Improving Supply Chain Performance through Supplier Relationship Management: A Moderating Model of Knowledge Management Practices in Automobile Sector of Pakistan

Kashif Mahmood [1] Dr. Muqqadas Rehman [2]
Prof. Dr. Ch. Abdul Rehman [3]

1. Ph. D. Scholar, Department of Business and Management Sciences, The Superior College, Lahore, Punjab, Pakistan
2. Professor, Institute of Business Administration, University of the Punjab, Lahore, Punjab, Pakistan
3. Professor, Department of Business and Management Sciences, The Superior College, Lahore, Punjab, Pakistan

Abstract

Companies are gaining competitive advantage based on their supply chain networks now a day where strengthened supplier relationship plays a vital part. This purpose of this research is to measure the organization's supply chain performance through supplier relationship management by considering the knowledge management practices as the moderator. Majorly, customized services provided by the suppliers and collaboration level with suppliers are focused in this research whereas supply chain performance is measured through supply chain operations reference (SCOR) model and knowledge management practices were considered as knowledge creation, sharing, storing and implementation. The study has used cross-sectional design under the positivist paradigm by following deductive approach where questionnaires are used as data collection tool. The automobile sector in Pakistan is focused in this research specifically the two-wheeler motorbike manufacturing firms. Data are analyzed by using SEM model through SmartPLS software and SPSS-24 software is used for descriptive analysis. The study found that the individual impacts of the independent and moderating variables are significant over dependent variables however the moderation analysis shows that the KMP moderates partially the relationships of SRM and SCP as few hypotheses remained insignificant. The study is unique into its nature as prior studies partially focused either on direct impacts of KMP on SCP or SRM on SCP but none of the study is found that consider the KMP as moderator.

Key Words: Collaboration**,** Customized Services, Knowledge Management Practices, SCOR Model, Supplier Relationship Management, Supply Chain Performance

Introduction

Businesses have always been concentrated towards introducing innovative and unique ideas, techniques and methods in order to improve the business processes. Supply Chain Management (SCM) has developed as a possibly valuable solution for the organizations in order to gain best output and to increase performance (Handfield & Cousins, 2015). The early experimental researches were focused on developing such tools which could be utilized in order to measure SCM practices (Kumar & Reinartz, 2018; Maestrini, 2017; Schaltegger & Burritt, 2014). Organizational accomplishment depends on the efficacy and strength of supply chain performance as a component of supply chain management(Li & Ragu-Nathan, 2006).

Supplier relationship management and organizational performance are interconnected where the incorporation of suppliers of a business is considered to be a

vibrant contributor towards the improved supply chain performance level leading to improved business performance(Fredendall & Hill, 2016). Strategic partnership of business with their suppliers helps in resolving business issues and leads to long term relationship with suppliers(Kroes & Ghosh, 2010). Furthermore, the consolidation of suppliers into the product design phase may yield cost effective alternative choices for the businesses(Akyuz & Erkan, 2010; Azevedo, Carvalho, & Matias, 2017).

Previous researches have clearly described that adoption of knowledge management approach into a business redesigns its supply chain management process and performance evaluation measures seeking the ultimate benefit of the business venture. In brief, amalgamation of knowledge management refers to the strive of the company to gain operational efficacy in all the respective disciplines, activities, procedures at all levels in order to utilize the established synergized power to influence supply chain practices and hence yield an enhanced progression and improved level of performance(Handfield & Cousins, 2015; Maestrini, 2017).

Pakistan is a growing market for vehicle and allied industries specifically referring to the groups concerned with the whole manufacturing or assembling the cars, other vehicles which are solely used for business purposes, freight carrying trucks, bikes and many more. Car enterprise has witnessed a boom in the modern era within the time frame of a few years and hence novel and innovative forms of cars and other automobiles equipped with modern era facilities and components has been evolved domestically(Arifeen, 2018).

Increasing demand for supply chain has led to the speedy worldwide growth of the automotive sector(Anderson & Dekker, 2009; Lendermann et al., 2003). Therefore, the manufacturing sector should be holistically responsive to deal with vibrant industry demands through prioritizing the right tactical activities(Wiengarten, Humphreys, Cao, Fynes, & McKittrick, 2010).

Some Pakistani automotive companies have been able to meet with current global industrial standards whereas others are putting their efforts to adopt or track current standards leaving some companies in trouble(Yaghoubipoor, Tee, & Ahmed, 2013). Therefore, the current situation signifies the need to explore the subject of the study in the automobile sector of Pakistan (Mustafa, Begum, Nisar, & Osama, 2018) .Most of the researches that have been conducted within the domain of supply chain management practices have been attributed to the interdisciplinary origination of supply chain management practices and perspectives of SCM concept encompassing the impact of SCM practices on the sustainability of organization (Heckmann, Comes, & Nickel, 2015; Rajeev, Pati, & Padhi, 2019; Touboulic & Walker, 2015).

The relationship between buyers and suppliers of the businesses is a significant area of interest for the researchers However, not much research has been conducted considering the contribution of enhanced buyer-supplier relationship into improving the performance of supply chain process through considering knowledge management approaches (Touboulic & Walker, 2015). Liu and Wang (2000) conducted a research encompassing the effect of collaborative and improved buyer-supplier relationships on the financial performance of organizations where the study

discussed only one aspect of supply chain performance which was procurement function.

Frohlich and Westbrook (2001) investigated the results of dealer–client integration on organizational performance however the researches considering the effect of internal supply chain management practices on the overall supply chain performance process have not been conducted so far leaving the gap for the future researchers. Subanidja and Hadiwidjojo (2017)found that KMP significantly impacts the company performance and it can be used as independent, moderator or intervening variable. Furthermore, the researchers considered Just in Time approach combined with knowledge management in order to address the supply side strategic development of the organizations. However, the research lacked empirical findings regarding the advantages of knowledge management-based supply networks.

The researchers have recommended including supply chain performance related components into the future researches in order to evaluate the role of knowledge management practices and supply chain performance measures on overall supply chain process improvement in the automobile industry. Despite the increased attention being paid to supply chain management and its various aspects, the current studies couldn't offer much about the relationship between the numerous levels or relative stages of supply chain and its relevant performance. Hence, it leaves a space for the researcher to extend and enhance the research base in this field by studying the impact of various stages of supply chain on SC performance where knowledge management practices are considered as moderating variable.

This study aims to measure the moderating role of knowledge management practices (KMP) on the supply chain performance (SCP) by analyzing several stages of supply chain management practices in Automobile sector of Pakistan. Furthermore, research aims to validate that knowledge management practices put a great effect on all the supply chain management practices which results in an improved supply chain performance. The research objectives are investigating the effect of supply chain management practices on the supply chain performance and measuring the moderating impact of KM practices on the relationship between SRM and SCP.
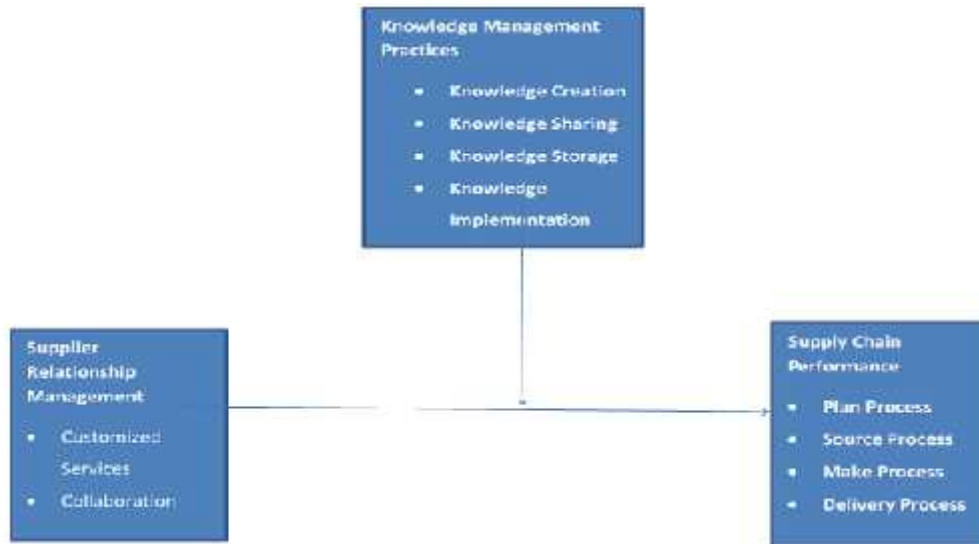
Figure 1: Research Model

Literature Review

Supply chain performance is an augmentation to supply chain management activities. Essentially, it alludes to satisfying customer's demand by guaranteeing very much determined procurement of raw material, on time product accessibility and proficient supply and inventory management capacities of a business (Bottani & Montanari, 2011). However, there are sure conditions which organizations need to follow before executing supply chain performance framework. In the first place, shared accord of the considerable number of shareholders about execution measurements and assessment model is required. Second, the performance measurement framework ought to be transparent and cover all the groups and subgroups including both internal and external parts of supply chain (Simatupang & Sridharan, 2002).

Supply Chain Operations Reference (SCOR) Model

Supply Chain Operations Reference (SCOR) model is considered as a crucial tool to best to best clarify the fundamental concept of the entire supply chain process(Prajogo, Oke, & Olhager, 2016). SCOR model takes into consideration the whole supply chain process and allows supplier to supplier and customer to customer relationships. It provides the basic idea to characterize a normalized standard, in order to avoid biasedness and ensure correct performance measurement. The criterion which has been set comprisesof types of processes, SCOR processes and above all the hierarchal levels of a company(Lima-Junior & Carpinetti, 2016; Lima-Junior & Carpinetti, 2019).
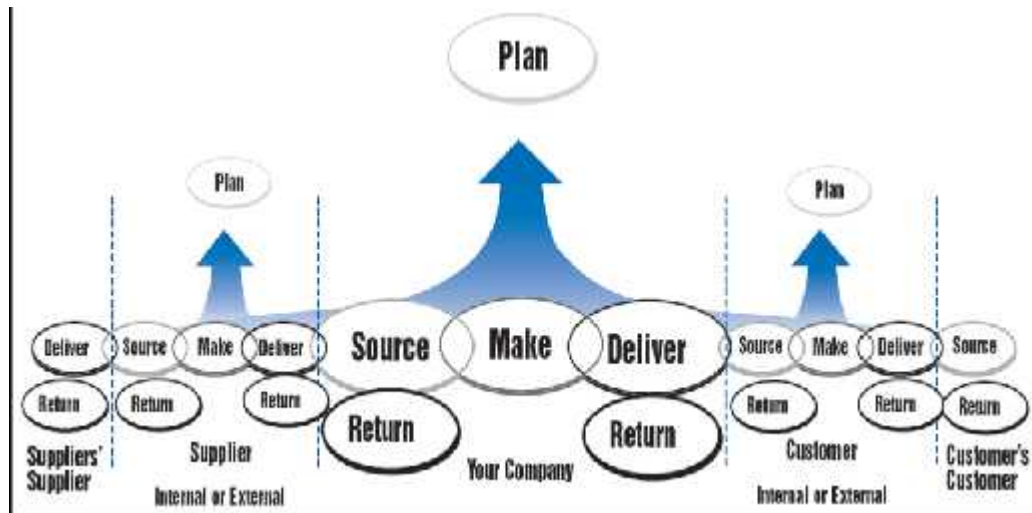
Figure 2: SCOR model
Source: Adopted from Wang, Chan, and Pauleen (2009)

First phase of SCOR Model is planning. This model ensures to tackle and summarize all the operational functions at this phase so it includes all types of planning such as strategic thoughts, operational dimensions, planning of manufacturing and supply chain networks as well. SCOR model also focuses on the production aspects where quality assurance is the most significant aspect. Such incorporation of all the processes, activities, operations from strategic to retail level expands the SCOR model and it becomes multidisciplinary and challenging framework. Furthermore, SCOR model also takes into consideration the planning of the damaged or returned products (Sellitto, Pereira, Borchardt, da Silva, & Viegas, 2015).

Second phase of this model is termed as sourcing or making process, takes into consideration all the operational activities related to purchasing in a concise manner. Delivering is the third phase and it ensures the smooth flow of the products delivery chain of supply chain networking activities at all levels for all the products while Return is the last phase of SCOR model which takes into account the damaged, broken or returned products, examines the reasons and then use this gained information for future in order to ensure strict quality checkups along with devising deliberate measures to take proactive actions in order to avoid any such circumstances (Sellitto et al., 2015).

The SCOR framework reports break down and consider the whole production network. Mainly the implementation estimation framework as an imperative component permits estimating the execution of the supply chain network standardized and tackles issues of correspondence or many-sided quality (Sellitto et al., 2015).

Supplier Relationship Management

Supplier relationship management is identical to Supplier relationship management in less complex words as described by Akamp and Müller (2013).They

presented it as an act of positioning, executing, generating and inspecting organization's affiliation and unions with the present and potential suppliers. Major organization activities of supplier administration are supplier decision and appraisal, supplier observing, supplier progression and supplier joining. Supplier's decision is viewed as the foundation of obtaining a significant level of supply chain management to keep up and advance the focused control (Abdollahi, Arvan, & Razmi, 2015). Studies related to Supplier determination demonstrate excellence as most notable feature taken after by conveyance, value, producing ability, benefit, administration, innovative effort, backing and support, adaptability, notoriety, relationship, hazard management and supplier's wellbeing management (Thakur & Anbanandam, 2015).

SRM is an extensive approach which improves interest, coordination, and communication between the organization and its suppliers to construct adequacy and feasibility of joint effort and at the same time redesign quality, security and advancement (Mettler & Rohner, 2009). To recognize the possible obstructions, SRM mix is the focal topic which has been covered by Oghazi, Rad, Zaefarian, Beheshti, and Mortazavi (2016)and he attempts to gives course of action recommendations to beat these impediments. In such manner, the studies, researches and subsequent surveys in the concerned domain demonstrate that the SRM procedural combination can happen by the mix of its diverse sub-forms into vital and operational qualities.

Soh, Jayaraman, Yen, and Kiumarsi (2016)described seven dimensions that are widely used to measure the buyer supplier relationship. These measures are trust, contribution, business understanding, correspondence, responsibility, data sharing and information. The studies reveal that Supplier Commitment (SC) and Supplier Quality (SQ) have coordinates noteworthy connections with Supplier Performance (SP).

Development of collaboration between the firms and suppliers is definitely not a simple procedure. It requires time and financial speculation from the two sides. Lambert and Enz (2017)introduced a model considering the basic relationships between the firms and the suppliers by assessing all the drivers, facilitators, and other contributors which add up to formulate a sustainable alliance between two organizations. The researcher further explained the factors which signify that a relationship or collaboration between the suppliers and firm will be established on the basis of substantial cost effectiveness, improved mutual benefit and the development of auspicious and reasonable position in the market.

Knowledge Management Practices

The role of knowledge management hierarchy is nicely defined by Guo cited in Woolliscroft, Caganova, Cambal, Holecek, and Pucikova (2013) given in the figure 3. It represents the knowledge management as a procedure consisting of four sub-stages. First stage is knowledge sources, in which knowledge is collected from different sources, second phase is knowledge generation, at third level knowledge is stored and finally adopting the cooperation, communication, sharing and innovation techniques to ensure its proper application. Business organizations who have formulated their systems based on enhancing their knowledge capacity follow the same procedure as presented in the Figure3.
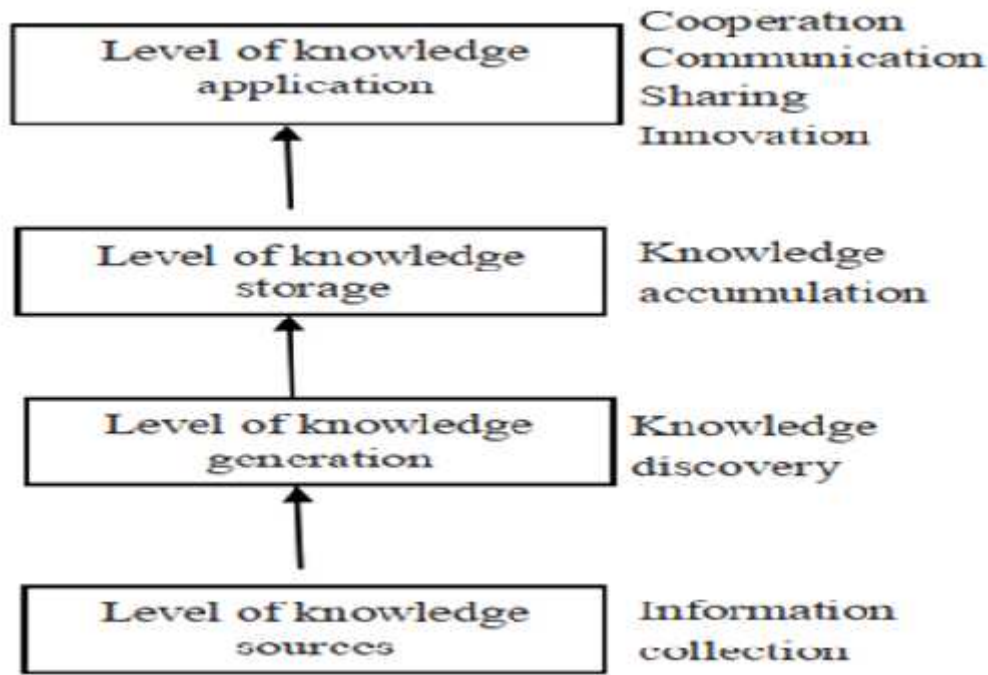
Figure 3: Knowledge Management Hierarchy
Source: Adopted from Woolliscroft et al. (2013)

First practice that is taken into consideration is knowledge creation; it is a process which includes an advanced executional context of the knowledge. According to Wu and Chen (2014)knowledge creation process focuses that organizations need to look for the new perceptions and aspects of gaining the knowledge from both internal and external sources. Transitional approach with organizational achievement, constant advancement and learning enhancement for the benefit of all the business's stakeholders as well as the organizational sustainability for a longer period of time is imperative while considering knowledge management process (Bhatt, 2000; Malhotra, 2000). The researchers also stated that knowledge creation process can be fostered and boosted Outsourcing can be another way to create knowledge and hence focus on getting efficacy in all the supply chain operations and activities in order to be competitive in the huge and ever-changing market (Abou-Zeid, 2002).

Storing knowledge is the second and follows knowledge creation process. The organization should be mastermind and deal with the learning and knowledge aspects along the mentioned subject lines considering its tendency to less demanding (Chang & Lin, 2015; Ling & Nasurdin, 2010; Massey & Montoya-Weiss, 2006). At such point when the learning is coordinated, it lessens the repetition along the subjected domain lines and hence improve proficiency (Alavi, Kayworth, & Leidner, 2005).Knowledge sharing is the third level which refers to the knowledge or learning trade(Eskerod & Skriver, 2007) which in simple words can be termed as the transfer of knowledge within individual, systematic or organizational levels(Krylova, Vera, & Crossan, 2016). According to most of the researches being conducted in this field, it has been understood that the basic purpose of knowledge sharing is to ensure that transferred or shared knowledge(Ko, Kirsch, & King, 2005), upon communication, converts from

indirect learning or knowledge to ambiguous knowledge (Ajmal & Koskinen, 2008; Koskinen & Pihlanto, 2008)in order to prevent this loss during the transferring phase (Pirkkalainen & Pawlowski, 2013).

Furthermore, the fourth and last step has been considered as the most dynamic aspect and hence covers the knowledge implication phase where the procedural aspect includes learning utilizing perspectives(Markus, Majchrzak, & Gasser, 2002) with the purpose of enhancing the productivity and most importantly cutting cost (Orlikowski, 2002). A person or organization utilizing the gained knowledge might vary from the one being involved in the process of knowledge creation (Hegazy & Ghorab, 2014).

Material and Methods

This cross-sectional research has used the survey method under the Positivist paradigm by following deductive approach and quantitative method approach to examine the effect of supplier relationship management on supply chain performance by considering the moderating role of knowledge management practices. The study has used questionnaires as data collection tool from 53 CEOs of automobile companies of Pakistan. Descriptive data is presented by using SPSS where important variable related to the respondent's profile are described whereas, PLS-SEM analysis is used to test the model where bootstrapping technique is used with measurement model to test the hypothesis.

Results and Discussion

Demographic Profile of Respondents

The data has been collected from 53 CEO's of automobile businesses of Pakistan. 53 research questions were designed for getting the consent and response rate was 100 percent. The table has shown demographic profile of respondents. Complete detail related to age, gender, income, size of the company as well as type of the company is provided in the table 1.

Table 1
Demographic Profile of the Respondents

Variable	Categories	Frequency	Percentage
Age	Below 30	Nil	Nil
	31 – 40	Nil	Nil
	41 – 50	34	64
	Above 51	19	36
Gender	Male	53	100
	Female	Nil	Nil
Size of the Company	Small	49	92
	Medium	2	4
	Large	2	4
Type of the Company	Local	50	94
	International	Nil	Nil

Multinational	3	6
Global	Nil	Nil

Above table shows variables, categories, frequencies and percentages. Total 53 CEOs responded the questioner and 100 percent response rate was achieved. According to George (2011) the response rate is highly affected by having previous relationships with the research participants, assuring their inclusion in the research. Other than that, 100% response rate can only be achieved if there is well defined and highly controllable environment in the organization.

All 53 respondents were male among which 34 (64%) were between 41 to 50 years of age and 19 (36%) were above 51 years of age. The data collected from 53 automobile companies, shows that 49 companies (92%) were small manufacturing concerns, 2 medium and 2 large automobile organizations. Likewise, 50 companies were local and 3 were multinational.

Table 2
Proportionate Sample Size Distribution

Whole Population	Proportionate Sample Size
500	50 %
1,000	30 %
10,000	10 %
150,000	1 %
1,000,000	0.025 %

Source: Recommendations of Ruane (2005)

Besides all that, another significant aspect is the discussion about the suitability and appropriateness of sample size as a true representative of population. As per official statistics of Pakistan Automotive Manufacturers Association (PAMA), there are 106 motorcycle manufacturing companies operating in Pakistan (see Annex Table 1). In view of total population of 106 companies across the country, author has used recommendation ofRuane (2005) as indicated in Table 2. As population falls under '500 slab', so minimum 50 per cent population is used for the analysis purpose.

In such case, using the recommended guidelines of Ruane (2005)about the selection of sample size based on the number of populations authenticates the selection of 53 CEO's representing 50% of the whole population.

Reliability analyses show reliability and consistency of measurement for all the variables. The table shows all the variables of this study, number of items and the value of Cronbach Alpha. Keeping in mind the samples of present study, value of Cronbach alpha been recorded ranging between 0.704 and 0.921. The higher values of Cronbach alpha show the existence of high reliability of variables, like values of Knowledge application is 0.921 and SRM Customized Services is 0.822, it shows that variables with high value of Cronbach Alpha are highly reliable.

Table 3
Reliability Analysis

Variables	Number of items	Cronbach Alpha
Knowledge Creation	5	0.732
Knowledge Sharing	5	0.786
Knowledge Storage	5	0.786
Knowledge Application	5	0.921
Supplier Relationship Management – Customized Services	5	0.822
Supplier Relationship Management – Collaboration	4	0.717
Supply Chain Performance – Plan Process	3	0.730
Supply Chain Performance – Source Process	3	0.704
Supply Chain Performance – Make Process	3	0.767
Supply Chain Performance – Deliver Process	3	0.788

Common Method Variance

Common method variance (CMV) is more related to the measurement method rather than constructs(Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). For this study data was collected through different personnel's, which were selected from procurement, production and sales department of every organization so there is no issue of CMV in this study and ultimately there is no need to use the statistical remedies.

Assessment of Reflective Measurement Model

The individual item/construct's reliability is determined by the inspection of item loading on their respective latent construct(Hulland, 1999). Higher loading depicts that construct and measurement share more variance rather than error variance and low loading of constructs result in reducing the estimated factors linking the variables(Hulland, 1999). In this study, different tests are applied to check that all the measurements are reliable and valid before checking their relationships in structural model. To measure the reliability, composite reliability test was used and validity was measured using SMART PLS software. To check the internal consistency of the data collection instrument, Confirmatory Factor Analysis (CFA) was conducted.

Composite Reliability and Convergent Validity

The composite reliability (CR) is used to measure the internal consistency and reliability of items. It is clear from the table given below that loading values range between 0.296 to 0.932. The table shows that during the analysis the composite reliability of all items presented in the same category even after the deletion of items from scale. The CR value is ranging between 0.747 and 0.945 that is more than the threshold value of 0.7(J. F. Hair, Anderson, Babin, & Black, 2010). Hence, internal consistency reliability of each variable reflected high level.

For the calculation of convergent validity, average variance extracted (AVE) was calculated. it is clear from the table that all the constructs were having AVE values more than the acceptable level of 0.5 and the values were ranging from 0.504 to

0.852. The AVE value more than 0.5 shows that more than half of the variance of its parameters were explained by the latent construct. So, all the variables which have AVE value > 0.5, show valid measures grounded on their constraint estimates and statistical significance(Chow & Chan, 2008). Therefore, all constructs in this model were having sufficient convergent validity.

Table 4
Factor Loadings

1st Order Constructs	2nd Order Constructs	Items	Loadings	CR	AVE
Customized Services		CS1	0.851	0.87	0.577
		CS2	0.806		
		CS3	0.527		
		CS4	0.833		
		CS5	0.737		
Collaboration		C1	0.66	0.81	0.59
		C2	0.843		
		C4	0.79		
Knowledge Acquisition		KAP1	0.677	0.917	0.69
		KAP2	0.748		
		KAP3	0.716		
		KAP4	0.686		
		KAP5	0.705		
Knowledge Storage		KS1	0.92	0.945	0.852
		KS2	0.932		
		KS4	0.918		
Knowledge Dissemination		KDP1	0.705	0.828	0.504
		KDP2	0.709		
		KDP3	0.613		
		KDP4	0.296		
		KDP5	0.384		
Knowledge Implementation		KIA1	0.908	0.939	0.794
		KIA2	0.865		
		KIA3	0.882		
		KIA4	0.907		
	Knowledge Management Practices	KAP	0.853		
		KDP	0.806		
		KIA	0.558		

	KS	0.77		
Plan Process	PP1	0.879	0.747	0.516
	PP2	0.416		
	PP3	0.777		
Source Process	SP1	0.866	0.887	0.724
	SP2	0.896		
	SP3	0.786		
Make Process	MP1	0.873	0.821	0.697
	MP3	0.795		
Delivery Process	DP1	0.861	0.882	0.715
	DP2	0.894		
	DP3	0.777		

Discriminant Validity

The degree to which a variable is differentiated from the other variables is called the Discriminant validity (J. Hair, Black, Babin, Anderson, & Tatham, 2010). In order to calculate discriminant validity, there were two methods that are used in this study: Fornell&Larcker Criterion (Fornell & Larcker, 1981) and heterotrait-monotrait ratio (Henseler, Ringle, & Sarstedt, 2015).

Heterotrait-Monotrait Ratio

Heterotrait-monotrait ratio of correlations was presented by Henseler et al. (2015), which depend upon "multitrait-multimethod matrix" to examine the discriminant validity of constructs. Many studies used the HTMT ratio for the calculation of discriminant validity and also recommended to use this approach in different scenarios (Ali, Rasoolimanesh, Sarstedt, Ringle, & Ryu, 2018; Haider, Jabeen, & Ahmad, 2018; Hamid, Sami, & Sidek, 2017; Henseler et al., 2015; Hussein & Baharudin, 2017; Janadari, Sri Ramalu, & Wei, 2016).

Discriminant validity can be calculated by using two ways in HTMT ratio; first, as a criterion and second, as a statistical test (Henseler et al., 2015). If HTMT ratio is measured as a criterion, it should be less than 0.85 (Clark & Watson, 1995; Kline, 2011) or it should be less than 0.90 (Gold, Malhotra, & Segars, 2001) but if ratio is higher than 0.90, it creates problem of discriminant validity . If HTMT ratio is used as a statistical test and for the test of null hypothesis (H0: HTMT 1) against the alternative hypothesis (H1: HTMT < 1) and if the confidence interval includes value one, it shows the lack of discriminant validity (Henseler et al., 2015). So, in this study, HTMT ratio is measured as a criterion to calculate the discriminant validity.

As shown in Table 5, all the values of the HTMT ratio for the first-order constructs were less than 0.90 and passed the criterion of the HTMT<0.90 (Gold et al., 2001). Hence, it is revealed through the findings that discriminant validity had been established for all the first-order constructs.

Table 5

Heterotrait-Monotrait Ratio

	C	CS	DP	KAP	KDP	KIA	KMP	KS	MP	PP	SP
C											
CS	0.38										
DP	0.284	0.608									
KAP	0.317	0.582	0.839								
KDP	0.349	0.635	0.691	0.691							
KIA	0.111	0.182	0.37	0.329	0.292						
KMP	0.313	0.602	0.828	0.815	0.855	0.698					
KS	0.161	0.434	0.591	0.542	0.631	0.381	0.831				
MP	0.374	0.69	0.739	0.696	0.706	0.299	0.725	0.492			
PP	0.475	0.691	0.787	0.649	0.686	0.369	0.738	0.542	0.572		
SP	0.283	0.587	0.756	0.688	0.859	0.322	0.787	0.533	0.812	0.69	

Figure 4 Measurement Model Assessment

141
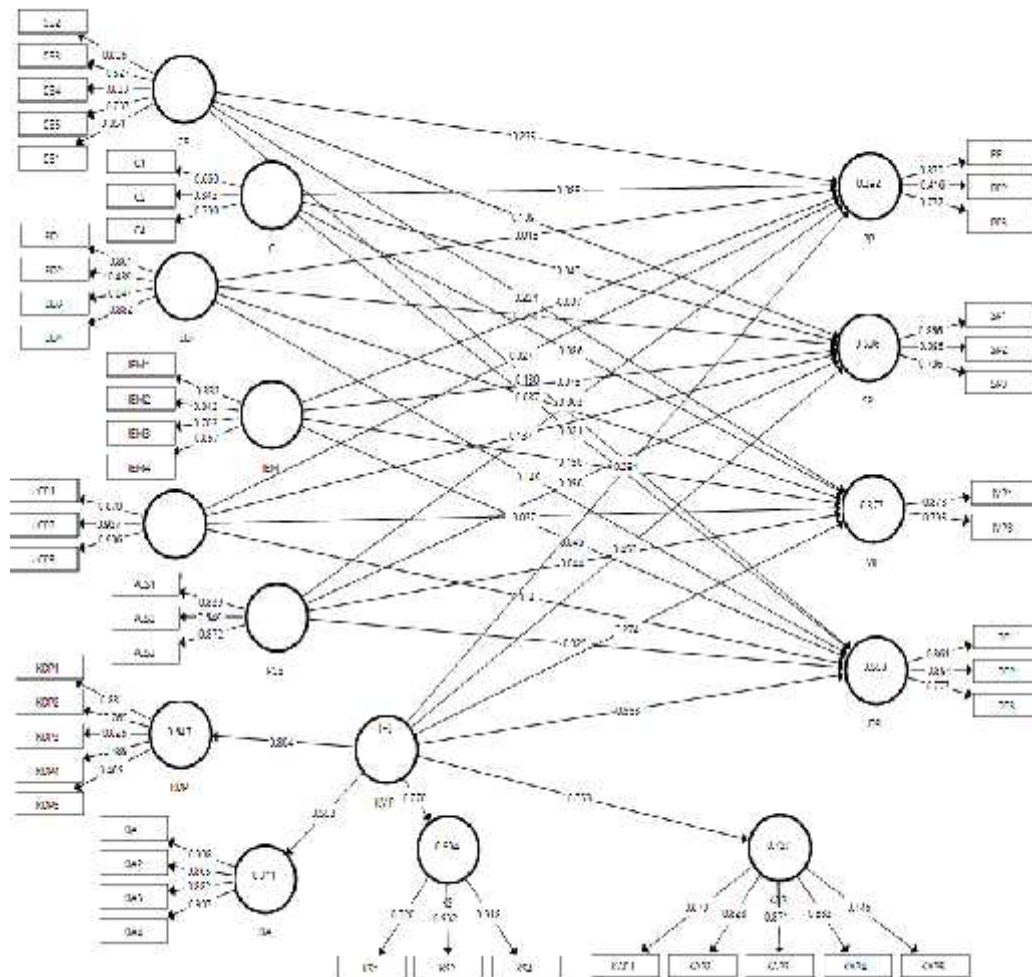
Assessment of Structural Model

Cohen (2013)suggested that R^2 values of endogenous latent constructs 0.26, 0.13, or 0.02 can be described as high, moderate and weak correspondingly as a rule of thumb. Table 6 indicates that exogenous constructs such as customized services and collaboration contributed 39.2%, 53.6%, 37.7% and 55.8% of the variance in plan process, source process, make process and delivery process respectively.

Table 6
R Square of Endogenous Constructs

Constructs	R Square	Effect
Plan Process	0.392	Substantial
Source Process	0.536	Substantial
Make Process	0.377	Substantial
Delivery Process	0.558	Substantial

Second, the predictor constructs can be assessed by using the effect size of Cohen (f 2) (Cohen, 2013). Because endogenous construct (Supply Chain Performance) had more than one exogenous construct (Customized Services and Collaboration)so the relative effect sizes (f 2) of the exogenous constructs were calculated.

Table 7
Effect Size

Constructs	PP		SP		MP		DP	
	f^2	ES	f^2	ES	f^2	ES	f^2	ES
Customized Services	0.061	Small	0.017	No	0.053	Small	0.025	Small
Collaboration	0.011	No	0.003	No	0.011	No	0.001	No

Discussion and Conclusion

According to Rucker (2016) discussion is one of the most important but challenging section of any research paper. Discussion part of any research paper enables the researcher to explore different measures and to relate and compare the findings of his/her study with previous studies (Rucker, 2016). This research has considered the moderating role of KMP on the SCP by analyzing various stages of supply chain process in the Automobile sector of Pakistan. Moreover, this research has been conducted to explore the effect of KMP on all supply chain practices, which ultimately produces an improved supply chain performance by gaining the competitive advantage as well as ensuring long term sustainability and stability in the ever-developing business sector.

The results of present study show that customized services and collaboration have positive impacts. It is suggested that organizations that provide customized services due to the expected variation in the requirements or demands of the suppliers, and plan appropriately can get positive effects. So effective planning has positive impact when a high level of customization and collaboration with suppliers are being practiced by the businesses or getting the suppliers involved in the planning process.

Moreover, moderation analyses have clearly revealed that KMP partially moderate the SCM practices and SC performance because most of the moderating hypotheses remained insignificant. So, to avoid objective limitation of this research, future studies are advised to consider real time performance data of the businesses instead of relying merely on self-reported measures.

This research has used an empirical approach to bridge the gap which has been identified in the existing literature pertaining supply chain management, supply chain performance measures along with the knowledge management domain. Findings of the study have clearly identified the relationship between supplier relationship management and Supply chain performance where knowledge management is identified as the relationship moderator; however there is a need to further cover the scope of the study by expanding the cultural, industrial and practical focus of the study in order to enhance understanding and utilize the generalized information to formulate proactive supply chain and knowledge management strategies of the businesses.

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