Does the Information Processing Requirements and Supply Chain Practices Effect the Imperativeness of an Agile Supply Chain Strategy for the Supply Chain Performance?

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Abstract- **This research study aims at explaining the way in which supply chain performance can be improved by agile supply chain strategy. The phenomenon has been studied from theoretical perspective. A key aspect is the complementary association between supply chain practices and supply chain strategy. It has been suggested that agile supply chain strategy can be supported by specific supply chain practices through a positive relation between supply chain performance and agile supply chain strategy. The second aspect is the firm's information processing. Through this aspect, it can be examined whether the agile capability of information system improves the influence of supply chain practices as a mediator. The study has used the survey-based methodology to achieve the objective of the current study. The data is collected from the manufacturing firms in Kingdom of Saudi Arabia. The benefits of supply chain practices have been enhanced through IS capability by the creation of match between the abilities and needs of information processing. The influence of supply chain practices as a mediator between the relation of supply chain performance and agile supply chain is improved with 'information system capability for agility. The relation between supply chain performance and agile supply chain strategy is positively mediated when the firm can deliver a range of products quickly. In order to deliver the required number of products, it is important to forecast the demand in an accurate way.**

Keywords: *Agile supply chain, Inform system, supply chain strategy, Kingdom of Saudi Arabia*

1. Background

To deal with the changing needs of customers, there is need for agility in SC of the firm. The firm can customize products as per the needs and requirements of customers only if its SC is agile. In this way, the firm can react to the short life cycles of the products and volatile demand [1]. In order to develop new products for customer requirements, agility in SC is crucial element [2]. Moreover, firm with agile SC can deal with changes in requirements of customers regarding time, quantity, and delivery. For instance, the SC of Zara is responsive, which allow the company to manufacturing new designs every week and sell them across the world in less duration [3]. The stores were replenished by Seven-Eleven with product diversity using suitable quantities. The customers receive products within the twelve hours of order placement [3]. Both of the examples are related to the agility of supply chains.

The strategy of agile SC leads to the establishment of agility [4]. In the strategy of agile supply chain, the SC responds to the changing demands of the customers. The relation between performance and ASC strategy has been focused by the literature including the agility antecedents, characteristics of product with SC agility [1, 5]. The existing literature lacks in explain the way in which performance of SC can be improved through ASC strategy. It was shown by a recent study that the significance of ASC strategy has been recognized by almost 89% companies. However, very few studies have realized the phenomenon that SC performance can be improved.

The hypotheses have been developed based on the IS literature and supply chain. The structured hypotheses explain the effect of three SC practices including customer relationship, postponement, and strategy supplier partnership (SP) as mediator. Moreover, hypothesis has been developed based on the agility IS capability as a mediator. The developed hypotheses have been formulated through moderate mediation analysis and structural equation modeling. The data has been collected from survey method. The target sample was based on senior executives working in the SC management across 205 manufacturing companies. The research results add to the literature through the conceptualization of effects created by IS agile capability and SC practices. Considering these effects, the SC performance can be positively enhanced by the ASC strategy. Two main contributions have been made by this study. The study is helpful in explaining the way in which SC performance can be improved by ASC strategy.

Previously, the relation between ASC strategy and SC practices was not examined. The second contribution of the study is in explaining the improvements in the linking effects when the IS agile capability exists. The SC performance can be improved by postponement, strategic SP, and customer relationship through ASC strategy. It is an important implication for the practitioners of operations management and supply chain. Moreover, SC managers are offered an insight of the SCagility and recommendations about the adoption of IS applications [6]. Through this aspect, it can be examined whether the agile capability of IS improves the influence of SC

practices as a mediator. Therefore, the objectives of this research study to address the following questions:

- Research Question 1: Is the relation of SC performance and ASC strategy mediated by SC practices?
- Research Question 2: Is the mediating relation positively moderated by IS agile capability?

2. Literature Review and Hypothesis Development

2.1 Imperativeness of an agile SC strategy for

The SC goals are specified by the SC strategy. The entire focus of SC is determined by strategy related to the responsiveness and cost. The SC strategy influences the logistics, customer service, and inventory management, which are the key processes in SC[2]. The strategy with which SC is able to respond to the changing needs of customers through SC agility is referred as ASC strategy [7, 8].

The agile SC strategy involves the agility factor in SC for quick response and adaptation [4]. The relation between financial, operational, and ASC strategy has been focused by research studies [9, 10]. Moreover, the agility antecedents including distribution, manufacturing, procurement flexibility, virtual integration and sharing of knowledge have been explored [5, 10, 11]. The conditions, which make ASC strategy suitable i.e. product attributes, etc., have been analyzed by some studies [4, 7]. The question related to the way in which SC performance can be improved by ASC strategy has not been addressed by the literature. In supply chain, the practices of SC are referred as different processes and activities, which can meet the set tasks.

Different set of activities and processes result in the formulation of strategy [12]. The SC performance can improve by the implementation of ASC strategy through SC practices. The complementarity concept supports this notion [13]. This concept suggests a match between the structure, processes, and strategy of a firm to achieve the expected organizational outcomes. There is need for occurrence of SC practices complementary with the SC strategy for desired benefits in terms of performance. The three specific SC practices, which can be complementarily used with ASC strategy, have been identified by this research. It is expected that there is a positive association between SC performance and ASC strategy.

2.2 The role of Information processing requirements in the Agile SC

From the perspective of information processing, the processes of the firm are executed through use of information [14]. Therefore, it is crucial for the firm to have information processing system. The matching mechanisms of information processing are required for satisfaction. The application of information processing view to the SC context suggests that the information processing needs of SC are represented by the required information for carrying out the activities or processes. The focal firm is provided with the ability of information processing through implementation of information systems in supply chain. This enhances the working of different activities and processes.

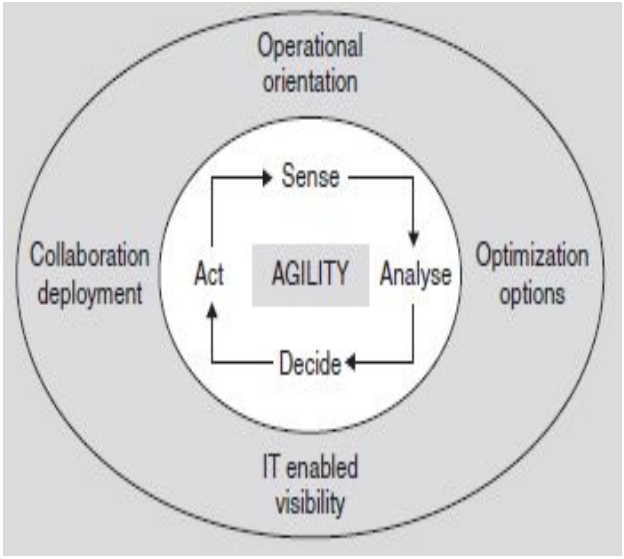

Figure 1. A decision model of agile SC
Source : Sharifi and Zhang [15]

In order to realize the benefits of using information systems within the supply chain, there is need for a match between the abilities and needs of information processing. The role of technology application in the integration of supply chain, procurement and supplier relations has been examined by literature [16-18]. This does not define the requirements of information processing for ASC and the way in which it can be supported. It has been theorized that there are two requirements of information. The first is the information access in a timely manner with reference to the competitive situation, preferences of customers and market trends. This enables the firm to react and respond to the external changes through product development in a timely manner [9]. The second point is the support of information to coordinate and collaborate with the partners in SC in terms of reducing inventory, lead times, and exchange of schedules. This is required by a firm to respond to the external changes in quicker manner along with execution of firm processes in an effective manner [10, 19]. The IS applications portfolio can address the information requirements, which should have the ability to understand the market intelligence and information sharing within and across the organization along with coordination and communication [20]. These have been described, as “IS capability for Agility”. It is the level with which the IS applications of a firm support the information sharing with the suppliers and customers and enable the firm to monitor the market situation and develop new products/services accordingly. Moreover, the benefits of SC practices have been enhanced through IS capability by the creation of match between the abilities and needs of information processing. The influence of SC practices as a mediator between the relation of SC performance and ASC is improved with ‘IS capability for agility’. The theoretical aspects have been reviewed and presented in study. The hypotheses of the study have been based on this review. It has been suggested that SC practices act as mediator in the relation of SC performance and ASC strategy. It has been proposed that all the three practices of SC and has a positive mediating influence on the relation of SC performance and ASC strategy. Moreover, IS agile capability act as a moderator in the

mediating influence of SC practices on the relation of SC performance and ASC strategy.

2.3 The SCM practices as an antecedent of AGSCS and SC performance

There are three objectives of ASC strategy. The first is related to the product supply in large amount with different customizations i.e. options, features, color, sizes and flexibility [21]. The second is the respond to the changes in demand of customers that is referred as responsiveness [7]. The third is the ability to comply with the external changes or uncertainty such as life cycle of product or technology, which is referred as adaptability [8, 9]. These objectives can be accomplished through using three practices of SC such as customer relationship, strategic SP, and postponement. The activities, which develop a long-term association of the firm and its suppliers is referred as strategic SP.

There is need for problem solving, mutual planning, and developing continuous improvement programs with the suppliers [2]. A high level of coordination is facilitated between the firm and suppliers through these programs. Moreover, the new product design is enabled through collaboration and exchange of information with the suppliers. In this way, flexibility is enabled. The firm becomes able to coordinate with the suppliers in sensing the technological and demand changes. It enables the firm to become adaptive and responsive [9]. The activities and processes to establish long-term association with the customers are referred as the customer relationship. Different interactive activities with the customers such as fulfilling demands, feedback processing, and dealing with complaints are involved in customer relationship. Through flexibility, the firm can track the changes in trends, preferences of the customer demand, which resolves the responsiveness attribute [2]. The forward movement of one or more activities/operations is referred as Postponement such as sourcing, manufacturing, and delivering to another point within the supply chain. The products are kept in the generic form until they are received by the customers. Materials are kept undifferentiated for mass customization and based on order, which addressed the flexibility attribute. The product assembly is made standardized and changes in customer demand are responded quickly [2]. In this way, the responsiveness attribute is addressed.

The level with which the needs of customers are fulfilled by SC in terms of delivery and availability is referred as SC performance [2]. The effect of ASC strategy is transmitted through three practices of SC on the performance of supply chain. In other words, it is transmitted through different ways of strategic SP. The integration process relation with the suppliers is accomplished by initiating the strategic SP by the firms. The firm share idea, explore market opportunities and manufacture products through knowledge sharing with the key suppliers in SC[7]. The opportunities and changing pressure of competition can be dealt by the firm through high-level interaction with the suppliers. Moreover, it enables the firm to do innovation and responds flexibility. Suppliers get involved in different activities across the life cycle of product by establishing strategic SP. The various activities include product engineering, designing, delivery, and reuse/recycle. Moreover, the suppliers can give initial input regarding the tools, materials, and design of products [2]. It can avoid the delay in performing the activities because of changes in requirements. Another factor is the frequent information sharing with the key suppliers [22]. It enables the firm to analyze the information related to lead times of delivery quickly. Another factor is the sharing of information and integration, which improves among the partners in supply chain. In this way, the level of collaboration, cooperation, and trust increases by sharing of information with the partners in supply chain. The firm can make decision, design products, and set certification programs in collaboration with the suppliers. The strategic supplier relationship supports these activities and the ability of partners in SC can lead to increased responsiveness. For instance, Cisco can respond to the market changes quickly as it can heat the market voice. In this way, it can management the strategic relationships with the suppliers with ASC strategy [22]. Through the strategic partnership with the suppliers, the positive association between SC performance and ASC strategy can be supported. Therefore, the following hypothesis has been developed based on the above discussions.

The level with which the firm can meet the requirements of customers and make the products available on time is referred as SC performance [23]. The effect o ASC strategy s transmitted on the performance of SC as discussed above. It transmits it influence on performance of SC through the strategic partnership with supplier in various forms. The ASC strategy transmits its effect on SC performance through the practice of strategic SP in several ways. The integration process relation with the suppliers is accomplished by initiating the strategic SP by the firms. The firm share idea, explore market opportunities and manufacture products through knowledge sharing with the key suppliers in SC[7]. The opportunities and changing pressure of competition can be dealt by the firm through high-level interaction with the suppliers. Moreover, it enables the firm to do innovation and responds flexibility. Moreover, it enables the firm to do innovation and responds flexibility. Suppliers get involved in different activities across the life cycle of product by establishing strategic SP. The various activities include product engineering, designing, delivery, and reuse/recycle. Moreover, the suppliers can give initial input regarding the tools, materials, and design of products. It can avoid the delay in performing the activities because of changes in requirements. Another factor is the frequent information sharing with the key suppliers [22].

The wait and see demand approach is a crucial element of ASC strategy. It refers to the product commitment on demand [5]. The materials are kept undifferentiated until the receiving of orders by the customers. The responsiveness and flexibility of the SC increases, and greater variety of product is achieved [24]. The ASC strategy is complemented by the inventory in the form of generic. This means the components, which are basic, standard, and semi-finished and can be assembled quickly to make various products on the demand of customers. This can be done by postponement, in which the orders of customers are not specified fully during the process of

production or ordering [24]. Modular or generic components are processed by the focal firm and features are customized in the final assembling of the products. A wide product rage is manufactured and delivered quickly. For instance, agility was established by Dell in its SC by allowing its customers for order configuration based on certain modules, which are standard. This kept the undifferentiating of the materials until the demand was known [25]. By incorporating responsiveness and flexibility within the supply chain, postponement acts as connecting element in the relation of SC performance and ASC strategy. The above discussion results in the formulation of following hypothesis:

H1: AGSCS has significant impact on the SC performance.

H2: SC practices has significant impact on the SC performance.

H3: AGSCS has significant impact on the Strategic SP.

H4: SC practices mediates the relationship between AGSCS and SC performance.

2.4 The information system capability as an antecedent of AGSCS and SC performance

The relation between SC performance and ASC strategy is mediated through the strategic partnership of suppliers. This process is enabled through involving supplier in various activities such as sharing of knowledge, life cycle of product and collaboration as well as process integration. These conditions are enhanced through IS agile capability and the mediation influence is moderated positively. The market is monitored by the focal firm and the changes are shared with the key suppliers, which increases the responsiveness. Therefore, the firm becomes able to integrate with suppliers and incorporate their role in various activities including knowledge sharing, collaboration and life cycle of product [26]. The focal firm becomes able to recognize different courses of action, which improves the changes of knowledge sharing regarding the future conditions that is with the suppliers. It has been suggested by literature that IS supports the establishment of strategic relations with the supply partners, which improve the decision making. High IS support is required for higher coordination and integration of supplier [26]. The focal firm becomes able to share important information with the customers and suppliers for over viewing the market changes. It becomes possible with IS agile capability to reduce the lead times in processing of information with the customers and suppliers along with better integration [27]. A positive interaction is suggested between IS agile capability and strategic partnership of supplier, which mediate the association of SC performance and ASC strategy.

The relation of SC performance and ASC strategy is mediated through the practices of customer relationship, which supports the focal firm in determining the needs of customers. Moreover, the firm can monitor the feedback and satisfaction of the customers. These conditions improve the firm's IS capability for agility boosts all of these conditions [28]. The focal firm gets the support for recognizing and responding to the requirements of customers by monitoring the market conditions [1]. Irrespective of a CRM system, BMW could not develop strong association with the customers in United Kingdom due to lack of system in providing the information related to the trends and needs of customers [29]. By responding to the market changes, the IS agile capability can improve the ability of firm to monitor the satisfaction level of the customers.

The relation between SC performance and ASC strategy is positively mediated when the firm is able to deliver a range of products quickly. In order to deliver the required number of products, it is important to forecast the demand in an accurate way. The information can be shared with the partners in SC by IS agile capability. The focal firm becomes able to predict the demand of customers in a better way and communicate with the partners within the SC in real time [2]. The firm becomes able to monitor the changes in demand of customer through IS agile capability. In this way, the risk of inefficient allocation of resources and inaccurate forecasts of demand is reduced through IS agile capability [2]. This improves the ability of the firm to manufacture and deliver the products as per the demand of customers. For instance, the order information is shared with the partners in SC by Dell in real time to ensure on time delivery of required products [25]. It has been hypothesized that the mediating influence of postponement on the association between SC performance and ASC strategy is moderated positively with IS agile capability. Based on the above discussion, the following research hypothesis has been formulated:

H5: AGSCS has significant impact on the SC performance.

H6: Information system capability has significant impact on the SC performance.

H7: AGSCS has significant impact on the Strategic SP.

H8: information system capability mediates the relationship between AGSCS and SC performance.

3. Methodology and Measurement

For the collection of data, we have used questionnaire survey method in the current study. For the collection of data, we had distributed 400 questionnaires in different construction organizations. May soft reminders through phone call and SMS are given for getting higher response rate, due to which 220questionaires we received 21 out of 220 were not useable or incomplete. There was a lack of information from participants in 21 questionnaires. Total 199 questionnaires were taken for analysis further. Total valid response rate was 50 percent which considered response rate is sufficient for the current study. As per Nardi [30] the minimum response rate for surveys is 30percent. We have used the smart PLS Structural Equation Modeling (which is also known as second generation approach), for checking the relationship between the constructs in the current study [31]. We may use SEM as an alternate for multiple regression and it also considered an effective approach, because SEM have abilities for handling multiple regressions with multiple dependent variables as compare to multiple regression which can use only one dependent variable at a tie. But SEM simultaneously can handle different variables. SEM approach is also used by the researchers having field of behavioral science. For running the path-analytic modeling by using SEM in the research analysis the researchers are able to include the latent variables. In current research we have estimated by using other

measures. unobserved variables are the constructs which will be estimated over their indicators. In SEM analysis structural model (which is inner model) and measurement model (which is also known as outer model) were used. We have adopted the measurement from the study of.

The items were used for measuring the construct of customer relationship, strategic partnership with suppliers and postponement. The items were taken from Coltman, et al. [32] for IS Agile Capability. The SC performance items were taken. For literature review on agility in supply chain, the construct of ASC strategy was formulated in this study [2, 33]. The measuring scale was based on 5-point Likert scale in which 1 represented strongly agree and 5 represented strongly disagree. Every item was evaluated based on this scale. Another option of number 6 representing not applicable was given as well.

4. Data Analysis

[34] have conducted a study recently in which he has suggested that for the measurement of validity the goodness of fit is not appropriate. This study also claimed that in PLS path model while using the stimulated data that valid models cannot be distinguished from non-valid models. The goodness of fit is not suitable in this way. Hair, et al. [34] have suggested a two-step process in which they assessed the inner and outer model. In the first step they have assessed the measurement model precisely but in second step they have assessed the structural model. Latent constructs are recognized in measurement model or the unobserved measures assigned. On the other side the association among unobserved constructs, independent and dependent variables is combined in structural model. The current research by using this approach can forecast, define and estimates the extent of relationship between latent constructs. We have required the internal consistency reliability, discriminant viand convergent validity and content validity after the assessment of measurement mode.

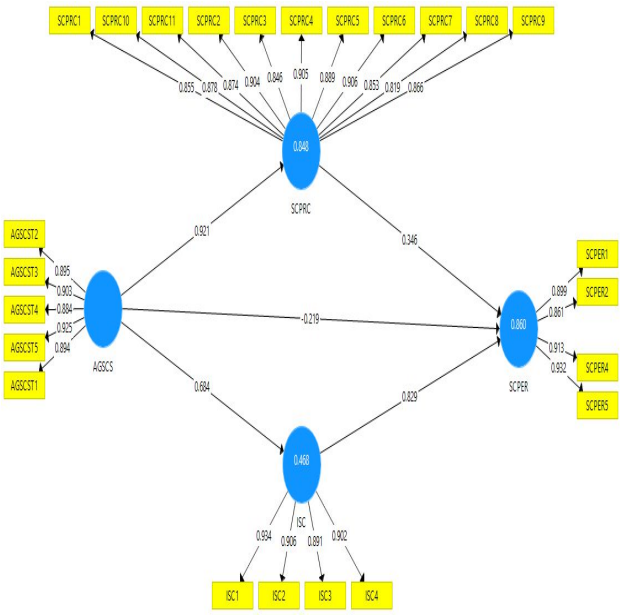

Figure 1. Measurement model

For the measurement of each construct we have assessed the outer loading estimation over the reliability of individual item. According to the scholar's item having the values 0.4 to 0.70 must be considered. In this current study we have omitted the 1 out of 254 items because of having values less than the standard value which is 0.40. by following the suggestion of [35] on the basis of multicollinearity issue we have omitted no items. If the items are similar to each other they are less likely for the measurement of construct. For the representation of set of items in the research if most of the items developed similar then only one or two items will be accepted, so it is suggested in literature that only 1 or 2 best indicators are enough. For the estimation of model with latent variables in each latent there should be two estimated indicators minimum. The degree of freedom get increased in estimation of complicated model. [35], suggested that the validity will be equal or same for the single or multiple items.

Tale 1. Outer loading

	AGSCS	ISC	SCPER	SCPRC
AGSCST2	0.895			
AGSCST3	0.903			
AGSCST4	0.884			
AGSCST5	0.925			
ISC1		0.934		
ISC2		0.906		
ISC3		0.891		
ISC4		0.902		
SCPER1			0.899	
SCPER2			0.861	
SCPER4			0.913	
SCPER5			0.932	
SCPRC1				0.855
SCPRC10				0.878
SCPRC11				0.874
SCPRC2				0.904
SCPRC3				0.846
SCPRC4				0.905
SCPRC5				0.889
SCPRC6				0.906
SCPRC7				0.853
SCPRC8				0.819
SCPRC9				0.866
AGSCST1	0.894			

The findings of measures (theoretical and empirical) while using single item measurement will be the same. Hair Jr, et al. [36] have suggested that in research we can use the single item measures. they also projected some constructs which we can measured over single item indicators. The convergent validity is referred as "The degree at which the purpose latent constructs are characterized through the items which re related alike latent constructs". For the estimation of latent construct convergent validity by following the suggestion of [35]we have used the AVE

approach in the current study. For the achievement of enough level of convergent validity it is also stated in literature that value of AVE for all the latent constructs should be equal or greater than to 0.50. the estimated value of AVE are reflecting the higher loadings which are represented in table 4.8 and ranges from 0.56 to 0.8771 as recommended by Hair, et al. [34]. Results are representing that between the constructs there is convergent validity.

Tale 2. Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
AGSCS	0.942	0.943	0.955	0.811
ISC	0.929	0.930	0.950	0.825
SCPER	0.923	0.924	0.945	0.813
SCPRC	0.969	0.969	0.972	0.762

Discriminate validity is referred as the level of difference from one latent construct to another. We have measured the discriminant validity in the current study through AVE. the relationship between unobserved constructs have compared with squared value of AVE which also lied in the satisfactory range of0.56 to 0.87. We have estimated the DV by following the suggested process. Gorgees and Hilal [35] have suggested that the acceptable value for AVE must equal or greater than 0.50. the squared value of AVE must be greater than the value of correlation between latent constructs for the achievement of discriminant validity which is presented in table 3.

Table 3. Validity

	AGSCS	ISC	SCPER	SCPRC
AGSCS	0.901			
ISC	0.784	0.908		
SCPER	0.767	0.816	0.901	
SCPRC	0.721	0.685	0.713	0.873

In the current study after the determination of measurement model, the next phase is valuation of the structural model. For the assessment of oath coefficients significance, we have applied the bootstrapping procedure by taking a sample of 5000 and 195 cases. Basheer, et al. [37] demonstrates regarding structural model dependence and reliance of association in assumed model. In PLS structural model take earlier directional association among variable, t-vales and path co-efficient. The standardized beta coefficient which is estimated in the regression analysis is alike to PLS approach. For the checking the correlation between the variables we have tested the hypothesis.

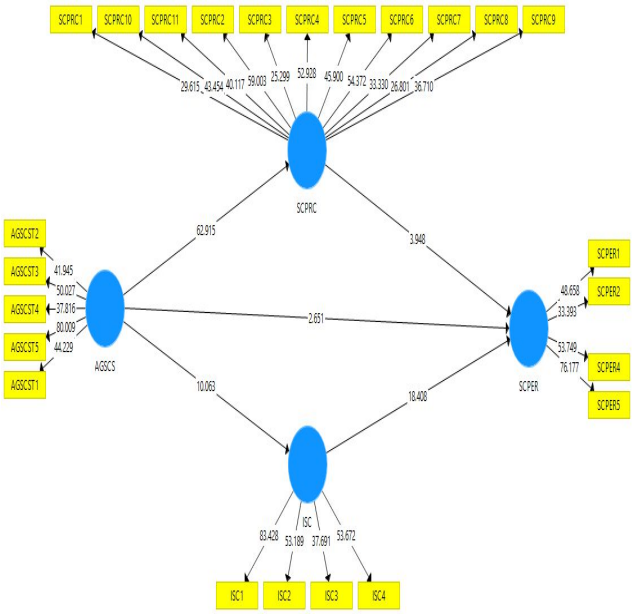

Figure 2. Structural Model

Talbe 4. Direct relations

	Beta	(M)	(STDEV)	T Statistics	P Values
AGSCS -> ISC	0.684	0.685	0.068	10.063	0.000
AGSCS -> SCPER	0.667	0.668	0.064	10.353	0.000
AGSCS -> SCPRC	0.921	0.921	0.015	62.915	0.000
ISC -> SCPER	0.829	0.823	0.045	18.408	0.000
SCPRC -> SCPER	0.346	0.350	0.088	3.948	0.000

Tale 5. Mediation

	Beta	(M)	(STDEV)	T Statistics	P Values
AGSCS -> ISC -> SCPER	0.567	0.562	0.047	12.103	0.000
AGSCS -> SCPRC -> SCPER	0.319	0.322	0.080	3.963	0.000

In the PLS -SEM the changes in dependent variable due to the explanatory variables established for estimating the structural model. The R square value is also important, which shows the coefficient of determination or goodness of fit. Basheer, et al. [37] have suggested that the vales of R square represent the variation or change in dependent variable due to the independent variable. The minimum accepted value of R square should be 0.10. in PLS if R-square is 0.19 its weak 0.33 as moderate and 0.67 is considerable. The value of endogenous latent variable which s r square is presented in table 6.

Table 6. R-Square

	R Square
ISC	0.468
SCPER	0.860
SCPRC	0.848

5. Conclusions

The ability of the focal firm to alter its manufacturing and production is based on the ability of SC to change the important aspects including schedule and quantities. The ability of the firm to adjust its operations and tactics is included in SC agility, which supports it in manufacturing with adaptation to the wide range of products and uncertain changes. By understanding the way in which the performance is influenced by SC agility, the way in which firms manufacturing facing the variations in the market and demand can be known. However, the relation of performance and SC agility has not been analyzed empirically by many researchers [1]. The existence of specific practices of SC and capabilities of information processing the influence the positive association between SC performance and SC practices. The way in which firm manufacturers in accordance to the changing trends of markets and demand has been analyzed by this research.

This research study has captured complementarity between the specific practices of SC and ASC strategy, which is a key contribution in theoretical terms. In this way, this research offers insight about the way in which SC performance can be improved by ASC strategy through the role of these practices as mediator. The previous research studies have been extended by focusing on the SC agility's antecedents and their influence on the financial performance of the focal firm. Another theoretical contribution of this study is in terms of representing IS agile capability. It facilitates the sharing of information with the partners and suppliers. The expected future situation is analyzed by market scanning and the mediating influences are improved. The role of IS within the SC is examined in this research as the previous studies have analyzed the concepts of inter-organizations including collaboration, trust, knowledge of sharing, and innovation [16]. The influence of SC practices in improving the SC performance through agility has not been determined. In this regard, this research study has contributed.

The results of the study have several implications for management of supply chain. The results of the study are beneficial for the SC agility. The study found that there are not similar influences created by the three SC practices in the relation of SC agility and performance. Our findings have implications for managerial practice regarding SC practices and information systems applications that are helpful for agile supply chains. The SP is crucial, and the postponement has come out as partially important. The development of these capabilities is important for firms with ASC strategy. The information sharing is facilitated with the partners by the presence of IS agile capability. Moreover, agility enables a firm to monitor market situation and analyze the future scenarios. These elements are crucial for improve the performance of SC. Lack of similar IS among the suppliers may not help the firm in realizing the functionality, which is a caution for the firm. The technology required for executing the IS agile capability may not be possessed by the suppliers or they may not have supported applications or interface standards and incompatible data. It is important to create an alignment between the IS of the firm and its suppliers for achieving benefits of IS agile capability. The SC performance cannot be improved by customer relationship management alone, but it can be achieved with IS agile capability. The sharing of information can be facilitated by applications with the partners and suppliers. These applications support the development of new products and market scanning and in this way, the relation between SC performance and ASC strategy is improved through customer relationship. It has been suggested that there is need for careful consideration for improving SC performance through SC practices based on ASC strategy and IS promoting agility. The gap in literature to understand the way in which SC performance is improved by ASC strategy is addressed by this research study. It has been suggested by the study that specific SC practices can create a positive mediating relation between SC performance and ASC strategy. From the view of information processing, it has been further suggested that the relation given by these practices can be improved through IS agile capability.

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