ISSN 2821-9074 (Online)
ISSN 2730-2601 (Print)
RICE Journal of Creative Entrepreneurship and Management, Vol.3, No.3, pp. 15-22,
September-December 2022

doi: 10.14456rjcm.2022.14
Received 27.06.22/ Revised 31.10.22/ Accepted 10.11.22

Salient Factors Affecting Marketing Communication Performance

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Abstract

Marketing communication is one of the most important business activities of almost all industries in that firms are trying their best to achieve their maximum sales volume as requirement. The researcher identified three factors reported in previous studies--basic conditions, demand conditions, and facilitation from support industries--as the most salient factors in determining the marketing communication performance of a firm. The researcher used a survey questionnaire to secure 105 responses, and the obtained data were processed by Principal Components Analysis (PCA) and Multiple Linear Regression (MLR). The first two factors were found significant in predicting marketing communication performance while the third factor did not significantly affect marketing communication performance as expected. As a set, however, the three variables accumulatively help predict marketing communication performance by 11.7 percent.

Keywords: *Marketing, PCA, MLR, basic conditions, market conditions, facilitation, support industries*

1. Background of the Study

Digital marketing is now on the go as most countries take part in outreaching and assessing customers' needs and behaviors. It is also vitally important for a business organization to send its messages on products and services in a quick and cost-effective online channel. In this regard, digital marketing has been recognized as the most basic mode to engage customers in both home market and international marketing partners (Fletcher & Brown, 2002). Online marketers need to consider factors influencing the success of a firm regarding the conditions in the home market relative to the international market as well as facilitation from support industries concerned. Quite a few previous studies pointed to three constructs uniquely related to the marketing performance of a firm: basic conditions, demand conditions, and facilitation from support industries (Maholtra, 1999; Manning & Munro, 2007; Davidson et al., 2002; Fletcher & Brown, 2002). The researcher therefore would like to investigate these three factors how they can affect the marketing communication performance of a firm. The finding of this study were expected to serve marketers as the basis for predicting of their marketing communication performance. This study focused on the three salient factors on marketing communication performance via the social media platform.

2. Three Factors and Hypotheses Statements

Customers perceive value in products and services as compared to other alternatives. The value is derived from the perceived total subtracted by the perceived given (from customers' perspective). The major total get is *quality of the product* being offered to customers which depends largely on quality of the product and quality of the content directly communicated with the target. The quality of the product also includes its quality innovation for added value (Ratchavieng, Srinet & Syers, 2021). The major part of the total give is the price which is marked up from the accumulative costs. The lower the cost, given the same quality, the higher the ability to price the product more competitively as compared to competing products. The marketers should consequently pay good attention to their cost management. Availability, cost and quality of the raw materials and labor are, therefore, critical to marketers' success (Fletcher & Brown, 2002). In this study, the researcher focused on the three salient factors on marketing communication performance via the social media platform and therefore hypothesized as follows:

H1: As the basic conditions relating to quality, availability and cost of production factors namely, raw materials and labor become more favorable for a firm, its content and communication becomes more efficient

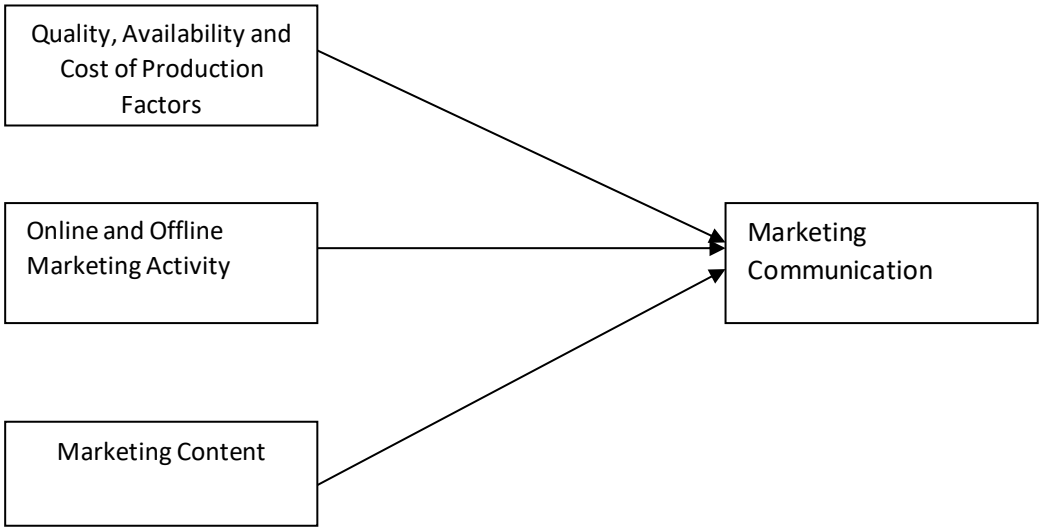
Since firms normally engage themselves in marketing activities for various reasons including idle capacity of the production in the home market, the shrinkage local market or similarity of taste of the two markets. Some other times, *the cost of development of products* (research and development costs) is very high and it must be spread over the largest number of units of production as possible; sales and marketing or other marketing engagement must be considered. One point that should be noted is that advertisement connotes marketing costs to be incurred to the firm and would be pushed to buyers' burden in terms of price (Maholtra, 1999). In this sense, if the existing customer base is large enough and the advertising cost both offline and online is not too high, an increase in online marketing perception would be a more profitable option for a firm. Market conditions in online marketing must therefore be considered for communication. This can be hypothesized as:

H2: As online marketing options are more favorable as competitive advantage of the firm and are complex in terms of customers' expectation as compared to traditional marketing, its marketing communication performance can become efficient.

Marketing communication also depends on other *facilitating industries*, such as retailing, wholesaling, food and beverages, in both online and offline markets. Besides, governmental policies in both markets are also considered critical to marketing activities. The cost effectiveness and the complicatedness of the facilitation/ availability processes imposed by the support industries do have strong influence on marketing firms (Maholtra, 1999; Fletcher & Brown, 2002). This can therefore be hypothesized as:

H3: As the support industries (i.e., facilitation from the support industries), become more favorable to a firm its business performance would become favorable.

Figure 1: Relationships between Three Independent Variables to Marketing Communication



3. Measurement of Variables

As most independent variables earlier stated would be measured from the perspective of marketing managers of companies of different sizes. Most researchers tended to adopt the 7-point Likert scale to measure the degree of agreement or perception of the marketing managers toward three independent variables, followed by open-ended questions to measure their respective firm's marketing performance (in terms of earned income) (Maholtra, 1999). .

The *basic conditions* (later labelled as "Quality, Availability and Cost of Production Factors") contain eight dimensions to be measured in eight questions (7-point Likert scale), the *demand conditions* (later labelled as "Domestic versus International Market Conditions") contain three dimensions to be measured by three questions (7-point Likert scale) and finally *facilitation from support industries* (later labelled as "Support Industries") contained six dimensions to be measured by six questions (7-point Likert scale).

4. Data Collection

The researcher designed the questionnaire according to the methods of variable measurement earlier mentioned to survey with marketing managers of local firms to be completed and returned by mail. Two hundred questionnaires were sent out and followed up by phone to increase response rate and 105 responses were returned.

As the study aimed is to find a basis to estimate or predict a firm's own marketing performance, the obtained data were reduced by creating composite variables constituting dimensions pertained in each concept. To accurately formulate the composite variable that is valid and reliable, Principal Component Analysis (PCA) was performed on all dimensions pertained in the components determined by the priori theory. Following PCA, Multiple Linear Regression (MLR) was conducted with the three composite variables and the dependent variable "marketing performance" to determine the unique relationship of each

of the three independent variables on the marketing performance of a firm and finally their influence as a set (Maholtra 1999).

Before conducting MLR, each of the composite independent variables was tested for the normality, homogeneity, internal consistency and reliability (Manning & Munro, 2007). Correlation coefficient of the four constructs were also tested to assure that there was no multicollinearity (Manning & Munro, 2007).

5. Data Analysis

Principal Components Analysis was used further with the component determined by the priori theory as earlier stated and graphically demonstrated to confidently decide which variables would be included in the formulation of the composite variable so that the formula to be stated in the later stage would be highly accurate and generalizable.

Table 1: Factor Loading of the Three Composite Independent Variables

Item	Quality, Availability and Cost of Production Factors	Domestic versus International Marketing Conditions	Support Industries
Availability of Labor	0.782		
Low Cost Labor	0.847		
High Quality Labor	0.780		
Availability of Raw Material	0.798		
Low Cost Law Material	0.732		
High Quality of Raw Material	0.838		
The Workforce is highly educated	Not Applicable		
There are many different Raw Material Suppliers	Not Applicable		
Domestic Market High Growth Rate		0.870	
Domestic Market is Large		0.857	
Domestic Consumers are more demanding than foreign consumers		0.877	
Finance and Banking Systems			0.723
Government Marketing Promotion	Not Applicable		
International Transportation Systems			0.880
Domestic Transportation Systems			0.835
International Telecommunication Systems			0.816
Domestic Telecommunication Systems			0.835
Eigen Value	*3.825*	*2.261*	*3.429*
Percent of Variance (Percent)	*47.718*	*75.357*	*68.585*
Alpha	*0.855**	*0.836**	*0.885**

***critical at α >0.7** *Borrowed format and adapted from "Workplace Ethical Climate: Effects on Ideals, Perceptions of Colleagues, and Self-efficacy to deliver Ethical Outcomes"(Shacklock et al., year unknown)*

From the dataset, variables 1-8 were supposed to measure the *basic conditions* according to the priori knowledge. PCA, however, has extracted 3 components. Items 1-6 belonged to component 1, item 8 belonged to component 2 and item 7 belonged to component 3. A construct that is explained by only one dimension (antecedent variable) might not be appropriate to be included in the calculation of the composite variable.

Components 2 and 3 were not, consequently, included in the calculation of the composite variable.

The composite variable which was labelled "Quality, Availability, and Cost of Production Factors" was calculated by using arithmetic mean of the score of variables 1-6 representing the different levels of loading factors as indicated in Table 1. The mean of the composite variable was reported as 4.0683 and the standard deviation as 0.78674 with 95 percent level of confidence. The new composite variable can be argued to be homogeneous (inter-item correlation mean was 0.5678, >0.3 critical value and item-to-total correlation of all antecedent variables are higher than 0.50 critical value), internally consistent (only one variable has demonstrated the Eigen Value higher than 1.0, Eigen Value = 0.855), and reliable (Cronbach's Alpha = 0.855, $\alpha > 0.70$ critical value). This composite variable can be argued to be appropriate to serve as the basis for subsequent analyses in this study.

From the dataset, variables 9-11 belonged to the component "Demand Conditions" as determined by the priori theory. PCA extracted one variable, as only one variable has demonstrated the Eigen Value higher than 1.00. With all values indicating the appropriateness of PCA, the composite variable has been formulated by using arithmetic mean of variables 9-11 and was labelled "Domestic versus International Market Conditions" as the questions of the variables earlier mentioned measure the respondent's perception about their respective markets as compared to the other markets. As shown in Table 1, the mean of the composite variable was reported as 4.00 with standard deviation 0.97731 (95% level of confidence). The composite variable can be argued to be homogeneous (inter-item correlation mean was 0.6293, greater than critical value 0.30 and the item-to-total correlations of all antecedent variables were greater than 0.50 critical value), internally consistent (only one variable demonstrated Eigen Value greater than 1.0, Eigen Value = 2.261), and reliable (Cronbach's Alpha value is greater than 0.70 critical value, $\alpha = 0.863$). As for normality of score distribution and outliers, the histogram, boxplot and descriptive analysis indicated the normality of the score distribution of this composite variable (z-score = 0.236, <2.58 critical value- for sample smaller than 300) and no outlier was identified. As for normality of distribution of outlier, the histogram and z-score indicated normal distribution of the score (z-score= 1.5720, < 2.58 critical value- for sample smaller than 300). Although one potential outlier was identified from the boxplot (case 70), the normality of score distribution could still be maintained, the researcher, therefore, kept that potential outlier in the data set. This composite variable can, therefore, be assumed to be appropriate for subsequent analyses of this study.

According to the dataset, questions 12-17 belonged to the component "Facilitation from Support Industries." The researchers have explored the correlations among the six antecedent variables as initial test for appropriateness for PCA and found that item 13 was not correlated to most other items at a satisfactory level (critical value of 0.3 for inter item correlations). The communalities (0.140, <0.30 critical value) of item two did not pass the critical value of 0.30 (Manning and Munro 2007), indicating that item two was well explained by the underlying component. Item two was, therefore, not included in the PCA analysis and neither the composite variable.

The new composite variable was computed by using arithmetic mean of items 12,14,15,16, and 17 and was labelled "Support Industries." As indicated in Table 1, the mean of the composite variable was 4.0381 and the standard deviation as 0.9728 (at the level of confidence 95 percent). The composite variable can be argued to be homogeneous (inter-item correlation mean= 0.6038, greater than the critical value 0.30, and the item-to-total of all antecedent variables were greater than 0.50 critical value), internally consistent (only one variable has demonstrated Eigen Value greater than 1.0, Eigen Value = 3.429), and reliable (Cronbach's alpha greater than 0.70 critical value, α= 0.885). As for normality of the score distribution and outliers, histogram and z-score (0.3898, <2.58 critical value- for sample smaller than 300) and no outlier was identified. The composite variable can, therefore, be argued to be appropriate for the subsequent analyses of the study.

As for the dependent variable "marketing performance," the tests for normality of score distribution were conducted. Histogram, boxplot and z-score (0.3686, <2.58 critical value- for sample less than 300) indicated the normality of score distribution of the variable "marketing performance" and no outlier was reported.

Being certain of the appropriateness of three composite component variables and the dependent variable, MLR was, further conducted, to see the influence of each of the independent variables on the dependent variables as well as their influence as a set. Before so doing, their correlation coefficients were explored to verify if there was any problem with the multi-co linearity which is the basic requirement of MLR (Manning and Munro 2007).

Table 2: Correlations between the Three Variables

Variables		Quality, Availability and Cost of Production Factors	Online and Offline Marketing Activity	Marketing Content
Online and Offline Marketing Activity	Pearson Correlation (r)	0.054		
	Sig. (2 tailed)	0.583		
Marketing Content	Pearson Correlation (r)	-0.22	-0.09	
	Sig. (2 tailed)	0.827	0.930	
Marketing Performance	Pearson Correlation (r)	0.316 (*)	0.197 (*)	0.092
	Sig. (2 tailed)	0.001	0.044	0.349

**** Correlation is significant at the 0.05 level (2tailed)***

Table 3: Quality, Availability and Cost of Production Factors &Online and Offline Marketing &Support Industries to Marketing Performance

R	0.377	Adjusted R^2	0.117
F (3,101) = 5.584	Sig. 0.001 (**)	Constant	7.168

Independent Variable	B	Beta	t-Test	Sig.	SR_i^2
Quality, Availability and Cost of Production Factors	1.230	0.308	3.340	0.001(**)	0.095
Domestic and Demand Condition	0.581	0.181	1.959	0.053 (*)	0.033
Support Industry	0.348	0.101	1.090	0.278	0.010

Adapted from: Organizational Climate, perceived customer satisfaction and revenue per available room in four-and-five-star Australian Hotels(Davidson, Manning et al. 2002)

**** Significant at p<0.05***
***** Significant at p<0.054***

There was no problem with multicollinearity as no too high correlation coefficient (0.90) (Manning and Munro 2007) was reported. A standard multiple regression could, therefore, be performed between marketing performance as the dependent variable and "Quality, Availability and Cost of Production Factors," "Online and Offline Marketing Activity" and "Marketing" as independent variables. The multiple correlation coefficient (R=0.377) was significantly different from zero, F(3,101)=5.548, p<0.05, and 11.7 percent of variance of the dependent variables could be explained by the three independent variables as a set (R2 =0.142, Adjusted R2 = 0.117). "Quality, Availability and Cost of Production Factors" SR i2 = 0.095, t = 3.340, p<0.05 was found to be significantly and uniquely contribute to the prediction of marketing performance. "Domestic versus International Market Conditions" was also accepted to significantly and uniquely contribute to the prediction of marketing performance although the significant level was found slightly higher than acceptable range (SR i2 =0.033, t= 1.959, p= 0.053, >0.05). "Support Industries," however, was found not to provide any significant unique contribution to prediction (t = 1.090, p>0.05). The equation of prediction produced by this analysis describes the relationship between the variables as follows:

*Marketing Performance = 1.230*Quality, Availability and Cost of Production Factors + 0.581* Online and Offline Marketing Activity + 0.348* Marketing Content +7.168*

6. Conclusion

MLR has shown the significant contribution of "Quality, Availability and Cost of Production Factors" to the prediction of a firm's marketing performance (SR i2 = 0.095, t = 3.340, p<0.05), Hypothesis one was therefore supported. Despite a slight deviation from conventional significant level (0.05), "Domestic versus International Market Conditions" (SR i2 =0.033, t= 1.959, p= 0.053, >0.05), could be assumed to help predict the marketing performance of a firm as well. Hypothesis two was also supported. Hypothesis 3, however, was not supported as MLR did not show the significant regression of the variable to the marketing performance.

As a set, the three independent variables helped explain 11.7 percent of the variance of the marketing performance of a firm. To predict the marketing performance of a firm in the future, the formula might be applicable as follows:

Marketing *Performance = 1.230*Quality, Availability and Cost of Production Factors + 0.581* Domestic versus International Market Conditions + 0.348* Marketing Content +7.168*

All these findings point to two salient factors—*basic conditions* (quality, availability and cost of production factors) as well as *demand conditions* (domestic versus international market conditions/ online and offline marketing activity) help predict the marketing communication performance of a firm. As for *facilitation from support industries* (marketing content) did not show the significant impact on the marketing communication performance. As a set, however, the three factors/ variables accumulatively help predict marketing communication performance by 11.7 percent. From the obtained findings, the researcher practically considered the results as not totally conclusive for the identified salient factors. The salient factors reported in this paper would require larger data in further research to ensure specific salient factors affecting marketing communication performance in the time of rapid change in the marketing trend.

7. The Author

Nalinee Saengaran is a lecturer in the Faculty of Business Administration, Rajamangala University of Technology Rattanakosin, Nakhon Pathom, Thailand. Her research interest is in the areas of marketing of food materials, consumers' decision-making, marketing communication via social media platforms.

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