

Structural Equation Modeling of Market Orientation and Staff Loyalty in Education Marketing

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Abstract

Every vibrant and competitive business organization recognizes the significance of its employees in the actualization of its vision and goals. The primary focus of the study is to ascertain the relationship between market orientations and staff loyalty in higher education institutions. Random sampling technique was used to select some students from two private universities. Regression and correlational analyses were carried out to ascertain the pattern of relationship among the variables with the aid of structural equation model. It was discovered the effect of customer orientation and intra-functional orientation on stakeholders loyalty were both significant and positive. The regression weights reveal that competitor orientation has a negative effect on stakeholders' loyalty. Based on the findings, it was recommended that higher education institutions should not be carried away by the activities of its competitors but rather be focused on improving the quality of its intra-functional relationship and service delivery to its customers.

Keywords: customer orientations, competitor orientation, intra-functional orientation, market orientation and stakeholders loyalty.

INTRODUCTION

Market orientation is the philosophy and the awareness of the needs of marketing strategies in managing the day to day activities of business organizations. It is interesting to know that higher education institutions are gradually embracing marketing techniques, principles and strategies that were formerly being restricted to the business parlance. The role of marketing mix strategies is very important in a University setting because it helps higher institutions to increase the quality of its operations and hence, their competitiveness (Molesworth, Scullion and Nixon, 2011). Universities develop product strategies, pricing strategies, promotional strategies, and distribution channel strategies to achieve its corporate and marketing objectives. In the product/service strategies the University marketers develop general policies for product/service modifications, positioning because branding is a major issue in the product strategy of many Universities. As a result, in order for Universities to build their brand name they must develop marketing mix strategies around this issue.

Furthermore, the basis of University brand equity lies in the relationship that develops between a student and a University offering its products and services under the brand name (Kotler & Fox, 1995; Kotler & Andreasen, 2008; Kotler & Keller, 2008). Therefore, students who prefer the brand name of a specific University basically agrees to select that brand over others, based primarily on his or her perception of the brand and its value on higher education.

Building a brand requires the University to gain name recognition for its high value educational level, attract the student, and convince the student that the brand is acceptable. One of the most critical factors to achieve a brand success is the name awareness. As a consequence, Universities must deliver to the students, strong and positive associations regarding its brand name. In addition, all aspects of Universities' operations such as its product and service offerings, its marketing programs, and its student's service policies must support this image. When all these elements support a distinctive image of the University and its high value educational level in the minds of consumers, the higher institution has established brand equity (Kotler & Fox, 1995; Kotler & Keller, 2008). Consequently, the successful implementation of marketing mix strategy such as product, price, promotion and distribution channels is an essential factor for Universities to establish brand equity.

Additionally, the marketing mix describes a range of tools available for satisfying students and other stakeholders. Universities design and implement marketing mix strategies to support and reinforce its chosen competitive position. The marketing mix strategy is a particular blend of controllable marketing variables that Universities use to achieve its target market (Kotler & Keller, 2008). Consequently, balancing the mix for each

target segment involves decisions on the nature of the product/service to be offered, pricing policies, distribution, and the type of promotion. The 7Ps of the marketing mix are linked closely to help Universities search for the most effective way to satisfy the student. The marketing mix strategy also assists the dynamic environment of the University to prepare and identify opportunities and possible threats. For this reason, marketing mix strategies focus on the nature of the transactions involved.

The central focus of this study is to explore the effect of market orientation on loyalty. However, the following are the specific objectives;

- customer orientation has a positive effect on stakeholders loyalty
- competitor orientation has a positive effect on stakeholders loyalty
- intra-functional orientation has a positive effect on stakeholders loyalty

LITERATURE REVIEW

Market orientation is a central tenet of marketing (Morgan and Strong, 1997) the beginnings of which go back over 40 years ago to its philosophical foundation, the marketing concept. Kohli and Jaworski (1990) and Jaworski and Kohli (1993) are among the prominent scholars that have done extensive academic works in that area. They were able to provide the early conceptual framework such as organizational antecedents and expected organizational consequences of a market orientation and all these led to the development of early market orientation scales (e.g., Narver & Slater, 1990; Kohli, Jaworski & Kumar, 1993). As a result of their scholarly contributions, three sub-dimensions emerged. The first was market intelligence gathering, that is, information related to customers, external factors as well as other exogenous elements disclosed by environmental scanning activities. The second was intelligence dissemination. It was the basis for integrated and concerted efforts by intra-company departments that were players in developing new products. The third element was the firm's responsiveness to market intelligence, which included the proper actions toward distribution and promotion of new products as well as even the product design and production..

However, Kohli and Jaworski and Narver and Slater were of different opinion as regards the relationship between organizational climate and market orientation. They made some scholarly contributions as regards the cultural perspective (Narver and Slater, 1990) and behavioral perspective (Kohli and Jaworski 1990) of market orientation. These conceptual findings attracted academic debates among various scholars in most of the market orientation works. Some scholars believe that culture drives behaviors of firm's managers, employees and customers while some of them believe that the culture only reflects the behaviours of the managers, employees and that of customers. As a result of this disparity in views, some scholars attempted to integrate these two perspectives into one framework (e.g. Matsuno, Mentzer and Rentz, 2005). As Sin et al. (2005) suggest, "a market orientation is primarily concerned with a relentless pursuance of intelligence pertaining to customers, competitors and internal organizational integration (Slater and Narver, 1998, 1995; Narver and Slater, 1990) or about information acquisition, information dissemination and responding to information (Kohli and Jaworski, 1990, Jaworski and Kohli 1993)."

They concluded that market orientation is at the same time a set of norms and values and a set of behaviors and activities. Some literature uses the variable "customer orientation" as something of a surrogate for market orientation. (Hammond, Webster and Harmon, 2006).

Simply stated, it is the 'what happens around here' concept ... Slater and Narver (1996) added even more depth to this definition: Climate describes how an organization operationalizes its culture, the structure and processes that facilitate the achievement of the desired behaviors" (Wooldridge & Minsky, 2002; pp. 31-32). Most empirical research on market orientation's organizational antecedents has been targeted at the SBU level or above and little on the new product team specifically. However, much of today's new product development activity is located and directed by intra-company, cross-functional teams at the sub -SBU level. Cross-functional teams have been suggested as being critical to operationalizing the marketing concept as early as the late 1950s (Felton 1959, p. 58). Their use has been part of the management landscape since the early total quality management movement in the 1960s (Koura, 1991), and their broad use in new product development has flourished in U.S. industries since the late 1980s.

Our focus here is on the organizational antecedent variables, as originally defined by Jaworski and Kohli (1993), and their relationship to the three sub -constructs originally identified by Kohli and Jaworski (1990) that comprise the market orientation construct; that is, intelligence gathering, information sharing and response implementation. The reason to focus on the Kohli and Jaworski (behavioral/information) perspective is, in our judgment, because businesses are becoming more and more information driven, and their decisions, operations, customer relationships, supplier relationships and internal networking are increasingly information dependent. Our decision to take the behavioral/information-related perspective was based on the belief that being able to change information acquisition, dissemination and responses to the information in reaction to customer, competitor and market conditions would be faster, cheaper, and easier, and would produce more immediate consequences than trying to change company culture.

Thus, the behavioral/information-related (Kohli and Jaworski) perspective would offer a company the greatest

immediate return for the least effort and could be the grass roots foundation of company culture or cultural change. Kohli and Jaworski (1990) recognized three groups of organizational antecedents to market orientation: senior management factors (identified as top management emphasis and risk aversion), interdepartmental dynamics and organizational systems. An extensive meta-analytic review of 114 studies produced seven generally accepted antecedent variables in the three rubrics mentioned above. The senior management factor was top management emphasis. Risk aversion was not mentioned in the Meta-analytic study, but was a senior management factor identified by Jaworski and Kohli (1993). Interdepartmental factors were connectedness and conflict. Organizational systems consisted of formalization, centralization, reward system orientation, and training (not one of Jaworski's and Kohli's, 1993 original inclusions).

H1: customer orientation has a positive effect on stakeholders loyalty

H2: competitor orientation has a positive effect on stakeholders loyalty

H3: Intra-functional orientation has a positive effect on stakeholders loyalty

Research method

The study adopts a mixture of descriptive and survey research design. Questionnaire was developed and distributed to randomly selected staff from two private universities in Nigeria. The first section of the questionnaire described the respondents, while the second section of the questionnaire dealt with stakeholder orientation, competitor orientation and intra-functional orientation. The last section of the questionnaire contained items on stakeholder loyalty.

Five point Likert scale was employed and the respondents were requested to respond based on their degree of agreement to the issue being discussed. The target population is the Nigerian university stakeholders while the study population for the study consisted of all the staff population of the two universities. However, research horizon was limited to school of business staff from the two universities due to economic and time constraints. 112 copies of the instrument (questionnaire) were hand-delivered to the purposive sample of staff. Only 100 copies of the completed questionnaire were found valid and useable for the present study.

Data analysis was executed at 95% confidence level or better with the aid of SPSS. The statistics, measurement scale, data analysis, reliability and validity tests used in this research followed the research suggestions in extant literature. Descriptive analysis and structural equation models were among the statistical stools employed to ascertain the quality of research instrument and the pattern of relationship among the variables.

Data analysis and Discussion of findings

Descriptive Analysis of the research variables

Table 1: Demographic Characteristics of Respondents

Demographic Characteristics		
	Frequency	Percent
Gender:		
Male	63	63.0
Female	37	37.0
Total	100	100.0
Institution		
University A	57	57.0
University B	43	43.0
Total	100	100.0
Number of years spent in the University		
Less than 2 years	5	5.0
2-5 years	78	78.0
5-10 years	16	16.0
10 years and above	1	1.0
Total	100	100.0

Demographic characteristics of respondents in the table above shows that the male gender consists of 63% and 37% constitute female gender. Respondents were basically from two institutions (1st University 57% and 2nd University 43%). Majority of the respondents (78%) had spent between 5-10 years with the university.

Table 2. Descriptive Statistics of Market Orientation Measures

Dimensions/ Items	Mean	Standard Deviation	Skewness	Kurtosis
Student Orientation (SO)				
SO1	4.0200	.80378	-1.227	2.378
SO2	4.0700	.71428	-.951	2.800
SO3	3.7000	.96922	-.584	-.307
SO4	3.8400	.88443	-.841	.624
SO5	3.5100	1.05883	-.313	-.782
Competition Orientation (CO)				
CO1	4.1400	.93225	-1.125	.933
CO2	3.8600	.91032	-.864	.890
CO3	3.9700	1.02942	-.903	.433
Intra-Fractional Orientation (IFO)				
IFO1	4.2200	.78599	-1.049	1.167
IFO2	4.1200	.80754	-.928	.823
IFO3	4.3000	.67420	-.848	1.225
IFO4	4.2400	.72641	-.887	1.042

Table 3. Descriptive Statistics of Stakeholders Loyalty

Dimensions/ Items	Mean	Standard Deviation	Skewness	Kurtosis
Stakeholder's Loyalty (SL)				
SL1	4.0200	.87594	-1.143	1.898
SL2	4.0800	.95007	-1.532	2.853
SL3	4.3000	.70353	-1.563	5.235

Table 2 shows that the most emphasized market orientation measure was “Academic staff in this University cooperate to promote the university’s image” (IFO3) with a mean score of 4.30 and the least mean score was on “Students are encouraged to offer positive comments/contribution (SO5) with score 3.51. From Table 3, all items had their mean score above 4.0 indicating that respondents strongly agreed to the items on stakeholders’ loyalty. Skewness and Kurtosis for the various variables were obtained to assess their normality of distributions. Skewness and Kurtosis for all variables as shown in table 2 and 3 reflects evidence of normality following the rule of thumb proposed by Kline (2005). This rule indicates that any univariate skew values greater than 3.0 and kurtosis greater than 10.0 may suggest problem of normality of data (Hardigan et al., 2001). None of the results as shown in table 2 and 3 approached these abnormality values. Therefore, normal distributions were assumed for all the variables of interest.

Factor Analysis of the variables in the study

Exploratory Factor Analysis

In this study, exploratory factor analysis procedure using IBM SPSS 19.0 was performed with principal axis component as a method of extraction. Exploratory factor analysis was used to determine the item or statements that appear to best measure the various dimensions of market orientation. This method of Principal component considers the common variance in the data and helps to identify underlying dimensions in large number of variables. This research also used Varimax rotation method which reduces the number of variables with high loadings on one factor (Malhotra, Hall, Shaw, & Oppenheim, 2002).

The exploratory factor analysis procedure using principal component and varimax rotation provided a three-factor solution for market orientation that explained 64.5% of the variance and a one-factor solution for stakeholders’ loyalty that explained 73% variance. The eigenvalues associated with each of solutions were all greater than 1.00. The value of Bartlett’s test for sphericity was 389.467 (significance 0.000) for market orientation and 112.241 for stakeholders loyalty (significance 0.000) whereas the Kaiser-Meyer-Oklne (KMO) measure of sampling adequacy was high at 0.739 for market orientation and 0.657 for stakeholders loyalty. The communalities of the eleven items for market orientation range from 0.465 to 0.804 and that of stakeholders’ loyalty range from 0.641 to 0.831. Results of the factor analysis are reported in Table 4 and 5.

The EFA results indicated that market orientation measures in this research is consistent with Narver and Slater's (1990) dimension of market orientation with three distinct components of 'customer orientation', 'competitor orientation', and 'intra-functional orientation'.

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was used to test the dimensional structure of the market orientation and stakeholders' loyalty scale suggested by the exploratory factor and also to assess the convergent and discriminant validity of the constructs. The result of the CFA test showed that the model fits the data as ($\chi^2/d.f. = 1.23$, AGFI = 0.854, IFI = 0.974, TLI = 0.961, CFI = 0.972, RMSEA = 0.049) model indices exceeded their respective common acceptance levels.

Reliability and validity of the factors were estimated using composite reliability. Discriminant and convergent validity was also estimated with the use of average variance extracted (as shown in Table 6). Composite reliability for all factors in the measurement model was above 0.70. Convergent validity was tested by checking that the factor loadings of the confirmatory model were statistically significant (level of .01) and higher than 0.5 points (Steenkamp and Geyskens, 2006). Results were satisfactory as the standardised factor loading coefficients are between 0.56 and 0.89 level, thus reflecting an acceptable level of convergent validity.

An observation of the Average of Variance Extracted (AVE) indicates that all items were above the recommended 0.50 level (Hair et al., 1992), this meant that more than one-half of the variances observed in the items were accounted for by their own factors. To examine discriminant validity, shared variances between factors were compared with the average variance extracted of the individual factors (Fornell and Larcker (1981). This showed that the shared variance between factors were lower than the average variance extracted of the individual factors, confirming discriminant validity. Also, correlation between the variables in the confirmatory model were much lesser and a little higher than 0.8 points (Bagozzi, 1994).

According to Real et al., (2005), the squared root of the AVE (diagonal elements in Table 6) was compared with the correlations among constructs (off-diagonal elements in Table 6). In other words, the construct shares more variance with its measures than the variance it shares with the other constructs in the model (Wiertz and De Ruyter, 2007). In summary, the measurement model in this study demonstrated adequate reliability, convergent and discriminant validity.

Hypotheses Testing and Result Presentation

The structural model in figure 1 was employed to test the first hypothesis. An examination of the fit indices suggested that the model had acceptable fit with the data. Although the Chi-Square was found to be statistically significant, other indicators can suggest a good model fit (Steenkamp and Geyskens, 2006) as: GFI= .970, NFI=.903, IFI=.917, CFI=.910 are within the recommended level.

The effect of customer orientation on stakeholders loyalty was significant at ($\beta = .516$, $p < .001$), Thus, H1 was supported. This indicates that customer orientation has a positive effect on stakeholders' loyalty. Competitor orientation had a positive significant effect on stakeholders' loyalty ($\beta = .222$, $p < .01$), H2 was also supported. The regression weights reveal that competitor orientation has a negative effect on stakeholders' loyalty ($\beta = -.008$, $p > .05$), H3 was not supported.

CONCLUSION AND RECOMMENDATION

The study has been able to ascertain the validity of the research instrument adapted from the work of Narver and Slater. The structural equation model establishes the construct validity, discriminant validity and convergent validity of the three constructs; student orientation, competitor orientation and intra-functional orientation. The study concludes that market orientation is an effective instrument that should be employed by the management of Nigerian universities in order to boost the morale, satisfaction and the loyalty of their employees.

The study however recommends the followings;

- University management needs to put in place, the organizational structure that clearly defines the roles and responsibilities of their staff.
- There is need for better coordination of the functional relationship among different roles and responsibilities.
- Employee loyalty can be secured through job enrichment.
- University administrators should be more market oriented in managing the day-to-day activities of Nigerian Universities.

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Table 4a. Factor Analysis (KMO & Bartlett’s Test) of Market Orientation

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.739
Bartlett's Test of Sphericity	389.467
Approx. Chi-Square	
df	55
Sig.	.000

Table 4b. Factor Analysis (Total Variance Explained) of Market Orientation

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.820	34.729	34.729	3.820	34.729	34.729	2.818	25.619	25.619
2	1.980	18.004	52.733	1.980	18.004	52.733	2.278	20.707	46.326
3	1.296	11.786	64.519	1.296	11.786	64.519	2.001	18.193	64.519
4	.719	6.534	71.052						
5	.690	6.269	77.321						
6	.605	5.502	82.823						
7	.565	5.133	87.957						
8	.481	4.370	92.327						
9	.352	3.199	95.526						
10	.299	2.720	98.246						
11	.193	1.754	100.000						

Table 4c. Factor Analysis (**Component Matrix^a**) of Market Orientation

	Component		
	1	2	3
SectionB1	.661		
SectionB2	.692		
SectionB3	.763		
SectionB8	.771		
SectionB13	.781		
SectionC17			.777
SectionC18			.718
SectionC22			.825
SectionD24		.780	
SectionD25		.875	
SectionD26		.873	

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

Table 5c. Factor Analysis (KMO & Barlett's Test) of Stakeholders Loyalty

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.657
Bartlett's Test of Sphericity	Approx. Chi-Square
	112.241
	df
	3
	Sig.
	.000

Table 5b. Factor Analysis (Total Variance Explained) of Stakeholders Loyalty

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.193	73.087	73.087	2.193	73.087	73.087
2	.543	18.088	91.175			
3	.265	8.825	100.000			

Extraction Method: Principal Component Analysis.

Table 5c. Factor Analysis (**Component Matrix^a**) of Stakeholders Loyalty

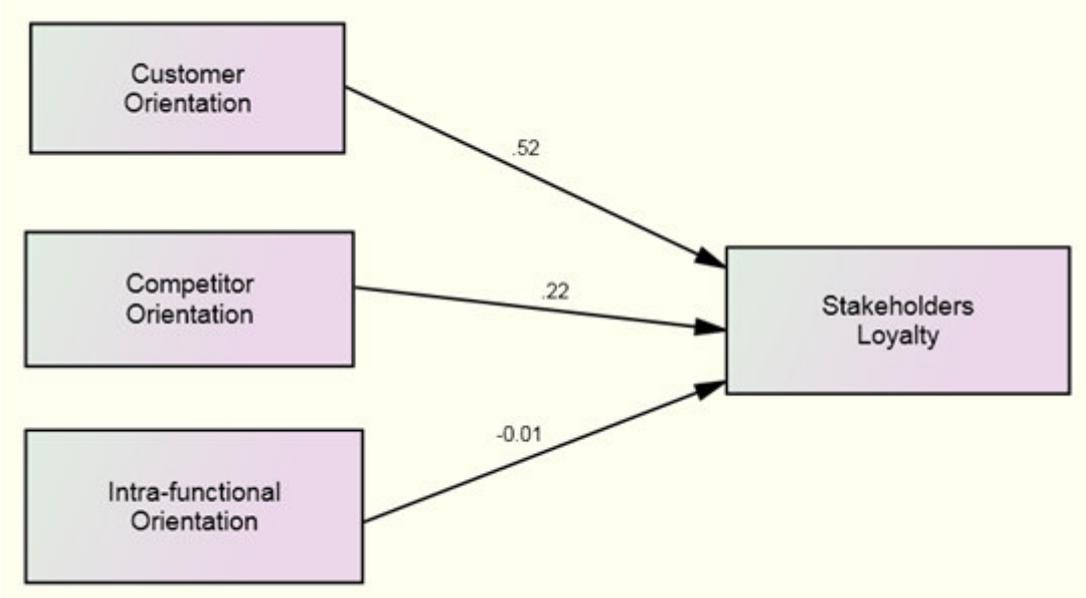
	Component
	1
SectionE32	.849
SectionE33	.912
SectionE34	.800

Extraction Method: Principal Component Analysis.
 a. 1 components extracted.

Table 6: Composite reliability and discriminant validity

	Intra-functional	Customer/student	Competitor	Stakeholders
Intra-functional	0.802			
Customer/student	0.327	0.672		
Competitor	0.469	0.369	0.676	
Stakeholders	0.250	0.628	0.471	0.787
Composite Reliability	0.843	0.802	0.712	0.828
AVE	0.643	0.512	0.571	0.619
ASV	0.130	0.212	0.193	0.226

Fig. 1 . Hypotheses testing results.



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