

The effect of social media agility to strengthen the business relationship: Evidence from pharmaceutical firms in Thailand

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ABSTRACT

The firms and the industries still using the ways and means of promotion and publicizing the products have still not achieved the level of success as the modern means of social media is providing in creating a huge demand for their products. This study involves the modern means of communication agility promises success, development, and significance of the product in an efficient manner. Social media plays a vital role in creating a demand for the products by explaining the need of the product and a very effective source of creating a link among industries, firms, management, employees and especially the individual ones who come to know the skills and expertise. The impact of social media in strengthening the relationship with the customer has been very keenly observed and the findings show that such research has detailed that the use of social media has influenced the internal and the external capabilities. The data gathered in this study shows that the firms and the industries using the approach of social media have a revolutionary impact on building and strengthening the relationship between the customer and the management, employees. This study shows a strong bond between a firm and the customer using social media.

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1. Introduction

Many studies proved that agility of supply chains could generate value through increasing the competencies of information technology by providers, which could also improve the interactions with customers along with enhancing the collaboration at interorganizational level (Akhtar, Khan, Tarba, & Jayawickrama, 2018). Ngai et al. (2011) explained that agility is an ability of an organization to cope with changes and demands with associations of flexible efficiency, cost accuracy and speed (Eckstein, Goellner, Blome, & Henke, 2015). Akhtar et al. (2018) explained that the agility of social media is considered as a new concept which highlights the response quickly (Ancillai, Terho, Cardinali, & Pascucci, 2019), content as appropriate along with efficiency in cost. Furthermore, the agility of social media also enhances applications of flexibility in operations which perform day by day (Cai, Huang, Liu, & Wang, 2018; Chirumalla, Oghazi, & Parida, 2018). Similarly, Pitafi, Liu, and Cai (2018) said that the agility of social media also elaborates that organizations conduct research to understand the potential and current needs of customers through using social media. Thailand is the largest center of pharmaceutical industries, due to which social media perform a significant role in maintenance of relationships among the company customers. Fig. 1 shows that social media have different percentages in strengthening the relationship and various forms of social media are used for such tasks.

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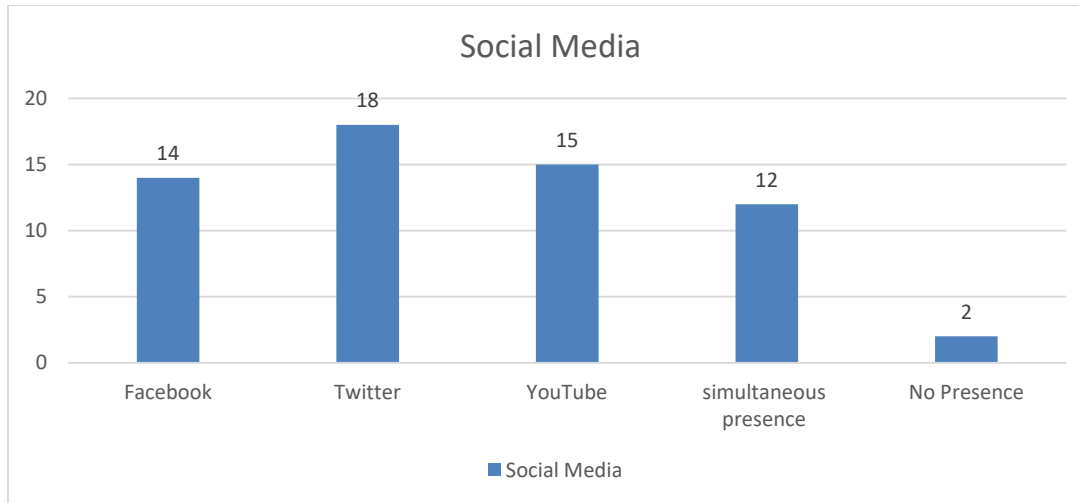


Fig. 1. On Route of Social Media Agility for Strengthening Relationship with Customers

Organizations which have high capability of agility, easily respond to current changes along with cooperate and communicate with customers which simultaneously fulfill the needs of customers and also adapt the changes of the market (Zhou, Mavondo, & Saunders, 2019). Following objectives were formulated to carry out this study:

- To analyze the impacts of Social Information Processing Capability on Strength of Customer Firm Relationship,
- To analyze the impacts of Customer Co-Creation on Strength of Customer Firm Relationship,
- To examine the Impacts of Customer Involvement Capability on Strength of Customer Firm Relationship,
- To analyze the Impact of Social Information Processing Capability on Strength of Customer Firm Relationship with Mediating Role of Social Media Agility,
- To analyze the Impact of Customer Co-Creation on Strength of Customer Firm Relationship with Mediating Role of Social Media Agility,
- To analyze the Impact of Customer Involvement Capability on Strength of Customer Firm Relationship with Mediating Role of Social Media Agility.

The next section of the study includes hypothesis formulation, while methodology will be explained in the third section of the study. Analysis was performed in the fourth part and at the end discussion, limitation and future indications will be explained in this study.

2 Literature Review

2.1 Dynamic Capability Theory

The theory of dynamic capability is considered an extension of resource-based view theory. According to this theory, limitation can be overcome by exploring the capabilities of organizational practices and improve the process of organization in which they reconfigure all resources along with coordinate the process effectively to remain in competitive environment (Zhang & Wu, 2017; Zouaghi, Sánchez, & Martínez, 2018). In addition, studies also explained that the firms for reconfiguring renew as well as adapt already present resources according to policies term as dynamic capabilities (Chuang & Lin, 2015). Zhang and Wu (2017) further said that the network is embedded with resources which interplay between external and internal type offers for new products. The opportunities engage in the development of dynamic capabilities. Therefore, internal sourcing of firms aligns with external sources which ultimately reduces the time of response and enhances efficiency of cost (Zhang & Wu, 2017). Based on dynamic capability, it can be said that capability is used for processing the deployment of social information along with corrections of customers through reconfiguring the resource that exists to increase the agility of social media (Zouaghi et al., 2018). Co creation of customers created from driving forces like collaboration and interaction between organizations and its customers (Franklin & Marshall, 2019), are predominantly beyond the firm's control (Marcos-Cuevas, Nätti, Palo, & Baumann, 2016). So, firms which have capabilities of processing the social information along with ability to collaborate with customers not only decrease the time of response but also strengthen the interaction that ultimately enhances the agility of social media and improve the relationship which develops with customers (Heirati & Siahtiri, 2019).

2.2 Impact of Social Information Processing Capability on Strength of Customer Firm Relationship

The relationship of customers and firms can be explained as the closeness of social link among firms or its customers and strong relationships gave various benefits such as mutual trust, gratification (Gao, Xie, & Zhou, 2015) along with ability to solve the problems jointly (Yang, Zhang, & Xie, 2017). Similarly, processing of social media gave many advantages in

management which include improving trust of users (Chang, Shen, & Liu, 2016), enhance the satisfaction of customers as well as responsiveness (Agnihotri et al., 2016), or also improve the relationship between customers and firms (Parveen, Jaafar, & Ainin, 2015). In addition, Kao and Wu (2016) explained that processing of social media also acts as a method which enhances the creation of knowledge. In relation between customers and firms, social media have impacts which rely on the services and products that are offered by organizations (Bashir, Papamichail, & Malik, 2017) along with communications between them (Agnihotri, Dingus, Hu, & Krush, 2016).

H₁: *Social information processing capability positively strengthens customer firm relationships.*

2.3 Impact of Customer Co-Creation on Strength of Customer Firm Relationship

For communication towards ideas for services and new products which offerings from firms, customers use processing through social media. (Bashir et al., 2017) (Chirumalla et al., 2018). Co-creation can be explained as the process in which customers as external forces of driving engaged for development of services and products in collaboration with firms (Buoincontri, Morvillo, Okumus, & van Niekerk, 2017). Similarly, co-creation is an interactive and demand centric process which involves a minimum of two actors willing to integrate the resources along with engaging in specific form of collaboration and giving results as creation of value for them. Although co-designs and customizations are driven by customers which encompasses by co-creation of customers which enable the firms to integrate the ideas of customers into new creations (Leclercq, Hammedi, & Poncin, 2018). Information from social media of an external base must enhance the satisfaction of customers (Grissmann & Stokburger-Sauer, 2012). Effectively social media assists the co-creation of customers by allowing the customers to interact more easily with firms and also communicate their ideas to firms through processing of social media that grant the firms access to demands of the customers (Koivisto & Mattila, 2018). Kang (2017) proposed that social media facilitates both customer-generated design and customer engagement, which facilitates the development of new product and service offerings.

H₂: *Customer co-creation enhances the customer firm relationships.*

2.4 Impact of Customer Involvement Capability on Strength of Customer Firm Relationship

Achieving complementarity between internal and external driving forces is a considerable challenge that requires various managerial capabilities (Chuang & Lin, 2015). For example, processing the information in firms made him capable of gathering information along with analyzing the trend of the market then responding to all complaints which come through social media from customers of the firms. Employees equip effectively by integration and processing of such information to absorb information, make coordination with customers then collaborate with customers to improve the services and products which are offered by firms to adapt to daily changes of market.

H₃: *Customer involvement capability has a positive influence on the strength of customer firm relationships.*

2.5 Impact of Social Information Processing Capability on Strength of Customer Firm Relationship and Mediating Role of Social Media Agility

Specifically, the agility of social media based on internal as well as external sources can be asset as accurately, efficiently with cost or quickly, along with it also meet the changes and demands flexibly, which gives the results of strengthened relationship between firms and their customers. Agility of social media by using the processing of social information to provide customers and their firms in their daily base operations, the great flexibility along with accelerating the delivery of offerings, service and products, gave advantages to both parties. Furthermore, agility as social media also adjusts smoothly all operational responses and changes to demands of customers or enables a firm or also its customers to resolve all the issues in a collaborative manner. According to theory of dynamic capability, the ability of the firms to quickly respond to the requirements of customers, therefore; improve the customers relationship with firms (Chuang, 2020).

H₄: *Social information processing capability positively strengthens the customer firm relationship with the mediating role of social media agility.*

2.6 Impact of Customer Co-Creation on Strength of Customer Firm Relationship and Mediating Role of Social Media Agility

Many studies proved that the co-creation value will improve the agility of the firms as compared to their rivals and competitors. Therefore, co-creation of customers and firms causes positive effects on sensing and responding to challenges of the firms. Furthermore, it also explained with studies the co-creation with firms and customers can enhance satisfaction among customers as well as loyalty of the customers with firms (Navarro, Llinares, & Garzon, 2016). Whereas Prebensen and Xie (2017) explained that with collaborators and participants of an external base co-creation has a positive effect on agility in operational practices of supply chain. According to theory of dynamic capability, Co-creation which is generated by experiences of services drive through the collaboration and interaction, along with it also generate with values that are used by customers and become the need of the firms. Thus, the delivery of the firms which it offers to customers can be enhanced with development of new products and services that also generate a co creation making firms and their customers as well as improve the response time of the firms that show effeteness of the firm (Chuang, 2020).

H₅: *Customer co-creation strengthens the customer firm relationship with the mediating role of social media agility.*

2.7 Impact of Customer Involvement Capability on Strength of Customer Firm Relationship and Mediating Role of Social Media Agility

In a firm, employees heavily rely on the sources of external bases regarding social media, so they have an impact of radical nature and become highly inclined towards the use of social media as means to improve the already present offerings for customers (Chuang, 2020). Processing the capability of social information emphasizes on integration and use of social media agility as a meaningful resource which is specific to firms. According to theory of dynamic capability, such capabilities enhance the flexibility of the firms along with its ability to formulate and develop new services and products as well as commercialize the information of external forces (Zhang & Wu, 2017).

H₆: *customer involvement capability positively strengthens the customer firm relationship with the mediating role of social media agility.*

Fig. 2 presents the structure of the proposed study.



Fig. 2. The structure of the proposed study

3 Methodology

3.1 Sample selection and collection

Based on the hypothesized mode, we conducted a survey to empirically analyze the conceptual framework. The sample has been taken from the employees of leading pharmaceutical firms in Thailand. The targeted companies opted based on their engagement with B2B online sales. To get data, purposive sampling techniques are employed. The data is collected by self-administered survey methodology. The questionnaire is based on three sections: first section based on demographics of respondents, second based on survey items of independent variables and mediator, and third section based on measures of customer-firm relationship. The total valid responses which make an authentic data set based on 323 respondents. Tremendous efforts are made to preserve the reliability and authenticity of surveys. After the survey was performed, minor alterations were made in the questionnaire to confirm semantic consistency between Thai language and English. All the survey items are recorded on five-point Likert scale from strongly disagree to strongly agree with statement.

3.2 Measures

The study adopted the multi-items scale of measures from extant studies to empirically explore the impact of social information processing capabilities, customers' co-creation, customers' involvement on strength of customers' firm relationship. The measures have been adopted from existing literature and edited to fit them in the context of social media. The scale of social information processing capabilities, a key independent variable, is taken from the study of (Trainor, Andzulis, Rapp, & Agnihotri, 2014). The measure is based on a further three secondary constructs which each are based on three survey items such as information communication, information acquirement, and information responsiveness. The measure of Customers' co creation is developed from the scale of Khanagha, Volberda, and Oshri (2017) which is based on four items each elicit responses on companies' coordination with customers on social media for different purposes such as product promotion, solution of issues, creating new product etc. Moreover, the measures of customer involvement are based on five survey items, which have been emulated from the study of Cheung and To (2011). However, the scale has been aligned with the context of social media for customer's relationship. Following the hypothesized model, the mediating variable such as social media agility is based on seven items, four each for its such-construct such as internal SM agility and external social media agility (Chuang, 2020). The scale of output variable such as customer-firm relationship is adapted from the (Leonard-Barton & Deschamps, 1988) which comprised five survey items.

3.3 Analysis and Tools

To empirically investigate the hypothesized model, the study employed sophisticated statistical tools such as SPSS and AMOS. In SPSS three tests are performed to observe the reliability of measures and characteristics of data and respondents. The test performed on SPSS are: frequency distribution to analyze the demographic factors of respondents; descriptive analysis to check the statistical characteristics of data such as central tendency, normality, outliers, maximum and minimum values, and no of observation; and reliability factor analysis to check the reliability of items to develop construct. Besides, the analyses

performed on AMOS are composite factor analysis to check the validity (convergent and divergent) of data, structural equation model to estimate regression coefficient of latent constructs, and model fitness tests.

4 Data Analysis

4.1 Demographics

The data was collected from a total of 415 employees belonging to the pharmaceutical industry of Thailand. Out of the 415 people in the sample 228 were men and 187 were women i.e., 54.9 percent of the sample represents male, and 45.1 percent represents female workers. The age statistics reveal that more than half of the sample, i.e., 73.3 percent of people were aged up to 35. The working experience of many people in pharmaceutical firms was between 2 and 8 years. The sample therefore was mature, experienced, and represented somewhat neutrality in the gender dimension.

4.2 Descriptive Statistics

Table 1 displays that the mean values of all variables are centered around three and most are approaching 4, thus the respondents were particularly in agreement with the statements of the questionnaire. The skewness coefficients are within the threshold ranges of $-1+1$, therefore the data follows a normal distribution. The maximum and minimum values, however, represent the presence of outliers in the data.

Table 1

Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
SIPC	415	1.00	5.00	3.3570	1.02997	-.282	.120
CustCC	415	1.00	5.28	3.4521	1.12272	-.536	.120
CustInv	415	1.00	5.00	3.5803	1.14628	-.567	.120
SocialMA	415	1.00	5.00	3.5225	1.18251	-.566	.120
SCFR	415	1.00	5.00	3.2735	1.01992	-.231	.120
Valid N (listwise)	415						

4.3 Measurement Model

The loading of individual items, composite reliability and average variance extracted were analyzed in Table 2. The loadings for all the construct variables were ranging from 0.734 to 0.897, surpassing the threshold of 0.7. All AVE values are exceeding the recommended threshold of 0.5, and the CR values of all construct items were above the threshold of 0.7, ranging from 0.868 to 0.958 and were acceptable. Table 3 represents the results of discriminant validity. Table 3 represents the correlation between variables and the squared AVE values of all variables. The data indicates that the constructs have squared AVE values greater than the correlation between constructs, thus discriminant validity is confirmed. The measurement CFA model is depicted in Table 4. The RMSEA, CMIN, CFI, IFI and GFI values are represented in table 4 and they are according to the required threshold. Therefore, the model is fit. The KMO factor is computed to verify the adequacy of the sample, as the value is between 0.8 and 1, sample is adequate, and the model is fit.

Table 2

Factor loading and convergent validity

	1	2	3	4	5	CR	AVE
SIP1					.734	0.868	0.684
SIP2					.801		
SIP3					.791		
CI1				.822		0.943	0.803
CI2				.843			
CI3				.871			
CI4				.879			
CCC1			.828			0.958	0.823
CCC2			.857				
CCC3			.861				
CCC4			.864				
CCC5			.857				
SMA1	.851					0.914	0.851
SMA2	.828						
SMA3	.824						
SMA4	.879						
SMA5	.897						
SMA6	.884						
SMA7	.891						
CFR1		.837				0.956	0.788
CFR2		.872					
CFR3		.829					
CFR4		.808					
CFR5		.854					
CFR6		.862					

Table 3

Discriminant validity

	SMA	SIP	CI	CCC	CFR
SMA	0.921				
SIP	0.522	0.829			
CI	0.481	0.568	0.898		
CCC	0.566	0.504	0.434	0.909	
CFR	0.479	0.628	0.485	0.481	0.889

Table 4

Confirmatory Factors Analysis and KMO

CFA Indicators	CMIN/DF	GFI	IFI	CFI	RMSEA	KMO
Threshold Value	≤ 3	≥ 0.80	≥ 0.90	≥ 0.90	≤ 0.08	0.6 – 1.0
Observed Value	2.995	0.869	0.961	0.958	0.068	0.939

4.4 Hypothesis Testing

Table 5 represents the results of the SEM which is conducted in order to compute the coefficients that define the causal relationships among constructs. A unitary change in SIP predicts a change of 35.5 percent in CFR, similarly CI and CCC produces a change of 14.6 and 13.1 percent in CFR. The relationships are significant therefore hypotheses 1,2 and 3 are accepted. The mediation of SMA between the predictor and predictand proves to be significant as well. It produces effects of 3.7, 5.9 and 3.1 percent through SIP, CI and CCC. Thus hypotheses 4, 5 and 6 are also accepted.

Table 5

Structural Equation Modeling

Hypothesis	B-Value	SE	P-Value	Decision
SIP→CFR	.355	.047	.000	Accepted
CI→CFR	.146	.043	.002	Accepted
CCC→CFR	.131	.042	.006	Accepted
SIP→SMA→CFR	.037	.016	.017	Accepted
CI→SMA→CFR	.059	.022	.018	Accepted
CCC→SMA→CFR	.031	.025	.017	Accepted

5 Discussion and Conclusion

5.1 Discussion

Organizations must build up consumer responses and also fulfill consumer needs mainly when faced with some market competitors; these advantages are very helpful in generating good relationships between customers and firms (Homburg, Jozić, & Kuehnl, 2017). Today's organizations seek to generate long term relationships with their customers and consumers because these relationships prove to be very fruitful for organizations in generating positive revenues. According to the measurements of data, the results of the study indicate that the social information processing (SIP) capability of a firm can enhance and strengthen the relationship between customer and firm. SIP capability is a type of interpersonal communication that enables individuals to communicate over social media and provide reviews about products and brands to the corresponding firms. This capability of an organization can enhance and improve the relationship between the firm and customers. Customer co-creation is another significant factor discussed in this study to find the nature of the relationship between firm and customer. According to the research by O'Hern and Rindfleisch (2017), customer co-creation is a type of strategy that mainly aims to bring together individuals from different groups to enhance the relationship between customer and organization. This strategy is mainly used by firms that want to improve their relations with their customers. Thus, the hypotheses related to the direct impact of customer co-creation on the relationship between firm and customer has been accepted.

5.2 Conclusion

The outcome of the study is that social media influences positively and strengthens the relationship between the customer and the firms. Social media effectively and positively attracts customers. To gain very efficient and positive results by social media agility, the external and internal driving forces can play a very complementary role with others in shaping and developing a better relationship between the firms and the customers. The firms deliberately use the service of social media in building a strong relationship between the customers, firms and the industry in Thailand pharmaceutical sector.

5.3 Implications and Limitations

This study has a very positive effect and influence when adopted by the firms and the industries in increasing the rate of the customers and building a strong relationship between them.

The findings of this research study are limited to the role of social media in analyzing the relationship between a firm and its customers. Therefore, it is recommended for future research that they should consider another type of variable, that is social

media related to wider results and findings. Some variables related to social media strategy and agility such as firm culture and skills and information should be considered in future research and studies. This research study only evaluates one dependent variable, so future studies should address this gap.

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