

A framework for measuring customer loyalty for 3PL industry: a case of evolving market

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Abstract

Purpose: This research aims to propose a framework for measuring customer Loyalty for third party logistics (3PL) Industry by exploring the attributes that are more attractive to customers and ascertain the mechanisms for increasing customer loyalty in third part logistics industry.

Design/methodology/approach: Data was collected from one hundred and thirty-three (133) respondents who were employees of different industries that outsource 3PL services. The partial least square structural equation modeling was deployed for analysis.

Findings: The results showed that service quality has a significant positive impact on customer orientation, customer satisfaction, and relationship quality. On the other hand, customer orientation has been observed to positively impact customer satisfaction but an insignificant impact on customer loyalty and relationship quality. Customer satisfaction has a significant positive impact on relationship quality but an insignificant impact on customer loyalty. Also, relationship quality has a significant positive impact on customer loyalty.

Practical implications: The results recommend that 3PL companies' managers focus more on developing quality relationships with their customers, delivering exemplary service quality, and offering customer orientation.

Originality/value: This study will help the stakeholders gain much more understanding and insights on how competitive advantage can be achieved and, consequently, help the 3PL become the market leaders.

Key Words: *Service Quality (SERVQUAL); Customer Orientation; Customer Satisfaction; Customer Loyalty; Relationship Quality.*

1. Introduction

1.1 Background

Over the past decade, technology has changed every perspective of the business economy as the world has shrunk into one global village (Kingshott et al., 2018; Ashok et al., 2018; Pagani, and Pardo, 2017). The way of doing business is much easier recently than a decade or two ago, resulting in increases in competition in the market (Bengtsson and Kock, 2000). Customers are becoming more demanding because of less trading boundaries (Oh et al., 2018), and this has impacted freight forwarding and logistics companies (Orji et al., 2020) in terms of the privatizations of new and modern businesses (Parry et al., 2012; Puccinelli et al., 2013). These include local and global market competition and trends of new business ideas and economic strategies such as The Belt and Road Initiative (BRI) (Cui et al., 2020).

An important project within the BRI is the China-Pakistan Economic Corridor (CPEC). Pakistan has needed the best world-class infrastructure for logistics and transportation activities and the rapid movement of goods & services inside Pakistan to contribute to the Economic Cooperation Organization (ECO) to boost trade in central Asia (Ali, 2020). CPEC is a significant initiative not for Pakistan and China but also for the Asian economy. This is because CPEC has become the game-changer strategic project in China and Pakistan. However, it will also help neighboring countries boost their trade and economic activities in the sub-region (Kanwal et al., 2020). For logistic network expansion purposes, China's Belt and Road Initiative (BRI) is to expand the logistics infrastructure nationwide. The BRI is to expand the distribution system and enlarge warehouses' system in major cities like Karachi and Islamabad. The BRI also aims to improve and develop the auto industry in Pakistan because of the CPEC; heavy vehicles and machinery for transportation purposes will increase. Many international auto companies have shown interest in investing in the region; for instance, Volvo and MAN SE (Nisar, 2017). The whole arrangement is likely to increase Third-Party Logistics (3PLs) service providers directly and indirectly inside Pakistan. Earlier freight forwarders provided limited services and features. However, as a result of local and global competition, there has been an increase in the list of freight services functions and features (Kilibarda et al., 2016).

Local freight forwarders convert their small companies into large logistics companies to provide a wide range of competitive prices and maximize their profit by giving tough time to their competitors (Shang and Lu, 2012; Murphy and Daley, 2001). Based on past studies, the researcher's main focus is to measure the quality of service provision since most researchers have done quite an appreciable work on the topic regarding this study area. Parasuraman et al., 1985; and Martinez & Martinez, 2010 conducted their studies on the above topic but focused on quality services models, measurement and the reasons of low quality services (Parasuraman et al., 1994; Cronin & Taylor, 1994; Braddy and Cronin, 2001).

Babakus and Boller (1992), Brown et al. (1993), Parasuraman et al. (1992) researches and studies were based on a similar theme on consumer's interviews and marketing orientation. They made reference to the measurement of services qualities. Many complex, detailed and elaborating models were used to expand the service quality theoretical domain (Brady and Cronin, 2001; Dabholkar et al., 2000; Mentzer et al., 2001). Talha (2004) argued that the purpose of total quality management is to consolidate all business activities to provide the best end value to their customers, but in the competitive era of the businesses the total quality management also becomes the vital tool for service quality after manufacturing (Ooi et al., 2011; Samat et al., 2006; Saravanan and Rao, 2006). According to Wang et al. (2008), the gradual changes of time and conditions for 3PL service providers or companies have necessitated changes in strategies from cost-based to services-oriented strategies and as a result many 3PL firms have become more customer oriented (tian et al., 2010).

The logistics service providers or companies who are customer oriented take good care of their customers by understanding the need of the customers, therefore provide a better solutions for them and create a good value for the customers to satisfy their needs (Panayides, 2007; Tian et al., 2010; Huma et al., 2020).

1.2 Gaps and highlights

Chu and Wang (2012) proposed that there is a greater rate of increment in outsourcing logistics services from 3PL providers because customers are expecting more while competition is also increasing. Because of higher competition in the open market, companies are joining World Trade Organization (WTO) since WTO has set of rules and

regulations that seek to improve competition in 3PL service providers (Wang et al., 2008). Chu et al. (2016) argued that there has been a greater gap in finding the scenario in which third party logistics providers increase their performance of services to satisfy their customers. Murphy and Daley (2001) and Shang and Lu (2012) argued that small freight forwarders turn into large logistics service provider companies in a very competitive environment while continuously trying to penetrate into the market to give tough competition to their competitors to increase their consumer base.

Chu et al. (2016) observed that the cost factor of services does not impact maintaining customer loyalty and market penetration and postulates that logistics companies are suffering from customer satisfaction with current service provision and probing out the ways to fulfill customers' expectations.

Kilibarda et al. (2016) argued that many 3PL logistics firms and freight forwarders are not aware of the factor of customer's perception about their service provision and customer expectations that have been built in the mind of the customers. Furthermore, it has become impossible for the service providers to gain knowledge about the factor of current consumer mindset of 3PL consumers. So, we can probe out the answers of all questions by improving, measuring and monitoring the quality of the services (Liang et al., 2004, 2006; Lin & Liang, 2011; Ding and Tsai 2012; Ahmed and Omer 2019).

The purpose of this research is to probe out the attributes from the customers which are more attractive to them and ascertain the mechanisms for increasing their loyalty towards 3PL. This potential findings of the present study seeks to help the Pakistani freight forwarders, Logistics providers, supply chain analyst, Logistics analyst, Government bodies, Law making bodies, teachers, authors, writers and future researchers to understand the concept of service quality, customer demand, customer satisfaction, and customer loyalty, and how to measure and improve the quality of 3PL services in the context of Pakistan. This study will further assist the above stakeholders to gain much more understanding and insights on how competitive advantage can be achieved and consequently assist the 3PL in becoming the market leaders. This research will be helpful to the Pakistan Goods Carrier Association and Karachi Goods Carrier Association in terms of law making and amendments in the rules and regulations of the Freight Forwarders

Memorandum of Association and Article of Association to provide customer oriented services to consumers.

The rest of the paper is structured as followed. Section 2 presents and discusses the theoretical background and proposes a framework, and section 3 presents the methodology adopted and utilized in this study. The data analysis and results are presented and discussed in Section 4, and finally, conclusion, implications and recommendations for further research are provided in section 5.

2. Literature Review

2.1 Theoretical foundations of the framework

The framework is based on Customer Value-Based Theory and SERVQUAL Model which form the basis of the study. These are defined and discussed in the next sections.

2.1.2 Customer Value-Based Theory (CVT)

Slater (1997) proposed the customer value based theory and postulates that customer's needs and satisfaction can be achieved through the provision of major products and services delivered by the firms. This theory explains the concept of how companies penetrate the market and target their customers with their strategies and provide the value as promised. According to Slater (1997) companies who choose customer value based orientation achieve high performance through customer orientation environment in the organization and provide customized value based services to achieve higher effective and efficient rate of performance. According to the researchers who have researched into customer value based theory deeply, such as Slater and Naver (1994); Jaworski and Kohli (1993); Min et al. (2007), found that empirical investigation have proven that organizational performance and customer orientation are positively directly proportional. Customer value based orientation on the other hand provides the basis of creating marketing strategy and other business strategies to promote and create customer value based environment to become a market leader and achieve higher sustainable competitive advantage.

2.1.3 SERVQUAL (Service Quality) Model

According to Parasuraman et al. (1998; 1991), one of the most reliable instrument for measuring the logistics service quality is SERVQUAL Model. This can differentiate between two things; what users expect and how users perceive (Sterling and Lambert, 1989; Lambert et al., 1990; Zinn and Parasuraman, 1997; Davis and Mantzer, 2006). This is the way the base of the SERVQUAL Model has been defined for measuring logistics quality. Neo et al. (2004) implemented the SERVQUAL Model in 3PL logistics which provide consumer end goods. The instrument SERVQUAL was also used for Sea transport quality in which the two kinds of gaps were identified for goods transporters and freight forwarders and different employment positions (Chen et al., 2009). Seth et al. (2006) argued that in measuring the 3PL gaps of quality of services the framework of SERVQUAL Model is very much useful. Parasuraman et al. (1985) formulated the original service quality components which are reliability, responsiveness, security, understanding customers, competence, access, courtesy, communication, credibility and tangibles. In 1988 these factors of service quality were further refined to form famous SERVQUAL Model having five dimensions which are Reliability, Assurance, Tangibles, Empathy and Responsiveness (Parasuraman et al., 1988). The aggregate level dimensions of seven components were Empathy and Assurance and the rest of the three remains the same including: Responsiveness, Tangibles and Reliability.

Table 1: SERVQUAL Dimensions

Dimensions	Definitions
Reliability	The ability to perform the promised service dependably and accurately
Assurance	The knowledge and courtesy of employees and their ability to convey trust and confidence
Tangibles	The appearance of physical facilities, equipment, personnel and communication materials
Empathy	The provision of caring, individualized attention to customers
Responsiveness	The willingness to help customers and to provide prompt service

Source: Parasuraman et al. 1988

Based on the aforementioned discussion, regarding the theoretical background it is established that for an organization to excel in the market, they must be customer oriented which makes their relationship with the customer more stronger and further helps in satisfying their requirements which eventually helps them in improving their loyal customer base (Slater, 1997; Min et al., 2007). Moreover, in addition to have customer orientation, the satisfaction of customer is highly dependent on the level of the quality service provided to him (Parasuraman et al., 1988). Therefore, in the present study a framework is proposed by integrating the theory of CVT and framework of SERVQUAL (shown in Figure 1).

2.2 Hypotheses

The service industry is a big sector that is why service quality has an important perceived value because of the higher level of participation of customers, intangibility of products and importantly perishability (Kilibarda et al., 2016). Many past studies proposed that how service quality and customer satisfaction direct proportionality is increasing (Parasuraman et al., 1988; Wu and Chan, 2011). According to Gustaffson et al. (2005) service organization long run success factor can be determined by customer satisfaction and service quality because service quality is a prerequisite of customer satisfaction. Zeithaml et al. (1988) examined customer perception and identified that there is a high impact of service quality on customer satisfaction. Wu and Chan (2011) investigated customer satisfaction aided by SEM model and identified that highest level of satisfaction is caused by positive customer perception. Moreover, Kaura and Dutta (2012) explained that in the Indian banking sector service quality and customer satisfaction has a very significant positive effect. From the above literature evidence, it can therefore be hypothesized that;

H1: Service quality has significant impact on customer satisfaction.

The paperwork is full of references that lead to the building up of a significant customer orientation. According to Cran (1994) in a few occasions, customer orientation is referred to as a "Service orientation" though in others, it is incorporated as a segment of a market orientation for services firms (Egeren and Conor, 1998). Slater and Narver (1995) argues that encouraging a customer arranged culture prompts the creation and upkeep of

customer esteem. They go ahead to contend that this additionally prompts a firm that is all around situated to expect the requirements of its clients and to offer goods and services that fulfill these requirements. Service quality improvement can be done through other ways. Yaftang and shih-Wang (2007) explained the marketing aspects that a company should know, what the current customers' demands are, and how it would be fulfilled in terms of customer oriented ways of services. Chang et al. (1999) observed that there is a positive relationship between service Quality and Customer orientation. Therefore, it has hypothetically been proven that better service quality increases customer orientation.

H2: Service quality has significant impact on Customer orientation.

Lewis and Booms (1983); Lehtinen and Lehtinen (1982); Huma et al., (2020) and Gronroos (1984) argues that the service quality differentiates between customer expectations about the services and how they perceive the services has been provided. Gronroos (1984) argued that the technical aspect is not the important aspect of service quality but functional. Gronroos (1984, 1990) explained the functional aspect about the service quality that only SERVQUAL model primarily focuses on functional aspect of service quality. Levit (1986) argued that there is an exchange of intangible values which contain product and services in between buying and selling personnel. Johnson (1999) argued that relationships depth and climate depends on relationship quality in general. Bejov et al. (1996) pointed out that the relationship quality of the sales representative is obligatory in long run successful relationships. Thus, hypothesizes that;

H3: Service Quality has significant impact on Relationship Quality.

Berry (1995) and Heskett et al. (1994) pointed out that long run success and survival of economical aspect depends upon essential factor of long term customer relationships. Customer satisfaction has been defined as; "Overall evaluation of firm's products [or services]" (Anderson et al., 1997; Huma et al., 2020). It is argued that customer satisfaction becomes the major prerequisite of customer retention in the marketing aspects (Crosby et al., 1990; Henning-Thurau 1997; Klee, 1997). Biggemann et al., (2013) argued that supplier can achieve better customers' related outcomes through customer oriented services which further leads to customers' satisfaction and improved revenue streams.

Marketing relationship and customer satisfaction becomes the important factor for the concept of relationship quality. Oliver (1997) pointed out that customers always expect more of the value of services which is provided by the service employees and also their behavior or interaction in different situations or level is exceeded (Ghlichlee, & Bayat, 2020). Therefore, customer satisfaction has a direct positive effect on services, the hypothesis contains;

H4: Customer orientation has significant impact on customer satisfaction.

Customer orientation plays a vital role in maintaining the relationship outside the organization such as commitment and trust factor (Ghlichlee, & Bayat, 2020). Customer satisfaction, commitment and trust factor depends upon relationship quality. Navde and Buttle (2000); Bove and Johnson (2001); Chu and Wang (2012) argued that the above factors measures the relationships between organizations, suppliers, customers and all the stakeholders. 3PL organizations should maintain close relationships with their customers to know about the customer satisfaction and their demands. Relationships of 3PL firms with their customers requires a leverage which should be provided to the customers in terms of customer orientation perspective by which organizations can achieve a higher level of competitive advantage. Macintosh (2007) argued that customer orientation and relationship quality are directly proportional to each other. Terawatanavong et al. (2011) pointed out that there exists a positive relationship between relationship quality and market orientation in terms of supplier organizations. Therefore, it is hypothesized that;

H5: Customer orientation has significant impact on Relationship Quality.

Abu-Elsamen et al. (2011) argued that customer loyalty and customer satisfaction in services are directly proportional to each other. Satisfied and loyal customers are concerned with service provider firms they give feedback and motivate other consumers to purchase particular brand (Olorunniwo et al., 2006; Kingshott et al., 2018). Customer retention can be improved by the customer satisfaction which directly affects the consumer choice. Long term relationships between consumer and the company depend upon higher customer satisfaction, which results to become customer loyalty (Najmi, Ali, Ahmed, Kanapathy & Aziz, 2020). Bowen and Chen (2001) argued that high level of customer satisfaction creates higher level of customer loyalty. Anderson and Sullivan (1993) pointed

out that there is a direct relationship between customer satisfaction and customer loyalty and these are positively correlated. Hence, it is hypothesized that;

H6: Customer satisfaction has significant impact on customer Loyalty.

Many researchers like Crosby and Stephens (1987); Singh (1991) explained in their previous studies that customers of servicing organizations many times analyze the satisfaction level provided by the companies by organizational customer oriented services, personnel involved in providing services and overall organization services. Customer satisfaction depends on the evaluation of how customers analyze the experience of services with the firm (Chu et al., 2106). Customers assess their satisfaction with the person involved in the execution of services and that satisfaction level takes the customers to the level of relationship quality gradually along with trust factor at inter personal level (Najmi, Ali, Ahmed, Kanapathy & Aziz, 2020). The people or representatives of the servicing firm who are directly involved with the customers in terms of provision of services, build up relationships at interpersonal level which directly leads to the satisfaction with the organization (Ghlichlee, & Bayat, 2020). So, it is hypothetically proven that customer satisfaction has positive effects on relationship quality.

H7: Customer satisfaction has positive impact on Relationship quality.

According to Brown et al. (2002) customer orientation at individual level is the key success factor of servicing firm's abilities to the market orientation. Saxe and Meitz (1982) defined the customer orientation as, "Practice adopted by the modern marketing concept to try to help their customers make purchase decisions that will satisfy customer needs". Many other researchers such as Boles et al. (2001); Brown et al. (2002); Swenson and Herche (1994) found that the relationship between customer orientation and customer satisfaction at individual and firm level directly leads to customer loyalty. Therefore, it is hypothetically proven that Customer orientation has positive impact on Customer loyalty (Chu et al., 2016).

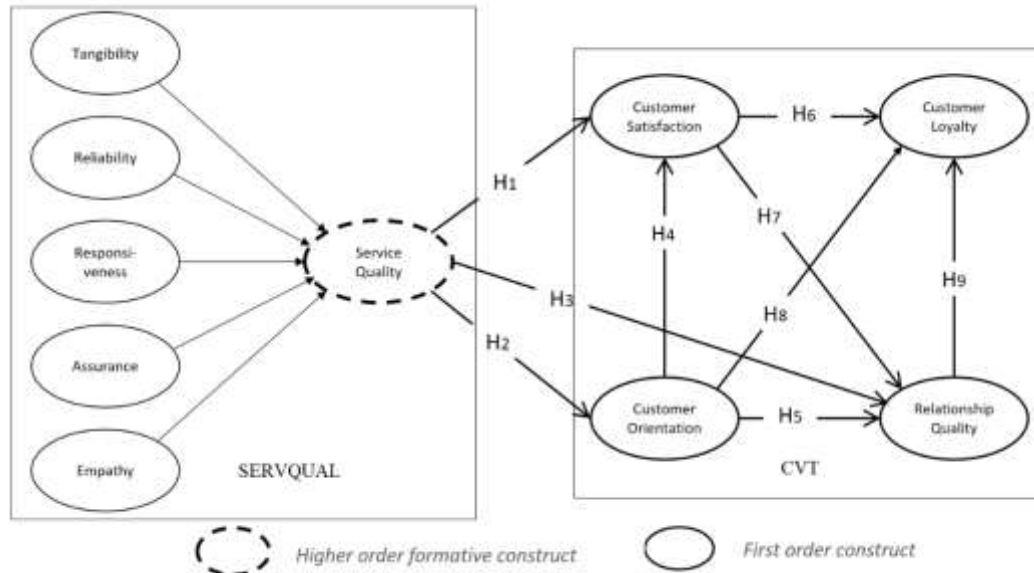
H8: Customer Orientation has positive impact on Customer Loyalty

Most of the researchers ignore the factor of interpersonal level relationships with customers in the marketing and business perspective and valued the relationship of customers directly

to the firm or product or services (Najmi, Ali, Ahmed, Kanapathy & Aziz, 2020). Doney and Cannon (1997) and Laobucci and Ostron (1996) argued that the presence of both types are factors of relationships in businesses. The specific solution provision through developing working relationship is now considered as a distinctive characteristic for successful business (Restuccia et al., 2018; Evanschitzky et al., 2011). Sometimes customers are not loyal to the company but have loyalty with the representatives at personal level and interpersonal level that plays a vital role in connecting between the customers and the organizations (Ghlichlee, & Bayat, 2020). This suggestion has been made on the above literature that relationship quality has positive impact on customer loyalty. Therefore, it is hypothetically proven that;

H9: Relationship quality has positive impact on Customer Loyalty.

Figure 1: Conceptual Framework



3. Methodology

The Co-relational design of research was used in the study. The main purpose of this design is to establish two or more variables or relationship. The relationship between these variables can be negative or positive and depends on the data gathered. The correlational research design shows negative or positive effects of independent variables on dependent variables and that research was concerned with measuring the degree of existence of more than two variables relationship (Bordens and Abbott, 2002). In this study, the relationship has been tested among service quality & customer orientation as independent variables and their effects on customer satisfaction, customer loyalty and relationship quality as dependent variables.

This research has been established based on primary data, which is basically a first-hand data, in which researcher do collects by itself. In this research, data was collected from supply chain managers, executives and the employees (who are involved in inbound or outbound logistics activities and in overall transportation activities) of Karachi based companies who used third party logistics services. Variables used in the research questionnaire were adopted from different literature sources with these variables and their sources indicated below in Table 2. Forty three (43) measurement items were structurally

aligned to measure these variables on a Likert scale of 1 to 5 (1 is the lowest rating and 5 is the highest rating) to measure variables.

Table 2- Instrument sources	
Variables	Sources
Tangibles	Kilibarda et al. (2016)
Reliability	Kilibarda et al. (2016)
Responsiveness	Kilibarda et al. (2016)
Empathy	Kilibarda et al. (2016)
Assurance	Kilibarda et al. (2016)
Customer Satisfaction	Chu, et al., (2016)
Customer Orientation	Chu, et al., (2016)
Customer Loyalty	Pattanayak et al., (2017)
Relationship Quality	Chu, et al., (2016)

According to Kwon and Sun (2005) restricted type of research can be conducted through specific target population in a defined restricted area. Target population of this research study was supply chain managers and executives working at different organizations in Karachi who uses 3PL services. The questionnaire was sent to 237 respondents using purposive sampling technique of which 153 responses were received leading to the response rate of 64.55%. 20 cases of them were further removed because of being partially filled and during the process of data screening.

The screening process of data was conducted through the use of SPSS in which univariate, multivariate outliers and missing values data were detected. The final data was comprised of 133 valid responses upon which SEM (Structural equation modelling) using Smart PLS 3.2.4 was utilized for validating outer measurement and hypotheses testing which is recommended by Hair et al. (2011) that, its usage is more suitable when the model is complex and the data is less than 200.

Moreover, prior to the employment of PLS-SEM, the presence of several biases were assessed. For instance, whenever there is a time lag in the process of data collection, there is a possibility of having non-response biasness which could be revealed in distorted results. Therefore, the collected sample was divided into two categories which are early respondents and late respondents and their mean was compared by the help of independent t-tests. The mean comparison revealed the insignificant differences between the two groups

thus confirming the absence of non-response biasness (Ahmed, Najmi, Arif & Younus, 2019).

In addition to this, for countering the common method variance, procedural remedies were followed as directed by the Podsakoff et al. (2012) whereas statistically it was evaluated by employing Harman's (1967) test as discussed by Najmi and Ahmed (2018) which confirms the absence of CMV, whereas the value of inter-construct correlations less than 0.9 also provide empirical evidence of the absence of CMV (see Table 7) which is found in this study. Lastly, the robustness and quality of data was evaluated by assessing the causality by the help of nonlinear bivariate causality direction ratio (NLBCDR) as discussed by Kock (2018). The value exceeding 0.7 justifies the absence of endogeneity which in the represent study is found close to 1 (Ahmed, Najmi, Khan, & Aziz, (2019). Thus all of these tests confirms the absence of the aforementioned biases and hence favored the application of PLS-SEM.

4. Data Analysis and discussion

The core target of this investigation was to delineate the impact of developed hypothesis on 3PL service quality and their effect on customer orientation, customer satisfaction, customer loyalty and relationship quality through projected model. In conducting the substantial study, the most applicable approach of quantitative research is statistical scrutiny and this was adopted to clearly endorse the collected sample data with the help of practical implementation, instrument authenticity, ratability and validity test, model fit and finding essential purpose of the variables mentioned, i.e. (Service Quality, Customer satisfaction, Customer orientation, customer loyalty and relationship quality), etc. (Hair, 200, Leech et al., 2005).

However, the tools contained for testing the raw form of gathered data was thoroughly analyzed and firstly run in the SPSS followed by partial least square regression method. The smart PLS 3.2.4 was also used to evaluate the model fit, validity and reliability test and building the relationships among the variables.

4.1 The measurement of outer model

The most important test of validity and reliability of outer model was already experienced and measured using the software PLS 3.2.4 before analyzing the developed

hypothesis (Ringle et al., 2015), the inner model. Further description about outer model was explained in following divisions which are further split into three categories of testing the reliability and validity of outer model part. The three sections are content validity, convergent validity and discriminant validity.

4.1.1 Content validity

Content validity is scrutinized through confirmatory factor analysis (CFA) and through cross loadings digits. It is beneficial for researchers to have strong and correlated factor loading of items in all over the tested model (Chin, 1998, Hair et al., 2013). However, the item which is not built or attached with any other items are removed from the table to increase the model authenticity and validity of strongly related items. It was essential to set the loading more than 0.7, this reflects the property of computing related concept. For more illustrations, tables 4 and 5 shows all the related relevant and strong cross loading items that are loaded on their respective paradigm.

Table 3 - Demographics			
Description (Sample Size = 133 Respondents)		Frequency	Percentage
Designation	Lower Management	13	9.77
	Middle Management	43	32.33
	Upper Management	77	57.89
Number of working years in the company	< 1Year	9	6.76
	1-5 years	52	39.09
	6-10 Years	47	35.33
	11-15 Years	12	9.02
	16-20 Years	04	3
	>20 Years	09	6.76
Number of working years in Current position	< 1 Year	23	17.29
	1-5 Years	45	33.83
	>20 Years	65	48.87

Number of working years with current 3PL service provider	< 1 Year	19	14.28
	1-5 Years	44	33.08
	6-10 Years	49	36.84
	11-15 Years	08	6.01
	16-20 Years	08	6.01
	>20 Years	05	3.75

Source: Author's estimation

Table 4 - Factor Analysis Results									
Constructs	AS	CL	CO	CS	EM	RL	RQ	RS	TN
AS1	0.831	0.589	0.577	0.765	0.653	0.684	0.675	0.600	0.478
AS2	0.861	0.642	0.571	0.591	0.601	0.559	0.598	0.682	0.421
AS3	0.819	0.566	0.532	0.634	0.601	0.528	0.581	0.633	0.433
CL1	0.656	0.885	0.564	0.672	0.749	0.640	0.723	0.738	0.500
CL2	0.669	0.866	0.605	0.644	0.742	0.709	0.728	0.696	0.470
CL3	0.627	0.879	0.602	0.638	0.719	0.567	0.692	0.668	0.525
CL4	0.513	0.823	0.492	0.573	0.605	0.569	0.664	0.583	0.383
CO1	0.364	0.312	0.664	0.383	0.262	0.279	0.337	0.424	0.252
CO2	0.650	0.578	0.856	0.700	0.634	0.555	0.636	0.607	0.454
CO3	0.578	0.577	0.832	0.682	0.625	0.591	0.696	0.578	0.373
CO4	0.542	0.542	0.822	0.693	0.581	0.654	0.667	0.511	0.452

CO5	0.492	0.547	0.864	0.652	0.587	0.564	0.645	0.571	0.453
CS1	0.576	0.524	0.599	0.833	0.572	0.621	0.650	0.556	0.378
CS2	0.720	0.700	0.662	0.873	0.718	0.697	0.751	0.670	0.453
CS3	0.702	0.562	0.658	0.841	0.708	0.668	0.725	0.588	0.459
CS4	0.695	0.567	0.660	0.786	0.610	0.605	0.647	0.639	0.408
CS5	0.656	0.605	0.665	0.844	0.679	0.614	0.711	0.601	0.383
CS6	0.560	0.638	0.685	0.751	0.632	0.655	0.686	0.595	0.420
EMP1	0.673	0.775	0.632	0.745	0.880	0.713	0.745	0.674	0.473
EMP2	0.607	0.632	0.593	0.644	0.835	0.613	0.650	0.658	0.505
EMP3	0.621	0.691	0.572	0.660	0.858	0.657	0.721	0.702	0.485
FVT1	0.608	0.546	0.497	0.591	0.614	0.606	0.589	0.617	0.785
FVT2	0.369	0.399	0.325	0.305	0.385	0.479	0.331	0.386	0.763
FVT3	0.243	0.302	0.324	0.265	0.311	0.341	0.296	0.398	0.774
FVT4	0.231	0.298	0.314	0.233	0.272	0.289	0.290	0.281	0.667
R1	0.587	0.641	0.608	0.682	0.638	0.859	0.679	0.628	0.553
R2	0.600	0.625	0.566	0.640	0.672	0.854	0.633	0.704	0.529
R3	0.567	0.607	0.583	0.655	0.684	0.857	0.593	0.664	0.497
R4	0.657	0.581	0.570	0.694	0.633	0.834	0.635	0.636	0.491
RQ1	0.682	0.675	0.636	0.777	0.715	0.679	0.810	0.637	0.472
RQ2	0.628	0.746	0.684	0.789	0.726	0.710	0.863	0.673	0.426
RQ3	0.671	0.691	0.660	0.739	0.751	0.631	0.856	0.653	0.444
RQ4	0.589	0.722	0.647	0.660	0.617	0.564	0.854	0.570	0.467
RQ5	0.563	0.642	0.654	0.673	0.698	0.620	0.855	0.584	0.474
RQ6	0.577	0.597	0.575	0.602	0.620	0.526	0.784	0.530	0.424
RSP1	0.639	0.677	0.542	0.672	0.699	0.716	0.657	0.775	0.414
RSP2	0.561	0.566	0.530	0.531	0.585	0.599	0.540	0.832	0.516
RSP3	0.639	0.674	0.590	0.611	0.692	0.648	0.602	0.858	0.533
RSP5	0.646	0.620	0.552	0.601	0.595	0.553	0.574	0.798	0.486

Source: Author's estimation

Table 5 – Factor Loading Significant					
Constructs	Items	Loadings	Standard Error	T Value	P Value
AS	AS1	0.827	0.046	17.937	0.000
	AS2	0.858	0.037	23.279	0.000
	AS3	0.817	0.041	19.786	0.000
CL	CL1	0.884	0.021	42.249	0.000
	CL2	0.863	0.032	26.801	0.000
	CL3	0.877	0.025	35.445	0.000
	CL4	0.818	0.039	20.921	0.000
CO	CO1	0.660	0.090	6.289	0.000
	CO2	0.854	0.033	26.303	0.000
	CO3	0.828	0.044	19.107	0.000
	CO4	0.819	0.045	18.225	0.000
	CO5	0.863	0.031	28.137	0.000
CS	CS1	0.831	0.033	25.036	0.000
	CS2	0.872	0.025	34.624	0.000
	CS3	0.839	0.033	25.447	0.000
	CS4	0.780	0.052	15.108	0.000
	CS5	0.842	0.033	25.483	0.000
	CS6	0.747	0.061	12.336	0.000
EMP	EMP1	0.878	0.027	32.637	0.000
	EMP2	0.831	0.042	19.714	0.000
	EMP3	0.856	0.031	27.854	0.000
FVT	FVT1	0.791	0.042	18.694	0.000
	FVT2	0.745	0.076	10.046	0.000
	FVT3	0.762	0.073	10.667	0.000
	FVT4	0.648	0.104	6.402	0.000
R	R1	0.857	0.031	27.571	0.000
	R2	0.854	0.027	31.723	0.000

	R3	0.857	0.028	30.622	0.000
	R4	0.823	0.050	16.582	0.000
RQ	RQ1	0.804	0.046	17.674	0.000
	RQ2	0.860	0.029	30.107	0.000
	RQ3	0.853	0.033	25.996	0.000
	RQ4	0.853	0.030	28.482	0.000
	RQ5	0.852	0.033	26.025	0.000
	RQ6	0.780	0.051	15.338	0.000
RSP	RSP1	0.771	0.048	16.199	0.000
	RSP2	0.830	0.039	21.276	0.000
	RSP3	0.857	0.027	31.509	0.000
	RSP4	0.801	0.038	21.265	0.000

Source: Author's estimation

4.1.2 Convergent validity

The convergent validity is measured through the constructed model where all the items are placed and interlinked with each other or as a collective convergence of a group of items (Hair et al., 2013). For regulating the measurement of convergent validity three elements should be treated as important. These include statistically strong and significant factor loading of more than 0.7, secondly, 0.5 average variance extracted (AVE) is considered satisfactory (Fornell and Larcker, 1981), and finally, composite reliability should be 0.7 or more. All requirements were made up to the mark as shown in Table 6.

Table 6 – The Convergent Validity Analysis			
Constructs	Loadings	CR	(AVE)
AS	0.788	0.875	0.701
CL	0.888	0.921	0.745
CO	0.877	0.894	0.633
CS	0.905	0.926	0.676
EM	0.821	0.893	0.735
RL	0.873	0.913	0.724

RQ	0.917	0.934	0.701
RS	0.833	0.888	0.666
SQ	0.948	0.947	0.506
TN	0.783	0.836	0.561

Source: Author's estimation

4.1.3 Discriminant validity

Discriminant validity is described as the ability to discriminate the gathered item organized in the construct of model which is separated from other construct (Ahmed and Najmi, 2018).

Discriminant Validity is defined as the degree to which all set of items can differentiate a variable from other variables in a model. In this research, we checked discriminant validity by using three criteria. First, we checked all items which are in the construct and loaded strongly on their particular constructs than the other construct and checked the difference between items with loading on their particular construct and values of cross loading which are greater than 0.1 (Gefen and Straub, 2005). Second, the correlation matrix shown in Table 7 contains diagonal line of elements which signify the square root of AVE. These pivot values must be greater than their respective values of row and column or in other words, their correlation of the construct in rows and columns. Discriminant validity confirmed the values of diagonal line are greater than the others in their rows and columns. This discriminant approach is recommended by Fornell and Larcker (1981). Thirdly, the Heterotrait-monotrait ratio of correlation calculate in Table 8 shows that none of the value of HTMT are higher than 0.85 (Henseler et al., 2015).

Table 7 – Correlation of Discriminant Validity									
Constructs	AS	CL	CO	CS	EM	RL	RQ	RS	TN
AS	0.837								
CL	0.716	0.863							
CO	0.670	0.656	0.795						
CS	0.795	0.733	0.789	0.822					

EM	0.740	0.817	0.699	0.798	0.857				
RL	0.708	0.721	0.684	0.784	0.772	0.851			
RQ	0.740	0.813	0.769	0.818	0.824	0.746	0.838		
RS	0.762	0.779	0.679	0.742	0.791	0.774	0.729	0.816	
TN	0.531	0.545	0.507	0.509	0.568	0.608	0.538	0.597	0.749

Source: Author's Estimation

Table 8 -- Heterotrait – Monotrait Ratio (HTMT) Results									
Constructs	AS	CL	CO	CS	EM	RL	RQ	RS	TN
AS									
CL	0.855								
CO	0.812	0.744							
CS	0.938	0.815	0.897						
EM	0.919	0.955	0.815	0.923					
RL	0.851	0.818	0.776	0.882	0.911				
RQ	0.869	0.900	0.854	0.926	0.948	0.831			
RS	0.942	0.903	0.808	0.852	0.955	0.904	0.830		
TN	0.623	0.624	0.598	0.557	0.667	0.699	0.602	0.703	

Source: Author's Estimation

4.2 The Structural model and test of hypothesis

The structural equation modelling (SEM) was used to test the developed hypothesis after following the validation techniques (Ringle et al., 2015). The main idea behind using SEM for testing our hypothesis is because the structural equation has great possibilities of estimating other models and considered as the best among all the statistical tools (Hair et al., 2011, Henseler et al., 2015). Especially, it replaces the importance of the covariance (Hair et al., 2011, 2012). Using the sample data of 500 with smart PLS the research is executed further and testified in as shown in the Figures 2 and 3 below.

4.2.1 Predictive relevance of the model

The R-square model is utilized to gauge the aggregate limit as far as variance clarification of the coveted model remains relevant (Hair et al., 2011). According to Cohen (1988) the values between 0.13 and 0.02 are said to be weak and mild, whereas the values near to 0.26 are strong and significant Q-square is known as the quantity used to determine the predicative relevance. Predictive relevance can be recognized by the values greater than 0 and higher if the change between Q-square and R-square is mild (Hair et al., 2011; Hair et al., 2014). The results of this study have been recorded as substantial level (high) because all the values of the factors or variables are above the mentioned criteria of substantial level of R-square. The values of customer orientation (0.567), customer satisfaction (0.778), and customer loyalty (0.668) and relationship quality (0.776) are strong and greater than the criteria. As compared to the service quality (1) which has strong significant value, the Q2 values have greater numbers of value than 0 and as compared to the R-square values which is less than or half the values, as compared to the R-square. We can see all the relevance values in Table 9.

Model goodness of fit (GOF) is also a way of analyzing the model of PLS-SEM (Tenenhaus et al., 2005). Even though the latest edition of GOF is not recommended for every research using PLS (Hair et al., 2016). The investigation consists of the use of average communality (AVE) and predictive indicators (R-squared) to measure model fit. This is stated by the formula:

$$\text{GoF} = \sqrt{\text{Average } R^2 * \text{Average AVE}}$$

The values which are used to estimate the level are small (0.1), medium (0.25) and large (0.36). The values of the calculation per the above criteria results are 0.6522 and 0.7578 which are more than the above criteria and have a very strong significant impact.

Table 9-Predictive power of Construct		
Construct	R Square	Q Square
CL	0.668	0.493
CO	0.567	0.348
CS	0.778	0.512
RQ	0.776	0.531
SQ	1.000	0.496

Source: Author's Estimation.

The beta coefficient represents how and in what direction or magnitude, positive or negative accordingly unit change in shift of a dependent variable to an independent variable with other variable construct (Hair, 2010; Leech et al., 2005). The criteria for the significance level is 0.01 which means the probability or p value should be equal to or less than 1%. As can be seen from Tables 10 and 11 values, and Figure 2, all the constructs/variables met this criterion. Taking “services quality” as an example, service quality has significant and positive impact on customer satisfaction at the level of (0.00) Beta = 0.573, t-stats = 8.878 and p value = < 0.01. Again, service quality has positive significant impact on relationship quality at the level (0.00) Beta = 0.348, t-stats = 3.827 and p value = < 0.01. Furthermore, service quality has significant and positive impact on customer orientation as per the criteria level (0.00) Beta = 0.751, t-stats = 13.327 and p value = < 0.01. From Tables 10 and 11 values, and Figure 2, it is obvious that all the hypothesis tested were supported.

Figure:2

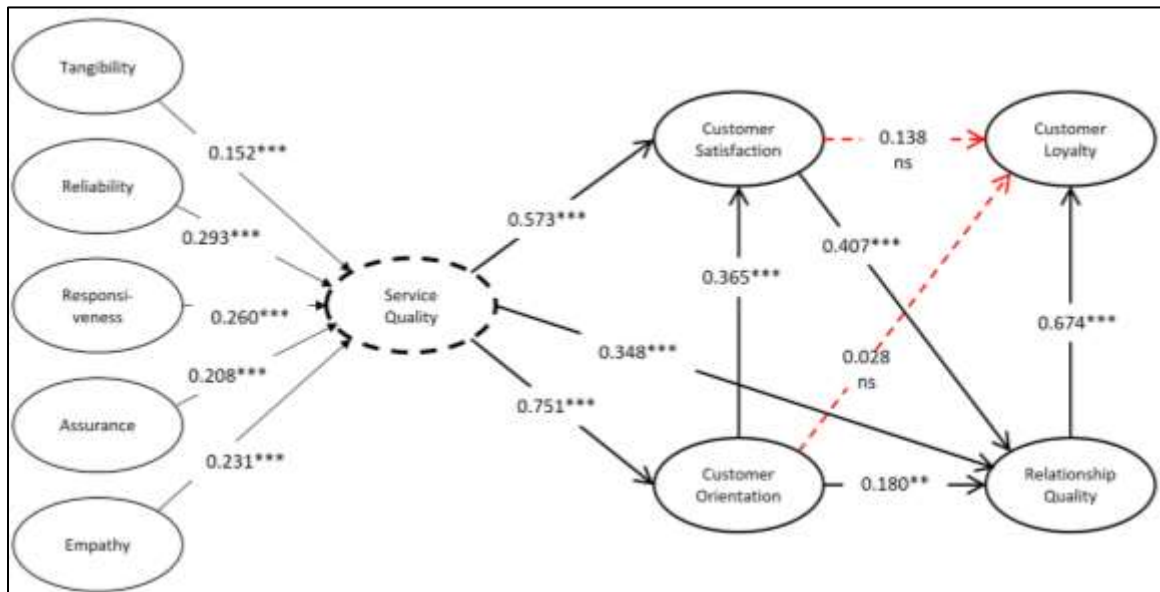


Table 10 – Formative Construct for Service Quality				
Formative Indicator for Service Quality	Loading of Construct	Standard error	T Statistics	P Values
AS -> SQ	0.208	0.013	16.642	0.000
EM -> SQ	0.231	0.014	15.873	0.000
RL -> SQ	0.293	0.017	16.906	0.000
RS -> SQ	0.260	0.017	14.930	0.000
TN -> SQ	0.152	0.021	7.289	0.000

Source: Author's estimation

Table 11 – Hypothesis Testing Result					
<i>No.</i>	<i>Hypothesis</i>	<i>Estimate</i>	<i>SE</i>	<i>T Value</i>	<i>P Value</i>
1	CO -> CL	0.028	0.070	0.372	0.710
2	CO -> CS	0.365	0.068	5.432	0.000
3	CO -> RQ	0.180	0.082	2.201	0.028
4	CS -> CL	0.138	0.135	1.037	0.300
5	CS -> RQ	0.407	0.096	4.190	0.000
6	RQ -> CL	0.674	0.124	5.434	0.000
7	SQ -> CO	0.751	0.056	13.327	0.000
8	SQ -> CS	0.573	0.064	8.878	0.000
9	SQ -> RQ	0.348	0.093	3.827	0.000

Source: Author's estimation

The results from the above tables shows the significant and insignificant impact of the variables on each other or independent variables on dependent impact. It shows service quality has significant impact on customer orientation, relationship quality and customer satisfaction while on the other hand customer orientation has significant impact on customer satisfaction and insignificant impact on customer loyalty and relationship quality. Customer satisfaction has significant impact on relationship quality and insignificant

impact on customer loyalty. Relationship quality has significant impact on customer loyalty.

In Table 11 above, data shows and defines the indirect effect of variables such as, customer orientation indirect impact on customer loyalty and relationship quality and customer satisfaction has indirect impact on customer loyalty. In which, customer loyalty is improved with beta value of (0.269) by customer orientation through relationship quality. Relationship quality is improved with beta value of (0.148) by customer orientation through customer satisfaction. Customer loyalty is improved with beta value of (0.272) by customer satisfaction through relationship quality.

5. Conclusion, implications and Recommendations for further study

5.1 Conclusion

Findings of this research reveals that all ServQual dimensions are significant for users' satisfactions in 3PL industry. Reliability, responsiveness and empathy has the higher weightage in maximizing the service quality. It is also found that service quality leads to satisfaction of the customer and also it leads towards customer oriented approach of doing business. In turn, third party logistics provider which enhances their customer orientation will gain more customers' satisfaction. But the most important finding of this research is that both customer satisfaction and customer orientation are insignificantly making any impact on customer loyalty which is quite true in the geographical context. There are lot of competition in the market and every now and then new 3PL entrant enters in the market which makes business environment more volatile. Therefore, only those service providers that retain their customers for longer period are not only customer oriented and better quality services providers but also built strong working relationship with their customers.

5.2 Theoretical Implications

The present study has several theoretical implications. Firstly, the present study validated the SERVQUAL model as an important determinant of customer satisfaction. Though this relationship has been studied in various disciplines however, the viability of SERVQUAL in the context of 3PL has made a significant contribution in the literature. Moreover, SERVQUAL also emerged as the predecessor of customer orientation which justifies that for customer orientation, an organization need to have superior service quality.

Secondly, the integration of SERVQUAL and CVT also emerged as important contribution which provides an avenue for the future researchers to further explore this direction whereas they can also expand this scope while employing this integration in other settings. Lastly, the contextual settings of the present study is also an important contribution which will provide a theoretical foundations for future researchers in their further exploration of these relationships.

5.3 Implications for managers

This study will provide great deal of insights for the 3PL service providers to gain customer satisfaction and further to retain their loyalty to their business. Firstly, it is necessary for 3PL service providers' to maintain and increase the level of their service quality as per service level agreements. This research further specifies the priority for 3PL providers that they must focuses on reliability and their response at the first place. Then their personals must be empathetic and their policies and practices assures their commitment along with the assets and resources that reflect their capabilities to manage the work. This may also help third party logistics' policy makers to develop their KPIs accordingly.

Secondly, this study confirms that logistics service quality enhances customers' satisfaction but it further reveals that 3PL organizations that are more customer oriented are more liked by the customers. Customers are more satisfied with and rate high to those logistics service providers which provides solutions specifics to their requirements.

Thirdly, this study highlights some unique understanding about the third party buyers and suppliers that buyers doesn't necessary return to repurchase the services from the logistics provider even if they were satisfied with their performance. The reason may be intense pressure, new entrants and low differentiation in the market. Even customer specific solution won't work for keep customer loyal to provider's business.

Lastly, this study presents the solution for the above finding that to retain customer for longer period it is necessary to build quality buyer-supplier relationship. A relationship in which need are assessed mutually, ideas are exchanged frequently, responses are provided at every level of interactions. Thus business need is properly understood to facilitate buyers accordingly. This will lead buyer to avoid frequent switching of logistics service provider and enhances business loyalty.

5.4 Future Recommendations

Based on the limitations of the present study, it is recommended that future research should include factors such as technological issues, infrastructure and environmental uncertainty issues in 3PL service sector. Moreover, buyer and supplier dependence can also be included to understand the relationship nature. Future research in similar context may also study the indirect effect for understanding the phenomenon better. Methodologically, since the present is based on the survey from customer perspective, therefore there is a possibility of employing experts opinions by means of multi-criteria decision making technique (see Najmi, Kanapathy, & Aziz, 2019). Statistically, the present study has only captured the linear relationships by using the SEM and hence non-linear relationships can also be captured by employing the two staged approach (see Najmi, Kanapathy, & Aziz, 2020). Lastly, studies in other geographical setting would also be helpful in comparing or generalizing the concepts more.

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