

Examining the impact of E-Supply Chain on Service Quality and Customer Satisfaction: A Case Study

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Abstract

Purpose

The purposes of this study are to introduce the concept of Service Quality (SQ) in E-Supply Chain Management (E-SCM) and its impact on increasing Customer Satisfaction (CS) and provide insightful enhancements to the literature. In addition, the paper also examines the influence of SQ of E-SCM on CS in online shopping.

Design/Methodology/Approach

After a comprehensive literature review, four key factors for measuring the E-Supply Chain (Process Control, Interaction with Supplier, Management Support, and Focus on Customers), four key factors for measuring CS (Informing Customers, Attention to Customers' Needs, Staff Performance Accuracy, and Easy Access to Services), and four factors for measuring the quality of identification services (Assurance, Accountability, Tangibility and Reliability) were selected. The proposed conceptual model was then presented. This model was validated by data collected through a survey of 150 respondents in order to identify CS, including that of customers of online websites in Iran. The sample data was analyzed using SPSS21, after which the interrelationships between the model and factors were examined based on the Partial Least Square-Structural (PLS). Model fit indices were then calculated for the dataset. The proposed model was validated using factor analysis and structural equation modeling techniques.

Findings

The results indicated that E-SCM has a direct impact on CS. The effect of SQ was also confirmed. A positive and significant relationship was identified between E-SCM and CS, E-SCM and SQ, as well as SQ and CS ($P > 0.05$).

Research Limitations/Implications

The first limitation was to convince respondents to cooperate with the researchers. The second one was the lack of research related background due to the subject being relatively new.

Originality/Value

This study, to the best of the authors' knowledge, is the first empirical analysis on the CS assessment of SQ of E-Supply Chain in online shopping. This important link to online shopping has rarely been explored. It is expected that by filling this gap, this study will help in strengthening online shopping, which needs a change in the marketing area.

Keywords: Service Quality; E-Supply Chain Management; Customer Satisfaction; online shopping

1. Introduction

Since December 2019, the outbreak of the new coronavirus (COVID-19) in Wuhan has been accompanied by a slew of challenges in a variety of dimensions for countries all over the world. Even developed countries have recently encountered a variety of issues. Supply chain systems are one of the most influential issues. Although supply chain has always been a critical issue, its significance was highlighted during COVID-19. The COVID-19 pandemic has forever altered online shopping behaviours. In COVID-19, the demand for online shopping has been increasing every day. Consumers in different industries have made the greatest shift to online shopping. The main pillar of online shopping is a fast and agile supply chain system. Therefore, it is critical to examine this importance.

Supply chain management (SCM) is to process of the production flow of a product or service, starting from the raw material and information to produce the final goods and services to the consumer. An efficient SCM enhances the performance and productivity of the company (Mentzer et al., 2001). SCM has received much interest from researchers (Autry, Rose, & Bell, 2014; Chopra & Meindl, 2013; Piera, Roberto, Giuseppe, & Teresa, 2014; Ross, 2003; Van der

Vorst, 2004) SCM, along with other industries, has been deeply impacted by the growth and development of information technology, and has seen significant growth in areas from the traditional supply chain to Electronic Commerce Supply Chain Management (E-SCM). E-SCM refers to management in all the processes in the entire supply chain, such as planning and forecasting, procurement, inventory, production, logistics, sales and information, and other resources as well as customer satisfaction (CS) and service quality, which is achieved by means of e-commerce/information technology. E-SCM is the result of the integration of e-commerce and SCM, (Hua & Cong, 2011). Researchers apply different names for E-SCM, for example, Supply Chain 4.0, E-logistics, or Logistics 4.0 which is derived from Industry 4.0 in the SCM.

Industry 4.0 has had important effects on E-SCM (Ben-Daya, Hassini, & Bahroun, 2017; Valverde & Saadé, 2015). The growth of connected devices, the Internet of Technology (IoT), cloud computing and big data in recent decades has caused world-renowned companies and economic institutions to invest heavily in this field and beyond to implement the most innovative facilities to gain more benefits and attract more customers (Abdirad & Krishnan, 2020)

One of the best examples of E-SCM is Amazon, which uses the benefits derived from the impact of the Internet. Amazon has millions of orders every day that customers submit online. To prepare customers' order, Amazon's robots fetch, pick up goods and bring them to its employees to fill at the right time and deliver to customers. Another interesting example of the use of E-SCM is DHL. By collecting and evaluating big data from customers, DHL can provide customers with information on potential interference in their respective supply chains. It is possible, therefore, to protect as well as to improve the efficiency of the supply chain and achieve long-term CS (Valverde & Saadé, 2015; Witkowski, 2017).

Expedited service is one of the main motivations behind companies utilizing E-Supply Chain (E-SC) and it has often been employed as an alternate means of customer service. Companies

are able to offer their products and services full-time and online to all buyers around the world, regardless of geographical boundaries and nationalities. They are turning to this system to speed up the process and increase the efficiency of the service they provide. Customers no longer have to travel long distances to get the goods they need, which has led to higher CS. Overall, using E-SC has led to the expansion of services with easier purchases and more choices (Valverde & Saadé, 2015). Also, E-SC saves time and money for customers and delivers high data processing accuracy (Pulevska-Ivanovska & Kaleshovska, 2013).

Many companies review their sales systems with the intention of transitioning to E-SC which better supports their operations. In fact, E-SC, without the use of IoT, is a major obstacle for online shopping. It is important to identify the factors that affect the modern supply chain. One of the factors that plays an important role in this field is the quality of supply chain services. Excellent service quality reduces costs, while increasing CS, customer loyalty (CL) and profitability. Poor service quality leads to loss of reputation, reduced CS, reduced CL, poor supply chain performance, and reduced profits. Therefore, this paper focuses on examining CS with SCM in online shopping through their perception and evaluation of service quality and proposes a relational model considering them. The objective of this paper is to enhance theory development in the era of E-SC, CS (Customer Service) and SQ, and obtain empirical evidence to fill the gap in the literature. The novelty of this paper is to develop a model regarding a combination of all these three factors on each other and assess the effectiveness relationship between them in a proposed model.

The remainder of this paper is organized as follows: Section 2 provides a review of the literature and background on the subject. Section 3 explains the conceptual model and provides hypotheses development. Section 4 is dedicated to research methodology, including sampling, data collection, questionnaire design and testing hypotheses. Section 5 presents the results and

discussion, and Section 6 wraps up the paper with the conclusion, limitations and future directions for further research.

2. Literature Review

2.1. Role of Customer Satisfaction and E-Supply Chain Management

CS is essential to online shopping, especially in E-Supply Chain Management (E-SCM). Higher CS leads to higher loyalty (Anderson & Swaminathan, 2011). Therefore, it is necessary to have more understanding of key factors in CS. A review of the relevant literature has shown that a limited number of previous studies have attempted to identify the impact of E-SCM processes on CS (Shamout & Emeagwali, 2016). Tan and Trang mentioned the impact of E-SCM on improved CS, efficiency, effectiveness, and its ability to increase the enterprise's chance to do market development (Le Tan & Thi Dai Trang, 2017). Further, they reviewed the impact of the Internet on the order fulfillment process in two major aspects. The first is related to the fact that e-commerce consists of fulfilling customer orders through the Internet which increases efficiency. The second aspect is related to the use of the Internet to improve the efficiency of the order fulfillment process which actually requires the access and manipulation of a large amount of data from customer orders to inventory levels (Le Tan & Thi Dai Trang, 2017).

Pulevska-Ivanovska & Kaleshovska found that E-SCM has proved its importance for numerous reasons: improving operations, better outsourcing, increasing profits, enhancing CS, generating quality outcomes, tackling competitive pressures, increasing globalization, and increasing importance of e-commerce as well as the growing complexity of the supply chains (Pulevska-Ivanovska & Kaleshovska, 2013).

Omoruyi and Mafini discussed the relationship between CS, SCM practices and three input factors, namely, product quality, flexibility and product variety in small to medium enterprises

(Omoruyi & Mafini, 2017). In a similar vein, Bucko et al. determined factors that affect the consumers' willingness to purchase products from an online store. They evaluated the criteria based on which users make decisions when purchasing items online and found that the price factor causes consumers in online shopping to be satisfied or unsatisfied (Bucko, Kakalejčík, & Ferencová, 2018).

Anderson and Swaminathan found Six factors to significantly affect satisfaction in online shopping including adaptation, commitment, network, assortment, transaction ease, and engagement. Additionally, they discovered that the positive effect of satisfaction on loyalty is moderated by customer trust and inertia (Angelova & Zekiri, 2011).

Chavez et al. found that online supply chains are positively correlated with multiple factors for example quality, flexibility and cost, which lead to CS improvement (Chavez, Yu, Jacobs, & Feng, 2017).

2.2. Role of Service Quality in Customer Satisfaction

Service Quality (SQ) is one of the most important and critical issues as well as one of the most effective tools in creating competitive advantages and improving organizational performance (Stanley & Wisner, 2001). Perhaps the pioneers of studies on service quality can be considered Parasuraman, Zeithamel and Berry. Initial results of their research include ten dimensions of service quality called SERVQUAL. The development of SERVQUAL, an instrument for analysing customer perceptions of service quality in service and retention businesses, is described. SERVQUAL provides physical dimensions and appearance, reliability, responsibility, competence, humility, credibility, accessibility, communication, assurance and understanding and attention to the customer (Parasuraman, Zeithaml, & Berry, 1985, 1988).

Creating a top-level of SQ brings CS and loyalty. However, the nature of the exact relationship between SQ and CS, especially in the way the two constructs have been operationalized, is still shrouded in uncertainty (Sureshchandar, Rajendran, & Anantharaman, 2002). Some research considers customers as one of the most essential features of the service and suggests that CS is directly related to the service quality (Meidutė-Kavaliauskienė, Aranskis, & Litvinenko, 2014; Rahman, Khan, & Haque, 2012).

Other research along this line attempts to develop a better understanding of the most important dimensions of E-Service Quality (E-SQ) that affect CS. Hong et al. explained that logistics service elements concerned with CS are convenience, communication, integrity, responsiveness, and reliability (Hong, Zheng, Wu, & Pu, 2019). While Gupta and Singh in their discussion of the concept of SQ in supply chain mention that exemplary service has always built up the confidence of the customer in a firm (K. Gupta & Singh, 2012), others like Chang et al. have tested the interrelationships among the perception of E-SQ, CS, and CL about electronic service quality (Chang, Wang, & Yang, 2009). Most of the studies on this matter have concluded that CS is one of the major determinants of CS and CL (Kumar, Batista, & Maull, 2011). Increasing SQ generates a growth in CS, which in turn improves CL.

Al-dweeri et al. revealed in their study that CS mediates the relationship between E-SQ and behavioral and attitudinal loyalty (Al-dweeri, Obeidat, Al-dwiry, Alshurideh, & Alhorani, 2017). Zehira and Narcikara, looked into understanding the relationships between E-SQ, Perceived Value, Recovery Service Experiences and Loyalty Intentions. They intended to see the effects of recovery services during nonroutine encounters of customers with the sites as well as the effects of E-SQ on routine encounters. Their results show that there is a strong relationship between E-SQ and loyalty intentions with perceived value acting as a mediator between them (Zehir & Narcikara, 2016).

Sundaram et al. in their study tested the conceptual framework of customer perception of service quality in online business and its impact on satisfaction and loyalty through e-commerce business (Sundaram, Ramkumar, & Shankar, 2017). In 2019, Khan et al. indicated that all the first latent constructs are significant where electronic CS and E-Customer Loyalty (E-CL) are influenced by E-SQ. The analysis shows that there is a strong positive relation between E-SQ and E-CS, and E-SQ and E-CL (Khan, Zubair, & Malik, 2019).

Understanding of the service quality and efforts to improve it, leads to quality services. This is how it is expected to have increased CS. Therefore, service quality is considered as an important factor or a measure of CS. The interested reader can learn more about logistics service quality impact on CS and Loyalty (Saura, Francés, Contrí, & Blasco, 2008).

2.3. Role of Services Quality in E-Supply Chain Management

As pointed out in the last subsection, creating a high level of SQ brings CS and loyalty, thus leading to increased market share and profitability. There appears no general model for measuring SQ and information regarding the integrating of SQ and SCM still remains limited in the literature (Quang et al., 2016; Stanley & Wisner, 2001)

Rita et al. in their analytical results mentioned that three dimensions of E-SQ, namely website design, security/privacy and fulfillment, affect overall E-SQ (Rita, Oliveira, & Farisa, 2019). Barnes & Vidgen (2002) also pioneered a new E-SQ measurement called WebQual that focuses on the importance of easy-to-use websites. Later, Blut et al. showed that the E-SQ construct conformed to the structure of a higher-order factor model that links online service quality perceptions to distinct and actionable dimensions, including website design, fulfillment, customer service, and security/privacy. The results also demonstrated that overall quality fully mediated the

relationship between dimensions and outcomes for fulfillment and security, and partially mediated the relationships for customer service and website design (Blut, Chowdhry, Mittal, & Brock, 2015).

Customer service systems play a crucial role in SQ and therefore, customer service representatives often have direct contact with customers, which ensures that these representatives are the first group to get notified if a customer is dissatisfied with a product or service. How customer service representatives respond to customers is also an important matter to consider. They can solve the customers' problems or offer customers a better deal to keep them satisfied. Interested readers are offered further details by referring to (Ben-Daya et al., 2017; H. J. Kim, Son, & Kim, 2016; Meesuptaweeakoon & Chaovalitwongse, 2014; Naoui, 2014; Shanthi & Kannaiah, 2015). From another point of view, providing the goods needed by the customers and facilitating easy purchases is part of the quality service. In instances where customers need certain additional goods while purchasing some goods, selling or suggesting goods that customers often buy together can help with the quality of service. Table 1 is a list of some cited papers of *CS and E-SCM*, *SQ in CS*, and *SQ E-SCM* in the literature.

Table 1. Summary of literature review.

According to the literature review and research gap, a theoretical model was developed, as visualized in Figure 1, that considers the direct and indirect effects of E-SC over service quality and CS, as well as the effect of service quality over CS. The model was adapted from some papers in the literature review (Anderson & Swaminathan, 2011; Fida, Ahmed, Al-Balushi, & Singh, 2020; Gupta & Singh, 2012; Parasuraman et al., 1985, 1988) and as well as using the Delphi method. In the Delphi method, the goal is to acquire the experts' opinions. In fact, each expert is asked to rate each indicator based on the Likert scale (with 5 indicating most important and 1 indicating least

important). The items in this study were reviewed by five experts with an average of 15 years of experience in SCM. This process was continued until they reached to the same consensus. Thus, the following hypotheses were proposed:

H 1. E-SCM has a positive direct impact on CS.

H 2. SQ in E-SC has a positive direct impact on CS.

H 3. E-SCM has a positive direct impact on SQ.

Figure 1. Complete conceptual model.

3. Research Methodology

The research methodology starts with sampling and data collection for the study. Later, descriptive questionnaire design and measures are covered, after which the testing of the hypotheses is explained. The last subsection covers a discussion of the research method used for this study.

3.1 Sampling and Data Collection

The company chosen for this case-study is the biggest e-commerce start-up and the largest online store in Iran. Customers submit their orders online and this company delivers products to the customers in a brief period of time, much like well-known retailers such as Amazon do.

Data for this study was collected using survey results from customers who made most of their purchases from this online site. Customers were selected based on their marital status, education (having at least a bachelor's degree), and number of children. These individuals had skills to use technology like computers and mobile devices and were open to the risk of buying new products online. These demographics indicated that customers would be more likely to buy products online because of their technical skillset.

In this study, customers were selected randomly as samples who met the foregoing criteria. Since the presumed statistical population in this study was online customers of this retailer, the sample size was calculated according to the Cochran formula ($z = 1.96$; $p = q = 0.5$; d : Permissible error value = 0.08)

Out of the 150 randomly selected online customers (56% females and 44% males; average age=38), 50 of them were from the social class B and 100 of them from the social class C+. Class B consists of skilled workers and employees who have master's or Ph.D. degrees, and their lifestyle is premium. This class comprises 40 percent of the population of any society, who have less wealth than the top 10 percent, and more wealth than the poor 50 percent of society. In other words, the middle class includes the 6th to 9th deciles and class C+ consists of service workers and manual workers that they have bachelor's degree or diploma, who have less wealth than the top 50 percent, and more wealth than the poor 40 percent of society. To remove the outlier for responders' information like age, the value is replaced by mean. To remove the missing data of the Likert scale, the value was replaced by the median of the whole variable column and for continuous variables like age and income, the mean value of the column was used. The demographics information of respondents is presented in Table 2.

Table 2: Demographics for the test sample.

3.2 Questionnaire Design and Measures

This research is practical and therefore, the results of the current research are of those companies that sell products online. Additionally, this study is descriptive, in that the research variables are examined based on the current status. To collect data, a researcher-made questionnaire

was utilized in three levels of variables of E-SCM, CS, and SQ. The selected variables explain below.

E-Supply Chain Management: This variable is evaluated with indicators of process control, interaction with suppliers, management support, and focus on customers in E-SC. Each variable has 3 questions that are assigned to this variable from questions 1 to 12.

Customer Satisfaction: CS is an issue that companies and customers have in common. In this study, different factors such as Informing Customers, Attention to Customers' Needs, Staff Performance Accuracy, and Easy Access to Services were measured. This variable is assigned from questions 13 to 24.

Service Quality: SQ is a complex issue that is often subject to a customer's judgment. According to Parasuraman et al., quality is the judgment of the customer and the customer's expectations of what the organization should deliver, which helps the performance of the service received (Scott, Lundgren, & Thompson, 2018; Zeithaml, Parasuraman, Berry, & Berry, 1990). In this study, the service quality was measured with the components of tangible factors, Reliability, Accountability, and Reassurance. A total of 12 questions from questions 25 to 36 are devoted to Service Quality.

After obtaining the necessary permits, the authors provided the questionnaires as an internet-based survey questionnaire on Qualtrics. The completed questionnaires were entered into the software to be analyzed. The most important methods of data collection in this research are as follows:

Field Research: For this part, a questionnaire was used to collect the data and information for analysis. To design these questions, a five-point Likert scale, which is one of the most common measurement scales, was used. At the five-point Likert scale, each response is assigned from 1 to 5.

As identifying the variables is vital to test the hypotheses of a research, the main variables of this research were identified as service quality, CS and supply chain in online shopping.

Content Validity: Content validity is a type of validity used to evaluate the components of a measuring instrument (Garver, 2019). The questionnaire was pretested with the same experts who assessed the conceptual model. The experts evaluated the validity and reviewed the questions for readability, ambiguity, and completeness, and asked to state if there are other criteria in addition to the research criteria (Wagner, Grosse-Ruyken, & Erhun, 2018). At this step, some adjustments were done to the questionnaire.

Structural Validity: Another type of validity is structural validity which examines the relationship between the measuring instrument and the general theoretical framework, to reflect the relationship of the measuring instrument to the concepts and theoretical assumptions. Kaiser-Meyer-Olkin (KMO) is a test to measure sample adequacy and how suited the data is for factor analysis (Shashi, Tavana, Shabani, & Singh, 2019). Structural validity is obtained through of KMO of factor analysis and the significance level of the Bartlett test (Khyzer Bin Dost, Rehman, Gilaninia, Ismail, & Wasim Akram, 2018; Paprocki, 2016). Thus, if the KMO level is 0.5 or higher and the significance level of the Bartlett's test is 0.05 or lower, the variables of the questionnaire set are valid (Malhotra, Nunan, & Birks, 2017). In this study, given that the KMO is 0.69, the questionnaire is acceptable and approved.

The initial step to analyze data is to test whether the distributions of variables support the assumption of normality for multivariate analysis. One of the main criteria for this choice is the Kolmogorov-Smirnov test (K-S test or KS test). The Kolmogorov-Smirnov statistical test was used to check the normality of the questionnaire variables (Malhotra et al., 2017; Yusuf et al., 2012). Table 3 indicates the KS test result of normality of research variables. According to the results, the significance level of the Kolmogorov-Smirnov test was less than 0.05. Therefore, the

distribution of variable data in this statistical sample comes from a normal distribution. PLS software was used to perform the structural equations and test the measurement models.

Table 3. Results of normality of research variables (Kolmogorov-Smirnov).

Reliability tests: Reliability is one of the technical features of measuring instruments. A measure has high reliability if it produces similar results under consistent conditions (Khyzer Bin Dost et al., 2018). Cronbach's alpha is conducted to assess the reliability of each scale. Alpha values over 0.7 indicate that all scales can be considered reliable (Sukati, Hamid, Baharun, & Yusoff, 2012). In this research Cronbach's alpha was 0.826, indicating both strong internal consistency and strong interrater reliability. To analyze the data at the level of descriptive and inferential statistics, SPSS 21 statistical software was used. Also, Smart PLS software was used to model structural equations.

Confirmatory Factor Analysis (CFA): CFA is a statistical technique used to determine if the questions in the questionnaire are well-selected and completely correlated (Hussain, Khan, & Al-Aomar, 2016; Malhotra et al., 2017). Table 4 shows the confirmatory factor analysis statistics in all dimensions. The findings in this table show that all model paths were significant, based on scale items, and these values range from 49.74 to 53.32. Also, this table examines the parameters and coefficients of impact factors for the second-order confirmatory model which indicates that CS had the most impact factor.

Table 4. Statistics of confirmatory factor analysis in all dimensions.

3.3 Testing Hypotheses

To assess the measurement and our structural model, the relationship between variables was evaluated. Table 5 shows the analysis of the research hypotheses. If the T-value is greater than 1.96, the relationships between the variables are confirmed. According to the results of table 4, the impact of E-SCM with SQ is 87% and the significance level is 4.78. The effect of service quality on CS was 79% and significance was 4.61. Also, the effect of SCM on CS is 70% and the significance level is 5.03.

Table 5. The results of the analysis of research hypotheses.

4. Results and Discussion

4.1 Measurement Model Assessment

To assess the measurement and our structural model, and to find the effect of independent variables on the dependent variable, Partial Least Squares Structural Equation Modelling (PLS-SEM) is utilized (Sener, Barut, Oztekin, Yuksel Avcilar, & Yildirim, 2019). In multiple regression analysis, it is determined how each of the independent variables affects the dependent variable (Lowry & Gaskin, 2014). To test the set of cause-and-effect relationships between the components, and to investigate the research hypotheses, multiple regression analysis was applied by using PLS software. Figure 2 illustrates the hypothesized relationships between the constructs and presents PLS-SEM results for the structural path coefficient significance and the relevance of the structure model.

Figure 2. Result summary of the conceptual model by PLS-SEM.

4.2 Assessment of Structural Model

Table 6 indicates the fit indices of the role of E-SCM in explaining the factor of CS by mediating the SQ factor. Based on the findings of this table, the set of fit indices shows the fitted model to the data.

Table 6. Fit indicator's role of SCM in explaining CS with SQ mediation.

4.3 Bootstrap

Bootstrap is a simple method used to determine statistical accuracy or to estimate distribution from sample statistics. Bootstrap and its confidence interval are used to determine the significance of the indirect paths of the independent variable to the dependent variables through the mediator variable, which assesses the mediator's role directly and has greater statistical power. Since the Bootstrap method provides an empirical representation of the indirect effect distribution of the sample, it does not face the problem of non-normal distribution of the indirect effect (Sener et al., 2019).

In order to measure the indirect effect of the independent variable using the Bootstrap method, the mediator variable is randomly sampled (by placement) at least a thousand times through the dependent variable, and the size of the indirect effect is calculated at each re-sampling. If the upper and lower limits of the indirect effect size are not zero at the confidence interval, the hypothesis that the indirect effect of the independent variable is mediated by the dependent variable is confirmed (C. Kim & Kim, 2019).

Table 7 illustrates the Bootstrap results for the intermediate path. The upper and lower confidence intervals for the IT variable are placed as the intermediate variable outside the zero range. The confidence level for this confidence interval is 95%. Since zero is assured outside of

this gap, the indirect path to information technology mediation between customer relationship management and supply chain is significant.

Table 7. Bootstrap freight path intermediate results.

5. Discussion and Suggestion

The results of this study indicate that the first hypothesis of the research is confirmed. Online shopping has a direct impact on CS. Online shopping saves time and money for customers. Additionally, online shopping gives more options to customers to purchase. Therefore, it brings CS to customers.

The second hypothesis of the study, that SQ affects CS, was also confirmed. This means that high service quality and CS are effective in online shopping. In other words, when online sellers promise to provide quality service to their customers, they create a sense of trust among their customers. Therefore, SQ brings and sustains CL for the company. CS intercede in the way of the relationship between SQ and CL (Fida et al., 2020; Kumar et al., 2011) The third hypothesis, that E-SCM has a positive impact on SQ, is also confirmed. The highest competitive levels of supply chain management are summarized in the SQ and the level of service provided to customers. The better E-SC provides the better SQ which will increase CS (Stanley & Wisner, 2001).

Companies must alter their behavioral intentions if they want to maintain long-term relationships with their customers. Because of the fierce competition in the service industry, understanding consumer expectations is becoming increasingly important (Uvet, 2020). Based on the findings of this study, attention to customer needs is very important and fundamental. It must be considered whether the customer's needs have been met all the time. Having a quality system is essential to achieving CS. Many successful companies like Amazon and Walmart provide online

services to their clients. To please consumers' desires, these organizations care more about the higher priority of SQ than on their competitors. Because they believe SQ attracts more customers for them.

As a result, organizational resources should be dedicated to the continuous monitoring of SQ and customers' need trends in order to effectively develop and maintain the organization's E-SC. To respond to this, well-trained staff and a well-designed system are required. Organizations should train and keep their employees update on a regular basis.

5.1. Contributions and Implication

Researchers might make use of the current findings by conducting their own studies. Considering, there is a small amount of research done in E-SC (Uvet, 2020), this research reflects the current state of research on this topic which could be used by researchers in future studies on online shopping.

This research assists managers in identifying and utilizing the system's influencing factors to improve the company's supply chain system. Managers can consider these factors for further investigation before making decisions for their companies.

As a result of these findings, any company can use them to improve its competitiveness in logistic services. Also, using the findings of this research helps organizations to more easily face the challenge of implementing the optimal system. Although this project has not been tested for other broader organizations, this study encourages businesses to pay explicit attention to the influence factors mentioned in the proposed model and improve their system as a result of them.

5.2. Limitations

While this study has valuable contributions, some limitations were encountered which may affect the result of this research. One such limitation was convincing respondents to cooperate with the researchers and fill up the questioner to collect data for the analysis. A second limitation was the scarcity of research-related background due to its new subject matter. Thirdly, the sample of this study was also limited to customers who had experience using online shopping in Iran. Due to this, the research outcomes may lack generalizability.

5.3. Suggestions

Based on the results obtained from the conceptual model presented in the case study, there are some suggestions for the company. First, attention to customers' needs is minimal. The company should consider customers' needs more. Second, according to customers' answers, access to services is not easy for customers which has affected CS and needs improvement. Third, the number of interactions with suppliers is low in online shopping and needs more attention. Lastly, according to the statistical community, the effect of Assurance and Tangible on service quality is low and should be increased

6. Conclusion

Nowadays, to improve and increase CS and to ensure product quality and SQ, companies have to cooperate closely with all components of their supply chain system. Supply chain quality management is a concept in response to the challenge that experts cite as the last step towards comprehensive quality management. They are of the belief that its implementation can provide the necessary framework for supply chain members to collaborate on SQ, consequently maintain product quality, and increase CS. The primary goal of this study was to determine the influence of Quality E-SCM services on CS in online shopping.

Based on the literature reviews, the authors arrived at the conclusion that the supply chain is an important concern for companies and corporate managers. Managers, in addition to focusing on their internal business, also focus on building long-term relationships based on commitment and trust with their suppliers and customers. E-SCM is a set of growing tools and technologies to coordinate and optimize key processes in production and SQ, including process control, supplier interaction, management support and customer focus, and other factors including cost reduction, quality enhancement, distribution facilitation and increased CS. To achieve these goals, it is necessary that E-SCM promotes the coordination of all components of the supply chain.

The present study is a survey study that was conducted to evaluate CS with the service quality in online shopping in the last quarter of 2019. Subsequent to assessing significant articles and books in this field, the necessary data was acquired utilizing a questionnaire and a study of the sample, after which the obtained data from the previous step was analyzed by structural equation modeling. In this study, the effectiveness relationship between E-SCM, SQ and CS was examined, and it was determined that the most important factor affecting CS is E-SCM. Therefore, it can be seen that four-dimensional SCM (Process Control, Interaction with Supplier, Management Support and Focus on Customers) enhances CS as well as the quality of online shopping.

Most of the proposed models in the literature review considered SQ, CS and E-SC two by two. The main contribution of this research is that, for the first time in an empirical study, relating all three factors was explicitly proposed in one model. This research is applicable because its results are used by the relevant customers and organizations, and it is descriptive because the research variables are examined based on the current situation.

A suggestion for future work would be to consider the effect of CS over quality service in all sections that deal with online shopping for example, electronic customers. It is suggested that this research be conducted with qualitative methods to examine the strengths and weaknesses of

opportunities and threats in details such as Strengths, Weaknesses, Opportunities and Threats (SWOT) matrix.

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