



Impact of Competitive Differentiation, Risk & Environment Risk on Supply Chain Risk Management of Cargo Companies in Berlin Germany

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Abstract

Germany is the central hub of Europe and contains many cargo transportation companies, which send cargo to Schengen areas and other European countries. Risk management in the supply chain has remained historically an accomplished truth in specific to cargo transportation in Germany over two decades and so on. A greater approach, towards dealing with risk factors involved. Germany has been blessed with remarkable success in cargo transportation. This research study has tried to explore the success areas that make risk management in the supply chain while keeping the cargo transportation in Germany as the case study in front. Primary data sources via questionnaires were used for data collection. The survey questionnaire contained with five-point Likert-type scale which included questions to know the responses of the supply chain managers related to the services provided in Germany and to measure their satisfaction level. Competitive Differentiation significantly affects supply chain risk management ($\beta = .119, P=0.000$). Risk exposure significantly affects supply chain risk management ($\beta = .850, P=0.000$). Environmental risk does not significantly affect supply chain risk management ($\beta = -0.005, P=0.704$). Germany seemed to have an effective supply chain risk management system in place with special focuses on environmental, social, and legal compliance on products cycling in the market under the supervision of their senior management.

Keywords: Supply Chain, Competitive Differentiation, Risk Exposure, Environmental risk.

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1. INTRODUCTION

Risk management in any of the companies is a helpful source in preparing to face unexpected risk factors before they happen. Almost every company in the world today deals with unexpected risks that cause loss of money or even complete closure of them. The kinds of risks are of various kinds and therefore they belong to different aspects like; strategic management errors, legal liabilities, financial uncertainty, accidents, and natural disasters (Rouse, 2004). According to ISO 31000 as the effect of uncertainty of objectives, risk management is defined in lines to the risks knowing, classifying, and signifying the areas, followed by the remedial measures in terms of vigilance, low cost, and expenses, enhanced coordination for gripping over the possibility of happening of events under the evolving risks with better approaches on them. Ideally, the management of the risks has prioritized the areas with more vulnerabilities and more probabilities are dealt with first. Managing the risks with priorities such as the areas with more vulnerabilities and possibilities are put in ascending order does not always result in high success rates because the situations in them are sometimes mismanaged (Munir et al., 2020).

The word “risk” comes from the early word “*ricercare*” in Italy, meaning “to dare.” The risk was correlated only with gambling for several years. The term was introduced by the insurance industry in England in the early nineteenth century and the industry became involved in the idea of risk in the fifties and sixties of the last century. This was due to the increase in market competition and the need to take into account the risk of several kinds of intervention in decision-making. Risk has historically been regarded through the lens of finance and insurance. Nowadays, a comprehensive risk approach can be used as an important part of business planning (Heizer et al., 2017). Effective risk management is a part of business life today. It begins with identifying the risks, analyzing them setting up the priority factors, and responding to them. It is meant to have a controlling ability to the risk factors before they occur. The business entity has an effective risk management capacity when it has the potential to minimize the impact of risk factors or they are effectively dealt with before they have any impact on the business processing (Abdellaoui&Pache, 2019). Risk management with a special focus on financing companies is associated with the pre-determination of risk factors and their restrictions to avoid any loss in advance. The investment-making process of the business exposes various forms of risk factors. The investors, therefore, have importance to the practicing of risk management (Amihud& Lev, 1981). The supply chain is a structural process of activities that makes the product-bearing company, the rest of the suppliers, and the buyer of the product interconnected in the process. In the process, the product from its very raw form gets into the customers’ hands. It happens with people, entities, information, and resources. The companies find supply chain management effective in reducing operational costs and very quick in the production cycle (Sheffi, 2001). The supply chain is used in the smooth flow of a product a good or service. It begins with the raw material and it ends in the hands of the customer. To accomplish the process a chain of suppliers is built to perform the tasks from the supply of the raw material to hand the product over to the organizations which deal with the users of the product (Bechtel &Jayaram, 1997). The companies dealing in supply chain management seemed more focused and much more attentive towards the levels of

their vulnerabilities in the smooth flow of their supply chain after the episodes like volcano eruption in Ireland, earth quack in Taiwan and Japan, and Hurricanes in the US gulf coasts. Crises and catastrophes episodes occurring in the world made the companies concentrate on vulnerabilities in their supply chain management. The practitioners of supply chain termed the supply chain risk (SCR) a growingly serious challenge in dealing with unexpected situations. The companies find SCR as a constantly prevailing aspect in running the business affairs for the years they have been in the business (Kumar et al., 2018). Companies around the world have taken risk management as an effective way to have smooth and effective operations in their business despite knowing with the facts that there are undecided functions in the process. The supply chain management having risk management is a key factor in keeping all uncertain phenomena in options of dealing with. Supply chain risk management (SCRM) has a variety of activities to cover in the process. Operating activities and mitigating risks are some of the fundamentals of the business (Naude&Chiweshe, 2017).

1.1 Rationality in Research

This research study has adopted a Pragmatic philosophy in line with the research questions to find out the Manager's awareness of supply chain risk management in cargo transportation companies in Germany. Supply chain management with a special focus on international levels has tremendous possibilities to be hurdled for expected or unexpected events. Those risk factors cause damage to the company's business processing and earnings (Haddud et al., 2017). No company now can thrive in secrecy. Each company has connections to other businesses, such as customers and vendors who work together to form a supply chain (Liu et al., 2022). Private companies and groups have long been conscious of the need for managing risk and evacuation plans (Shaikh et al., 2022). Supply chain management is still important today and includes many sectors (Such as; transportation, inventory, financial, and supply chain performance) (Felea&Albăstroiu, 2013). Transportation companies around the world are hardly hit with different risks in the process. They need to make the kind of mitigating strategies for managing the risks. The right methods and tools if used can handle the situations that can come out of it very quickly. The United States transportation industry is the world's hard-hit industry in managing the risks. They seem to adopt enterprise risk management strategies. Fleet integrity, compliance, driver's safety, retention, and many others are the kinds of internal challenges the transportation industries face. These challenges in risk management are completely different from the external risks which are associated with weather events, traffic, and road conditions. Managing the risks in the transportation industry is not always a perfect way to deal with the situation it also requires internal communication with employees. It is to come up with the situation and make sure their senses are on tasks of delivery. Transportation companies still look at risk management in a different way according to their areas of operations but the basic elements in dealing with these are almost the same everywhere (Pyöriä, 2011).

1.2 Significance of Research work

In a case study involving freight transportation businesses in Germany, the success aspects of supply chain risk management have become the aspect of the research study. Its focus was on the analysis of supply chain risk management's existing understanding and use in corporate business plans. The study also sought to identify the factors that cargo businesses considered important when deciding on their methods, as well as how these factors may be enhanced and developed to boost the likelihood that supply chain risk management will be successful. Germany was the geographic area selected for this investigation.

1.3 Research Objectives

1. To identify the effect of competitive differentiation on supply chain risk management of cargo companies in Berlin Germany.
2. To identify the effect of risk exposure on supply chain risk management of cargo companies in Berlin Germany.
3. To identify the effect of environmental risk on the supply chain of cargo companies in Berlin Germany.

2. LITERATURE REVIEW

The environmental and supply chain risks involved in the deal depend on a variety of factors, such as particular concerns relating to the activities of the client/investor, the business, and the geographic context. E&S concerns generally include environmental emissions, human health risks, safety and protection, community effects, and challenges to the nature and native culture of the country. By incorporating the Environmental and Supply chain risk Management Framework, a company may increase its perception of the E&S consequences inherent with each operation, which could be used by the justice system for continuing with the operation (Hall et al., 2006). Supply chain Risk Management (SCRM) is a philosophical paradigm developed by the World Bank especially its Social Security and Workforce Market, under the guidance of Robert Holzmann, since the late 1990s. The goal of SCRM is to expand the conventional social safety framework to provide protection, mitigating, and coping methods to secure food safety and environmental and high performance. SCRM puts an emphasis on the disadvantaged, who are most vulnerable to danger and most continue to cause financial deliberations and surprises (Waters, 2011). Via its policies, SCRM seeks to reduce the insecurity of the vulnerable and enable them to engage in riskier yet higher-return practices in order to overcome persistent poverty. Earlier it had dealt with social protection with OECD partners in economies where it was in implementation for longer and lasting time periods. Its failure in implementation with desired results was deepened more specifically in developed countries across. Because of the changes in the views and opinions on the measuring efforts to the cause with fair trade arguments, it has now been changed to social risk management (Carroll et al., 2010). Supply Chain Risk Management is more than a valuable complement to your operations it

is vital to your survival in events such as natural disasters, overdue bills, transport delays, etc. The goal of risk management is to mitigate problems and minimize risks if risk incidents arise. If you do not have a risk management system, a weak risk management system, or a minimal risk management system, you will have losses at various levels of doing business. More organizations recognize that risk management provides a sustainable competitive edge and facilitates an agile supply chain that operates better than ever before. With supply chain risk management, you will be able to outperform your rivals and increase market share when there is a common risk. You will also be able to reduce confusion and improve partnerships and faith in your prospects. Risk assessment also constantly monitors, optimizes, and decreases risk perception and costs (McLaren et al., 2002). The supply chain is described as the implementation procedure of manufacturing and delivering commercial products, including at any point from the delivery of materials and the manufacture of products to their delivery and sale. Proactively managing supply chains is critical to the company that hopes to compete (Lee, 2008). Evidence has demonstrated that companies barely gain the comparative benefit offered by the supply chain technique in management. This can be due to the fact that existing methodologies for the study of supply chains are not adequately detailed, particularly when it comes to understanding the complexities of SCM and organizational output in a single sense. In addition, researchers have not replied comprehensively to the main issues such as what are the conations between the various measurements of SCM and what are the conations between SCM? In the basic dimensions of SCM and SCM efficiency, the gap also remains in terms of the interpretation relationship between success indicators of the SCM and corporate performance indicators (Deshpande, 2012).

2.1 Competitive Differentiation

The competitive distinction is because the product or service of a business varies from what its rivals sell. It is focused on what consumers appreciate, such as accessibility, branding, pricing, or customer service. The role of marketing is to ensure that prospective customers understand what sets the offering apart. This is how businesses target, acquire and retain their clients. Although building distinction is a cross-functional endeavor, marketing is responsible for communicating the differentiators externally so that consumers can recognize what makes the business, product, or service special. Marketing departments also monitor market dynamics and competitive analysis to find differences and ways to distinguish (Chan et al., 2020).

The competitive distinction is a mechanism that allows consumers to differentiate your company from comparable rivals and gives them a persuasive incentive to choose you. It consists of two components: 1) one or more of the features of your firm that your main competitors either ignore or are not talking about and 2) a plan to promote certain features that will motivate potential customers to purchase (Chan, &Ip, 2011).

2.2 Risk Exposure of the Supply Chain

Risk management should not have to encounter an 8.9-magnitude earthquake half a world away to endure an outage in the vital supply chain. It can happen in any country right now. That can result from a fire next door to the main supplier or a storm that happens a few miles away. A split in the supply chain can occur with a key customer, not just with a key product supplier. A big accident at a consumer site can be almost as cataclysmic to a company as the absence of a vital supplier (Klibi et al., 2010). Supply Chain Interruption—the producer and the client be a problem for anybody in the company, maybe not the risk manager. It requires some comprehension of the agency’s job customer experience system and the capacity to support itself both in the short and long term without a vital supplier or client. Dependent personal accident policies for loss of profits and/or increased operational expenses can be part of the remedy but should not be the only remedy (Aggarwal et al., 2011).

2.3 Management of Environmental Risk

Environmental risk management aims to define the environmental threats that exist and also to decide how to handle those risks in a manner that is better conducive to protecting human health and the environment. Risk management Aid is a mechanism that determines how to safeguard public health (Vecchio et al., 2022). Examples of risk control activities include determining how much of a product a corporation should discharge into a river; Deciding the chemicals must be deposited in a wastewater processing plant; deciding to what degree a hazardous waste site must be cleaned; setting the number of approvals to be discharged, stored or transported; setting national environmental standards for air quality; and setting permissible levels of pollution of drinking water. The risk assessment shall include information on possible risks to health or to the atmosphere, and risk control shall be action taken on the basis of such and other information (Hawe et al., 2022). In managing environmental risks, management teams have to first identify the full concept of environmental risks. They should be capable of understanding what the industry, the legislature, policymakers, conservationists, and other interested parties mean when using the term environmental risk (Kitsios et al., 2022). For instance, business managers may be using the word to refer to risk to a company ranging from community environmental concerns, while policymakers may use the term risk of damage to ecosystems or to public health resulting from a human-made environmental offense (Wang et al., 2021).

2.4 Supply Chain Management in Germany

If globalization results in both stresses and drivers for German businesses to boost their environmental efficiency, it is anticipated that businesses will need to adopt policies to reduce the negative environmental effects of their goods and services. In order to develop their sustainable profile, businesses must incorporate environmentally sustainable activities into their business strategies and day-to-day operations. This way of doing business will also create new opportunities for competition. Consumer preferences, risk control, regulatory enforcement, and

market productivity are some of the factors driving competitive advantage through environmental success. Green supply chain management (GSCM) has a vital role to play in ensuring that all of these factors are tackled. GSCM has recently emerged as a crucial solution for businesses aiming to become profitable in a challenging world (Akgül&Seçkiner, 2019).

Germany is one of the fourth largest economies in the world economies. Stable macroeconomic growth has resulted in an acceleration of foreign trade over the last decade. Trade in Germany has grown dramatically and the country has a larger role in international trade. Germany's share of global trade is predicted to reach 5% by 2025 with supply chain management as the key contributor in it (Sachs, 2019).

2.5 Conceptual Framework

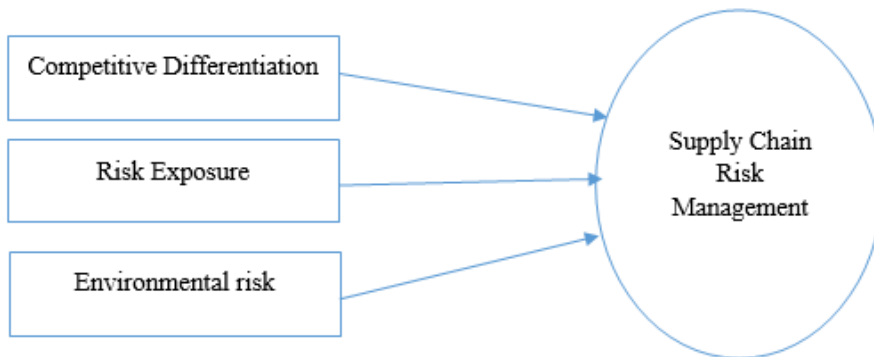


Figure 1:Conceptual Model

2.6 Hypotheses of the Study

H1= Competitive Differentiation has a positive effect on supply chain risk management in Cargo companies in Germany.

H2= Risk Exposure has a positive effect on supply chain risk management in Cargo companies in Germany.

H3= Environment Risk has a positive effect on supply chain risk management in Cargo companies in Germany.

3. RESEARCH METHODOLOGY

This research study has revolved around the factors that have an impact on the accomplished management of the supply chain in risk management, purely adopted by the management and the ground-level implementers in cargo transportation companies in Germany. In this research study pragmatic philosophy was adopted because it seemed deemed fit to the best with the context of the research question and it also allowed for flexibility in the approaches, methods, and techniques of data collection. Pragmatic philosophy became prevalent in the United States

when we looked into the very first part of the 20th century. This philosophy is based on the premise that the utility, practicability, and convenience of concepts, strategies, and solutions are the criterion for their value. It emphasizes the priority of procedure over theory, of practice over defined concepts, and the facts in their confirmation. Concepts however are simply tools and risk assessments (Raza et al., 2021). Pragmatic is also related to business and public relations when certain outcomes are achieved and things are made to happen. There is a darker and more brutal connotation of the word in which any use of force in the active achievement of realistic and concrete goals is deemed “pragmatic.” The nature of United States money and the government is also defined in this manner. In these situations, “pragmatic” bears the mark of explanation: a strategy is pragmatically justified if it is effective. Knowledge and academic concepts have in general the opposition to using the power of precepts or objective and final standards (Rosenthal, 1994).

A questionnaire is a set of questions posed by the clients. These questions are usually a mix of closed-ended and open-ended questions. Long-form questions leave space for clients to expand on their opinions. Questionnaires should be a more workable and effective testing tool than those interviews. Questionnaires are much easier to perform than in-person interviews, which require paying interviewers for their time. They can save time on both sides, as consumers can fill it easily on their own time, and staff shouldn't have to take some time off from their time to wait in interviews. The questionnaire is a collection of questions used to perform a survey, which is the method of collecting, sampling, reviewing, and evaluating data from a group of individuals. A questionnaire is essentially one of the instruments used to carry out a survey (Kim et al., 2018).

Close-ended questions and their forms of questions are important to the selection of sample answers across a small set of choices. Closed questions form the base of all predictive research methods applicable to questionnaires and surveys. Close-ended questions are described as question forms that require participants to rate from a different collection of predefined answers, such as ‘yes/no’ or between numerous choices. In a standard case, closed-ended questions are used to obtain objective responses from participants. Closed-ended questions appear in a variety of ways, but they are characterized by the need for specific alternatives. A formative assessment of close-ended questions is simple and versatile and allows the information to be collected that is clean and easy to interpret. It usually comprises the vascular bundle's question, the correct answer, the closest option, and the stray thoughts. In a survey, it is more probable that you will eventually wind up responding only to the close-ended questions. There is a clear explanation for this close-ended query to help collect actionable, quantitative data (Patra, 2019).

Since this particular research study has focused on cargo transportation in an effort to assess the accomplishment of supply chain risk management in Germany, hence the population for the study was the management and their employees who were associated with the tasks in relevance. The managers and the employees of such companies were taken as the population for the study. In order to get the best possible numbers of the individuals as the respondents for the purposes a definite

sampling methodology was adopted in the process.

4. RESULTS

In this part, we talk about research analysis what the study to be collected and proposed in this chapter also discusses the hypotheses testing frequency tables, regression models, and also correlation analysis. The questionnaires contain two parts so firstly we discussed some descriptive statistics and secondly apply some statistical models for further analysis.

4.1 Position in the company:

Table 1: Frequency Table of Position of respondents

	Frequency	Percent	Cumulative Percent
Account Manager	4	1.5	1.5t
Accountant	11	4.2	5.7
Assistant	2	.8	6.4
CEO	3	1.1	7.6
Communication Manager	1	.4	8.0
Coordination Manager	19	7.2	15.2
Coordinator of supply chain management.	1	.4	15.5
Customer service	52	19.7	35.2
Depo Manager	1	.4	35.6
Export and Import Manager	29	11.0	46.6
Financial Manager	2	.8	47.3
Financial Department	40	15.2	62.5
GM	1	.4	62.9
Inbound Logistic Manager	3	1.1	64.0
Logistic & Operations Manager	1	.4	64.4
Logistic Coordinator	2	.8	65.2

Logistic Manager	24	9.1	74.2
Logistics Department	1	.4	74.6
Manager of Depo.	3	1.1	75.8
Marketing department	1	.4	76.1
Operation Manager	9	3.4	79.5
Owner	3	1.1	80.7
Project Management	1	.4	81.1
Project Manager	1	.4	81.4
Sales Director	1	.4	81.8
Sales Manager	3	1.1	83.0
SEO	1	.4	83.3
Social Media Manager	5	1.9	85.2
Supply Chain Manager	15	5.7	90.9
Warehouse Employee	1	.4	91.3
Warehouse Manager	23	8.7	100.0
Total	264	100.0	

The analysis in this table No.1 for the positions of the respondents in the company who could take part in this research shows that all the levels of the positions holding employees took part in the research process. The analysis further depicts that from the level of CEOs of the companies to the warehouse employees took part and responded to the questionnaires with frequency at 264, with percent and valid percent at 100.0 each. The employees in the enlisted companies were there as the respondents to the questionnaires. They were working at levels of their employment. They all looked very positive towards responding to the questionnaires. Therefore, they stood up in a good sampled size while working at all the positions.

4.2 Gender Statistics

Table 2: Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	172	65.2	65.2	65.2
	Female	92	34.8	34.8	100.0
	Total	264	100.0	100.0	

Table No. 2 shows that both sex genders were involved in the respondent’s lists. The analytical table further concludes that there are 264 respondents in total out of which 172 are male and 92 are female respondents. Both percent and valid percent show at 100.0 for each in the analysis results. The respondents work in the companies in both of the genders male and female. They all come up with their great attributes towards this survey whether they belong to the male gender or the female gender. Though the majority of them stand with the male side. Males are quite responsible for outdoor activities therefore to deal with suppliers and other outdoor person males are communicating efficiently.

4.3 Reliability for all variables

Table 3: Cronbach Alpha results of variables

Reliability Statistics	
Cronbach’s Alpha	No. of Items
.860	25

Table 3 shows reliability statistics for all variables together and the value is 0.860 and tested twenty-five items together internal validity of all variables together is 86% which really indicates excellent results via Cronbach alpha.

4.4 Pearson Correlations

Table 4: Pearson Correlation Analysis

		SCRM-Mean	CD-Mean	REMean	ER-Mean
SCRM-Mean	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	264			

CDMean	Pearson Correlation	.533**	1		
	Sig. (2-tailed)	.000			
	N	264	264		
REMean	Pearson Correlation	.818**	.522**	1	
	Sig. (2-tailed)	.000	.000		
	N	264	264	264	
ERMean	Pearson Correlation	.228**	.175**	.299**	1
	Sig. (2-tailed)	.000	.004	.000	
	N	264	264	264	264

Table 4 shows correlation analysis among variables correlation is really a good test to understand the relationship among variables and also you can use their p values for hypotheses testing, good thing in correlation analysis is it measures the relationship among all variables together, here in the table there is a moderate relationship between supply chain risk management and company differentiation the value is 0.533, supply chain risk management and risk exposure has strong positive relationship 0.818, while supply chain risk management and environmental risk has a weak positive relationship with the value of 0.228. Secondly, there is a moderate positive correlation between Competitive Differentiation and risk exposure 0.522. Environment risk has a weak positive correlation with company differentiation of 0.175. Thirdly Risk Exposure and environmental risk have a moderate positive correlation together with a value of 0.299.

4.5 Multiple Regression Analysis

Table 5: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829 ^a	.687	.682	.20386

Table 6: ANOVA Analysis

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.658	4	5.915	142.317	.000 ^b
	Residual	10.764	259	.042		
	Total	34.422	263			

Table 7: Beta Co-efficient

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
B		Std. Error	Beta			
1	(Constant)	-.022	.220		-.101	.919
	CDMean	.119	.033	.145	3.563	.000
	REMean	.850	.051	.731	16.547	.000
	ERMean	-.005	.012	-.014	-.380	.704

Table 8: Hypotheses testing

H	Hypotheses	P-Value by Regression Analysis	Supported / Not Supported
H1	Competitive Differentiation has positive effect on supply chain risk management in Cargo companies in Germany.	0.000	Supported
H2	Risk Exposure has positive effect on supply chain risk management in Cargo companies in Germany.	0.000	Supported
H3	Environment Risk has positive effect on supply chain risk management in Cargo companies in Germany.	0.704	Not Supported

Table 5 is a model summary of the running model having three independent variables which are run by one dependent variable Supply chain risk management. R is 0.829 means the model has a strong positive correlation and all variables are strongly correlated, R square is 0.687 so competitive differentiation, risk exposure, and environment risk clarify about 68% variations in supply chain risk management. Table 6 The Analysis of Variance table is talking about the variance level of the model here regression sum of squares is 23.658 and the residual sum of the square is 10.764 so the total sum of the square is 34.422. Further, in regression, there are four degrees of freedom and in residuals, there are 259 degrees of freedom in total there are 263 degrees of freedom. The mean square of regression in 5.915 and the residuals mean square is 0.042, the F value is 142.317 and the Significance value is 0.000, so the model is statistically significant. Table 7 shows the results of regression analysis, this test is really good for checking the significance level in the model and also gives separate results for the analysis, the table gives us T-test values, beta coefficients, p values, and standard errors. Here in this model, the t values are 3.563, 16.547, -0.380, and 1.253, we can compare them by critical values at 5% critical value is 1.96. Beta 1 of the Competitive differentiation variable is .119, therefore; if Competitive differentiation has an increment by 1% then change in supply chain risk management is predicted to have an increase by 11%. Beta 2 of the Risk exposure variable is .850, therefore; if Risk exposure has an increment by 1% then a change in supply chain risk management is predicted to increase by 85%.

Beta 3 of the environmental risk of variable is $-.005$, therefore; if the environmental risk has an increment by 1% then change in supply chain risk management is predicted to have a decrease by 0.5%. Table 7 is talking about hypotheses testing there are three proposed hypotheses in this research, and three independent variables which are affecting on one dependent variable Supply chain risk management, by considering the regression analysis results the p-value of H1 is 0.00 and it is below than 0.05 hence Competitive Differentiation and Management has positively significant with Supply chain risk management (Pfohl et al., 2010; Afraz et al., 2021; Shou et al., 2022). For H2, the p-value is 0.000 and it is also below 0.05, Risk exposure of supply chain and management is also positively significant with Supply chain risk management (Baz & Ruel, 2021; Steinbach, 2021; Ghadge et al., 2022). For H3, the p-value is 0.704 which is above 0.05, Environmental risk is no positively significant in Supply chain risk management. Hence H3 is rejected and its null hypothesis is accepted (Parast & Subramanian, 2021; Gurtu & Johny, 2021; Settembre et al., 2021).

5. CONCLUSIONS

The research study took place on the factors that drive the success of supply chain risk management in relationship to the cargo transportation companies in Germany. The study brought out to have all major companies in this case study with all their levels of employees from the strategic to implementation roles took part and it has concluded that the cargo companies earlier were established in Germany with later expansion internationally, having both genders of employees, have been working in this particular sector for over two decades and so. The companies working on supply chain management with effective management systems internationally have been around for five years and so old. The managers of the companies are well trained on the modern trends and adopted in supply chain management with frequent capacity building opportunities. The said companies see risk management as a pivotal factor in supply chain management. Their managers are raised with awareness of it regularly. Hence the top-level management in the companies stands responsible for coping with them and therefore they find it a traditionally handled factor with higher success. It is further concluded that the senior management is seen as involved in the management of risk factors the companies seem involved in social interest groups. All the business activities are implemented under the code of conduct such as SA 8000. Most of the participating companies seemed to have social and third-party audits and they offered incentives for suppliers who had socially responsible conduct. A strong cooperation mechanism for supply chain management was carried out with the business partners and they had policies for taking action if any social misconduct was ever reported. It also concludes that the companies had their senior management responsible for dealing with the management of the environmental risks and they had coordination with environmental interest groups. In a nutshell, most of the cargo transportation companies in Germany seemed to have an effective supply chain risk management system in place with their special focuses on environmental, social, and legal compliance on products cycling in the market under the supervision of their senior management. The management of the companies looked to have significance on the capacity development of their respective employees over the phenomenon at offer for coping with risks factors at

a place in smooth management of the supply chain.

RECOMMENDATIONS

Distinguished risk factors in supply chain management based on more ground realities may be outlined for future research. Political and religious-based factors may also be considered risk factors in supply chain management. All the companies in Germany may take legal compliance as their major practice in dealing with risk factors. Social media-based gathered information on the markets may play a pivotal role in reducing the risk factors in the management of the supply chain. To deal with the latest trends that can actually multiple risks may be dealt with more frequent capacity building opportunities for the management in the companies. The unbroken and consistent coordination mechanisms with the stakeholders at all levels may be ensured in an effort to reduce risk factors in supply chain management.

DECLARATION OF INTEREST

It is declared that authors of this research work have no competing interest.

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