

Effect of Supply Chain Strategy to the Supply Chain Performance of the Lotus Flower for Food Industry

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Abstract:

The objective of the current study is to examine the effect of supply chain strategy (SCS) on supply chain performance (SCP). The relationship between provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP were examined. Furthermore, the mediation effect of customer retention was examined between SCS and SCP. Data were collected from the food industry of Thailand. 400 questionnaires were distributed among the employees of Thailand food industry by using the cluster sampling technique. Therefore, the population of the current study is food companies of Thailand and employee are the respondents of the study. Results of the study shows that SCS has positive role to enhance SCP. Better implementation of SCS has positive effect on customer retention which further increases the SCP. It is found that raw material, stack of goods, timely delivery and safe delivery has positive effect on customer retention, further, customer retention effect positively on SCP.

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INTRODUCTION

The importance of supply chain cannot be neglected among all industries because supply chain activities are involved in all companies. None of the company is free from supply chain process. It does not matter the nature of activities in various companies, supply chain is involved in all companies. Most of the companies are majorly based on external supply chain in which these companies provide goods to the external people outside the company. Generally manufacturing companies are majorly involved in external supply chain. However, on the other hand, different companies are involved in internal supply chain activities. Internal supply chain activities are involved the supply chain to support the internal operations of the company such as to support the operations of the company through raw material. Therefore, supply chain can be

involved externally as well as internal among various companies. Whatever the situation, supply chain remains involved. Thus, supply chain is most important among different organizations which requires special focus (Egbuniwe, 2019; Fernández-Caramés, Blanco-Novoa, Froiz-Míguez, & Fraga-Lamas, 2019).

The involvement of supply chain activities in each industry shows the importance of supply chain activities among the business activities. In this era, supply chain is most important, and it is the major focus of all companies to enhance the business activities. The companies are trying to enhance the supply chain because supply chain is important for customer satisfaction. Companies are using supply chain as a tool to satisfy the customer needs and to retain the customers. Thus, the importance of supply has major role among the companies (Ul-Hameed, Mohammad, Shahar, Aljumah, & Azizan, 2019).

Any change in the supply chain has direct influence on the business activities because supply chain is central to the company's internal as well as external operations. Both the internal and external operations are based on the supply chain. Hence, the importance of supply chain is vital in business (Singsa, Sriyakul, Sutduean, & Jermittiparsert, 2019).

Supply chain is also very important in food supply companies. It has more importance in food companies because food has very short life, therefore, timely supply of food is most important. In this process while supplying the food, supply chain process cannot be stopped because it will damage the food. These food supply companies are also very active in Thailand. These companies in Thailand are also playing a positive role in supply of food from one area to another area. In Thailand, the supply of lotus flower for food industry is very important. In Thailand, supply of lotus flower for food industry is very crucial. Therefore, proper supply chain activities are required for this process. Food industry has major role in Thailand to supply the food (Ploenhad, Laoprawatchai, Thongrawd, & Jermittiparsert, 2019; Tipmontian, Alcover, & Rajmohan, 2020). Thailand food industry has central importance which must has better supply chain. As Thailand food industry is one of the strong industries which is exporting food to various countries. Figure 1 shows that top ten countries where Thailand export food.

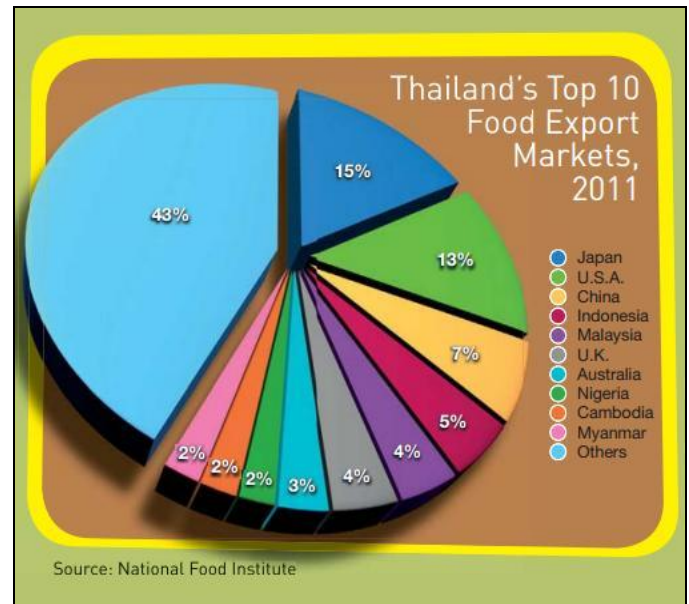


Figure I.
Thailand Top 10 Food Export Markets

However, to enhance the supply chain in food industry of Thailand, supply chain strategy is required. Better performance of supply chain in Thailand food industry required better strategies. According to the current study, food supply companies must have better internal and external supply chain management. Internally, companies must have better provision of raw material. Externally, the food companies must have a reasonable level of goods stack to fulfill the sudden need from the client. Both the availability of raw material and goods stack will facilities or expediate the supply chain. Furthermore, to enhance SCP, other external elements such as timely delivery and safe delivery has the ability to enhance SCP. Increase in external elements such as timely delivery and safe delivery may lead to the better performance of supply chain. These four elements of supply chain strategy have the ability to expediate customer retention which can effect positively on SCP. As the customer retention is also one of the key variables in the current study as it has significant importance among various companies. Hence, supply chain strategy has vital role in companies (Tarafdar & Qrunfleh, 2017; Wiengarten, Li, Singh, & Fynes, 2019) to enhance SCP. Therefore, the objective of the current study is to examine the effect of SCS on

SCP. The relationship between provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP were examined. Number of previous studies examined the supply chain in food industry among various countries (Miranda-Ackerman, Azzaro-Pantel, & Aguilar-Lasserre, 2017), however, this relationship is not examined in relation to the customer retention in the context of Thailand. Along with this previous study have not use the customer retention as mediating variable between SCS and SCP.

II. LITERATURE REVIEW

Supply chain of the lotus flower for food industry is most important to handle requirements. Particularly in Thailand, it is important to handle the requirement of food industry. It requires special focus because the requirement of industry is increasing. To fulfill the daily requirement, the supply chain activities must have better performance. Low performance of supply chain activities cannot fulfill the requirements. In this direction to fulfill the growing requirements, supply chain must have better strategies. The effect of SCS is given in Figure 2 which shows the relationship between provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP.

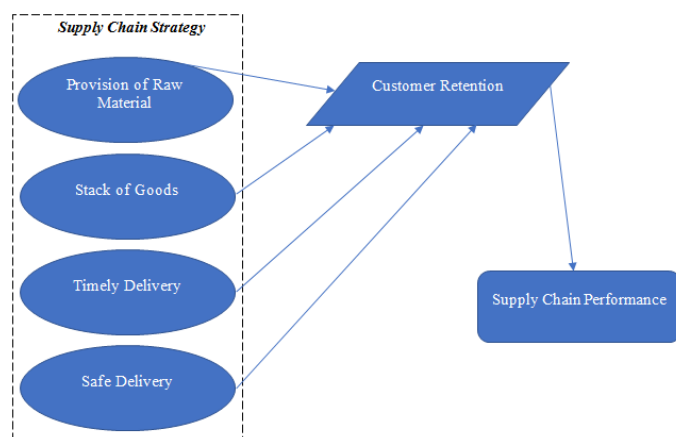


FIGURE II.

Theoretical framework of the study showing the relationship between provision of raw material, stack

of goods, timely delivery, safe delivery, customer retention and SCP

According to Figure 2, SCS strategy has four elements which has influence on customer retention. These elements include; provision of raw material, stack of goods, timely delivery and safe delivery. All these elements of supply chain strategy have influence on customer retention which further increases the SCP. Customer retention is one of the most vital elements of any business organization (Aldaihani & Ali, 2018; Ciunova-Shuleska, Palamidovska-Sterjadovska, Osakwe, & Omotoso, 2017). Therefore, SCS has major role in customer retention and finally customer retention has positive role in SCP.

First strategy of supply chain; provision of raw material has significant role in customer retention. A raw material can be described as a feedstock, unprocessed material to make products, or primary commodity, is one of the basic materials that is used to produce various required goods, finished products, energy, or intermediate materials that are feedstock for future finished products. It has central importance among the companies. Because maintenance of the certain quantity of raw material is most important to produce finished goods in time. Because delay in the supply of raw material generally effect negatively on overall process. As previous studies show that raw material has relationship with supply chain (Geng, Mansouri, & Aktas, 2017; Palandeng, 2018; Guneri & Yildiz, 2019). Therefore, provision of raw material shows positive effect on customer retention which further increases the SCP.

Second strategy of supply chain; stack of goods also has important relationship with customer retention and SCP. Every business should have a reasonable stack of goods to fulfill the sudden requirement of customer. Customer retention can be enhanced with the proper delivery to the customer. Quick delivery is always required to satisfy the customer which require a significant amount of stack in the firm. On the other hand, if the company do not

deliver the order quickly, it effect negatively on the retention of customer which further causes to decrease the SCP. As the stack of goods, supply chain and customer retention have relationship with each other (Maladi, Nirwanto, & Firdiansjah, 2019; Nelson et al., 2017). Stack of goods helps to fulfill the customer requirements which further increase the SCP.

Third strategy of supply chain; timely delivery is most important to increase the satisfaction level among the customers which further causes to increase SCP. As the satisfied customer have better retention level which increases the purchase form the same company. Timely delivery of goods is the guaranty of smooth operations, however, delay in the delivery has negative effect on the customers operations which causes to decrease the customer retention level. As previous studies shows the relationship between timely delivery and customer retention (Sani, Shehu, Usman, & Suleiman, 2019). Along with this, timely delivery also has relationship with supply chain (Wu, Nie, Xu, & Yan, 2018). Further, it is highlighted by Wu et al. (2018), timely delivery is becoming a serious strategy that is as vital as lean manufacturing as well as innovation strategy in current supply chain process, mainly in perishable food supply chains.

Fourth and final strategy of supply chain; safe delivery has major role in SCP. Safe delivery of goods to the customer is always important for the supply chain companies. Damage to the goods during delivery of goods have negative role on customers. Actually, SCP is majorly based on the customer satisfaction and customer satisfaction lead to the customer retention. A retained customer come again and again which has positive role to enhance SCP. It is evident from the previous investigations that safe delivery is the key to supply chain customers (Mehmood & Najmi, 2017). Finally, delivery of goods also has relationship with customer retention (Afshar, Polas, Imtiaz, & Saboor, 2019). Hence, the above discussion lead to the following hypotheses;

Hypothesis 1. Provision of raw material has positive influence on customer retention.

Hypothesis 2. Stack of goods has positive influence on customer retention.

Hypothesis 3. Timely delivery has positive influence on customer retention.

Hypothesis 4. Safe delivery has positive influence on customer retention.

Hypothesis 5. Customer retention has positive influence on SCP.

Hypothesis 6. Customer retention mediates the relationship between provision of raw material and SCP.

Hypothesis 7. Customer retention mediates the relationship between stack of goods and SCP.

Hypothesis 8. Customer retention mediates the relationship between timely delivery and SCP.

Hypothesis 9. Customer retention mediates the relationship between safe delivery and SCP.

III. RESEARCH METHOD

The objective of this study is to examine the effect of supply chain strategy (SCS) on supply chain performance (SCP). To attain this objective, the current study used quantitative approach along with the cross-sectional research design. Hence, the current study used primary data. The firsthand data was collected from the respondents. Therefore, to examine the relationship between provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP, this study designed a questionnaire. Survey questionnaire is suitable in the situation of current study (Bowling, Bond, Jenkinson, & Lamping, 1999).

Six variables, namely; provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP were measured in the current study. SCP was measured by the timely supply of raw material and timely supply to the end users. Therefore, SCP was measured through internal supply and external supply of the companies. Internal supply is based on the material

used for by the company to make goods and external supply is based on the goods required to supply to the customers. Customer retention was measured by examining the customers purchase of certain company products again and again. All these measures are adapted from the already published studies. Finally, data were collected with the help of cluster sampling (Ul-Hameed, Mohammad, & Shahar, 2018). Simple random sampling was also used after making the clusters (Kaur, Patil, Shirk, & Taillie, 1996). Data were collected from the food industry of Thailand. 400 questionnaires were distributed among the employee of Thailand food industry by using the cluster sampling technique. Therefore, the population of the current study is food companies of Thailand and employee are the

respondents of the study. Finally, 224 questionnaires were received for data analysis.

IV. FINDINGS

It is very important to handle the errors in the data. Errors in the data may lead to the different results. Therefore, to handle errors in the data, the current study used preliminary data analysis which has importance in data analysis. Therefore, this study used data screening as given in Table 1 to check the missing value (Aydin & ŞENOĞLU, 2018) and outlier in the data. Table 1 highlighted that all the data have no missing value as well as outlier.

TABLE I.
Data Statistics

	No.	Missing	Mean	Median	Min	Max	SD	Kurtosis	Skewness
PRM1	1	0	3.001	3	1	6	1.353	-0.391	-1.098
PRM2	2	0	3.048	3	1	7	0.876	-0.586	0.48
PRM3	3	0	3.556	3	1	7	1.829	-1.014	0.282
PRM4	4	0	3.556	3	1	7	1.943	-0.867	0.315
PRM5	5	0	3.549	4	1	7	1.625	-0.333	1.202
SG1	6	0	3.621	4	1	7	1.753	-0.513	0.219
SG2	7	0	3.003	4	1	7	0.757	-0.804	0.057
SG3	8	0	3.725	4	1	7	1.819	-0.67	0.145
SG4	9	0	3.699	4	1	7	1.83	-0.683	0.259
TD1	10	0	3.732	4	1	7	1.801	-0.545	1.326
TD2	11	0	3.627	3	1	7	1.875	-0.708	0.343
TD3	12	0	3.021	3	1	7	1.786	-1.047	0.384
TD4	13	0	3.614	3	1	7	1.92	-0.793	0.31
TD5	14	0	3.386	3	1	7	0.742	-0.412	0.389
TD6	15	0	3.542	4	1	7	1.826	-0.725	1.198
SD1	16	0	3.458	4	1	7	1.745	-0.486	0.265
SD2	17	0	3.621	4	1	7	1.7	-0.526	0.173
SD3	18	0	3.085	3	1	7	1.45	-0.069	0.564
SD4	19	0	3.035	3	1	7	1.408	1.075	0.85
SD5	20	0	3.248	3	1	7	1.411	0.936	0.862
CR1	21	0	3.216	3	1	7	1.376	0.479	0.607
CR2	22	0	3.144	3	1	7	1.265	0.808	1.606
CR3	23	0	3.275	3	1	7	0.947	0.41	0.66
CR4	24	0	3.176	3	1	7	1.396	0.839	0.859
CR5	25	0	3.072	3	1	6	1.258	-0.444	0.102

SCP1	26	0	3.275	3	1	7	1.29	1.02	0.656
SCP2	27	0	3.163	3	1	7	1.316	0.39	0.546
SCP3	28	0	3.118	3	1	7	1.414	0.279	0.588
SCP4	29	0	3.288	3	1	7	1.38	0.086	0.51
SCP5	30	0	3.203	3	1	7	1.305	0.672	0.579

Above section was used to examine the errors in the data. The next section is the first step of Partial Least square (PLS) to examine the factor loadings. As this study used PLS, therefore, confirmatory factor analysis (CFA) was used to examine factor loadings which is most popular method for examination of factor loadings (F. Hair Jr, Sarstedt, Hopkins, & G. Kuppelwieser, 2014; J. F. Hair, Ringle, & Sarstedt, 2013; J. F. Hair, Sarstedt, Pieper, & Ringle, 2012). Figure 3 shows that raw material provision is measured by using 5 items, stack of goods is measured by using four items, timely delivery is measured by using six items. Safe delivery is measured by using five items. Customer retention was measured by using five items and finally, SCP was measured by using five items as shown in Figure 3 and factor loadings is given in Table 2. All the factors loadings for scale items of all variables; provision of raw material, stack of goods, timely delivery, safe delivery,

customer retention and SCP is above 0.5 (J. Hair, Hollingsworth, Randolph, & Chong, 2017).

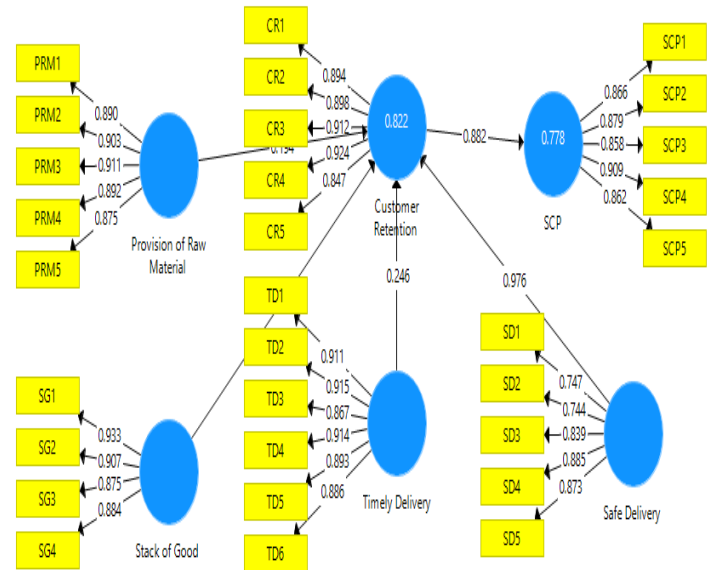


FIGURE III.
Measurement Model

TABLE II.
Factor Loadings

	Customer Retention	Provision of Raw Material	Safe Delivery	Stack of Good	Timely Delivery
CR1	0.894				
CR2	0.898				
CR3	0.912				
CR4	0.924				
CR5	0.847				
PRM1		0.89			
PRM2		0.903			
PRM3		0.911			
PRM4		0.892			
PRM5		0.875			

SCP1	0.866		
SCP2	0.879		
SCP3	0.858		
SCP4	0.909		
SCP5	0.862		
SD1		0.747	
SD2		0.744	
SD3		0.839	
SD4		0.885	
SD5		0.873	
SG1			0.933
SG2			0.907
SG3			0.875
SG4			0.884
TD1			0.911
TD2			0.915
TD3			0.867
TD4			0.914
TD5			0.893
TD6			0.886

As CFA was used for factors loadings given in Figure 3. Moreover, CFA was used to check the composite reliability (CR) and average variance extracted (AVE) as shown in Table 3. It is evident that all the variables; provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP have CR above 0.7. Moreover, it is found that all the variables; provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP have AVE above 0.5. Thus, convergent validity is also achieved. Along with convergent validity, the discriminant validity is given in Table 4 with the help of cross-loadings (Fornell & Larcker, 1981).

TABLE III.
Reliability and Convergent Validity

	Alpha	rho_A	CR	(AVE)
Customer				
Retention	0.938	0.94	0.953	0.801
Provision of				
Raw Material	0.937	0.939	0.952	0.8
SCP	0.923	0.924	0.942	0.766
Safe Delivery	0.879	0.898	0.911	0.672
Stack of Good	0.922	0.925	0.945	0.81
Timely				
Delivery	0.952	0.954	0.961	0.806

TABLE IV.
Cross-Loadings

	Customer Retention	Provision of Raw Material	Safe Delivery	Stack of Good	Timely Delivery	
CR1	0.894	0.575	0.836	0.813	0.52	0.485
CR2	0.898	0.603	0.749	0.793	0.576	0.558
CR3	0.912	0.584	0.834	0.807	0.547	0.504
CR4	0.924	0.643	0.812	0.835	0.592	0.538

CR5	0.847	0.564	0.707	0.771	0.528	0.484
PRM1	0.614	0.89	0.542	0.72	0.809	0.81
PRM2	0.544	0.903	0.441	0.649	0.853	0.817
PRM3	0.543	0.911	0.47	0.656	0.804	0.835
PRM4	0.623	0.892	0.52	0.707	0.812	0.849
PRM5	0.629	0.875	0.544	0.74	0.87	0.814
SCP1	0.741	0.446	0.866	0.734	0.422	0.405
SCP2	0.742	0.466	0.879	0.7	0.434	0.428
SCP3	0.811	0.582	0.858	0.766	0.536	0.503
SCP4	0.794	0.499	0.909	0.794	0.48	0.422
SCP5	0.765	0.476	0.862	0.761	0.452	0.443
SD1	0.572	0.82	0.492	0.847	0.812	0.815
SD2	0.566	0.807	0.513	0.844	0.799	0.817
SD3	0.802	0.552	0.816	0.839	0.515	0.514
SD4	0.818	0.595	0.8	0.885	0.564	0.502
SD5	0.851	0.557	0.808	0.873	0.527	0.474
SG1	0.596	0.851	0.518	0.693	0.933	0.804
SG2	0.572	0.848	0.492	0.69	0.907	0.794
SG3	0.51	0.819	0.425	0.635	0.875	0.831
SG4	0.538	0.826	0.478	0.679	0.884	0.883
TD1	0.48	0.851	0.45	0.632	0.847	0.911
TD2	0.568	0.856	0.479	0.666	0.841	0.915
TD3	0.526	0.792	0.457	0.654	0.76	0.867
TD4	0.491	0.82	0.407	0.631	0.818	0.914
TD5	0.482	0.816	0.442	0.625	0.798	0.893
TD6	0.531	0.837	0.474	0.669	0.877	0.886

Figure 4 shows that the direct effect of raw material provision on customer retention. The direct effect of stack of goods was also examined on the customer retention. Moreover, the direct effect of timely delivery for the customers is also examined on the customer retention. Along with this, the effect of safe delivery was examined on customer retention. Finally, the direct effect of customer retention was examined on SCP. Therefore, the direct effect of provision of raw material, stack of goods, timely delivery and safe delivery was examined on customer retention and customer retention effect was examined on SCP. These relationship was examined with the help of PLS structural model (Hameed, Basheer, Iqbal, Anwar, & Ahmad, 2018; Henseler & Chin, 2010; Henseler et al., 2014; Henseler, Ringle, & Sinkovics, 2009).

Results of the study in Table 5 shows that raw material provision has positive effect on customer retention. Stack of good also has positive effect of customer retention. Timely delivery has positive influence to enhance customer retention. Moreover, safe delivery to the customer also has positive effect on customer retention. Hence, raw material, stack of goods, timely delivery and safe delivery has positive effect on customer retention. Finally, customer retention has positive effect on SCP.

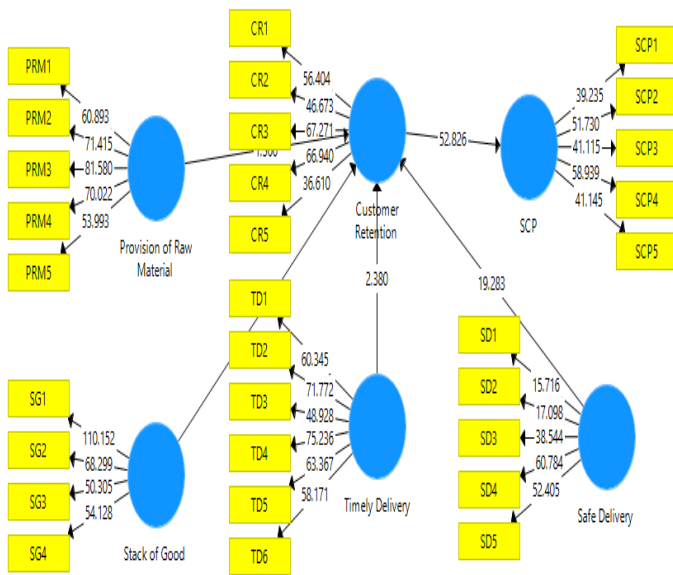


FIGURE IV.
Structural Model

TABLE V.
Direct Effect Results

	(O)	(M)	SD	T Statisti cs	P Value s
Customer Retention -> SCP	0.88	0.88	0.01	52.826	0
Provision of Raw Material -> Customer Retention	0.19	0.19	0.05	3.366	0.001
Safe Delivery -> Customer Retention	0.97	0.97	0.05	19.283	0
Stack of Good -> Customer Retention	0.06	0.07	0.01	3.6	0
Timely Delivery -> Customer Retention	0.24	0.24	0.10	2.38	0.018

TABLE VI.

After the assessment of direct effect, this study also examined the indirect effect of customer retention. The mediation effect of customer retention was examined between raw material provision and SCP. Customer retention as mediating variable was measured between stack of goods and SCP. The third mediation effect was examined between timely delivery and SCP. Final mediation effect of customer retention was examined between safe delivery and SCP. Results of the mediation effect are given Table 6. The mediation effect of customer retention between raw material provision and SCP is not significant with t-value 1.367. Customer retention as mediating variable between safe delivery and SCP found t-value 16.418 which is significant. Thus, customer retention as mediating variable reflect the positive effect of safe delivery on SCP. The third mediation effect was examined between timely delivery and SCP which is found t-value 2.387 which is significant. Thus, customer retention as mediation effect reflect the positive effect of timely delivery on SCP. Moreover, mediation effect of customer retention was examined between stack of goods and SCP which is insignificant with t-value 0.598. Hence, from total four mediation hypotheses, two hypotheses are supported, and two hypotheses are not supported. Finally, r-square value of SCP was examined which is 0.788 and considered as strong (Chin, 1998). It shows that; provision of raw material, stack of goods, timely delivery, safe delivery and customer retention are expected to bring 78.8% change in SCP.

Indirect Effect Results

	(O)	(M)	SD	T Statistics	P Values
Provision of Raw Material -> Customer Retention -> SCP	0.171	0.171	0.125	1.367	0.172
Safe Delivery -> Customer Retention -> SCP	0.861	0.864	0.052	16.418	0
Stack of Good -> Customer Retention -> SCP	-0.06	0.068	0.101	0.598	0.55
Timely Delivery -> Customer Retention -> SCP	0.217	0.212	0.091	2.387	0.017

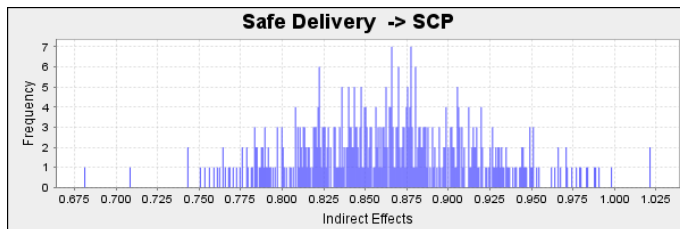


FIGURE V.

Indirect Effect: Safe Delivery -> Customer Retention -> SCP

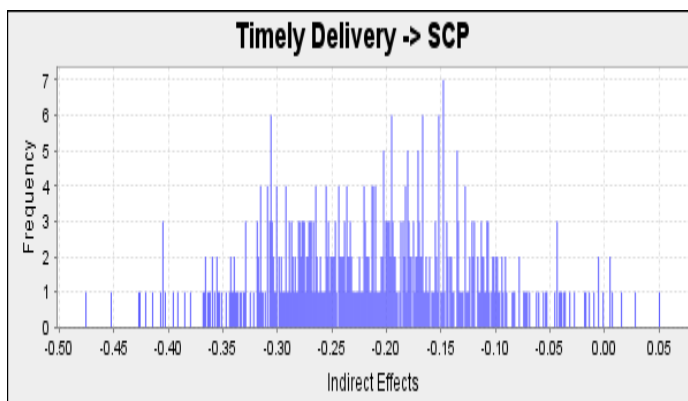


FIGURE VI.

Indirect Effect: Timely Delivery -> Customer Retention -> SCP

V. CONCLUSION

The relationship between provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP were examined. The objective of this current study is to examine the effect of supply chain strategy (SCS) on supply chain performance (SCP). Data were collected from the food industry of Thailand and employee was selected as the respondents. Results of the study shows most important strategies of supply chain which has major effect on customer retention. First, provision of raw material has positive effect on customer retention. Increase in the provision of raw material shows positive influence on customer retention. Raw material is the important part of supply chain and to make various products. Unavailability and shortage of raw material has negative effect on customer retention. Second, stack of goods is also most important strategy of supply chain which includes on SCP through customer retention. Stack of goods has the ability to fulfill the customer requirement in given time. However, if the company do not have the stack of goods, it is hard to

fill the sudden requirement. Therefore, stock of goods has positive effect on customer retention which further increases the SCP. Third, delivery on time to the customers also has positive effect on customer retention. However, late delivery may affect negatively on customer retention which further shows negative effect on customer retention and lead to the decrease in SCP. Four, safe delivery to the customer also has positive effect on the customer retention. Safe delivery of products shows the increase in customer retention which further causes to increase the SCP. Hence, results of the study show that SCS has positive role to enhance SCP. Better implementation of SCS has positive effect on customer retention which further increases the SCP. It is found that raw material, stack of goods, timely delivery and safe delivery has positive effect on customer retention, further, customer retention effect positively on SCP.

5.1. Implications of the Study

The current study has several theoretical implications. According to the results of the study, the relationship between provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP has vital importance for the literature. Because the relationship between SCS and SCP has vital importance for the literature of supply chain. This relationship also has key importance for the literature of SCS. Along with this the effect of SCS on SCP contributed to the body of knowledge with the help of investigation about the food companies in Thailand. Previous studies related to the food supply companies has not discussed the relationship in Thailand food industry. Previous studies have discussed the SCS, however, these studies did not examine the SCS in relation to the food supply companies. Moreover, this study also has contribution because the mediating effect of customer retention is examined between provision of raw material and SCP. The mediating effect of customer retention was also examined between stack of goods and customer retention. This study also contributed by examining the mediation effect of

customer retention between timely delivery and SCP. Finally, this study contributed by examining the mediation effect between safe delivery and SCP. Hence, mediation effect of customer retention was examined between SCS and SCP. Furthermore, the relationship between provision of raw material, stack of goods, timely delivery, safe delivery, customer retention and SCP have vital importance for food industry. As this study provides valuable outcomes for the supply chain activities.

VI. LIMITATIONS OF THE STUDY

The current study highlighted the important literature with the help of supply chain and food industry of Thailand, as this study has major role to play in the literature and it has major role in various practical elements of supply chain activities to improve different activities in the firm. Future studies, the increase in literature received the most important part, however, it must be expanded with the help of other strategies. Food company operations are different from one country to another country; therefore, results cannot be applied on all countries. In Thailand, it shows positive effect towards SCP. The nature of business is different in each country. Therefore, as there is difference between variables which causes to increase the SCP. His relationship is much importance for the practitioners of Thailand; however, these results cannot be generalized, therefore, for future studies, other variables should be added. Therefore, future studies should include the other factors related to the SCS.

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