbach's alpha (α), and item loadings to assess the internal reliability and convergent validity. The values for CR and AVE, along with the standardized CFA loadings in Appendix A, provide evidence of convergent validity. Almost all the factor loadings in the measurement model are greater than *0.6*, showing convergent validity (Bagozzi et al. 1991). For an additional test of the model fit, we used the chi-square goodness-of-fit test. The chi-square test value in our analysis was *1.286*, further showing excellent fit (Hair et al. 2010). Another important index used for assessing model fit is the root mean square error of approximation (RMSEA), which provides a mechanism for adjusting for sample size, where chi-square statistics are used (Byrne 2016). The RMSEA of our measurement model came to *0.033*, providing further evidence of an excellent model fit (Browne and Cudeck 1992; Kline 2011; Byrne 2016). In our measurement model, the comparative fit index (CFI) was observed to be *0.979* and PClose was observed to be *0.987*, providing further evidence for an excellent model fit (Hair et al. 2010). Therefore, an analysis of the measurement statistics suggests that the model displays excellent fit along with high reliability and validity. Since all the measurement criteria were satisfied, we further tested the structural model.

## 6. Structural Model Results and Discussion

### 6.1. Structural Model Test Results

The structural model was examined using AMOS covariance-based SEM to test our hypotheses. The results of the analysis are outlined in Figure 3 and Table 3. Hypothesis 1a (H1a) states that supply chain risk drivers (SCRD) negatively impact a firm's financial outcomes (FO). The effect is observed to be negative and significant ($\beta = -0.139$, $p < 0.001$). This result was expected and is in keeping with the current literature that had identified the negative impact that supply chain risk has on a firm's financial performance (Zsidisin et al. 2016; Dubey et al. 2019). This result provides support for the previous study that supply chain risk drivers (SCRD) directly and negatively impact a firm's financial performance. The result of H1b ($\beta = -0.201$, $p < 0.001$) supports that SCRD negatively impacts strategic innovative practices (SIP). This confirms that supply chain disruptions motivate firms to devise new and different responses in their strategic level planning practices (Singh and Hong 2020; Kaplan 2008; Nader et al. 2022).

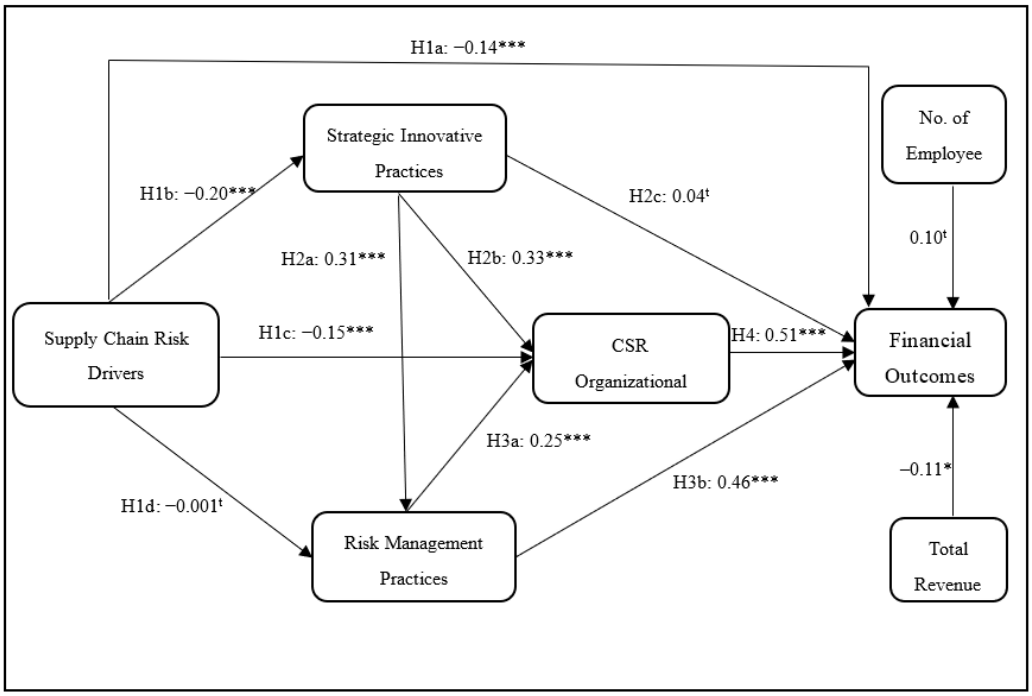


**Figure 3.** Analysis of Empirical Results. Notes: * 90% significance level; *** 99% significance level; t: statistically insignificant.

**Table 3.** Structural Model Results.

| Hypothesis | Path | Path Coefficient | *p*-Value | Result |
|---|---|---|---|---|
| H1a | Supply Chain Risk Drivers (−ve) ⟶ Financial Outcomes | −0.139 | $p < 0.001$ | Supported |
| H1b | Supply Chain Risk Drivers (−ve) ⟶ Strategic Innov. Practices | −0.201 | $p < 0.001$ | Supported |
| H1c | Supply Chain Risk Drivers (−ve) ⟶ CSR Org. Practices | −0.150 | $p < 0.001$ | Supported |
| H1d | Supply Chain Risk Drivers (+ve) ⟶ Risk Mgmt. Practices | −0.001 | $p > 0.05$ | Not Supported |
| H2a | Strategic Innovative Practices (+ve) ⟶ Risk Mgmt. Practices | 0.312 | $p < 0.001$ | Supported |
| H2b | Strategic Innovative Practices (+ve) ⟶ CSR Org. Practices | 0.334 | $p < 0.001$ | Supported |
| H2c | Strategic Innovative Practices (+ve) ⟶ Financial Outcomes | 0.037 | $p > 0.05$ | Not Supported |
| H3a | Risk Management Practices (+ve) ⟶ CSR Org. Practices | 0.250 | $p < 0.001$ | Supported |
| H3b | Risk Management Practices (+ve) ⟶ Financial Outcomes | 0.457 | $p < 0.001$ | Supported |
| H4 | CSR Org. Practices (+ve) ⟶ Financial Outcomes | 0.507 | $p < 0.001$ | Supported |

The result of H1c ($\beta = -0.150$, $p < 0.001$) also supports that SCRD negatively impacts CSR organizational practices (CSR). This suggests that various supply chain risk drivers become the source of added pressures and stresses and they are quite disruptive for normal CSR routines (Singh 2021; Lim 2020; Zhou and Ki 2018). The result of H1d ($\beta = -0.001$, $p > 0.05$) indicates that SCRD negatively impacts risk management practices (RMP) but it is not statistically significant. This means that risk management practices by nature anticipate disruptive events and thus they are better prepared to deal with these external disruptions without a huge impact on risk management practices across organizational boundaries. The results of H2a ($\beta = 0.312$, $p < 0.001$), H2b ($\beta = 0.334$, $p < 0.001$), and H2c ($\beta = 0.037$, $p > 0.05$) show that strategic innovative practices (SIP) positively impact RMP and CSR but not financial outcomes (FO). This explains that firms that formulate strategic innovative practices through proactive and systematic processes involving organizational members are more likely to implement effective RMP and CSR (Agarwal and Ansell 2016; Dupire and M'Zali 2018; Nyuur et al. 2019). The result of H2c indicates that strategic planning practices alone do not directly impact financial performance. The financial performance outcomes require the implementation of mediating organizational practices that support strategic planning goals (Certo et al. 2006; Seifzadeh and Rowe 2019; Lestari et al. 2020; Hong et al. 2019).

The results of H3a ($\beta = 0.250$, $p < 0.001$) and H3b ($\beta = 0.457$, $p < 0.001$) suggest that RMP positively impacts both CSR and FO. This indicates the powerful synergy when organizations implement both RMP and CSR in their normal organizational processes (Craighead et al. 2007; Scheibe and Blackhurst 2018; Kim et al. 2019; Singh and Hong 2020). Organizations can achieve positive financial performance if they use RMP and CSR to support strategic goal practices (Davis et al. 2009; Ho et al. 2015; Hong et al. 2019). The results of H4 ($\beta = 0.507$, $p < 0.001$) report that CSR positively impacts FO. This suggests that as CSR is positioned in the back-end (as an operational implementation mechanism), and not in the front-end (as a strategic planning tool), it has a much more direct impact on financial performance (Cruz 2013; Roberts and Dowling 2002; Saeidi et al. 2015; Zhao et al. 2019).

### *6.2. Theoretical Rationale and Empirical Tests*

Hypotheses state the relationships between key variables with theoretical support and logical rationale. In this study, the original survey items of each variable clearly reflect what each theoretical rationale suggests, and the adequate sample size allowed us to empirically test the validity of the relationships between these key variables.

Items of strategic risk drivers and strategic innovation practices represent external environmental challenges and pressures, whereas strategic innovation practices reflect the organizational intent and strategic aims and goals of firms according to the emphasis of strategic orientation theory (Chaganti and Sambharya 1987; Day and Wensley 1983; Saebi et al. 2017; Tourky et al. 2020). Items of strategic risk management practices consider both practical and timely organizational risk management approaches according to what risk management theory suggests. Items of CSR organizational practices measure key CSR practices that benefit both internal (e.g., employees) and external stakeholders (e.g., direct customers and societal members).

## 7. Limitations and Implications

As with all empirical research, our study also has certain limitations. First, most respondents were primarily senior managers working in either the manufacturing sector or the logistics sector. However, this research does not include a representation of firms from the service and hospitality sectors, where the experience of organizations in managing and reacting to supply chain disruptions might be different. Second, this study was primarily empirical in nature and therefore aimed at quantitatively identifying strategic practices that are relevant to both the manufacturing and logistics sectors. Therefore, the study does not identify specific strategic innovative, risk management, and CSR practices that firms can adopt to manage incidences of supply chain disruption. Third, the study takes a macro

perspective of the role played by CSR practices in managing corporate reputation when firms are faced with a supply chain crisis situation. The study, however, does not identify how much CSR practices differ across sub-sectors. Despite these limitations, the findings of this study provide meaningful insights on theoretical and practical aspects.

### 7.1. Theoretical Implications

First, this study clarifies theoretical ambiguity about the role of CSR in relation to organizational processes and performance outcomes. The debate on CSR was not about the value of CSR purpose and intent but on the process and outcomes (Ginder et al. 2021; Liu et al. 2021). To test the role of CSR, the research model defines key variables that highlight three theoretical perspectives. All the key variables in this research are further measured by the original benchmark instrument, which is the result of rigorous instrument development procedures (Churchill 1979; Hair et al. 2010). The empirical tests results suggest that firms that position CSR as a vital organizational process beyond a strategic intent indicator are more likely to achieve better performance results. In this sense, this study clarifies the theoretical rationale on how firms can formulate and implement CSR for achieving desirable performance results.

Second, this study suggests that confirmation of theoretical relationships requires using both perceptive and actual performance measures. This study uses both perceptive organizational variables and actual financial statements from annual reports. Distinctively different from prior CSR empirical research articles, this research does not use self-reported perceptive financial measures. The credibility of empirical investigation is often debated because of the heavy usage of self-reported perceptual measures without the actual financial performance outcomes (Broadbent et al. 2015; Maestrini et al. 2017; Moore and Benbasat 1991). In contrast, this research validates the trustworthiness of self-assessed practices through actual financial performance outcomes. In this sense, an important theoretical implication is that a useful benchmark survey instrument should use hybrid measures in terms of self-reported perceptive measures and objectively reported actual outcomes measures (Byrne 2016; Gligor et al. 2015; Hu et al. 2019).

Third, the effective role of CSR requires the corresponding right configuration of relevant variables. This study suggests that CSR alone does not generate desirable outcomes. Rather, CSR, with the combination of other congruent variables, provides synergistic effects on performance outcomes (Lee and Kwon 2019; Ben Brik et al. 2011). In this study, CSR organizational practices are positioned as a crucial mediating linkage mechanism that directly impacts financial performance outcomes. In prior CSR research, CSR practices were positioned as the front-end practices. CSR is envisioned at the corporate level and CSR practices are implemented as mandates of overall corporate mandates (Ham and Kim 2019; Snider et al. 2003). Therefore, CSR is too often not so visible and relevant in mid-level business practices. On the other hand, in our research model, CSR, as a center of organizational practices, is positioned between upfront strategic flow and back-end performance flow (Wang et al. 2016; Singh 2021; Zhao et al. 2019). This research suggests that CSR success is only possible when CSR is implemented broadly throughout organizational processes along with other relevant variables. The theoretical implication of this study is that CSR can become a critical linkage between corporate missional intent and competitive performance results through risk management practices.

### 7.2. Managerial Implications

First, outstanding firms adopt CSR beyond promotional and demonstration effects. Although all firms operate in their unique contexts, business practices with staying power adopt practices that are sensible (i.e., theoretically explainable) (Albuquerque et al. 2019; Day and Wensley 1983) and credible (i.e., broadly tested in diverse contexts) (Nader et al. 2022; Saeed et al. 2019; Singh and Hong 2020). This study's findings suggest that effective CSR implementation requires strategic motivation through supply chain risk drivers and process routinization through broad acceptance by large organizational members. A unique

aspect of this study is that CSR management practices are not outlier practices, but they interact with strategic innovative practices and risk management practices as a part of important organizational routines (Mehralian et al. 2016; Wu et al. 2015). This suggests that firms that treat CSR as an indispensable element of organizational practices are more likely to succeed in achieving superior and sustainable performance outcomes in their organizational contexts. It is imperative for senior leadership to communicate the positive role of CSR practices and use them as a critical linkage between front-end strategic flow and back-end performance flow. CSR success is not merely CSR program achievements but an organization's enduring success. In this sense, CSR is no longer a marketing tool but an organizational culture that defines organizational character (Pan et al. 2022; Schaefer et al. 2019; Wang et al. 2016). Just as the soul is the actual content of the body, CSR defines the soul of the company.

Second, business leadership achieves competitive financial performance outcomes as the result of pursuing a something bigger purpose. Organizational viability is sustained through steady and consistent financial outcomes. Without financial success, no business can survive regardless of its noble intent. CSR is important to the extent that it is supported by other relevant business practices and demonstrates their sound impact on financial performance (Lestari et al. 2020; Seifzadeh and Rowe 2019; Zsidisin et al. 2016). Any corporate initiatives and even government mandates cannot ignore the importance of financial performance. However, outstanding leaders motivate their organizational members to achieve not merely tangible financial goals but to help strive for something with a deeper meaning. In this sense, CSR is a part of defining what such bigger and larger goals of business firms are. The more CSR efforts are conceived as a concrete element of a purpose-driven organization, the more its broad impacts are reaped in the form of diverse and sustainable business outcomes including financial performance (Hong et al. 2021; Levillain and Segrestin 2019; Malnight et al. 2019; Muñoz et al. 2018).

## 8. Summary and Conclusions

This article examines the role of CSR in the context of supply chain risk drivers. CSR practices are also related to risk management practices and performance outcomes. This research provides a conceptual framework that highlights the role of three theoretical rationales as a general model. The research model highlights the relevance of strategic orientation theory and risk management theory in that risk drivers require top management to formulate vigilant oversight for front-line practices in the form of strategic innovation practices, risk management practices, and CSR practices to achieve performance outcomes. This study focused on the critical linkage role of CSR in relation to strategic innovation practices and risk management practices.

Future studies may further examine how firms implement CSR in response to other risk drivers such as geo-political and trade tensions, national interest-driven industrial policy implementations, and increasing disruptive technology effects (e.g., AI, robotics, IoT, and the Fifth Industrial Revolution) and broad expectations of environment–sustainability–governance (ESG) (Avramov et al. 2022; Du and Xie 2021; García-Sánchez et al. 2021; Hong and Park 2020; Li et al. 2021; Shakil 2021). In addition to survey-based benchmark instruments, future studies may conduct in-depth case studies of firms from a wide range of business sectors. Future studies may conduct an extensive literature review on diverse patterns of CSR and use multiple databases (e.g., primary, secondary, online research, panel, and platform data) to examine the changing roles of CSR as a part of complex strategic, cultural, psychological, operational business dynamics that are being adapted in the turbulent, uncertain, and competitive market environments (Antwi and Hamza 2015; Fielding et al. 2016; Khan et al. 2021; Pratt et al. 2020; Smith 2015; Snyder 2019).

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## Appendix A. Survey Instrument: Items, Mean, Standard Deviation, and Factor Loadings

| Variables | Item Descriptions (Scale) | Mean | S.D. | Loadings |
|---|---|---|---|---|
| **Supply Chain Risk Drivers ($\alpha$ = 0.789)** | | | | |
| SCRD1 | Our suppliers' weak quality practices damage productivity goals. | 2.88 | 0.888 | 0.790 |
| SCRD2 | Our suppliers' delivery performance often generates complaints from our customers. | 2.67 | 0.890 | 0.669 |
| SCRD3 | Our suppliers' capabilities are inadequate to meet fluctuating customer orders. | 2.68 | 0.837 | 0.863 |
| **CSR Organizational Practices ($\alpha$ = 0.720)** | | | | |
| CSR1 | Our firm has a long history of implementing diversity. | 3.83 | 0.983 | 0.597 |
| CSR2 | Our firm uses a fair rewards system. | 3.75 | 0.815 | 0.616 |
| CSR3 | Our firm values innovative problem solving. | 4.17 | 0.754 | 0.657 |
| CSR4 | Our firm encourages socially responsible work practices. | 4.21 | 0.769 | 0.700 |
| **Strategic Innovative Practices ($\alpha$ = 0.841)** | | | | |
| SIP1 | Our senior managers accept ideas or perspectives that diverge radically from past ideas/perspectives. | 3.51 | 0.918 | 0.734 |
| SIP2 | Our senior managers regularly ask questions that challenge the status quo. | 3.72 | 0.924 | 0.822 |
| SIP3 | Our senior managers willingly adopt ideas from other industries. | 3.55 | 0.933 | 0.752 |
| SIP4 | Our senior managers frequently experiment with new ways of doing things. | 3.37 | 0.956 | 0.754 |
| **Risk Management Practices ($\alpha$ = 0.672)** | | | | |
| RMP1 | Our firm assesses fierce competitive threats. | 3.80 | 0.877 | 0.762 |
| RMP2 | Our firm considers the impact of losing important customer segments. | 3.91 | 0.856 | 0.635 |
| RMP3 | Our firm implements rapid response initiatives (e.g., continuous replenishment or vendor-managed inventory). | 3.52 | 0.992 | 0.867 |
| **Financial Outcomes ($\alpha$ = 0.849)** | | | | |
| FO1 | Within the last three years, our firm achieved profitability growth targets. | 3.75 | 0.986 | 0.767 |
| FO2 | Within the last three years, our firm increased its competitive market share. | 3.32 | 1.038 | 0.702 |
| FO3 | Within the last three years, our firm secured desirable return on asset (ROA) performance. | 3.49 | 0.886 | 0.750 |
| FO4 | Within the last three years, our firm ensured steady cash flows. | 3.91 | 0.935 | 0.754 |
| FO5 | Within the last three years, our firm attained an excellent market reputation. | 3.98 | 0.830 | 0.717 |

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