

The Importance Of The Virtual Supply Chain In Facilitating Short Term Business Collaborations

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Abstract

Using a virtual supply chain, a corporation can streamline its operational administration by connecting electronic supply chains together in a network. Using high-tech facilities rather than relying on the cumbersome physical supply chain network is a viable option for any company in today's digital world providing technical support, from data and resource management to logistics management. In modern business, virtual supply chain management is a huge advantage, but there are challenges too. E-supply chain management, also known as virtual supply chain management, has numerous benefits for business operations. On the other hand, technical glitches can slow down operation, which can have an impact on the company's efficiency and reputation. Supply chain management provides an organised, basic structure for important business operations for a company producing goods or services. Manufacturing, packaging, shipping, and reselling the company's products are the primary functions of the company's operational activities. To keep track of the strategic operational management plan, these activities are managed according to a variety of theories. This study's methodology difficulties were largely caused by the data collection strategy, which relied primarily on quantitative methods while ignoring the potential benefits of qualitative approaches. This study explores some of the challenges faced by organisations leveraging on virtual supply chain network and management systems.

1.1 Background of the study

The complexity of managing supply chains has risen because of increasing commerce and economic activity on a global scale. Its architecture has evolved over time from such a two-way, hierarchical model to one that is more flexible, networked, and virtual. Along with this, supply chain administration has evolved from a hierarchical, price-driven framework to a more distributed, cross-corporate collaboration one. As a result of these

developments, interorganizational interactions have also changed from being contractual and hostile to ones of collaboration and alliance. Social and technological concerns such as cross-enterprise process integration as well as visibility into the supply chain and logistics are at the root of all these developments.

A greater focus is being placed on virtual supply chain as an interconnected network, extended enterprise, and virtual organization. Short-term business

collaboration is conceptualized and analyzed using a socio-technical methodology. In the context of a virtual supply chain, visibility and information sharing are crucial criteria for virtual network cooperation. If merchandise, activities, and flow of information are accessible in the virtual supply chain, which serves as a crucial component in real-time cooperation, virtual supply chain members may cooperate to address issues of potential interruptions and boost operational efficiency. For decision-making and optimization, visibility in virtual supply chain processes including order fulfilment, inventories, and transportation, is essential.

1.2 Problem statement

Businesses that use virtual supply chain management rely on constant, reliable transmission of information from all supply chain participants, which is dependent on internet availability. It is possible to mitigate certain concerns using off-site backup power and cloud data storage. However, any prolonged power outages or network unavailability may lead to severe supply chain interruption. Virtual storage and automation also ensures that, in the case of a persistent power or network outage, the information remains unreachable by any means. The present e-supply chain management of suppliers and distributors may be more useful for short-term business collaborations that do not control much of the supply chain. The fact that many businesses are customers of other businesses means that business collaboration can access their supply chain system directly or indirectly, avoiding the need to invest in technological infrastructure while still benefiting from a short-term business collaboration company's

reliance on virtual supply chain management.

1.3 Hypotheses

H1: There is a significant impact of Virtual supply chain in facilitating short-term business collaboration.

H2: There is no significant impact of Virtual supply chain while facilitating short-term business collaboration.

H3: There is significant impact on Virtual supply chain, technology on business collaboration.

H4: There is a significant impact of Technology on virtual supply chain.

1.4 Literature Review

1.4.1 Prior studies on virtual supply chain

The process of fostering innovations in all the sectors for any operational goals globally has significantly affected the collaborative missions of the corporate bodies for short term as well as long-term goals (Hillier et al., 2019). Collaborations bring many new things in respect to the growth and development of both the organizations and in this support, the internet connectivity helps through cloud based or ERP systems. The virtual supply chain management has also transformed the existing strategies of startups to scale, improve the quality of the product or create market impacts adding the key element of transparency, quiver services and high potential of returns on investment. By the means of collaboration, the companies tend to work correspondingly on the distinctive yet cooperative goals of sustainability and customer satisfaction. To fulfill this purpose, the mechanism of virtual supply chain management organizes a systematic way to customize productivity to ensure customer satisfaction. The business

collaborations are often with the objectives of competitive advancement and meeting the demands of the consumers in the higher ratio than usual or existing status of the company. The virtual supply chain supports the companies to get through the feedback and the analysis of measurable data that further helps the company to plan as well as foresee the futuristic reports ahead (Yousef, Salah and Makram, 2020).

1.4.2 Virtual supply chain

Borissova et al., (2020) opines that Virtual supply chain is an electronically organized supply chain network that facilitates IT controlling systems in the operational management of an organization. In the modern era of internet, where every complex functionalities of an organization has been technically supported from the data and resource management to the logistics handling, the supply chain management, the integral aspect of any company can be strengthened by the highly tech facilities to avoid the complex mechanism of the physical supply chain network (Shcherbakov et al., 2021). Virtual supply chain management is a term for the integrated operation chain managed by a computerized mechanism to unite the disintegrated system of supply chain management. The technology enables the key operations of the company to function with modified facilities of ICT so that the pace involvement of the functions must replace the traditional method which was obvious for risks and errors. In the implementation of virtual supply chain management, the addition of more new members as well as successful removal of extras can be done efficiently.

This paper discusses the significant role

played by virtual supply chains for the business collaborations for the short term. As the flexibility of the tasks in the operational goals are maintained in this method, it enhances to adapt any major or minor change in the organizational environment benefiting less wastage of time resources (Abideen et al., 2021). The operational activities of the company like logistics, storage, sourcing and return risk management asks for efficiency as well as transparency for any client, investor or a customer to gain reliability in the market. This reliability comes with the opportunities like enhanced productivity, funds for the company and decent deadline stock maintenance (Rajapakshe et al., 2019).

The tools of VSC like cloud based support systems and other softwares come as a solution for both the customers and company for engagement as well as accomplishment of the desirable data. Short-term business collaborations influence the profit making of the companies by adequately evaluating the activities with the aim to achieve successful experiences of continuous financial growth and development. Various researchers believed that collaborative business could be facilitated by the enhanced performance of the business organizations that support them to attain a sustainable position in the complex business environment. With the help of VSC's solutions, such as cloud-based support systems and other technologies, both customers and the firm can get involved and get the desired data (Borissova et al., 2020).

It attracts the financial stability goals of a firm, which means a large number of investors, thanks to the improved

efficiency. In addition, e-supply chain management stops the management from being on the list of problems and making necessary modifications. When data analysis in a virtual supply chain system becomes more flexible, improved business analytics and intelligence can be gained by the organisation, allowing it to get mostly valid estimated results and invest or plan accordingly. This ensures that the company's productivity and distribution mechanisms continue to grow at a rapid pace, which has a direct impact on its revenue. A virtual supply chain means that the company's financial stability and ability to satisfy budgetary targets can be easily achieved (Abideen et al., 2021).

The online service has a few downsides, but the benefits it offers far outweigh them. These features include real-time inventory information, single data entry to reduce the possibility of human error (due to the fact that customers are in charge of data input, which means it does not need to be re-entered), real-time online shopping, and multi-level password protection. To be as efficient as possible, the VSC must use a real-time supply chain information system that will enhance communication throughout the supply chain. Establishing and sustaining positive connections with the other members of a VSC is the aspect of the process that presents the greatest challenge.

To manage the VSC effectively, it is necessary to determine the key performance indicators that will indicate whether the management of relationships and networking will be successful. It is necessary to create an adequate information system making use of a variety of

information and communication technologies in order to fulfil the requirements of VSC (Abideen et al., 2021). It is essential to the success of the VSC to improve communication along the supply chain through the implementation of a real-time logistics information system. Establishing and sustaining positive connections with the other members of a VSC is the aspect of the process that presents the greatest challenge. The process of determining the most critical performance metrics for relationship management and networking is an essential component of VSC management. Because the success of the VSC is based on the performance of the communication system, an appropriate information system that makes use of a variety of information and communication technologies needs to be built for it (Hillier et al., 2019).

Automating the steps in the logistics chain is essential to ensuring that VSC is successful. The use of an electronic payment system helps to foster trust in the VSC as well as the transparent integration of a large number of businesses working together at various points along the supply chain. Customers have a better sense of safety when utilising the service because LINE offers an online payment option and the opportunity to monitor the development of their orders. The LINE module, which includes foreign exchange services, is also connected into the supply chain, and financial settlement is a part of this integration (including credit financing). This is made possible through a collaboration with one of the leading global providers of online payment services. By utilising LINE, sellers have access to a comprehensive selection of logistics providers, inspection agencies, banking

institutions, and freight insurance options (Hillier et al., 2019).

For both the VSC to be as effective as possible, a real-time supply chain information system must be used to enhance communication throughout the supply chain. Establishing and sustaining positive connections with the other members of a VSC is the aspect of the process that presents the greatest challenge. The process of determining the most critical performance metrics for relationship management and networking is an essential component of VSC management. To meet the objectives of VSC, it is important to develop a proper information system that makes use of a multitude of communication and information technology (Borissova et al., 2020).

During operations aimed at improving the supply chain, the primary objectives are to cut down on waste, minimise the amount of time between placing an order and receiving it, and improve product quality. Integration, information sharing, and collaboration both within and between businesses are necessary to accomplish these aims. The business that maintains the strongest ties to its clientele will eventually emerge as the market leader and assume control of the supply chain. This enterprise will be known as the channel master. A survey of the current literature was conducted, a theoretical foundation for VSC was built, and the consequences of VSC were studied, according to the conclusions of this research article (Yousef, Salah and Makram, 2020).

1.4.3 Virtual supply chains are essential for fostering short-term commercial partnerships

In the terms of collaboration by two or more corporate bodies, the span of the collaboration can be categorized in either short terms or long term as per required objectives to be fulfilled by all the organizations involved (Chen et al., 2022). The collaboration in these companies like pharma-based companies are structured with the networks of other medical companies, hospitals, doctors and other professionals. In this complex mechanism, the supply chain has to be managed faster than the demands to sustain and break the competition barriers. The virtual supply chain works for this vision of the organizations with the technical enablement of connectivity and easy authoritative goals. Mostly the key point behind the short-term alliance of the business is identification of the suitable business culture, fast operational task, promotional strategy optimization that may influence the creation of values (Sandén et al., 2021). The tools that act responsible for the achievement of these purposes are the cloud-based systems, decision support system and such other compatible tools. The objectives of implementation of these useful tools are to support a transparent framework with control system enablement that helps in quick and better decision making for the organization (Borissova et al., 2020).

This way, it ultimately affects the benefits of the turnover of the company. For the underperforming companies that tend to collaborate with the good companies for the goodwill and better tasks management, the slow process flaws are recovered with the tech enablement with the suitable tools for the organizations. E-supply chain management in managed with efficiency

must provide timely accessibility of data for the team to measure, record and manage the same. Supply chain management in respect to the traditional methods was indeed an efficient system for business operational practices but in terms of digital supply chain, it gets more transparent and convenient to handle the tasks with diligence. With the improved efficiency, it attracts the financial stability goals of a company that means a number of investors. E-supply chain management also prevents the management to get on the list of flaws and make changes where certainly needed. As the data analysis becomes more flexible in the virtual supply chain system, it enables betterment in business analytics and intelligence for the company to gain mostly valid estimated results and invest or plan accordingly. This ensures a pace development in the productivity and distribution mechanism of the company influencing its turnover. With the financial stability of the company in terms of virtual supply chain, it is obvious for the company to achieve the goals of reduced expenditure or meet budgetary goals (Abideen et al., 2021).

1.4.4 Technology in virtual supply chain management

While virtual supply chain management has many benefits for the contemporary corporate environment, in some circumstances it can also provide challenges for supply chain management. The primary goal of e-supply chain management, also known as virtual supply chain management, is to speed up business operations for firms. However, even a minor server flaw could temporarily impede overall duties, slowing down both rapid operations and the reputation of the

company. Network being the important element of the internet enabled supply chain is responsible for the data transmission from the hub to other systems for monitoring and recording. In this context, it can be considered that for any reason, if the network reliability hampers, this means a pause or interruption in the connectivity or the accessibility of the data. The internet connections such as wireless fidelity of the server can also be an obstacle if a weaker connectivity added for the same. This may certainly restrict the systematic working of the software, which may delay the data accessibility. As the technology has come with certain drawbacks with the beneficiaries it provides, cybercrime, one of the parent problems the tech supports, is also a threat to virtual supply chain management. As the matter of fact is hardly predictable or avoided, such supply chain management can become a weakness for the organization. Apart from the tech field threats, the investment on installation of such technologies is another factor of drawback to note. (Borissova et al., 2020).

This is especially for the local companies that are not much secure with the funds and investors for it. As the technology needs efficiency to operate, it calls for experienced tech professionals for the effectiveness in tech supported supply chain management. Nevertheless, for the short-term collaboration of any business, hiring such professionals for such a short period can be a vague input. While in some cases, it can be challenging for the management team when even the virtual supply chain management can provide them almost a negligible outcome. A virtual supply chain is a data visualisation of an organizations financial supply chain network. Manufacturing plants,

warehouses, and other supply chain nodes like clients, suppliers, and third-party warehouse operators are included in this. Similar to a virtual model of an entrepreneur's plan, a VSC provides supply chain planners with a comprehensive perspective of operations and allows them to zoom in on certain areas of interest. This study aims to analyse the evaluation, role and advantages of virtual supply chain (Abideen et al., 2021).

It was in the 1980s when personal computers started proliferating, and this led to the creation of computerised departments in the workplace. In the 1990s, it became clear that departments needed to break down their silos in order to communicate with one another. Eventually, this led to the development of intra-corporate ERP systems. There is a growing demand for a more wide inter-company connectivity for the company's supply chain functions. Thus, the Virtual Supply Chain has been developed (Chern and Ahmad, 2020). Companies in the supply chain will be able to operate more like departments inside a single organisation for the VSC. It also helps to reduce inefficiencies and prevent surprises by enhancing planning functions. The VSC will have a single, up-to-the-minute version of reality available to all its members. This results in better collaboration and communication amongst the teams. These customer-centric paradigms have led to the need for an enabler for firms to be able to meet the demands of these new customer-centric models. Eventually, the VSC will serve as the extended enterprise's digital nervous system (Matsuda et al., 2020). As time goes on, it will encompass numerous IOT devices, drones, and AI systems that will get feedback and send forward signals.

Systems powered by artificial intelligence will be able to monitor current happenings in the area, as well as incorporate real-time traffic and weather information to provide decision makers new possibilities (Yousef, Salah and Makram, 2020).

A virtual supply chain is a network of suppliers, manufacturers, distributors, and warehousing that is supposed to be flexible, complicated, and fast (Omar et al., 2021). Reduced time to market is another benefit of the virtual chain. Short production cycles, on-time delivery, and just-in-time inventory all work together to expedite production as soon as the first pieces of information are made accessible at the beginning of the supply chain. As a result, the supply chain benefits from decreased inventory levels. An integrated virtual supply chain is essential to maximising profitability, reducing expenses, and providing the best possible customer experience. Electronic data exchange is at the core of the virtual supply chain's operation (Matsuda et al., 2020). Manufacturers need to know as much about their customers as possible in order to adapt quickly to market shifts. Marketing and supply chain teams should collaborate closely to ensure that CRM data is immediately transformed into SCM data (Abideen et al., 2021).

While non-profit organizations have long ago realized the importance of collaboration with other organizations to achieve their future goals and objectives, profitable organizations have started noticing the advantage of collaboration with other organizations as it has helped many profitable organizations to increase their net worth, sales, and revenue generation. The virtual supply chain offers

a lot of benefits for organizations that have formed a partnership with each other to avail maximum benefits from this partnership, such as improving their net worth and revenue generation. Hence, it is important for organizations having virtual supply chain networks to form and establish a strong partnership with each other (Borissova et al., 2020).

This is defined as a particular sum that is bigger than the sum of an individual part. Thus, organizations that have developed and formed a partnership with each other by sharing their virtual supply chain networks would be able to understand different strengths and weaknesses in their virtual supply chain network (Yang et al., 2020). This would provide them with the opportunity to combine or integrate both of their supply chains, which would aid them in not only eliminating different weaknesses in their supply chains individually, but also, would also aid them in making their business operations and processes more improved and optimized in the process (Borissova et al., 2020).

By sharing different components of their virtual supply chain with each other, organizations that have formed a partnership with each other would be able to not only understand their business operations and functions at different levels of their supply chain but would also aid them in being more resourceful in eliminating each of their weaknesses in their businesses that have been diagrammatically described in their virtual supply chain networks (Salvini et al., 2020).

Theory of constraints works as a conceptual model that derives the fact that how decision making influences the systematic

profitability of the business (Melendez et al., 2018). The main elements that construct this theory are the variables of the business that significantly reflects in the decision-making and further in the profit making of the business. The theory explains that the constraints of the business operations can be a factor of slow step towards development. However, not neglecting the weak points, rather lowering the operational management in order to improve and get steady development can be a solution. In order to meet the needs of ever changing demands of the market, the theory of Time-Based Competition helps to evaluate the process of operations to be done within deadline. As this theory prevents the business from wasting time, it supports meeting demands of higher productivity as well as a determined benchmark of the company even in the shorter terms of time (Baah, 2019). Time being resources of competitive advantages as well even supports the company to sustain in the updated trends and market rate and position itself among leading companies globally. This theory asks for experienced human resources and fast technology as a factor for time efficiency to successfully execute all the operations on time.

1.5 Theoretical Framework

1.5.1 Systematic resource management theory of supply chain

Theories that explain the manufacturing system are in terms of systematic resource management and profitability, the proven theories and models compute a well-settled mechanism to maintain the swift run of business operations from manufacturing sector to transportations as well as delivery (Swanson, et al., 2018). These theories

mainly enable the team to grasp the concepts of the supply chain based on certain principles for them to figure out the strategic implementation of the tools and tactics to maintain the settled input-output system. This theory also helps the management team to handle the problems in the course of vital steps to be taken for the sake of better operations in the company. As with any supply chain model related to production creations and logistics, the theory supports the team in order to make assumptions based on those to estimate the total budget and expenditure.

This theory of supply chain management sets the principles of checking out if the production of goods has been done as per strategies and requirements. This theory guides the business operation management to be done as per relevant procedures in accordance to the requirement of the client or consumer. In simple words this theory fulfills the matter of inquiry whether the process of business operations are well organized enough to satisfy market needs. Under this theory, the role of the management towards monitoring the operational strategies includes the analysis of the sourcing quality raw material, monitoring the ethical packaging of goods as well as processing of order timely. Other than this, the evaluation of the operational management supports positive changes

where required for further development (Yousef, Salah and Makram, 2020). Thus, a partnership between two different organizations is said to be successful, when they collaborate with each other to achieve their common goals and objectives, which aids them in achieving their individual goals and objectives in the process. In this way, the collaboration between two organizations has been explained by the grounded theory of collaboration between two organizations.

As per this theory, buying behavior majorly depends on the practice of well-organized customer relationship management (Sota et al., 2018). A healthy relationship with the buyer prevents him from choosing other brands unless there are loopholes in quality, price or other factors, to break loyalty from a selective brand. This theory focuses on the psychological factor of the buying aspect of a customer as a human tendency to buy where he is emotionally connected from or can trust. The well to do customer relationship management asks for feedback from the customer about experience, improvements or uniqueness of the products or service (Yousof, Salah and Makram, 2020).

1.6 Conceptual framework

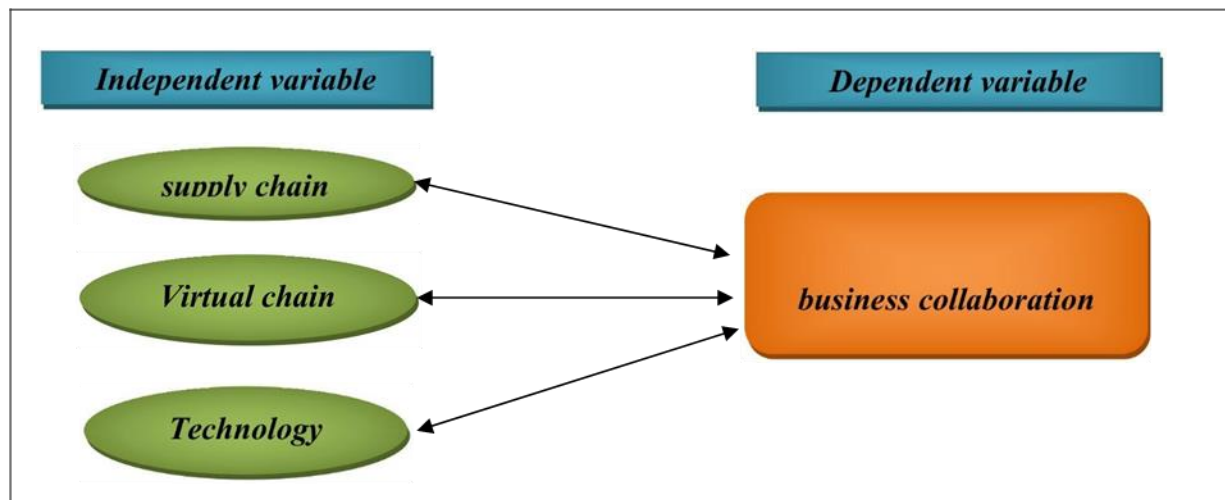


Diagram 1: Conceptual framework (Source: Self-created)

In the conceptual framework, the importance of virtual supply chain is seen to facilitate the short-term business collaboration. The independent variables comprise of enhancement of planning function, single version of truth in real time and proper decision making on the dependent variable, short-term business collaboration.

1.7 Methodology

1.7.1 Setting of study

For the purpose of this study, Shanghai was chosen as the research location because it is home to the majority of the country's financial and organisational institutions. Almost all of China's multinational financial institutions have a presence in Shanghai and its surrounding areas. This makes the city the ideal location for doing the research.

1.7.2 Population

For the purposes of a study, the phrase "population" refers to the complete community or group of people who share

the specific traits and characteristics being investigated (Sharma, 2019). People who are expected to be a part of the study's research population are, as previously said, another focus of attention. All multinational companies in the city of Shanghai are included in the study's population of respondents and those featured in the study's findings. This study's demographic was selected because of the recent increase in the use of information technology in this area.

1.7.3 Sampling

Samples are taken from a smaller group of people who can be easily attained by the researcher in order to serve as representative samples of the complete community (Sharma, 2019). A non-probability convenient sampling strategy was used in this study, where the author was able to quickly and easily allocate and administer the study to its participants without incurring significant costs or time in the process to achieve its goals and objectives.

1.7.4 Criteria for Sampling

According to the sampling requirements, respondents must be working in a bank or another financial institution in Shanghai right now and be willing to participate in the survey. It is also necessary for the financial institution to be utilising technology in at least some of its divisions. The third requirement is that the employees chosen as respondents be involved either directly or indirectly in the bank's communication and information technologies..

1.7.5 Sample Size

On the website listed below, a sample size calculation is made using the projected study population of 200 Shanghai workers and a power of 80%.

1.7.6 Instrument

It is equally important for the researcher to choose the best method for gathering data while conducting this kind of quantitative research, which can involve using tools like surveys and interviews. The researchers have chosen to employ a survey questionnaire to get the data needed from the participants for this investigation. There are two components to the research questionnaire. The first section collects demographic data from the respondents, such as age, employment history, and sexuality; the second section contains locations used to begin assessing both dependent and independent variables, which are observed using five-point Likert scale questions.

1.7.7 Reliability

Methodological validity is assessed using the Chronbach's alpha approach with an alpha of 70 percent. Components with an

alpha value greater than 0.70% are thought to have internal reliability and are thus used. In addition hand, the validity of the study's findings depends on using the right software and research tools to perform a quantitative investigation and display the results in an understandable way.

1.7.8 Preliminary Work

Any research involving the development of a brand-new survey questionnaire that has never tested previously requires a preliminary or pilot study. For a pilot study to be considered a successful one, the research instrument must be tested for its internal consistency (Gadziski, 2018). Pilot studies are used in research to test the research instrument for defects and gaps that may exist in it in order to lower the cost of data collecting. It is too expensive to go back and fix errors found in large-scale datasets, so it's best to start with a smaller sample size to see if any issues arise. As a result, in this research, a preliminary investigation was done using the same questionnaire questions. The researchers used Chronbach's alpha methodology to assess the reliability of the data acquired from 30 participants, and they obtained an alpha value of 80.5%, which is much higher than the needed value of 70.0% for a trustworthy data collection tool or questionnaire.

1.8 Data Collection

Chronbach's alpha was used by the researchers to assess the data's reliability; they found that it had an alpha value of 80.5%, which is significantly higher than the required value of 70.0% for a trustworthy data collection instrument or questionnaire. By analysing and drawing meaningful conclusions from data collected

from respondents, Islam (2020) argues that data analysis has achieved its goals. Microsoft Excel and the Statistical Package for Social Science (SPSS) were used to analyse the information gleaned from the survey and the participants. To explore how

technology affects corporate management, several methodologies were utilised, including demographic data analysis, descriptive statistical, correlation coefficient, and regression analysis.

1.9 Analysis

Chronbach's Alpha Method for Reliability Analysis

	Name of Variables	Item Number from Questionnaire	Chronbach's Alpha Value
1	Virtual Supply Chain	5	0.815
2	Business Collaboration	5	0.991
3	Technology	5	0.817
4	Short term collaboration	5	0.811

The findings from the reliability summative assessment on the items used for each parameter and the total amount of responses from participants are shown in the table above. Based on the use of five things, this alpha value was discovered to have the dependability of Chronbach's alpha for imaging technology of 0.815, which is significantly closer to 1 and over the 70% value for trustworthy items. Chronbach's alpha, which is based on the utilisation of 5 items, has likewise been found to be 0.991 reliable for reporting technology.

Data Analysis through Correlation

The accomplishment of the Correlation

research acts as the contents of assessing the direction and significance of the direct link that exists between two separate variables in a study. This is done by comparing the results of the two parameters. It accepts that two variables interact in such a way that a modification in one causes a change in the other. Correlation analysis can be completed using both Excel Spreadsheet and SPSS, and the results are analyzed using the level of significance, which should be less than 0.05 to indicate a true connection between the two elements. The amplitude and direction of the relationship are both reflected in the Pearson coefficient B component. Positive Pearson connection coefficients show that the two components are travelling in the same direction, whereas

negative Pearson connection coefficients show that they are going in the opposite direction. When the Pearson correlation coefficient is close to zero, it indicates a

weak link in magnitude, and when it is close to one, it demonstrates a strong link in degree.

Correlation between supply chain and collaboration

		SlumValue	Dwelling Characteristics
Supplychain	PearsonCorrelation	1	-.461**
	Sig.(2-tailed)		<.001
	Sum of Squares and Cross-products	119.680	-71.920
	Covariance	.601	-.361
	N	200	200
BusinessCorrelation	PearsonCorrelation	-.461**	1
	Sig.(2-tailed)	<.001	
	Sum of Squares and Cross-products	-71.920	203.355
	Covariance	-.361	1.022
	N	200	200
**. At the 0.01 level, correlation is significant (2-tailed).			

Short term and technology

		Accounting Technology	Organizational Management
Short term	Pearson Correlation	1	.817**
	Sig. (2-tailed)		.000
	N	200	200
Technology	PearsonCorrelation	.817**	1
	Sig. (2-tailed)	.000	
	N	200	200

**. The significance level for the correlation is 0.01 (2-tailed).

Technology and Collaboration

Correlations

		Reporting Technology	Organizational Management
Technology	Pearson Correlation	1	.714**
	Sig. (2-tailed)		.000
	N	200	200
Technological managemenr	Pearson Correlation	.714**	1
	Sig. (2-tailed)	.000	
	N	200	200

**. At the 0.01 level, correlation is significant (2-tailed).

Correlating Virtual Technology and Productivity

		Communication Technology	Organizational Management
Technology	Pearson Correlation	1	.912**
	Sig. (2-tailed)		.000
	N	200	200
Collaboration Management	Pearson Correlation	.912**	1
	Sig. (2-tailed)	.000	
	N	237	237

**. The 0.01 level of significance for correlation (2-tailed).

From the above table, it has been observed that the virtual supply chain supports connecting various business entities for performing a specific task with the aim to

achieve common values, goals, and activities. Here, the members are allowed to actively participate in other activities or activate new activities, which can, however,

have the potential to disrupt cooperation and coordination in the management of the virtual supply chain. It has evolved by the information and communication technologies it supports the firms in implementing quick information exchange that enhances the quality of temporariness, intensive use of technologies, client-oriented, geographical dispersions, as well as an organizational structure to ensure the progress of the firms. Considering the topic of discussion, it has been noted that various researchers believed that the virtual supply chain encourages digitalization in the business organization by implementing new innovative technological devices. It significantly supports the supply chain management of the company to transform into a virtually integrated simple communication space. The researchers believed that the virtual supply chain maintains the transparency as well as

collaborations in the supply chain operations that motivate the companies to develop adequate strategies considering the technological development for achieving success. Internet of technology, web-based system, strategic alliances, a system for evaluating the process, as well as supply chain visibility is considered some of the success factors of the virtual supply chain. Various researchers acknowledged that the virtual supply chain has seen rapid growth in the competitive business environment that supports them to increase their capabilities by sharing adequate and effective knowledge and information among the supply chain members. It helps in developing strategic values by providing wide affordability as well as availability for storing the relevant data and information considering the overall performance of the company.

Regression Analysis

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.141	.181		17.355	<.001
	BusinessCollaboration	-.300	.046	-.391	-6.507	<.001
	Technology	-.179	.035	-.316	-5.127	<.001
	Short-term	.044	.031	.087	1.450	.149
a. Dependent Variable: Virtual Supply chain						

The regression analysis reflect there is a positive relation between virtual supply chain and short-term technology as significance level 0.44. Therefore, from the above discussion, it can be said that a virtual supply

chain helps the business organization to survive in the competitive business environment by implementing new innovative ways for creating as well as adding value for the company. It is essential to effectively

manage the virtual supply chain intending to determine the success of networking as well as relationship management.

Technology and Collaboration

		Reporting Technology	Organizational Management
Technology	Pearson Correlation	1	.714**
	Sig. (2-tailed)		.000
	N	200	200
Technological management	Pearson Correlation	.714**	1
	Sig. (2-tailed)	.000	
	N	200	200

**. At the 0.01 level, correlation is significant (2-tailed).

Correlating Virtual Technology and Productivity

		Communication Technology	Organizational Management
Technology	Pearson Correlation	1	.912**
	Sig. (2-tailed)		.000
	N	200	200
Collaboration Management	Pearson Correlation	.912**	1
	Sig. (2-tailed)	.000	
	N	237	237

**. At the threshold of 0.01, correlation is significant (2-tailed).

From the above table, it has been observed that the virtual supply chain supports

connecting various business entities for performing a specific task with the aim to

achieve common values, goals, and activities. Here, the members are allowed to actively participate in other activities or activate new activities which can, however, have the potential to disrupt cooperation and coordination in the management of the virtual supply chain. It has been evolved by the information and communication technologies it supports the firms in implementing quick information exchange that enhances the quality of temporariness, intensive use of technologies, client-oriented, geographical dispersions, as well as an organizational structure to ensure the progress of the firms. Considering the topic of discussion, it has been noted that various researchers believed that the virtual supply chain encourages digitalization in the business organization by implementing new innovative technological devices.

It significantly supports the supply chain management of the company to transform into a virtually integrated simple

communication space. The researchers believed that the virtual supply chain maintains the transparency as well as collaborations in the supply chain operations that motivate the companies to develop adequate strategies considering the technological development for achieving success. Internet of technology, web-based system, strategic alliances, a system for evaluating the process, as well as supply chain visibility is considered some of the success factors of the virtual supply chain. Various researchers acknowledged that the virtual supply chain has seen rapid growth in the competitive business environment that supports them to increase their capabilities by sharing adequate and effective knowledge and information among the supply chain members. It helps in developing strategic values by providing wide affordability as well as availability for storing the relevant data and information considering the overall performance of the company.

Regression Analysis

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.141	.181		17.35	<.001

					5	
	BusinessCollabo ration	- .30 0	.04 6	-.391	- 6 .5 0 7	< .0 0 1
	Technology	- .17 9	.03 5	-.316	- 5 .1 2 7	< .0 0 1
	Short-term	.04 4	.03 1	.087	1 .4 5 0	. 1 4 9
a. Dependent Variable: Virtual Supply chain						

The regression analysis reflect there is a positive relation between virtual supply chain and short term technology as significance level 0.44. Therefore, from the above discussion, it can be said that a virtual supply chain helps the business organization to survive in the competitive business environment by implementing new innovative ways for creating as well as adding value for the company. It is essential to effectively manage the virtual supply chain intending to determine the success of networking as well as relationship management.

2.0 Conclusion

Concerning the topic of discussion, certain researchers hold the perception that the re-designing of the business strategies as well as models. This will significantly support the business to effectively collaborate intending to achieve the sustainable goals

for the growth and development of the business organization in the rapidly changing business environment. Effective leaders and managers in the business organization can further facilitate short-term business collaborations that aim to lead the employees from top to down intending to ensure cooperation as well as coordination among them. Connecting the various departments of the companies will also help to facilitate short-term business collaborations by encouraging visibility of the activities performed by the directors, managers, stakeholders, as well as employees of the companies.

The researchers believed that the short-term business collaborations ensure their enhanced productivity that helps in influencing the attitude, beliefs, and perceptions of their existing as well as potential customers. Trust in partnership also supports the facilitation of short-term

collaborative business that intends in dealing with the shortcomings and insufficiencies of the business organization with the aim to achieve success in the complex business environment. However, they also believed that this has the potential to increase the complexity as well as

challenges for the business organization that can significantly disrupt their progress in intending to achieve success in the business climate. It can further restrict the companies from working on the challenges and barriers and developing efficient tools for ensuring the success of the companies.

S N	Hypothesis Tested	Test Results Obtained
1	<p>H1: There is a significant impact of Virtual supply chain in facilitating short term business collaboration.</p> <p>The impact of virtual technologies and collaboration was studied using a regression analysis. At a significance level of 0.014 and a B value of 0.005, the analysis finds no significant cause and effect link between the two variables.</p>	<p>It signifies that the first hypothesis, based on data analysis and results, is not accepted.</p>
	<p>H2: There is no significant impact of Virtual supply chain while facilitating short term business collaboration.</p> <p>A regression study was performed to determine the impact of supply chain technology on collaboration ease. At a significance level of 0.014 and a B value of -0.007, the study discovers no correlation between the two variables that would indicate a cause and effect link.</p>	<p>It denotes rejection of the second hypothesis, which was supported by data analysis and findings.</p>

3	<p>H3: There is significant impact on Virtual supply chain, technology on business collaboration.</p> <p>A regression analysis of the influence of virtual supply chain on the ease of short-term business collaboration was performed. The study finds a significant cause and effect relationship between the two variables at a significance level of 0.01, with a B value of 0.87.</p>	It means that, in light of the data analysis and findings, the third hypothesis has been accepted.
4	<p>H4: There is a significant impact of Technology on virtual supply chain.</p> <p>A regression study was performed to examine the impact of technology, supply chain, and teamwork. At a significance level of 0.1 and a B value of -0.005, the investigation reveals no significant cause and effect relationship between the two variables.</p>	It means that the fourth hypothesis, based on data analysis and results, is not accepted.

Combining or integrating supply chain models with the help of virtual supply chain models would help both organizations under collaboration with each other to be more responsive and ready toward the needs and desires of customers. This can be done by creating efficient operation processes and optimizing responses to disruptions in their integrated supply chain management process. Thus, the collaboration of supply chain models with the help of virtual supply chain networks would aid these organizations to minimize their deficiencies in their supply chain management processes so that they are more ready and responsive to the needs and demands of their customers. Combining different components of supply chain models with each other with the help of a virtual supply chain model network would

aid both of these organizations to improve the orchestration process of their supply chain management process.

This is because real-time data and information would be shared effectively between them and thus, a collaboration between these organizations that have collaborated with each other by combining both of their supply chain models would be more strong and effective in the process. Bullwhip effect across the supply chains of their integrated supply chain network would also decrease and thus, they would be able to perform their business operations and processes with better efficiency and effectiveness. This would aid both of these organizations to earn more revenue and profits as their supply chain management process has become more

effective by combining both of their supply chain models with the help of virtual supply chain networks. These are some of the benefits of organizations collaborating with each other by utilizing the virtual supply chain networks and integrating both of their supply chains in an effective and efficient way.

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