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Should firms leverage Social Media usage to enhance Supply Chain Efficiency? A Post Covid-19 Empirical Investigation

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ABSTRACT

With the unavoidable spread of post-covid-19 digitization across the globe, firms have started opting for social media usage to meet the emerging competitive business landscape. Accordingly, this paper intends to investigate the impact of social media usage on supply chain efficiency. Furthermore, it also aims to observe the mediating role of both quality and intensity of knowledge sharing between social media usage and supply chain efficiency. Structured, survey questionnaires along with a convenience sampling technique were used to collect data from 312 active social media users. Appropriate supply chain representatives which majorly includes manufacturers, retailers, and consumers were taken from the Fashion Industry of Pakistan. The overall result depicts that social media usage across the supply chain is significantly related to supply chain efficiency. Results also validate the mediating role of intensity and quality of knowledge sharing, for enhancing overall supply chain efficiency through social media usage. The findings assist supply chain channel members across industries of Pakistan in general, and the fashion retail industry in particular. The study clearly, propagates the integrated and multi-layered social media usage across supply chains, for anticipated SC efficiency and related performance outcomes.

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1. Introduction

In today's global competitive environment, managers need to understand the significance of social media in dissolving "walls" for transforming traditional supply chain management (SCM)

practices (Agnihotri, Kalra, Chen, & Daugherty, 2022). Social media facilitates interactions, and communications between people of different groups across the world (Moran, 2012). Regardless of the challenges, social media as a digital tool and source has changed the way of doing business by truly connecting with the customers. It is evident from the recent literature that customers are not only relying on social media for making decisions rather they openly share their purchase experiences (Fujita, Harrigan, & Soutar, 2019; He, Tian, Chen, & Chong, 2016; Mangold & Faulds, 2009)

Social media has gained fabulous attention as a marketing tool. It has created new opportunities for marketers to promote their new and exciting offers. Social media is a significant online platform and acts as a communication channel that helps people in information sharing, making assumptions, developing profiles, building observations, apprehension, and perspicacity. Nevertheless, many organizations are not mindful of the opportunities associated with social media. For example, Kaplan and Haenlein (2010) pointed out that one prominent reason is the lack of understanding regarding what social media practices are and what structure social media practices can establish. Similarly, marketing executives ignore possible opportunities that creative customers are presenting on social media, even after accepting its significance (Berthon, Pitt, McCarthy, & Kates, 2007).

The usage of social media across the supply chains can leave behind other operational functions as it can change the way brands and their consumers engage with each other. Moreover, it helps the supply chain to communicate and reach their current and prospects directly. In this way, social media enables different parties to connect with the organization in a timely, inexpensive and collaborative way (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). However, a study for evaluating the initiative of big data with leaders of companies and industries by Ariffin, Ab Yajid, and Azam (2020) stated that intelligence of social media is least used in a company's supply chain. Even though some of the companies have confidence in their ability to manage transactional data, traditional structure and also the invisibility of supply chain. The outcomes reflect that firms are not yet able to capitalize on the benefits of social media. Still another study revealed that only three percent of supply chains are using social media effectively to understand the need of their customers (Cecere, 2012).

Social media adoption is found to be critical for supply chain digitization as it not only provides valuable information in bulk but is also advantageous in improving external and internal integration through enriched communication (Huang, Potter, & Eyers, 2020; Sanders, Boone, Ganeshan, & Wood, 2019). It is also contemplated to be a premier external connection that offers discussion platforms to enhance the quality of the knowledge base of the organization which in turn shares knowledge in supply chain networks efficiently (Cheng & Krumwiede, 2018). When organizations link up with each other and openly communicate under the shadow of trust, they can collect useful data as a by-product of their interactions (Markova & Petkovska-Mirčevska, 2013; Ozlen, 2021). Lately, there has been the increased focus of researchers on the role of social media management for decveloping customer-focused supply chains. It is debated to be one of the most important sources of competitive advantage that is realized by converting the gathered information and data into valuable knowledge (Agnihotri et al., 2022).

Despite its significance, little attention has been paid to addressing the fundamental question of how social media can realistically enhance supply chain efficiency? And how the dynamic knowledge sharing routines can play its role in the abovementioned link through information rich social media usage (Cheng & Krumwiede, 2018; Irani, Sharif, Papadopoulos, & Love, 2017). Therefore, this paper is an attempt to address this very basic question. For empirical verification, the data was collected from various supply chain members presently involved in the manufacturing, sales, and distribution of

fashion products.

2. Literature Review

There has been an increased recent focus on digitalization (i.e. Post Covid-19 era), by brands to extend their trust-based customer relationships. One of the primary reasons, behind the rapid adoption and success of social media, is, that it allows one-to-one interaction with customers. The rapport, relationship, and trust which were previously established through intermediaries are now achieved by social media marketers with the help of social media content. The content of social media is “a blend of opinions, facts, sentiments and impressions founded or unfounded experiences, tidbits, and even rumors (Choi & Lee, 2019). Usually, social media is utilized for prompt information exchange, timely communication, and reliable relationship building (Madison, 2012). Customers fetch information about products and services from social media which they consider comparatively trustworthy than all the other traditional mediums (Mangold & Faulds, 2009). Even, decision-makers are also gathering information through social media about consumers' opinions, their liking, disliking, gossip, & complaints, etc. about themselves and their competitors' products & services (Ramos & Young, 2009).

Furthermore, social media is defined as internet-based applications that carry consumer-generated content which encompasses “media impressions created by consumers, typically informed by relevant experience, archived or shared online for easy access by other impressionable consumers” (Blackshaw, 2004). According to Chau and Xu (2012), social media applications provide organizations and their stakeholders with a multi-way, convenient, and real-time communication platform to communicate in an effective and cost-efficient manner. To make maximum use of emerging technologies, firms need to develop a better understanding of their customers and their dynamic expectations. One needs to design a marketing mix in such a way that must ensure active customer engagement. Hence, social media provides an opportunity by using abundant media with high reach (Lahtinen, Dietrich, & Rundle-Thiele, 2020).

2.1 Usage of Social Media in Supply Chains

The utilization of social media is not limited to manufacturers and customers rather its usage has extended across the chains. Both upstream and downstream members including suppliers and retailers are actively involved in social media to announce events, trends, promotions, and sales, etc. Therefore, firms across the globe are successfully engaging their consumers through meaningful usage of social media. According to Devereux, Grimmer, and Grimmer (2020) social media permits suppliers and manufacturers to understand consumer behavior effectively and it allows customers to recognize the contribution of each supply chain member. Additionally, Huang et al. (2020) stated that social media generates multiple effects which can be used for information generation within and across the supply chains. It's been found that social media usage has not only enhanced supplier's involvement in the method of product formation rather extended it to innovativeness, financial and market performance (Cheng & Krumwiede, 2018). Other researchers like, Bharati, Zhang, and Chaudhury (2015) are of the view that information extracted from SM must be of use, in terms of integrating the supply chain transactions and processes. Similarly, social media must be utilized to establish and strengthen trust and integrated behaviors among supply chain members.

On the other hand, social media also helps retail networks to introduce a distinctive business model to gain competitiveness. Manufacturers' encouragement especially for their retailers to use social media has brought significant improvement in retail performance as well as it has enhanced their brand performance (Rapp, Beitelspacher, Grewal, & Hughes, 2013). Retailers can increase customer loyalty by arousing their favourable brand-related feelings, through excitement or other interpersonal and

emotional experiences (Yim, Tse, & Chan, 2010). Barnes (2014), observed that within no time there has been an increase in social media usage by the retailers, by forming pages on Facebook. Amazingly, by 2013, 70% of the total Fortune Top 500 Companies used Facebook, while, 96% of the Fortune 500 Retailers were using Facebook during the same period. Additionally, Facebook let consumers share information and opinions related to retailers' products and services with others. Based on customer reviews, retailers can now develop new marketing approaches and can extend their operations which possibly will further improve customer loyalty and will add value to customers' overall brand-related experience (Ramanathan, Subramanian, & Parrott, 2017). Moreover, Rapp et al. (2013) explored that retailers' social media usage directly affects the brand performance of both retailers and their suppliers.

Similarly, the customer as an ultimate chain member uses social media for search, spread, review, comment and also for creating their online 'content' that appears for others during "search" (Jermsittiparsert, Sutduean, & Sriyakul, 2018). Hall-Phillips, Park, Chung, Anaza, and Rathod (2016), shared that customer's content posted on social media is normally viewed as a genuine response and hence motivates others to act and behave accordingly. Social media is a communication vehicle for the customers, where they are free to share their views, experiences, ideas, and opinions which helps shaping the behaviors of others. Firms, through increased social media engagement, remain in a position to keep their pages more engaging for consumers. This helps in forming an improved brand image, enhanced customer experience, and also helps in causing higher number of future purchases. Based on the above discussion, the following relationships have been hypothesized.

H₁: Social media usage by manufacturers/suppliers positively affect supply chain efficiency.

H₂: Social media usage by Retailers positively affect supply chain efficiency.

H₃: Social media usage by Customer positively affect supply chain efficiency.

2.2 Intensity & Quality of Knowledge Sharing Through Social Media

Social media has set the tone for a newer route for customers to engage and deal with suppliers. According to Ramanathan et al. (2017), social media permits suppliers, to develop an environment with their customers, where customers are made to feel that service providers understand, and are anxious about their needs. It is also observed that emerging social networks can significantly affect how a business is recognized by individuals (Lal, Ismagilova, Dwivedi, & Kwayu, 2020).

Social media allows its users to like, share, review, create and comment on the content across the digital network. They also let customers directly access organizations, marketers, and brands (Cheng & Krumwiede, 2018). Similarly, it let its customers spread, review, comment, and also creates user-generated content, that even appears in the results section of a particular search engine (Cabiddu, De Carlo, & Piccoli, 2014; Chen & Lei, 2021). As prescribed by the theoretical lenses under consideration, (Ngai, Tao, & Moon, 2015) digital platform is a tool for customers to use, to go through the firm-generated content, and create content of their own. According to M. N. Hajli, Sims, Featherman, and Love (2015), social media doesn't only let its users engage with brands, rather it also let them interact with other users at large (N. Hajli & Lin, 2016). Consumers are readily opting for social media usage, because of the social support that they seek being part of a larger social media community, along with the access to timely information. Likewise, along with the availability of prompt information, consumers are equally bothered about the increased concerns related to the credibility of the information available (M. N. Hajli et al., 2015). Therefore, it is hypothesized:

H_{1a}: Manufacturers, utilization of social media, is significantly related to their intensity of knowledge sharing across supply chains.

H_{1b}: Manufacturer utilization of social media, is significantly related to their quality of knowledge sharing across supply chains.

H2a: Retailer utilization of social media, is significantly related to their intensity of knowledge sharing across supply chains.

H2b: Retailer utilization of social media, is significantly related to their quality of knowledge sharing across supply chains.

H3a: Customer utilization of social media, is significantly related to their intensity of knowledge sharing across supply chains.

H3b: Customer utilization of social media, is significantly related to their quality of knowledge sharing across supply chains.

2.3 Mediating Role of Knowledge Sharing

As a communication medium, social media encourages knowledge sharing. However, the gains are subject to the quality and intensity of knowledge, information, contents, and/or ideas shared through social media. Knowledge sharing is individuals' readiness to disseminate the knowledge with coworkers within the organization (Nelson & Coopriider, 1996). It stands for the dissemination of organization-relevant information, and ideas with one another (Bartol & Srivastava, 2002). Furthermore, increased trust, knowledge exchange, and future-oriented cooperation between themselves, buyers, and suppliers can increase their commitment, capability, and performance (Thomas, Thomas, Manrodt, & Rutner, 2013).

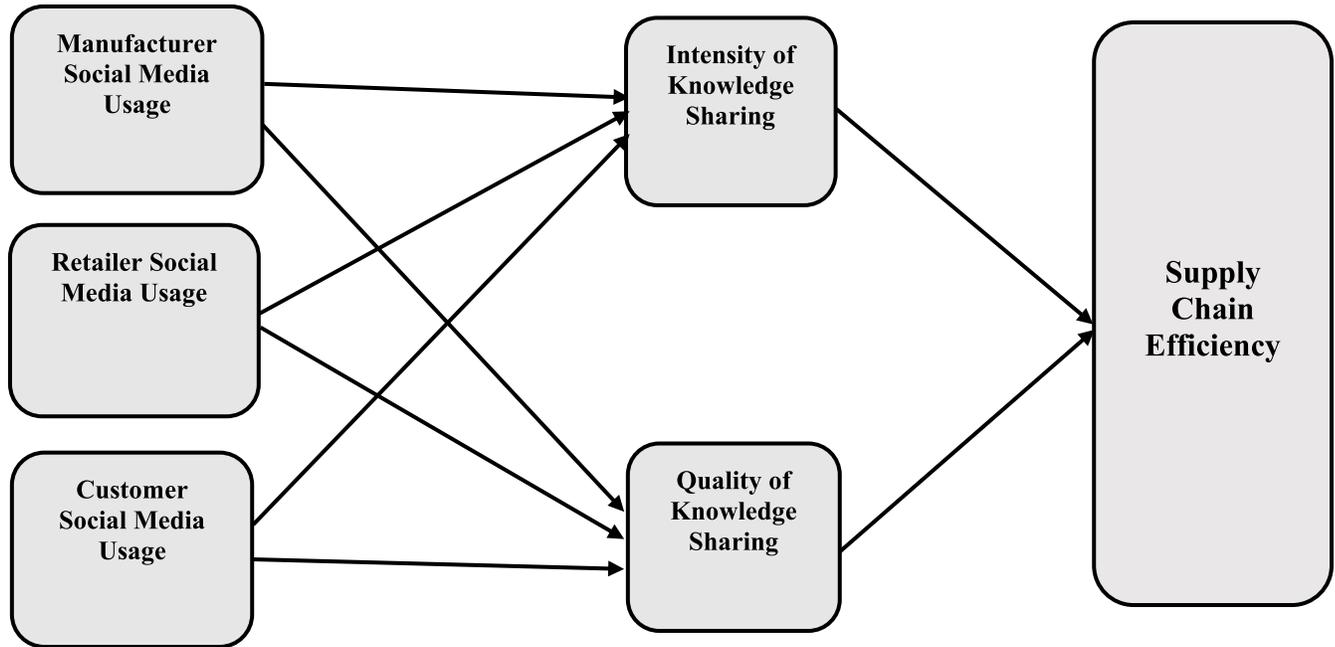
The information/content shared through social media must be directional and controlled, hence the quality and intensity of information/content must be formally managed. Moreover, channel members across chains must be available with the same intensity and quality of information to achieve the desired performance outcomes (Dejonckheere, Disney, Lambrecht, & Towill, 2004). Agnihotri, Dingus, Hu, and Krush (2016), observed that social media is well suited for suppliers too because it makes the audience available with customized forums for sharing viewpoints for discussions and provides an external link that helps managers to assemble quality knowledge and to share it with others in an effective manner. The information and knowledge that could be gathered by using social media can bring awareness about the issues, problems, and their remedies within and across the supply chains. It also let them anticipate and forecast the required knowledge and information about marketplaces that isn't easily accessible. It is also known for its effectiveness to boost the velocity of information generated and processed. Surowiecki (2004), articulated that 'information' collected from different sources (multiple supply chain members including customers) via social media should be viewed as the 'wisdom of the crowd'. It means the information created through social media, if accessible to all SC members, can generate operational excellence.

This is how social media can be used to alleviate or eliminate irregularities and strengthen the relationship among supply chain members. Such a strengthened association can assist in increasing performance, through the creation of intellectual capital, inter-company learning, resource exchange, product innovation, team efficiency, exploitation of knowledge, and supplier relationships (Palmatier, Dant, Grewal, & Evans, 2006). In addition to remarkable gains, researchers have also pointed out certain concerns which must be addressed to reap the real benefits of social media. Rapp et al. (2013) observed that most of the supply chain members have no idea whether the messages, which they have posted on social media will reach the end consumer or not. Furthermore, number of firms dealt with the issue concerning inconsistent messages, ambiguous policies, and a lack of defined strategy. It is, therefore, the content of the messages, intensity, and quality of messages, which matters a lot in pursuit of gaining the desired results.

H4: Intensity of knowledge exchange significantly mediates the association between a) Manufacturer, b) Retailer c) Customer utilization of social media and SC efficiency.

H5: Quality of knowledge exchange significantly mediates the connection between a) Manufacturer, b) Retailer, and c) Customer use of social media and SC efficiency.

Figure - 1: - Theoretical Model



3. Methodology

The given empirical investigation aimed to identify the real impact of social media on supply chain efficiency. The data was collected from multiple supply chain members including manufacturers, sellers, and distributors of fashion products. Knowing the fact that Textile and Garments is the largest industry of Pakistan and it comprises 46% share of total manufacturing, 67% of the exports, 40% of the employment, and 10.2% share in GDP, it is believed that valuable and in-depth insights from the given industry will benefit supply chain partners of this industry. To ensure appropriate representation, 360 active social media activists, 45 sales representatives of manufacturers, and 53 retailers, from three main sectors, i.e., apparel, footwear, and cosmetics of the textile industry were selected as respondents. A total of 312 (260/72.22% consumers, 22/48.87% manufacturers, and 30/56.6% retailers) responses were obtained. The overall response rate remained 68.12%. A blend of convenience (for consumers) and purposive sampling (for suppliers/manufacturers/retailers) were used.

Grounded in the literature, the questionnaire was comprised of three sections. Firstly, it included questions aimed to assess the use of digital media by the manufacturer (20 items), retailer (13 items), and customer (10 items). Secondly, questions were added to measure the impact of intensity (3 items) and quality (5 items) of knowledge sharing. The final section contains questions dedicated to measuring the major construct of the study, i.e., supply chain efficiency (8 items). The items were measured on five points Likert-type scale, wherein, 1 stands for ‘Strongly Disagree’ and 5 stands for ‘Strongly Agree’. Table -1 presents detail regarding constructs, their source, and the measuring scale used in this study to attain the objectives.

Table – 1: Source and Measures

VARIABLES	ITEMS	REFERENCES	SCALE
Manufacturer Social Media Usage (MSM)	20	Rapp et al (2013)	5 Point Likert Scale
Retailer Social Media Usage (RSM)	13	Rapp et al (2013)	5 Point Likert Scale
Customer's Social Media Usage (CSM)	10	Rapp et al (2013)	5 Point Likert Scale
Intensity of Knowledge Sharing (IK)	3	Lee and J. (2018)	5 Point Likert Scale
Quality of Knowledge Sharing (QK)	5	Lee and J. (2018)	5 Point Likert Scale
Supply Chain Efficiency (Matiz et al.)	8	Marwah et al (2014)	5 Point Likert Scale

4. Analysis and Findings

The results of the study were looked into for possible variance, which later on was addressed through Exploratory Factor Analysis (EFA). Then PLS-SEM was utilized to validate the proposed hypothesis and measurement model.

The values of Cronbach's alpha for different constructs remained higher than 0.70 which reflects internal consistency. The discriminatory and convergent validity was determined, wherein, the values remained appropriate for all constructs. The factor loadings of all items on the assigned parameter displayed values above 0.6 as suggested by Bagozzi and Yi (1988) and the average variance extracted (AVE) values varied between 0.626 to 0.807, hence, accepted as proposed by (Fornell & Larcker, 1981). The values of tolerance between 0.7 and 0.9 and the values of VIF between 1.0 and 1.3 confirmed that there is no issue of multicollinearity. Finally, it was evident from the results that all measures unveiled adequate convergent validity. As shown in Table 2.

Table – 2: Measurement Model Assessment

CONSTRUCTS AND ITEMS	CROSS LOADING	CRONBACH'S ALPHA	COMPOSITE RELIABILITY	AVE/VIF
Manufacture Social Media Usage		0.940	0.954	0.807 / 1.211
<i>M-SMU 01</i>	0.658			
<i>M-SMU 02</i>	0.649			
<i>M-SMU 03</i>	0.835			
<i>M-SMU 04</i>	0.676			
<i>M-SMU 05.</i>	0.602			
Retail Social Media Usage		0.973	0.976	0.790 / 1.225
<i>R-SMU 01</i>	0.800			

<i>R-SMU 02</i>	0.827			
<i>R-SMU 03</i>	0.828			
<i>R-SMU 04</i>	0.940			
<i>R-SMU 05</i>	0.845			
<i>R-SMU 06</i>	0.869			
<i>R-SMU 07</i>	0.903			
<i>R-SMU 08</i>	0.929			
<i>R-SMU 09</i>	0.856			
Customer Social Media Usage		0.952	0.962	0.807 / 1.314
<i>C-SMU 01</i>	0.760			
<i>C-SMU 02</i>	0.734			
<i>C-SMU 03</i>	0.724			
<i>C-SMU 04</i>	0.714			
<i>C-SMU 05</i>	0.672			
<i>C-SMU 06</i>	0.713			
The intensity of Information/Knowledge Sharing		0.870	0.920	0.794 / 1.717
<i>IKS-01</i>	0.798			
<i>IKS-02</i>	0.815			
<i>IKS-03</i>	0.822			
Quality of Information/Knowledge Sharing		0.933	0.950	0.791 / 1.726
<i>QKS-01</i>	0.702			
<i>QKS-02</i>	0.791			
<i>QKS-03</i>	0.810			
<i>QKS-04</i>	0.788			
<i>QKS-05</i>	0.734			
Supply Chain Efficiency		0.878	0.909	0.626
<i>SCE-01</i>	0.644			
<i>SCE-02</i>	0.638			
<i>SCE-03</i>	0.668			
<i>SCE-04</i>	0.653			
<i>SCE-05</i>	0.730			
<i>SCE-06.</i>	0.632			

The square root of AVE, for each construct's diagonal elements, is greater than the correlation of the construct with other constructs as shown in table – 3.

Table - 3: Correlation Matrix and Square Root of AVE

	CSM		IK	MSM	QK	RSM	SCE
CSM	0.898						
IK	0.845		0.891				
MSM	0.816		0.897	0.898			
QK	0.803		0.882	0.876	0.890		
RSM	0.818		0.812	0.821	0.851	0.889	
SCE	0.732		0.739	0.747	0.767	0.741	0.791

After validation of the measurement model, a structural equation model using PLS-SEM was estimated to evaluate the relationship among the latent variables. Figure - 2 illustrates all the structural model results. Path coefficient between MSM and IK is 0.264 ($\beta = 0.264, P < 0.05$) the results explained that if MSM increases from Mean through its one standard deviation then IK also increases by the value of 0.264 if all the connections remain constant. Path co-efficient between MSM and QK is 0.195 which is a moderate value ($\beta = 0.195, P < 0.05$). Path co-efficient between RSM and IK is 0.440 ($\beta = 0.440, P < 0.05$). Path co-efficient between RSM and QK is 0.543 ($\beta = 0.543, P < 0.05$) which is strong value. Path co-efficient between CSM and IK is 0.226 this is also an acceptable value ($\beta = 0.226, P < 0.05$). Path co-efficient of CSM and QK is 0.238 ($\beta = 0.238, P < 0.05$) which is also considered acceptable. Similarly, the path co-efficient of MSM with SCE is 0.166 ($\beta = 0.166, P < 0.05$). RSM and SCE path co-efficient is 0.548 that is a strong value ($\beta = 0.548, P < 0.05$). CSM and SCE path co-efficient is 0.224 ($\beta = 0.224, P < 0.05$). Comparably, IK shows a Positive effect on SCE with 0.234 value ($\beta = 0.234, P < 0.05$), QK shows moderate effect on SCE with 0.101 value ($\beta = 0.101, P < 0.05$). The test results support the proposed hypothesis and all hypotheses are accepted as indicated in table - 4.

Figure - 2: Empirical Study Results

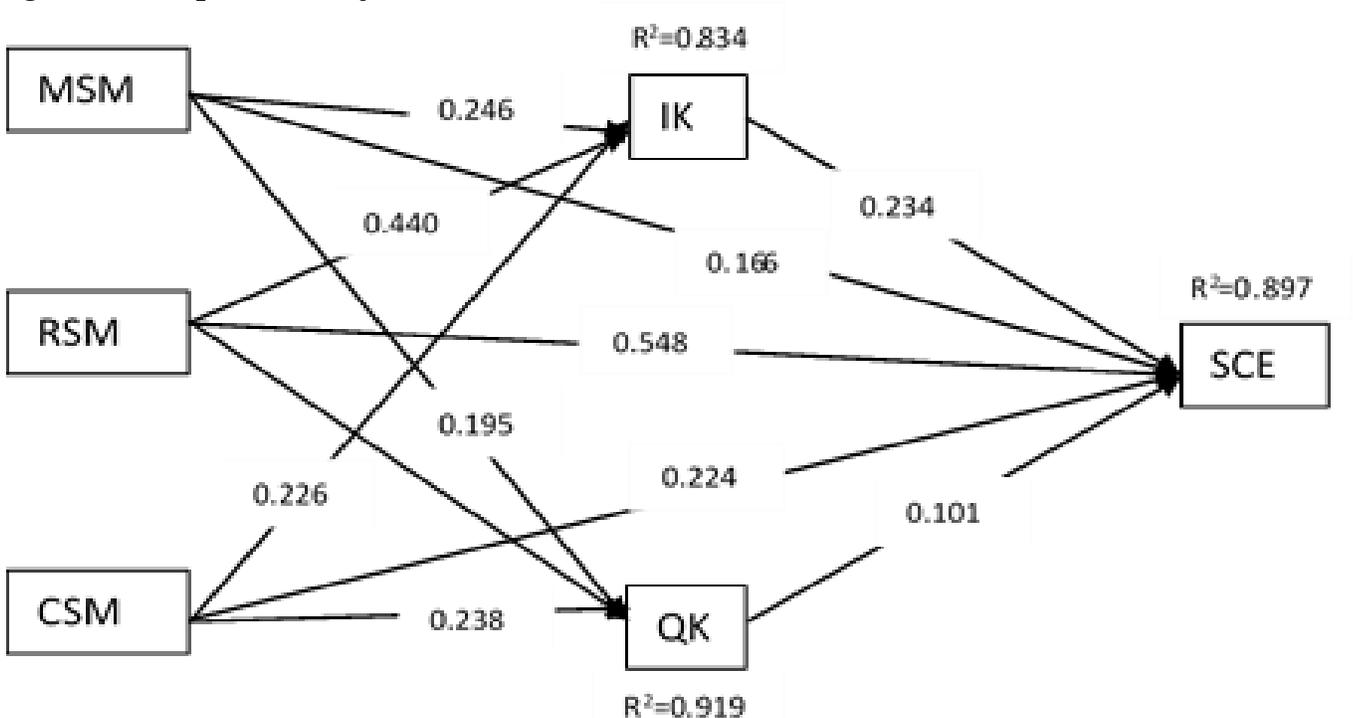


Table – 4: Direct Hypotheses Results

Hypothesis	Structural Path	β	t-value	p-value	Decision
H1a	MSM \rightarrow IK	0.387	1.990	**	Accepted
H1b	MSM \rightarrow QK	0.284	2.004	**	Accepted
H1c	MSM \rightarrow SCE	0.109	2.924	**	Accepted
H2a	RSM \rightarrow IK	0.266	3.641	**	Accepted
H2b	RSM \rightarrow QK	0.511	6.628	**	Accepted
H2c	RSM \rightarrow SCE	0.167	3.070	**	Accepted
H3a	CSM \rightarrow IK	0.187	2.854	**	Accepted
H3b	CSM \rightarrow QK	0.190	3.311	**	Accepted
H3c	CSM \rightarrow SCE	0.452	7.100	**	Accepted
H4	IK \rightarrow SCE	0.348	6.016	**	Accepted
H5	QK \rightarrow SCE	0.198	2.497	**	Accepted

Note: *p<0.1; **p<0.05; ***p<0.01

4.1 Mediation Analysis

Table – 5 Reflects that the intensity of knowledge sharing positively mediates between customers, manufacturers, and retailers’ meaningful use of digital media platforms and SC efficiency. Likewise, results clearly indicate the mediating role of quality of knowledge sharing between customers, manufacturers, and retailers in meaningful use of digital media platforms and SC efficiency. All the values are within the prescribed limit to validate the above-stated mediating hypothesis. While the results presented in Table – 4 reflect the significant relationship between IV and DV. Considering the limit set for appropriate significance level (i.e. equal to or above 0.05 (p≥0.05)), the findings indicate a positive relationship between, social media utilization of retailers, Manufacturers, and Customers, and SC efficiency. Both the values of P and t, for the extent of social media usage for manufacturers and SC efficiency were 0.009 and 2.61, which are well within the prescribed criteria proposed by Hair, Ortinau, and Harrison (2010) who say that the P value should be greater or equal to 0.05, and t value must be greater than 1.96. Therefore, hypotheses 1a, 1b, 2a, 2b, 3a, and 3b are accepted after the fulfillment of acceptance criteria. Therefore, it can safely be established that the increased use of social media by SC channel members is directly related to the increased SC efficiency. While efficiency further increases with the increased extent of both intensity and quality of knowledge sharing.

Table – 5: Mediation Effect

	Relation	Beta	S.E	t value	p value	Confidence interval		Decision
						2.5%	97.55%	
H1a	MSM \rightarrow IK \rightarrow SCE	0.070	0.030	1.999	***	0.042	0.078	Supported
H1b	MSM \rightarrow QK \rightarrow SCE	0.017	0.019	2.865	***	0.024	0.058	Supported
H2a	RSM \rightarrow IK \rightarrow SCE	0.023	0.035	2.658	***	0.067	0.078	Supported
H2b	RSM \rightarrow QK \rightarrow SCE	0.030	0.017	3.581	***	0.034	0.042	Supported
H3a	CSM \rightarrow IK \rightarrow SCE	0.065	0.025	2.611	***	0.021	0.119	Supported
H3b	CSM \rightarrow QK \rightarrow SCE	0.036	0.019	1.976	**	0.006	0.081	Supported

Note: *p<0.1; **p<0.05; ***p<0.01

5. Discussion and Conclusion

The outcomes of the study authenticated that utilization of social media by SC members affects the intensity and quality of knowledge sharing which causes an upsurge in SC efficiency. Social media usage helps manufacturers to monitor the market, trends, and competitors' performance. Also, the manufacturers prefer to work with those retailers and distributors who are using social media through co-promotions. The results indicate that usage of social media by supply chain channel members significantly causes SCP. The above-stated empirical outcomes are in sync with the outcomes of a previous study by (Swain & Cao, 2013). Further, the results also conclude that if the supply chain members will use social media to share knowledge across the supply chain, it will lead to an increase in its efficiency and performance.

It is also observed that intensity and quality of knowledge sharing mediate in the context of SCP. Similarly, the quality of knowledge sharing comparatively mediates more, between social media use by SC members and SC efficiency, than that of the intensity of knowledge sharing. Lee (2018) also concluded in his study, that the quality of knowledge sharing is stronger than the intensity of knowledge sharing. Findings also indicated, the stronger mediating role of the intensity of knowledge sharing, and the results related to the quality of knowledge sharing also reflect the greater mediating relation than that of the previous studies. In the earlier studies, the mediating role of the opted mediators (i.e. IKS, and QKS) was a moderate one, while in the given research the mediating role of IKS and QKS is stronger between the IV and DV.

Results of the proposed hypothesis suggest that firms with effective utilization of digitization across their value chains, hold a better chance of improving communication among their channel members, along with the improved brand image. Similarly, the theoretical framework also validates that knowledge sharing with the help of social media helps increase supply chain performance. Furthermore, the results indicate that retailers' social media usage, helps them in seeking a significant level of supply chain efficiency. The results reflect, that firms opting for digitization, across their value chains, hold the potential for increased knowledge sharing both within and beyond, which in turn increases SC efficiency for them. While the outcome of customers' social media adoption, is also highly related to their increased level of knowledge sharing.

The above-stated findings clearly indicate that social media usage across value chains can really be of use, not only for individual channel members but for the operational efficiency of the overall supply chain. Previous literature indicates, that social media usage with meaningful knowledge sharing affects supply chain performance by 87% which reflects the positive association between the above-stated variables. It also shows that firms must focus on incorporating social media into their supply chains to improve their SCP through prompt knowledge sharing. Researchers like (Madison, 2012; Wang & Hu, 2020) also proposed a notable connection between KS and SCP. Similarly, Swain and Cao (2013) also suggested a positive impact of social media usage and SCP.

The theoretical and practical contribution of this study is multi-folded. This study provides strong empirical evidence for the use of social media to boost SC efficiency especially when KS becomes more intense and higher in quality. The firm must not only rely on their own resources but rather need to have a constant eye on evolving market dynamics, in order to stay ahead of increased opportunities and in order to keep themselves competitive. Likewise, the greater will be the interactivity among channel members, the more efficient will be the value chains. Social media provide firms with an opportunity, to intensify their knowledge sharing along with the quality of information exchange across the value chains. Findings are also in agreement with the positive link between increased supply chain

efficiency because of uphill social media usage across the fashion industry of Pakistan. This sets the tone for upcoming researchers on the subject matter and also helps encourage channel members within the Fashion industry to encourage knowledge sharing through meaningful social media usage, for improved SCP. The findings of the study can assist future researchers in terms of outcome-oriented usage of social media, which ultimately will help them increase traceability and timely delivery of orders from the point of origination to the point of consumption across their value chains. It also propagates the higher quality and intensity of information dissemination throughout value chains, for achieving the ultimate level of supply chain efficiency.

Despite, exploring the phenomena at hand in a detailed manner, the study like all other studies was faced with certain limitations, which can set the tone for further future research endeavors. Firstly, the sample is restricted only to the firms operating across the fashion industry of Pakistan, which raises concern about the generalizability of the findings. It is, therefore, recommended to conduct similar studies across industries with varied nature and dynamics. Secondly, the study dealt only with structured and closed-ended questions, which has limitations of its own. Therefore, it is recommended that future studies must make use of open-ended questions, which may help in identifying some of the other practices and construct, within the given subject matter. Likewise, this study made use of a cross-sectional data collection mechanism, limiting the generalizability of the issue at hand. So, future researchers might explore the topic, through longitudinal research designs, for better validation and scope enhancement. Finally, knowledge sharing was used as a mediator in a given theoretical framework, future research must consider additional mediators as well to further validate the phenomena. Knowledge sharing is also suggested to be used as a moderator within the given theoretical compilation to extend the knowledge and give a new dimension to the given domain.

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