South Asian Journal of Social Review Vol. 2, No. 1, pp. 1-14 DOI: 10.57044/SAJSR.2023.2.1.2301 © 2023 SAG Publishing. All rights reserved



# Disruptive Enterprise Factors and Risk Management in Global Supply Chain

<sup>1*</sup> Rashid Hashmi	<sup>1</sup> Faculty of Business and Management, Universiti Sultan Zainal Abidin – Kampus Gong Badak, Kuala Nerus, Terengganu, Malaysia					
	*Corresponding email: <u>si1581@putra.unisza.edu.my</u>					
Article History	ABSTRACT					
Received: 10 January 2023 Revised: 30 May 2023 15 June 2023 Accepted: 30 June 2023	Global firm arrangements allow access to low-cost labour and raw resources, better financing, a more comprehensive range of product marketplaces, chances for profit-making through arbitrage, and other government-sponsored incentives. Therefore, this study focused on disruptive enterprise factors and risk management in the global supply chain. The methodology used in this research was based on quantitative data collected through surveys					
JEL Classification R41 L30 F01	conducted by supply chain professionals. The data were analyzed using SPSS to perform various statistical tests such as reliability and regression analyses. The patterns of findings derived through regression analysis illustrated that all three hypotheses were supported. The theoretical implications of the results are that they were very much aligned with the existing literature and contributed to it positively. On the other hand, practical implications are related to supply chain managers managing supply chain risks. The tested model can help understand the impact of specific variables on supply chain risk management.					

Keywords: Enterprise policy, Enterprise legal process, Enterprise environment, Supply chain risk, Risk management

## Citation of this article:

Asmawi, I. & Ahmed, O. A. (2022). Disruptive enterprise factors and risk management in global supply chain. *South Asian Journal of Social Review*, 2(1), 1-14. <u>https://doi.org/10.57044/SAJSR.2023.2.1.2301</u>

## Disruptive Enterprise Factors and Risk Management in Global Supply Chain

# 1. Introduction

Global firm arrangements allow access to low-cost labour and raw resources, better financing, a wider range of product marketplaces, chances for profit-making through arbitrage, and other government-sponsored incentives. The host countries' governments are aiming to draw foreign investment. These benefits, which encourage businesses to expand internationally, complement the reservations and risks managers look for in international supply networks. "In a stable global economy, a corporation may have the lowest overall costs, but it also might have the highest quantity of risk if any of the myriad gating variables kinks up an extended global supply chain!" (Rashid et al., 2023; Hoberg et al., 2020). Global supply networks are riskier than local supply chains because many linkages connect them. These connections are susceptible to disruptions, bankruptcies, political upheavals, and tragedies, all of which raise risks and make risk management more challenging. Global supply networks have risks and uncertainties, which are extensively recognized in the literature. There is a distinction between proactive and reactive supply chain risk management, even though risk management in the global supply chain has been observed and improved (Hoberg et al., 2020).

Decision-makers must be able to foresee and resist probable future changes using the proactive approach. The notion that decision-makers would one day be able to "completely manage" the entire supply chain is overly optimistic, notwithstanding the possibility that future technological developments will enable them to get closer to that goal. By being aware of the variety and connections among supply chain risks, managers may create well-rounded, efficient risk-reduction plans for their companies. Enhanced financial performance and a competitive edge in today's more complex market, according to risk-adjusted supply chain management, may result. Understanding global supply chain risk management should be given top priority by academics and practitioners alike. The current study explores the literature to find monitoring characteristics that function as risk indicators in the internal and external organizational contexts since there are no strategic management models to aid in identifying social risk, regardless of the widespread use of management systems to analyze the environment and direct organizational operations. For social hazards, no specific management models. The point of this project is to develop, validate, and test a social risk management evaluation tool in a global manufacturing organization (Berg et al., 2008)

Three critical gaps were discovered following a preliminary study of the literature on supply chain risk management. A term needs to adequately describe or consider the particular elements of risk and risk management in a global supply chain. Risk management techniques require more attention. Given these inadequacies, this study aims to begin developing a theory of global supply chain risk management techniques. A quantitative study methodology was adopted because so little is known about the phenomena. A model of risk management techniques in global supply chains is constructed based on examining in-depth related to enterprise policy, Legal constraints and environmental performance to practice risk management. It is worth noting that this research was conducted in the setting of manufacturing companies (Ahlqvist et al., 2020). Manufacturing enterprises are the focal point of product supply networks and hence a suitable place to start when developing supply chain theory. Future studies will be needed to expand the idea to other situations (such as additional levels in the supply chain or for service providers). This study advances our comprehension of the optimal handling of social hazards and permits the testing of an industrial activity assessment instrument for the manufacturing sector (Fan & Stevenson, 2018).

Since there are no strategic management frameworks to aid in identifying social risk, the current study explores the literature to find monitoring variables that act as early signs in direct and indirect contexts, despite the widespread use of management systems to analyze the environment and direct organizational operations. There are no specific management models for social risks. This project aims to develop, validate, and test a social risk management evaluation tool in a multinational manufacturing

company. Risk is inherent in any business, and seeking profit-generating possibilities without encountering them is not easy. Some hazards are inextricably linked to the nature of a company's operations. Risk occurs when there are weaknesses in the operating system due to a lack of control and efficient preventative actions in industrial organizations. One way to reduce risk is to design a system for monitoring market uncertainty and putting in place preventative steps to remove dangers to firms. Businesses adjust their behaviour to suit stakeholder expectations as part of the self-regulatory processprocess known as risk management. As a result, this research built an empirical model based on general stakeholder theory to develop a social risk management tool, exposing essential organizational characteristics described in the paragraph below.

The social approach begins with the transformation and fruition of ideology and concerns of corporate function from the standpoint of organizations (Rasheed & Rashid, 2023). When conduct or corporate activities generate vulnerabilities, social risk, like any other risk, occurs in the business environment. Stakeholders can identify these vulnerabilities in the case of social risk and put pressure on the firm to modify its behaviour. When a stakeholder with significant clout in social problems exerts pressure on the firm, the danger grows. As a result, improving one's aptitude to take note of stakeholder opinions on social issues is a spirited need and a risk management aspect that is increasingly included in corporate strategy. The four components of social permission to act are as follows. The belief that the organization offers value to its stakeholders, or economic legitimacy, comes first. The second is cultural credibility, which has to do with positively impacting the community, showing respect for the way of life there, performing as expected for the place of business in society and engaging in action based on fundamental principles of fairness. Interactional trust, the third factor, is the conviction that the organization listens, responds, keeps its word, and engages in a two-way dialogue.

The final constituent is institutionalized trust, founded on the belief that the connection between institutions and stakeholders is long-term and based on shared interests. The idea of social risk is only sometimes based on normative assessments. It is related to other business risks in that it represents how external circumstances are seen, negatively influencing an organization's icon and status in public (Kytle & Ruggie, 2005). From an organizational point of view, social risk may be equated to the requirement for gaining societal permission for the organization's recital in a specific location, giving it the green light to share resources like people and the environment in its operations (Rashid & Rasheed, 2023). The most prevalent concept in community-related initiatives is poverty, which may be seen particularly in social responsibility programmers. Organizations strive to acquire security for the venture with the public's permission, employing the creation of community relations programmers- and the age group of takings in connection to the social risk of conflict (Hashmi et al., 2021a, b). The basis for creating a model for managing social hazards is described in the following sections. Despite the expanding number of risk management, stakeholders are continually exploring new terrain regarding risk management best practices.

#### 1.3 Risk Management in Supply Chain

Risk in the supply chain is frequently viewed as unreliable and unpredictable resources causing disruption. However, uncertainty in SC processes may be characterized as a risk of matching supply and demand uncertainty that hurts SC performance. Process risk arises from the manufacturing course's untrustworthiness due to machine failures. Moreover, demand risk is perhaps the most significant since it originates from variable demand or erroneous estimates. Inventory costs, lead time, flexibility, and responsiveness all suffer due to increased risk in the supply chain. Several writers have looked at the risk factors using various techniques to reduce the influence on supply chain performance. A logical chain of command process, described as a multi-quality decision-making approach, has been presented as part of an integrated methodology for classifying, managing, and assessing incoming supply risk. A decision maker can use this to arrange an issue in an attribute hierarchy visually (Ahlqvist et al., 2020). A risk-management approach has also been investigated. Other writers have focused on reducing risk via flexibility, categorizing it into three categories: enterprise policy, Legal Process and environmental effect. Furthermore, while the risk mentioned above factors have been studied in many countries, few and only descriptive investigations conducted in manufacturing firms in México conducted a qualitative

analysis on factors such as used resources, network systems, and performance criteria. However, other essential components and their interactions are missing from this research, making it challenging to measure supply chain effectiveness (Gibbert & Ruigrok, 2008).

## **1.4 Problem Statement**

Every economic activity has a certain amount of risk, and each business must manage that risk following the scale and nature of its operations. Without adequate risk management, no organization can sustain itself over the long run. Enterprises now face substantially more significant obstacles as economic, technical, and legal interconnectivity becomes more prevalent and noticeable. Depending on a company's size and industry, risk management and internal control systems may vary from one to the next. So, it stands to reason that every organization has internal control systems and a robust risk management framework to help it achieve its goals. These are crucial to a business' smooth running and day-to-day activities and assisting it in achieving its goals. By managing risk at the supply chain level, this research was able to understand better any potential dangers to both the supply chain and the organizations that are a part of it, particularly to the logistic resources of people, infrastructure, and superstructure, as well as the flow of goods, services, and information. All supply chains share the risk involved in creating the desired supply chain, even though separate supply chains belong to different firms. The supply chain is growing along with globalization and industry competition, which significantly impacts how successful an organization is as a whole. Performance suffers when expected and unplanned catastrophes impair a company's supply chain. Every company runs the danger of failing to meet its manufacturing material requirements, which would significantly affect its capacity to fulfil client orders and, as a result, reduce sales and profitability (Bland, 2018).

Many businesses still do not have a supply chain risk management program that can identify latent risks in their supply chains and create mitigation strategies for those risks that could hurt the company's performance despite the significant adverse effects of supply chain disruptions on a company's bottom-line profits. In order to increase supply chain efficiency and effectiveness, firms must build thorough mitigation strategies. This requires supply chain managers to thoroughly understand all the risks involved with supply chains and all the uncertainties related to providing value to consumers.

## **1.5 Objectives of the research**

There are three elements of risk identified in the literature: enterprise policies, environment and legal policies. Supply risk is defined as the distribution of outcomes connected to unfavourable occurrences in inbound supply that impair the focus firm's capacity to satisfy customer demand based on the definition and built upon using the definition of risk. The distribution of outcomes associated with evil occurrences within the business that impair the firm's inside aptitude to generate products and services is known as operations risk. Demand risk is the probability of consumers making orders with the focal business due to evil occurrences in outward flows and inconsistency in the volume and hodgepodge sought by the customers. The distribution of outcomes associated with unfavourable events is called security risk. Human resources, operational truthfulness and information systems are all at risk, which might lead to disaster. Freight breaches, stolen data or proprietary information, destruction, and so on are all possible repercussions, robbery and sabotage.

## **1.5.1 Research Questions**

- Which enterprise Practices affect a company's financial and operational performance
- How does the process of identifying supply chain risks affect an organization's performance?
- Assessment of obtainable techniques and collection of one for valuation: After determining the firm's profile, a proposed method from the literature was developed to compare with the researched enterprise methodically.
- How should risk be managed to guarantee long-term organizational success?

### **1.6 Justification of Study**

This research is conducted to determine the critical supply chain risk sources and their impact on the company's performance. According to the findings, supply chain risks come from internal and external sources. Furthermore, according to supply chain risk sources, most believe that environmental risk sources include any external uncertainties emerging from the supply chain. The findings also revealed that those internal risks are within a business's control because they originate from the organization's activities.

### 2. Literature Review

Each firm has its process for creating a risk register, a list of discovered issues, and a priority ranking. There are numerous methods for identifying and categorizing risks. Possible explanations include helping us to differentiate between these risks and prioritize different risk mitigation investment options. There are a variety of approaches for recognizing risks, one of which is spotting substantial uncertainty in scenario development. Supply chain specialists have used uncertainty and risk interchangeably when identifying hazards, despite academic economists' attempts to limit risk to circumstances where probable outcomes can be expected to follow a known probability distribution. A one-time task, the compilation of an initial risk registry, A risk baseline must be established. Too many businesses begin their risk management initiatives without determining the dangers they are exposed to or the consequences of a disruption. People either spanned more effort or needed more time safeguarding against the appropriate threats. Even worse, they might ignore serious risks or fail to understand the potential consequences of a minor threat. Brainstorming sessions, past risk assessments, surveys, and other efforts to identify and catalogue potential risks within supply-chain processes may be the starting point for risk identification. Reference materials are available from the British Standards Institution, which offers a risk management code of practice, and the ISO (ISO 31010:2009), which offers a compendium of risk assessment methodologies (Hoberg et al., 2020).

A business-impact study should identify essential company functions and assign each priority level based on the operational or financial impact. It should specify the objectives for the recovery period and the tools required to meet them. This study highlights the value of early merchant participation in new product enlargement. ESI highlights the significance of interface early in the intended cycle for risk management and risk decline, even though the value of interaction in innovation research is well known. ' Greater information exchange results in a better comprehension of the circumstances neighbouring the subtleties of a supply association, and this comprehension increases the likelihood of identifying, preventing, and managing supply risk. These authors list the following issue factors and provide solutions for each: Manage legal obligations by locating intellectual property rights and putting knowledge sharing into the original contracts-control supplier capacity constraints by allowing suppliers pre-selection and selection freedom. Share future demand projection data with suppliers as soon as possible to streamline the planning process. Supply organizational problems may be resolved by defining supplier management frameworks and learning more about suppliers at the corporate and plant levels. Latent hazards at various stages of the procurement life cycle should be discovered early or before the actual execution of a procurement project, according to a fundamental guideline that probably applies to the majority of procurement plans. Remember the many process risks that may materialize throughout the project's life cycle when organizing the procurement, writing the contract, and managing the project (Fan & Stevenson, 2018).

There are many different perspectives and subject areas to consider while dealing with risk. Introduce hiring a "risk facilitator," a non-project team member who can collaborate with the project manager to identify risk because they are unbiased and free of bias. Some authors strongly emphasize the necessity of including seasoned colleagues for effective risk management. Project cancellation is one result of such an investigation, which is a worry for project owners and potential contractors regarding risk management. The project must consider several crucial factors, including risk analyses,

relationships with subcontractors, background research on individuals or clients, site visits, and financial considerations.

The ERM Policy's scope includes risks at all levels of the company and the inner and outside environment. Risk is distinct as uncertainty's positive or negative impact on an organization's objectives for a complete list of terms and definitions). This covers the impact of enterprise efforts on external issues such as the environment. as well as causing harm to people and the environment, focusing on avoiding and managing disasters. Potential harmful consequences are considered, but good outcomes are prioritized wherever feasible. Risk management categories into six major categories, information and Engagement on Risks: ERM must involve input from all pertinent parties, such as programmatic and operational staff as well as other significant parties (such as the UN system, national partners, experts, funders, particular groups, and program-impacted individuals). All risk assessment, treatment, monitoring, reporting, and review processes are influenced by routine and planned consultation and communication.

Setting the context requires comprehending the internal and external factors critical to accomplishing goals at each stage. The external setting is influenced by social, cultural, environmental (including climate change due), political, legal, financial, technical, security, and economic factors. It is also essential to comprehend external stakeholders' relationships, attitudes, and expectations. Strategic goals, norms, values, resources at hand, operational procedures, corporate culture, interactions with internal stakeholders, and capacities are just a few examples of internal settings. Risk assessment is an iterative method for identifying, analyzing, and evaluating risks. The objective is to provide frequent access to sufficient data for risk-informed management decisions. In addition to ensuring extensive due diligence, treatment, monitoring, and control, significant risk assessments enable more acceptance of risk-taking options (such as innovation).

Identifying the Threat: Risk is the potential positive or negative effect of ambiguity on organizational and programming goals. If risks are identified, goals may be more effective, avoided, negatively impacted, expedited, or delayed. The topic of risk assessment is "future occurrences," including their causes and probable repercussions. Therefore, risk identification calls for environmental knowledge, historical risk patterns, and forward-looking thinking to reveal potential future scenarios and uncertainties about company goals and growth results. Potential risks from all ERM risk categories (see Appendix 2) should be assessed to ensure that all pertinent risks are identified. Each risk is recorded in the risk register and described in terms of its cause, a potential future occurrence or scenario, and mitigation, including those identified by those above relevant prescriptive methods (such as HACT, SESP, and Fraud risk assessment). (Bland, 2018).

Risk analysis necessitates a determination of a risk's likelihood and latent influence on the purposes. A more strategic approach is needed at the program/unit and company levels. A complete study of the repercussions is used to estimate the total impact. The financial assistance, the amount needed to absorb unexpected losses, is determined by the financial ramifications. In determining the possibility and effect, available data and facts are considered. The risk analysis may incorporate the application of relevant theme analyses (for example, security risk analysis, fraud risk assessment, and social and environmental impact assessment) where appropriate (Berg & Knudsen, 2008). When assessing likelihood and effect is challenging, and there is a danger of damage, a precautionary approach is used by calculating the worst-case scenario to guarantee that the risk is managed appropriately and continuously monitored. If and when further information becomes available, the risk analysis should be modified.

Each High, Generous, or Sensible level risk must have one or more identified risk treatment techniques. Risk management approaches can be broken down into four groups when it comes to threats to organizational objectives: terminate (seeking to stop the activity that is causing the risk), transfer (assigning ownership and liability to a third party), mitigate (bringing the risk's likelihood and impact below the threshold of acceptability), and tolerate (tolerating the risk) (tolerating the risk level) (Ahlqvist et al., 2020). When it comes to opportunities, there are four forms of risk treatment: exploit

(making the occasion occur), experimentation (trying out new elucidations in risky situations), enhance (raising the chance or effect by strengthening the elicit circumstance or collective exposure), and accept (no proactive actions).

This research provides an understanding of the dangers of risk analysis. Starting with a control evaluation will help to find legal hazards. Risk controls can come in various forms depending on the risk and the industry. For example, it might control contract risk by meeting responsibilities. The possibility of discovery (will a claimant or regulator detect the problem) and the chance of an adverse judgment combine to form the likelihood of a legal risk. In the same way, repercussions are the result of damages (typically monetary) and frequency (the number of incidents). The assessment of legal hazards differs from the study of risks. Consider response while assessing legal risk. The core of hazard analysis is the company's risk sensitivity. Risk treatment is required for legal hazards that are above the line - unacceptable. The concept underlying risk treatment is straightforward: reduce the risk to a manageable level. It is important to note that it is not required to eradicate the danger; instead, it must be made acceptable. Treatment solutions for hazards are as varied as the risks we manage. However, there are a few approaches that may be used again and over again. Consider response while assessing legal risk. The core of hazard analysis is your company's risk sensitivity.

By presenting each risk separately, many risk professionals reduce the impact of their message and the efficacy of their communication. To make a lasting impact on the organization, think holistically and communicate clearly. The fundamentals of sound risk management in order to effectively manage risk in a big organization, control functions must collaborate with the business to identify and prioritize the main risks throughout the organization. In a big organization, using data to help identify risk and prioritization and testing are criteria independent of solutions that are not reliant on disparate, separate policies may be developed. Continuous testing and evaluation of controls, as well as regular communication, are required. Failure to do so will put legal, financial, and reputational issues at risk. Siloed practices may result in concerns being discovered much later, and wrongdoing may become more ingrained in a company's culture. Identification of all threats is the first step in risk management.

Risks associated with an organization's investments include financial, business, national, and currency rates and risks specific to the company (which is relevant if you are concerned about forex rates). So on are some of the risks relevant to an organization (let us imagine you work in the export or import industry). Organizations should do complete, focused risk assessments regularly (Gibbert & Ruigrok, 2008). There are numerous risk categories. The risk may also need to be assessed on a project-by-project basis. Risk must be assessed at two levels in the first stage. The risk might arise directly from an action or because of that activity. When a vendor fails to fulfil his deadlines, this is an example of a direct risk. However, a risk emerges because a raw material supplier fails to deliver supplies on schedule, causing the company to stay caught up on its customer commitments. Organizations must consider the likelihood of the dangerous event occurring and the amount of loss that might cause reruns, profit leakage, or postponed milestones, as well as the risk of customer claims for damages resulting from delayed delivery of goods, should all be considered (Holling, 1996; Hashmi et al., 2020a, b).

Risks must also be accomplished to lessen an incident's leeway and restrict it to ensure it does. Officialdoms should safeguard that employees are more aware of hazardous situations and have more influence over the situation through preventative or stoppage methods. To effectively manage a risk that must be absorbed, internal policies must be established for risks that result from human activity (as opposed to natural forces) between actual or potential participants in a transaction (as opposed to third parties).

However, the actual potential adverse effects are less thoroughly recorded. This literature focuses on how technology has impacted people's lives. The researcher anticipated a situation when he or she would need to make deductions based on hypothetical inquiries and work with little evidence. The same methodology was needed to determine what might go wrong, and put interest studies on the majority of studies on the subject of technology risk have been primarily hypothetical. Although there is no statistical information on the failure rates of the many types of equipment and technologies in use,

which have a variety of insignificantly impact duals, they significantly impact many people's lives. Concentrated studies have tended to concentrate alter how well they have been able to alter people's lives. Public knowledge of their performance before their development and integration into the medical profession could be much better. Things can be done more quickly and efficiently thanks to advanced technology. The information on fatalities brought on by auto accidents is readily available and can be viewed with just one mouse click. The same cannot be said for the deaths brought on by medical imaging equipment, which is present in all significant hospitals. There is no proof that medical equipment is tested to the same standards as automotive systems, which are examined for effectiveness using crash dummies before being deemed safe for public use (Fan & Stevenson, 2018). Determine whether a failure of an advanced medical intervention device is attributed to the system while performing a risk assessment. This includes determining whether the failure was brought on by a power failure, an inaccurate input, or a more general malfunction. Without a thorough examination of such complex procedures, discussions on the effects of technology on various problems may be more theoretical than factual. Most of the data that will be used to assess the risks connected to various technologies and their effects on society will come from the Internet.

An online search for litigation involving technological use that has negatively impacted operations is a rich source of information that clarifies technology's impact on workplace dangers. Data management is another risk due to technology advancements that have greatly expanded the risks. A study of how data breaches have contributed to global financial losses is another piece of evidence indicating technological advancements and how they have impacted risk weighting. Although such information is not readily available to the public, a thorough examination of a company's profits and losses, as well as a comparison to significant data breaches, can provide a general estimate of the loss's economic value (Berg & Knudsen, 2008; Rashid & Rasheed, 2022).

Another piece of information demonstrating technological improvements and how they have altered risk weighting is a study of global financial losses worldwide. Although such information is not readily available to the public, a thorough examination of a company's profits and losses and a comparison to significant data breaches can provide a general estimate of the loss's economic value. Risk management generally refers to the procedures, strategies, people, and systems in place to successfully manage technological hazards. Risk managers are responsible for identifying and mitigating possible technological hazards in all organizations. Detecting and mitigating external and internal technology risks that may negatively influence organizations if they closely examine them becomes more straightforward. Because of the following reasons, as a risk manager, you should concentrate on IT risks. It has become simpler for risk managers to anticipate and avert unforeseen incidents by concentrating on technological hazards. Surprisingly, no one likes surprises, especially ones that negatively influence business. Risk managers should consider all conceivable situations to manage them more effectively.

When a cyber-security event occurs, many employees spend significant time providing data to the risk management department. These jobs, on the other hand, are frequently done in an inefficient and disconnected manner. Streamlining incident reporting allows risk managers to reduce events through technology risk management. Stopping threats before they become cybersecurity issues may save money (Hoberg et al., 2020). Prevents the erosion of an organization's reputation: Financial losses are simpler to recoup from than reputational costs in the aftermath of a cyber-security catastrophe. Risk managers are becoming more aware of this. According to the Reputational Concerns e-Journal of Information Technology, reputational concerns hurt the company's business chances. It is simpler to avoid widespread unfavourable repercussions by minimizing these risks.

Decision-making is a complex process in any organization. It is considerably more difficult when the decisions significantly impact the organization's success. Technology has infiltrated every facet of modern business. As a result, risk managers are observing for solutions to diminish technical risks in order to enhance decision-making and assist organizations in achieving their goals. It has become simpler for risk managers to advise management on the advantages and possible drawbacks of various technologies by analyzing the technical risks that your organization confronts. They can also make suggestions to their organizations about the favourable risks of certain technologies so that they can explore them.

## 2.1 Hypothesis

H1: Enterprise policy significantly and positively affects supply chain risk management.

H2: The enterprise legal process significantly and positively affects supply chain risk management.

H3: The enterprise environment significantly and positively affects supply chain risk management.

#### **3. Research Methodology**

This study results from an action-research methodology in handling supply chain risk internationally. The two components of the action-research nine strategy—research and action—are intended to set practices improvement upon learning by individuals and work groups. While the study helps the researcher and other participants better understand the issue and potential solutions, the action helps the organization or community evolve to address the current condition (Hashmi & Mohd, 2020; Baloch & Rashid, 2022). This research methodology is concerned with resolving organizational issues by involving those who directly experience the issues and the researcher to make it easier for a practice to be improved by directly applying research findings in a practical setting (Rashid et al., 2023).

A quantitative technique is used to gather the categorical data required for statistical testing using a survey questionnaire because of the research's deductive nature, which demonstrates a model with a causal relationship between risk management and the global supply chain that needs analytical validity (Khan et al., 2023). In the current research process, the technique is being addressed along with the study sample and analytic unit. Vector scales from earlier experiments were used to build the questionnaire. Using a pre-tested, standardized questionnaire, this study empirically assesses and examines the Pakistani company's current risk management strategy. The study's goal is to use a quantitative approach to examine this phenomenon further and learn more about the operation of basic risk management procedures. The questionnaire to scientifically analyze and examine the current risk management strategy of the Pakistani firm (Rashid, 2021; Hashmi, 2023). This study aims to use a quantitative approach to investigate this issue further and learn more about how fundamental risk management procedures affect the efficiency of the entire global supply chain.

This research strategy is a set of strategies and processes for conducting research, including anything from broad conclusions to detailed data collecting, analysis, and interpretation methods. For this, we employed a quantitative technique. Quatesting objective hypotheses objective hypotheses to the test by looking at how variables interact (Rasheed et al., 2023). These factors can be computed using equipment, and the resulting numerical data can be statistically evaluated. A subway-based way was used to collect the data. The research strategy was employed in this inquiry. Experts from big, small, and medium firms were polled, and their replies were recorded to examine how they reacted to supply chain changes. For this study, the researcher has chosen positivism as our method. We employed a deductive method based on a design-based questionnaire for our study (Rashid et al., 2020; Hashmi, 2022).

A sampling technique used in this research in which each sample has an equal probability of being chosen is known as random sampling. A survey conducted at random is meant to be unbiased and representative of the entire population (Rashid et al., 2021). Professionals from various manufacturing, service, hospital, and agricultural organizations work in supply chains. There are 201 sample size participants in the study. In this research's primary objective, all ethical considerations establish explanations and detail ethical concerns that must be examined in human research, and all ethical

considerations are fact-based. This research will show the reader these ethics, traditions, procedures, and expectations. The reader may quickly distinguish good and wrong distinctions in the broad section of the study. It is more trustworthy and fosters mutual respect among scholars when relevant and correct sources are used (Bland, 2018).

# 4. Results & Findings

# 4.1 Descriptive profile of data

The results illustrated the descriptive profile of respondents. Males account for 80.5% of respondents, while females account for 19.5%. Moreover, 27.5% of respondents are between the ages of 20 and 30, 62% are between the ages of 31 and 40, and 10.5% are between the ages of 41 and 50. Respondents' professional experience is divided into three categories: 39% are from lower management, 44.5% are from middle management, and 16.5% are from high management. Respondents' work experience is divided into three categories: 21% with 1 to 5 years of experience, 26% with 5 to 10 years of experience, and 53% with ten or more years of experience.

## 4.2 Reliability and Model Validation

Each variable was tested for reliability to ensure the model was consistent. This study found Cronbach's alpha value greater than 0.7, indicating model reliability (Rashid et al., 2021). Reliability Statistics of Enterprise Policy for Risk Management: This research accepts these numbers because the range of reliability values was 0.778. According to Rashid et al. (2022b), a score of more than 0.7 implies that the scale items are reliable internally (Das et al., 2021; Haque et al., 2021; George & Mallery, 2003). Reliability statistics of legal process in supply chain risk management, this research accepts these numbers because the range of reliability values was 0.723. Reliability statistics of environment role in risk management, this research accepts these numbers because the range of reliability values was 0.731. Reliability statistics of supply chain risk management, this research accepts these numbers because the range of reliability values was 0.731.

Hypotheses were examined using SPSS Software with a linear regression test. The R-square shows how much of the disparity in the dependent variable is clarified by the independent variable.  $R^2$  values must be equivalent to or larger than 0.10, according to the variance described of a particular concept, to be considered sufficient. AS A RESULT, the  $R^2$  value in Table 1 is 0.877, which is sufficient (Falk & Miller, 1992; Khan et al., 2021). Adjusted R-square portrays the generalization of the fallouts in multiple regressions, i.e. the difference of the sample results from the population. The Durbin-Watson (DW) statistic is a method for determining if residuals from a statistical model or regression analysis exhibit autocorrelation. The Durbin-Watson statistic is consistently assigned a value between 0 and 4. The sample has no autocorrelation if the score is 2.0. Positive autocorrelation is a score of 0 to less than 2, and negative autocorrelation is a score of 2 to 4 (Rasshid, 2016).

ANOVA: A p-value of less than 0.05 is statistically significant (usually 0.05). It provides significant evidence against the null hypothesis. As a result, the null hypothesis is rejected, and the alternative hypothesis is accepted. The sig value in Table 1 below indicates that the independent variables enterprise, legal, and environment is significant to the dependent variable SCRM because the sig value is 0.00, which is below 0.05, representing that the model's outcome is significant (Qin et al., 2019). Coefficients: All of the variables have significance, according to the sig values in Table 1 below.

Similarly, every dependent variable affects the dependent variable. All of the sig. values are below 0.05. Further, the VIF value revealed that all independent variables have a value below 10, demonstrating that multicollinearity does not exist, that the effects of the model are pure, and that the effects of other independent variables do not harm one's effect. Consequently, all the hypotheses were accepted.

Variable	N	Mean	Standard Deviation	Model Summary		ANOVA	Coef	Coefficients		
				R	Adjusted R Square	F	x St.Coefficient Beta	t	Sig.	
Enterprise Policy	200	17.73	0.28				.092	3.304	.001	
Legal Process Environment	200 200	17.05 17.58	0.30 0.30	.937ª	.877	467.652	.770 .381	25.885 12.515	.000 .000	

Source: SPSS output

#### 5. Discussion, Conclusion, Recommendations Future Research

#### 5.1 Discussion

In the literature review, several factors influence preventive and necessary action to avoid risk management. In this study, literature on supply chain risk management in an area that has probably gotten the tiniest courtesy describes how Ericsson evaluates the use of supply chain risk management projects, mitigating techniques, and tools. However, the observations about the evolution of supply chain risk management practices and capacities through time—a topic that, to our knowledge, has not been studied—represent the key contributions. Overall trends have been discovered by collecting data from several eras, containing key development initiatives, enablers, and trigger points seen to be crucial for Supply chain risk management ongoing growth and ensuring that a supply chain culture will endure. The primary goal of this study is to analyze the risk management procedures and how they relate to the performance of the Global Supply Chain. These findings suggest that a Supply Chain's ability to manage risk effectively depends on several crucial variables. The appropriate awareness of risk and risk management in daily operations is crucial for the efficacy of risk management strategies.

Additionally, this research is crucial for supply to have an active risk management approach to recognize, quantify, track, and manage various risks, including operational risks, and retain capital against these risks. A key conclusion is the curbing role that team composition plays in the relationship between the choice of risk management approaches and its antecedents. Since there has not been much research into the nature of team composition in supply chains, this expands the body of knowledge. The influence of team composition on various supply chain decisions and the connections between various risk management techniques and their relationships with supply chain characteristics and temporal focus increase the prospect of an entire research program devoted to this subject.

#### **5.2** Conclusion

This study looked at business performance through the lens of risk management. One hundred ten people from the manufacturing industry in Karachi, Pakistan, were surveyed. It was discovered that if an individual receives proper prevention steps of enterprise, legal and environment, then the effect of the independent variable would be positive on his business performance. As a result, profitability will improve. This research focused on determining the influence of enterprise, legal, and environmental factors on business performance. Due to various problems, including its complexity, which presents its own challenges, it has been difficult to persuade many organizations to adopt it. However, as time passes and more research and study into risk management is conducted, organizations are becoming more willing to recognize its long-term benefits of legal and environmental have grown in popularity in developed countries. As a result, the objective of this research has highlighted the beneficial and positive benefits of environmental practices on business performance, particularly in Pakistan, where risk management is less understood and adopted for the reasons stated above model that depicts the impact on business performance.

### **5.3 Limitations**

In this research, the researcher has included managers who are directly tangled in creating and carrying out supply chain verdicts for their organizations. Although we Supply chain risk management techniques and theoretical saturation in our sample, the manager who works with external clients supplied highly detailed information. In-depth interviews with executives of 3PL companies and companies that offer global supply chain solutions to external clients are likely to yield further insights, particularly regarding new risk management techniques. Future studies may also distillate on linking the strategies to the results, i.e., what results change if an exact risk management method is selected.

### **5.4 Future Research**

This research will help include additional industries and conglomerate companies in the supply chain in the future; the researcher can raise the likelihood of a successful outcome. They can also describe their difficulties, strategies, goals, benefits, and downsides. To conduct preventative measures against such pandemics and maintain supply chain sustainability and networks and ensure compliance against risk factors. Identifying precursors to supply chain risk management solutions is the primary hypothetical conclusion. The prose lists several ways to control supply chain risks, but it does not specify when to apply each strategy. In order to close the gap, this study identifies the most crucial factors that influence the choice of risk management techniques and establishes a connection between those factors and the most suitable solutions. Future studies should quantify the strength of these interactions and qualitatively examine the existence of other antecedents and the complexity of these relationships.

## Reference

- Ahlqvist, V., Jahre, M., & Norrman, A. (2020). Supply chain risk governance: towards a conceptual multi-level framework, *Operations and Supply Chain Management*. An International Journal, 13(4), 382-395. <u>https://doi.org/10.31387/oscm0430278</u>
- Baloch, N. & Rashid, A. (2022). Supply Chain Networks, Complexity, and Optimization in Developing Economies: A Systematic Literature Review and Meta-Analysis. South Asian Journal of Operations and Logistics, 1(1), 1-13. <u>https://doi.org/10.57044/SAJOL.2022.1.1.2202</u>
- Berg, E., Knudsen, D., & Norrman, A. (2008). Assessing performance of supply chain risk management programmes: a tentative approach. *International Journal of Risk Assessment and Management*, 9(3), 288-310. <u>https://doi.org/10.1504/IJRAM.2008.019746</u>
- Bland, M. (2013). Plans are useless". *Journal of Business Continuity and Emergency Planning*, 7(1), 56–64.
- Das, S., Ghani, M., Rashid, A., Rasheed, R., Manthar, S., & Ahmed, S. (2021). How customer satisfaction and loyalty can be affected by employee's perceived emotional competence: The mediating role of rapport. *International Journal of Management*, 12(3), 1268-1277. DOI: 10.34218/IJM.12.3.2021.119
- Falk, R. F., & Miller, N. B. (1992). A primer for soft modelling. University of Akron Press.
- Fan, Y., & Stevenson, M. (2018). A review of supply chain risk management: definition, theory, and research agenda. *International Journal of Physical Distribution & Logistics Management*, 48(3), 205–230. <u>https://doi.org/10.1108/ijpdlm-01-2017-0043</u>
- George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update.
- Gibbert, M., & Ruigrok, W. (2010). The "What" and "How" of Case Study Rigor: Three Strategies Based on Published Work. *Organizational Research Methods*, 13, 710-737. <u>https://doi.org/10.1177/1094428109351319</u>
- Haque, I., Rashid, A., & Ahmed, S. Z. (2021). The Role of Automobile Sector in Global Business: Case of Pakistan. *Pakistan Journal of International Affairs*, 4(2), 363-383.

https://doi.org/10.52337/pjia.v4i2.195

- Hashmi, A. (2022). Factors affecting the supply chain resilience and supply chain performance. *South Asian Journal of Operations and Logistics,* 1(2), 65-85. <u>https://doi.org/10.57044/SAJOL.2022.1.2.2212</u>
- Hashmi, A. R., & Mohd, A. T. (2020). The effect of disruptive factors on inventory control as a mediator and organizational performance in the health department of Punjab, Pakistan. *International Journal of Sustainable Development & World Policy*, 9(2), 122-134. https://doi.org/10.18488/journal.26.2020.92.122.134
- Hashmi, A. R., Amirah, N. A., & Yusof, Y. (2020a). The mediating effect of integrated systems on the relationship between supply chain management practices and public healthcare performance: Structural Equation Modeling. *International Journal of Management and Sustainability*, 9(3), 148-160. <u>https://doi.org/10.18488/journal.11.2020.93.148.160</u>
- Hashmi, A. R., Amirah, N. A., & Yusof, Y. (2021a). Organizational performance with disruptive factors and inventory control as a mediator in public healthcare of Punjab, Pakistan. *Management Science Letters*, 11(1), 77-86. <u>https://doi.org/10.5267/j.msl.2020.8.028</u>
- Hashmi, A. R., Amirah, N. A., Yusof, Y., & Zaliha, T. N. (2020b). Exploring the dimensions using exploratory factor analysis of disruptive factors and inventory control. *The Economics and Finance Letters*, 7(2), 247-254. <u>https://doi.org/10.18488/journal.29.2020.72.247.254</u>
- Hashmi, A. R., Amirah, N. A., Yusof, Y., & Zaliha, T. N. (2021b). Mediation of inventory control practices in proficiency and organizational performance: State-funded hospital perspective. Uncertain Supply Chain Management, 9(1), 89-98. <u>https://doi.org/10.5267/j.uscm.2020.11.006</u>
- Hashmi, R. (2023). Business Performance Through Government Policies, Green Purchasing, and Reverse Logistics: Business Performance and Green Supply Chain Practices. South Asian Journal of Operations and Logistics, 2(1), 1–10. https://doi.org/10.57044/SAJOL.2023.2.1.2301
- Hoberg, K., Thornton, L., & Wieland, A. (2020). Editorial: How to deal with the human factor in supply chain management? *International Journal of Physical Distribution & Logistics Management*, 50(2), 151–158. <u>https://doi.org/10.1108/ijpdlm-10-2019-0311</u>
- Khan, S. K., Ahmed, S., & Rashid, A. (2021). Influence of social media on purchase intention and customer loyalty of Generation Y with the mediating effect of conviction: a case of Pakistan. *Pakistan Journal of International Affairs*, 4(2), 526-548. <u>https://doi.org/10.52337/pjia.v4i2.207</u>
- Khan, S. K., Rashid. A., Benhamed, A., Rasheed, R., & Huma, Z. (2023). Effect of leadership styles on employee performance by considering psychological capital as mediator: evidence from airlines industry in emerging economy. World Journal of Entrepreneurship, Management and Sustainable Development, 18(6), 799-818. <u>https://doi.org/10.47556/J.WJEMSD.18.6.2022.7</u>
- Kytle, B., & Gerard Ruggie, J. (2005). Corporate Social Responsibility as Risk Management: A Model for Multinationals. In *Corporate Social Responsibility Initiative Working Paper No. 10. Cambridge*.
- Qin, S., Nelson, L., McLeod, L., Eremenco, S., & Coons, S. J. (2019). Assessing test-retest reliability of patient-reported outcome measures using intraclass correlation coefficients: recommendations for selecting and documenting the analytical formula. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, 28(4), 1029–1033. <u>https://doi.org/10.1007/s11136-018-2076-0</u>
- Rasheed, R., & Rashid, R. (2023). Role of Service Quality Factors in Word of Mouth through Student Satisfaction. *Kybernetes. In press.* <u>http://dx.doi.org/10.1108/k-01-2023-0119</u>
- Rasheed, R., Rashid., A., Amirah, N. A., & Afthanorhan, A. (2023). Quantifying the Moderating Effect of Servant Leadership between Occupational Stress and Employee In-Role and Extra-Role Performance. *Quality-Access to Success, 24(195), 60-68.*

https://doi.org/10.47750/QAS/24.195.08

- Rashid, A. & Rasheed, R. (2022). A Paradigm for Measuring Sustainable Performance Through Big Data Analytics–Artificial Intelligence in Manufacturing Firms. *Available at SSRN 4087758*. <u>https://doi.org/10.2139/ssrn.4087758</u>
- Rashid, A. & Rasheed, R. (2023). Mediation of inventory management in the relationship between knowledge and firm performance, *SAGE Open*, *13*(2), 1-11. https://doi.org/10.1177/21582440231164593
- Rashid, A. (2016). Impact of inventory management in downstream chains on customer satisfaction at manufacturing firms. *International Journal of Management, IT and Engineering*, 6(6), 1-19.
- Rashid, A. Rasheed, R., & Amirah, N. A. (2023). Information Technology and People Involvement in Organizational Performance through Supply Chain Collaboration. *Journal of Science and Technology Policy Management. In press.* DOI: 10.1108/JSTPM-12-2022-0217
- Rashid, A., Ali, S. B., Rasheed, R., Amirah, N. A. & Ngah, A. H. (2022a). A paradigm of blockchain and supply chain performance: a mediated model using structural equation modelling. *Kybernetes, Vol. ahead-of-print No. ahead-of-print.* <u>https://doi.org/10.1108/K-04-2022-0543</u>
- Rashid, A., Rasheed, R., & Amirah, N. A., & Afthanorhan, A. (2022b). Disruptive Factors and Customer Satisfaction at Chain Stores in Karachi, Pakistan. *Journal of Distribution Science*, 20(10), 93-103. <u>https://doi.org/10.15722/jds.20.10.202210.93</u>
- Rashid, A., Rasheed, R., Amirah, N. A., Yusof, Y., Khan, S., & Agha, A., A. (2021). A Quantitative Perspective of Systematic Research: Easy and Step-by-Step Initial Guidelines. *Turkish Online Journal of Qualitative Inquiry*, 12(9), 2874-2883.