The Mediating Effect of Strategic Agility in the Relationship of Supply Chain Management Activities and Firm Performance of the Textile Industry of Indonesia

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Abstract-The study purpose is to investigate the mediating effect of strategic agility in the relationship of supply chain management activities (SCMA) and firm performance (FP) of the textile industry of Indonesia. For this purpose, data was collected from 300 supply chain managers by using a simple random sampling technique which yield a 50 percent response rate. The Structural Equation Modeling (SEM) has applied for the hypothesis testing. The direct effect of the study has shown that SMA has positive and significant relationship with the strategic agility (SA) and FP which supports to the hypothesis. In addition, SA also has also an association with the FP. On the other hand, the indirect mediating effect also show that SA is partially mediates in the relationship of SCMA and FP in the textile industry of Indonesia. Therefore, this mediating effect is considered to be a big contribution of the study which could become a new research area in future. The research limitations and future directions are discussed at the end of the study.

Keywords: supply chain management activities, strategic agility, firm performance, textile industry, Indonesia.

1. Introduction

Inside of the present age of the globalization, improvement in the field of technology, and faster environmental changes in the firm establishments, supply chains (SC) come to be an essential phenomenon which is very helpful for firms to attaining its important objectives, as well as that is also beneficial for exploiting outsider opportunities, as the outcome of associations among partners, consumers and suppliers in the chain. That is also provide with strong aspect of consumer retention and to preserve a strong association with suppliers in place of specific requirements at high demand period, thus towards meet their expectations. Firms come to seeing for worldwide competition, then challenges about receive goods and services must be available at exact time, on low cost and right place, issues created the firms to start seeing that not enough to improve and enhance the inside efficiency of firm.

Therefore, strategy of SC management come to be a more sufficient in connecting partners collectively and interesting into transporting of materials from sources of supply for delivering goods towards customers and also facilitate flow of information by the parties of SC [1]. Efficiently SCM is a strategic challenge which are facing business firms, achievement of that idea and practices fluctuates on integration of supply parties, which means consumers, suppliers and manufacturers, these parties can attain objectives for example growth and financial goals, basically for long-term basis [2]Various studies as well as researchers had speak to verify the requirement for influence of SC needs and requirements for attaining integration and coordination, collaboration as well as interchange of information among the parties of SC [3].

SCM become a very essential trends which leading to compete through the demands of firm's competitive abilities, then they can compete into the situation of competitive among several firms, as well as capability of the chain to constantly faster response in environmental changes in organizations [4]. Therefore, SCM is measured as a key functions which must be perform successfully and in the competence of entire firms [5]. Through observing the important objectives of SCM that could be easily mentioned that entire above influences connected with consumer service.

Many advantages which is consists on: (1) decreasing demand time, (2) make sure the quality, flexibility and reliability at a time of delivery, (3) entire supplies optimal level into SC (4) also decreasing total flow of costs of products [6, 7]. The basic objective of this study is to discover association among the activities of SCM plus operational performance by mediating variable of strategic agility. Then that is observed nonappearance of prior researches that is spoke on this variable, after that researchers have felt to current actuality of SC and production of textile industries in Indonesia that is also considered a very important sectors of industries, attainment of acknowledge in nature of work as well as issues come across inside the performance of SC, a very

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essential is that they facing several problem to discover objects to delay into logistic requirements for raw materials that is necessary for them from suppliers, and discovered there is also missing a chain among represents partners in percentage to receiving compulsory information to suppliers for compete the manufacturer procedures with ease as well as harmony. Based on the previous discussions, the current study purpose is to investigate the mediating effect of strategic agility in the relationship of supply chain management activities (SCMA) and firm performance (FP) of the textile industry of Indonesia.

2. Literature Review

Supply Chain Management (SCM)

There are SC refers to firm's suppliers and dealers of goods, into their warehouse and industrial units and that also handle different task like inventory control, delivery, distribution. production, and procurement Fundamentally, according to the [7] SC is the sequence of that operation which is shared and relationships among common processors as well as it entails entire factors of receiving raw materials, turn off into the finished goods and also deliver them towards final buyers. In this way that all procedures need not happen into one organization. Actually, the SC "consists of two or more companies connected" by stream of finances, evidences and resources, at a same time [9] laid it. Through distributing tasks of the producing factors and parts, manufacturing finished goods, processing the logistic services, as well as delivering towards final buyers, in this way associated firms can serve to each other.

Therefore, different organizations with various objectives and functions should collaborate with each other for SC toward operating lithely [10]. On the other hand, these all connected organizations can be comprehending as the processing chain, else, network of the firms associating their procedures and activities on upstream as well as downstream basis for the key objective of providing value towards final customers [11]. Consequently, SCM assist the production performance of firms which increased execution in addition also best SC decisions into the specified firms on externally and internally basis [12].

Supply Chain Management Activities

Discovering different scopes of the SCM activities, at this stage researcher established more scientific research which exploring diversity and variety of these operational dimensions; that could outcome from joining theoretical and practical functions with SC. In addition, that dimensions can be involve in creation of associations with the suppliers, as well as measured function of informational connections, pressure of cycle times, and outsourcing [13]. Therefore, they were predicating with

performs to make sure of quality, establishment of consumer association, and procurement that could be convened utilizing a mutual internal firm's system which involve in removal of the excess inventory by postponements. Briefly, SCM scopes involves in the set of undertaking activities which are carried out through a firm for the purpose of augment an efficiency plus effectiveness of their SCM performance [13, 14].

Alliances with Suppliers

This is distinguished at the completion of previous era that firms which sustained an effective association by the tended of suppliers towards enhance of its CA [15]. These SC associations remain a tactical union as well as collaboration among two and more organizations in SC that have objectives to speed up its shared effort with these activities as a research, production, sale, development of product, marketing, and delivering. These type of association is more prevalent hybrid structural SCM procedures [16]. Moreover, [17] indicated the research paper wherever they questioned administrator to stipulate a scope in certain activities can provide the value establish by SC associations, for the purpose of understanding how can firms are attempting to reduce difficulties of partnership success.

Thus, researchers described that the SC association could require a SC simplification modicum that could be accomplished upstream through rationalization of supply base [18]. In the internal firm's diversity can be existing in the different forms between partners, an aspect which can influence of its alliances performance positively as well as negatively.

Customer Relationship Management (CRM)

According to [19] majority of the universal projects, systems of CRM at the moment one of very important objectives, and they can more develop in applicability as well as significantly consciousness if they remained easy towards use and perform. Therefore, in the CRM approaches are a consumer-concentration on designed to preserve, fascinate, and enhance organizational boundaries. In this way that systems develop and establish on bonds as well as associations with the outer parties for example final consumers [20]. There is one kind of CRM is operational CRM which distributes formation of information, marketing, delivers the unique information sources about consumers [19]. This is very important in the present landscape of competitive organizations for enact strategies towards keeping and attracting customers. In this most important aspects of the firm success is value of customers, where consumers can selects goods and services in this way they recognized as a most contributing worth [21].

On the other hand, if CRM system within an active organizational functions well in this way the outcome will

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be sustainable as well as timely consumer segmentation. This segmentation could just be totally exploited to the certain purposes if this system covers present detailed data like interest about product portfolio, capabilities of the firms etc, [22]. The SCM can come to system as outcomes of firm's decisions about inception of the relational activities, which target to definite customer's groups, and singular customers, through whom the firm wants to engage in collaborative association [23].

Logistics

Main objective at the present stage is to describe how a firm efficiently execute the SCM, in that division which is through leading logistics professional associations [21]. Aspects of delegate as well as appointment of the managers remain openly connected to their influences to its transportation activities and logistic organizations [24]. This is could be very supportive, at that moment, observation of SCM is a system which is consists on several direct as well as indirect connected functions that is involved in the inclusive struggle to purchase, means, demand, as well as manage logistics procedures [24]. With having several influence on final customers, real logistic service value and existed services and goods should be differentiated through SC. Moreover, typical customer's product expectations remain always rising, in disparity of their failing loyalty towards any particular firm in this way that is very important for establishment of logistics system specifically etched in entire SC aspects. That is must be dynamically adjust belongings of the market exploration that is continuously measured for requirements of various associated populations of customers [25].

Information and Knowledge Sharing

There is knowledge management (KM) or knowledge sharing indicates that how can certifiable and operative flow of information throughout the SC [26, 27]and [28]. For improved usage of KM, that are very essential towards understanding of what that offers to SC, plus its background in how can organizational landscape eventually moved from exhaustive data processing functions which contained on knowledge-based firms [29].in this way that is also very helpful towards understanding of SC can be perceived at this place a essentially intricate as well as dynamic flows system where flow of knowledge as well as information also derive flow of capital plus material [30, 31].

An information integration in the SC can also bring some important benefits to industrial sectors. That is also include capability to cut intelligently of costs, minimize uncertainties, enhance efficiency of firms, better-quality service, discover earlier problems, minimized cycle time between order and delivery to market, faster responses, capability to reduce inventory because of effective

inventory management, in addition so on. Therefore, specialization in data and in sub sets of data which is established into data storage that is mostly directed to the specific line and specific cooperation or that is also used for attaining information sharing with specific objectives [32].

Strategic Agility

Organizations are become further engaged establishment of unique practices for firm's improvement in the entire stages [26]. Therefore, influences of the agile management practices, at that place agility and time necessities decreases remain basic aspects that could be utilized for delivering faster response towards changes in requirement or to consumer's ever-changing necessities. The agile SC strategies are very effective as dealing through various products in situation of fluctuating demand. In this way when overall lead time restricted that strategy can establish for minimum demanding towards perform [33]. So, Planed and thoughtful can be measured as the special form of dynamic capability of firms [34]In addition[32]has described the strategic agility in place of a capability of the dynamically modify and reorganized a firm as well as its strategies, in which shifting specialized environment and fluctuating tendencies of customers accounted for constantly, throughout deserting the vision of organizations. With the line in this [35]defined it as an ability to perceive as well as take benefits of environmental resources, which contains efficient, and planning on durable basis for predicted changes into the firms. It is also seen as a capacity to create essential decisions within restricted time, as that is predictable for distinctive market place as well as strategic environments [36].

There are [37]defined strategic agility by the way of relative concept, which representing the capabilities of firms to achievement of opportunities in more significantly fashion on the behalf of its competitors. That is also make clear by the [38] such as seizing and identifying options more rapidly than rivals. At this place, pay more attention on the strategic sensitivity, or capability towards be open as well as sensitive, by sorting with available information plus sustaining associations by the multiplicity of persons plus firms [39]. At that time, pay more attention on the strategic sensitivity, or capabilities towards be open as well as sensitive, to predict necessaries and opportunities, through sorting with this also put together speed response concept, that is refers to measure in which a firm take instant action on the certain point, these ideal opportunity towards introducing innovative manufacturer goods [40]. [41], contrariwise, pay more attention on the change practice and also defined strategic agility in place of the process to adjusting organization's strategic orientation to developments and changes in its environment.

Firm Performance

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There are firm performance (FP) talk about businesses nearby of the functioning, as deliberated contrary to the efficacy of distinctive benchmarks, efficiency, and circumstances accountability together with waste minimizing as well as regulatory compliances, instance of. These performances can have developed through containing customer on pertinent issues such as flow of material as well as quality outcomes in rapid and more specifics delivery of the results. That dimension of CRM should be providing suitable consequences when forthcoming with the strategies of SCM [15]. Moreover, [42] measured five different arguments towards OP with cost capability towards productions or delivered at low cost as well as quality; capability towards production or delivered according to demands, without speed and faults; capability to provides services and products as remained promised to the consumers 5. Agility: the ability to fluctuate processes into the presence of shifting environments.

The objectives included strategic positioning, utility, consistency, deliverability, sufficiency, cost-effectiveness, reliability, timeliness, accuracy, response, frequency, safety, reasonableness, and known functions. It could be recognized that the flexibility is very essential aspect, which various researchers comprehend as enhancing the efficiency of OP. in addition, disputes that several firms' procedure of flexibility or its operative capability for effectively modify towards the circumstances changes as well as also address requirements for the purpose of attaining competitive advantages. Furthermore, [43]indicated that the flexibility has come to be a key competitive weapon the reason is that it leads to more rapidly and more important manufacture and delivery of innovative goods in response towards customer needs.

Research Hypothesis

There are following hypothesis of the study which are formulated below.

H1: There is a significant relationship between supply chain management activities and firm performance of the textile industry of Indonesia.

H2: There is a significant relationship between supply chain management activities and strategic agility of the textile industry of Indonesia.

H3: There is a significant relationship between strategic agility and firm performance of the textile industry of Indonesia.

H4: Strategic agility is significantly mediating in the relationship of supply chain management activities and firm performance of textile industry of Indonesia.

3. Research Methodology

The current study purpose is to investigate mediating impact of strategic agility in the relationship of supply

chain management activities and firm performance of the textile sector of Indonesia. To attain this objective, the current study has used the quantitative research approach, cross sectional research design and study correlational in nature which shows that relationship among the variables. The study is consisting of primary data which was collected by using the self-administered questionnaires. These questionnaires were distributed to the 600 supply chain managers which were working in the textile sector of Indonesia. The questionnaire which were returned back 312, after screening among of these 312 responses, there were 300 responses were valid for further analysis which yield a 50 percent response rate. The questionnaire of the current study was adopted from the previous studies, where these questionnaires were already testing, in this regards, the questionnaire reliability is more. All the questionnaires were measured by using a five point Likert Scale which is ranged from strongly disagree (1) to strongly agree (5). The supply chain management activities (SCMA) were measured by four following dimensions namely, alliances with suppliers (AWS), customer relationship management (CRM), logistics (log), information and knowledge sharing (IKS). Every dimension of the SCMA was measured by four items. In addition, the strategic agility (SA) also measured by four items, firm performance is measured by ten items which were adopted from the study of [44]. These items were further used in the study of [45, 46].

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Research analysis and Discussions

The data analysis of the study is consisting of two sections. One section denotes the assessment of the measurement model, while other section indicates the structural model of the study. The assessment model has shown the validity and reliability of the model, however structural model of the study has shown the relationship of the variable which is gain by testing the hypothesis [47].

Measurement Model

This study has used the Partial Least Square (PLS)-Structural Equation Modeling (SEM) for the model testing. In the procedure of the model assessment, the first step is consisting of attain the reliability and validity acceptance level through the model assessment. For this purpose, the Smart PLS version 3 used which is being used the measurement model evaluation [48]. In the assessment of the path modeling, composite reliability (CR) and Cronbach's alpha utilize to evaluate variables reliability. Measurement model is used for the valuation of validity and internal consistency of scale items [47]. Cronbach's alpha and CR are usually used to evaluate the internal consistency of construct. CR used to check the internal consistency of the construct and it also emphasis on the construct reliability valuation. The CR is based on the individual indicators reliability of the estimated model

which suppose that all the items have different factor loadings, while Cronbach's alpha tells composite reliability of construct [47]. The minimum value recommended value is 0.7, for Cronbach alpha is 0.7, for factor loading is 0.5 and for average variance extracted (AVE) is 0.5 [47]. On the other hand, for the discriminant validity, the Fornell Lacker and HTMT are recommend by [47]. For the Fornell Lacker, all the diagonal values

should be greater than from below values. As per the [49] instructions comparison was established among the AVE square roots for each variable and correlations of the latent constructs. In addition, for the HTMT the correlation among the two construct should be less than 0.85 [50]. All of the convergent and discriminant validity results are predicted in the Table 1, 2 and 3 below.

Table 1. Reliability and Validity of the Model

Constructs	Items	Loadings	Alpha	CR	AVE
CRM	CRM1	0.693	0.918	0.932	0.58
	CRM2	0.740			
	CRM3	0.754			
	CRM4	0.912			
LOG	LOG1	0.884	0.920	0.94	0.59
	LOG2	0.876			
	LOG3	0.891			
IKS	IKS1	0.887	0.772	0.862	0.613
	IKS2	0.723			
	IKS3	0.769			
	IKS4	0.774			
AWS	AWS1	0.817	0.801	0.911	0.539
	AWS2	0.734			
	AWS3	0.715			
	AWS4	0.647			
SA	SA1	0.737	0.789	0.812	0.527
	SA2	0.811			
	SA3	0.904			
	SA4	0.873			
FP	FP1	0.797	0.881	0.927	0.808
	FP2	0.791			
	FP3	0.789			
	FP4	0.705			
	FP5	0.907			
	FP6	0.866			
	FP7	0.718			
	FP8	0.935			
	FP9	0.701			

Note: CRM- customer relationship management, LOG-logistics, AWS-alliances with suppliers, IKS-information and knowledge sharing, SA-strategic agility, FP-firm performance.

Table. 2 Fornell & Lacker Criterion

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	CRM	LOG	IKS	AWS	SA	FP
CRM	0.84					
LOG	0.13	0.902				
IKS	0.342	0.254	0.899			
AWS	0.402	0.171	0.189	0.762		
SA	0.560	0.431	0.342	0.431	0.890	
FP	0.600	0.340	0.543	0.123	0.347	0.856

Note: CRM- customer relationship management, LOG-logistics, AWS-alliances with suppliers, IKS-information and knowledge sharing, SA-strategic agility, FP-firm performance.

Tab	le.3	HTMT	Criterion

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	CRM	LOG	IKS	AWS	SA	FP
CRM						
LOG	0.203					
IKS	0.342	0.354				
AWS	0.302	0.271	0.289			
SA	0.360	0.531	0.342	0.331		
FP	0.500	0.340	0.443	0.223	0.347	

Note: CRM- customer relationship management, LOG-logistics, AWS-alliances with suppliers, IKS-information and knowledge sharing, SA-strategic agility, FP-firm performance.

Structural Model

After the assessment of the structural model of the study, the structural model of the study by using a bootstrap 500 resampling technique applied by using a Smart PLS. The structural model of the study tests the study hypothesis. The direct effect of the study has shown that supply chain management activities (SCMA) has a positive and significant relationship with the firm performance (FP) which supports the proposed hypothesis. Similarly, the SCMA also has positive and significant and positive relationship with the strategic

agility (SA) that supports the study hypothesis. In addition, SA also has a significant relationship with the FP that also supports to the study hypothesis. On the other hand, the indirect mediating effect of the study also shown that SA is significantly and partially mediates in the relationship of SCAM and FP that also supports to the study hypothesis. These findings have shown that textile industry of Indonesia has played an important role on the SCMA to increase their SA and FP. The direct and indirect effect results of the study are formulated in the following Table 4.

Table.4 Direct and Indirect Effect Results

	Beta	S.D	T Statistics	P Values	Results
SA -> FP	0.657	0.059	11.08	0.000	Supported
SCMA -> FP	0.145	0.063	2.302	0.022	Supported
SCMA -> SA	0.743	0.028	26.418	0.000	Supported
SCMA->SA->FP	0.177	0.065	2.723	0.018	Supported

Note: SA-strategic agility, FP-firm performance, SCMA-supply chain management activities

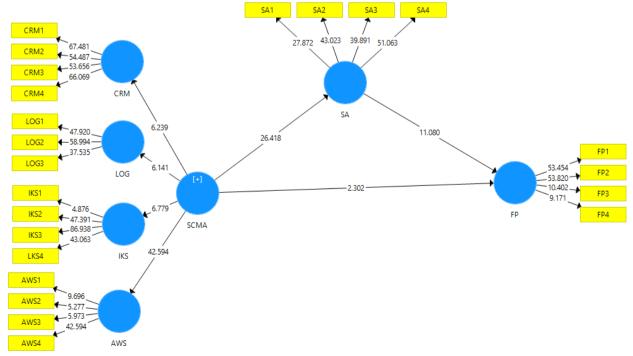


Figure 2. Structural model

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4. Conclusion

The study purpose is to investigate the mediating effect of strategic agility in the relationship of supply chain management activities (SCMA) and firm performance (FP) of the textile industry of Indonesia. For the objective of the study, the research hypothesis was formulated. All the hypothesis of the study was supported along with the proposed hypothesis which shows that SCMA has a positive and significant relationship with the direct and indirect effect. These findings indicate that SCMA is considered to be significant predictor to increase the strategic agility (SA) and FP. As, the SA is significant predictor among their relationship, therefore, this mediating effect is considered to be big contribution of the study. Moreover, study could also contribute to help to the supply chain managers, policy makers and owners to know about the importance of SCMA to increase the performance of organization. In addition, the study could also contribute a new area of research among the researchers and industrialist to increase their performance. With the presence of these contribution, the current study has some limitations. Firstly, the study was limited on one industry, therefore, the generalizability is limited, therefore a future research could be established a comparison study between the service and manufacturing industries. Secondly, the study was limited on the mediating effect, there are several other variables which can moderate among their relationship, in this regards, a future research could be established along with the moderating variable. Thirdly, the study was limited on cross sectional research design, in which data is collected at one time which has low generalizability. A future research could be done on longitudinal research design to increase the generalizability.

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