

The Role of Services Marketing Mix on Perceived Quality and Brand Awareness: An application using structural equation modeling

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Abstract:

This research examines the differential impact of Services Marketing Mix on perceived quality and brand awareness. This research aims to throw light on the factors that contributed to growth in the segment and presents an insight on the present status of the Telecom Sector. The Marketing Discipline embraces multiple research methodologies and paradigms to examine consumer decision making, judgment and purchase behavior. It explores the influence of broad, macro-level variables like demographics, social class and family socialization processes, as well as the effects of marketing variables such as advertising, branding, and store layout. Marketing Strategy encompasses selecting and analyzing of the target market/s and creating and maintaining an appropriate marketing mix that satisfies the target market and the organization. According to our model, marketing mix strategies are influenced by the company's marketing mix decisions while marketing mix decisions are influenced by the regional market environment, demand and size and cultural differences of the country.

Data was collected through surveying Mobile Users from the four Telecom Operators in Egypt, the collected data support the impact of the Services Marketing Mix on Perceived quality and Brand Awareness. The structural equation modeling is used to analyze structural relationships between services marketing mix and perceived quality and brand awareness.

The findings provide an essential case for analyzing services marketing mix role on perceived quality and brand awareness for students in higher education business institutions, as well as an agenda for future research.

Keywords: Services Marketing Mix, Telecom Sector, Perceived Quality, Brand Awareness.

1.Introduction

In today's competitive markets, number of service companies within the same industry is becoming increasingly similar. Growing levels of competition, will cause customers face more alternative product, price and variety of quality, so customers will be always find the highest value of several products. Since today's customers are more expecting, they are not just in search of functional advantages, but in search of more tangible ones such as popularity, position, characteristics, life style, success and other factors with which they can have a strong connection. Added value or increasing usefulness of the product accompanying brand is called brand equity (Andreassen and Lindestad, 2018; Kotler, 2020; Rostami et al, 2018). Seen from this condition, can be generally that company services brand management has an important role. This issue is essential in the design and development of the company's service offerings because the ultimate goal of any company is to have valuable brand equity. Build high brand equity value can enhance its potential choosing by customer and also leads to higher brand awareness, inclination of customer to pay more and purchase by customer as well as lower susceptibility of firms in competitive market (Al-Dmour et al, 2019; Pitta and Katsanis, 2015; Yoo et al, 2018). This means that manager must give more attention to the brand management and company marketing program that can increased brand equity over competitors. Many researchers accepted that by developing effective service marketing mix, the company brand awareness and perceived quality value can be increased (Al-Dmour et al, 2019; Ameri et al, 2018; Fathian et al, 2017; Rajh and Dosen, 2019; Rostami et al, 2018). Yoo et al (2018) suggest that service marketing mix elements can

play a great role in affecting to increase brand equity and be effective elements on brand equity seems quite necessary for company which desire to enter the arena of competition and surviving in the market. One of service business sector that must manage good brand management is telecommunication sector. It is undeniable that the need for communication for everyone is now very important in daily life. Rapid technological developments changed the way people communicate over long distances than conventional, such as correspondence becomes more practical, using a mobile cellular with phone call and short message service. Even today with the development of the internet also make a transformation of standard mobile phone to be smartphone, the way communication has evolved into an internet based. This enables everyone to communicate through video call and social media. It's mean that mobile telecommunication provider in today not only provide communication service, but also provide the consumer need of internet connection. In developing countries such as Egypt, development of communication has also reached an awesome stage. Egyptian public awareness of the need for communication and growing level of purchasing power followed by price of smartphone increasingly affordable, opening up opportunities for companies engaged in the field of mobile telephone services to expand in this sector. There are Four companies that are competing in mobile telecommunication business sector in Egypt which are Vodafone, Etisalat, Orange, WE. Growing level and aggressively penetration of telecommunication sector in Egypt can see from continuously communication sector increase the contribution to Egyptian Gross Domestic Product from 10.73% in 2015 to 14.08% in 2020 (Central Agency for Public Mobilization and Statistics, 2015) and increasingly number of customer in year to year based on each company annual report every year. The increasingly fierce Egyptian

market conditions making market participants and company competing to win this competition. Managers in this sector find themselves faced with increasing demands from customers, and face new challenges to achieve what they want and provide clients with superior services in light of the existence of higher competition in the marketplace. Various company that provide similar service, make company must develop and utilize product branding to ensure that companies can enjoy competitive advantage. Managing high value brand equity with the effective marketing mix strategy will be help consumer to response about the company differential marketing of the brand (Al-Dmour et al, 2019; Keller, 2018; Pitt and McCarthy, 2018). Marketing mix refers to a set of controllable marketing variables that are combined in target market by a company in order to stimulate desired reaction. On the other words, marketing mix is conceptual framework that identifies the principal decision making managers make in configuring their offerings to suit consumers' needs (Goi, 2019; Kotler and Armstrong, 2018; Niharika, 2020). The concept of marketing mix was introduced for the first time by Borden (1918) that known as 4P', namely product, price, promotion and place or distribution at a marketing manger's command to satisfy the target market. But, due to intangibility, heterogeneity, inseparability, and perishability characteristics of services; service firms have a different marketing mix strategies. Study conducted by Booms and Bitner (1982) founding the new element to apply the marketing mix concept to service. This research adding new 3P element to the original 4P element. The new element is people, process and physical evidence to figure out services problem by having more comprehensive model specified for service product. Brief explanation for each 7Ps marketing mix dimensions is:

- Nature of service elements are defined as an act or performance offered by one party to another that creates benefits for customers by bringing about a desired change in-or on behalf of-the recipient (Lovelock and Wright, 2017).
- Price elements defined as the amount of money charged for a product or services (Kotler and Armstrong, 2018).
- Distribution elements defined as involves the distribution channel, distribution coverage, outlet locations, inventory levels and location (Kotler, 2020).
- Promotion elements mean all of the tools available to the marketer to transform their message about the product strategy to the target market (Al-Dmour et al, 2019).
- People elements defined as all participants that have role at the service delivery process (Al-Dmour et al, 2019).
- Physical evidence elements is the environment in which the service is delivered and any tangible goods that facilitate the performance and communication of the service (Booms and Bitner, 2017).
- Process elements defined as the procedures, mechanism and flow of activities by which a service is acquired and about how a service is delivered to customers (Booms and Bitner, 2017).

According to Keller (2018) brand equity is defined in terms of the marketing effects uniquely attributable to the brand. Lassar et al (2017) also described brand equity as the enhancement in the perceived utility and desirability a brand name confers on a product. Brand equity represents a condition in which the consumer is familiar with the brand

and recalls some favorable, strong, and unique brand associations (Pitta and Katsanis, 2015). The literature on brand equity shows has been examined from two different perspectives. The first perspective of brand equity is financial-based, that more pertinent to determining a brand's valuation for accounting, merger, or acquisition purposes. Second perspective is focused on the consumer behavior effects specific to a particular brand, namely customer based. This research focuses on customer-based perspective, because for marketers the consumer effects are the appropriate focus and include a number of cognitive effects. And then, customer-based brand equity believed as the driving force for incremental financial gains to the firm.

Customer-based brand equity developed by Keller (2018). In this research, customer-based brand equity is defined as the differential effect of brand knowledge on consumer response to the marketing of the brand. The advantage of conceptualizing brand equity from the consumer's perspective is that it enables managers to consider specifically how their marketing program improves the value of their brands. Researcher conceptualized brand equity using an associative memory model focused on brand knowledge and involving two components, brand awareness and brand image.

Research conducted by Aaker (2019) found five elements of brand equity, namely perceived quality, loyalty to a brand, awareness of a brand, brand association and propriety assets. And then, Lassar et al, (2017) modify the previous element of customer-based brand equity into five elements. First is replacing quality dimension with performance. Second use social dimension to replace image dimension. Third, distinguish between commitment as a feeling versus commitment as action. Fourth element is value or the perceived brand utility relatives to its costs, and the last is

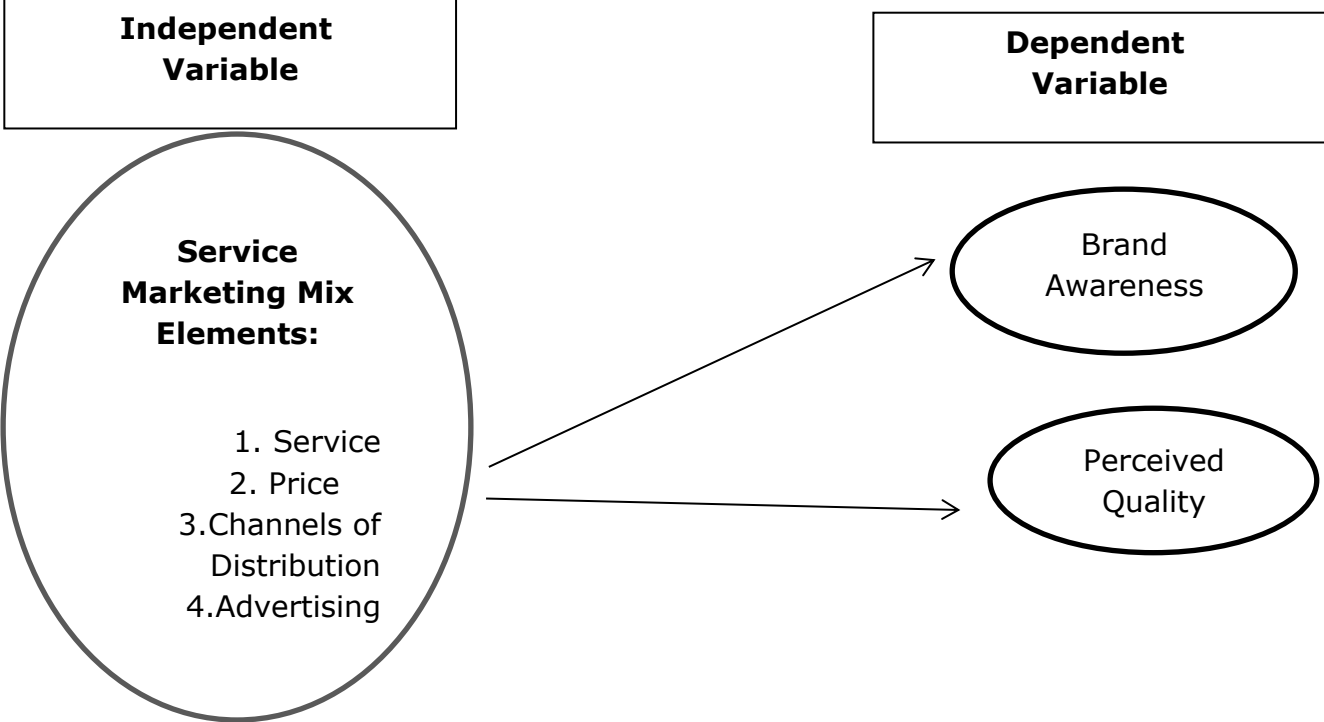
trustworthiness, as the confidence a consumer places in the firm and the firm's communications, and as to whether the firm's actions would be in the consumer's interest. Yoo et al (2018) in their research adopt three element found by Aaker (2019), with adding antecedents of brand equity, which they identify as price, price deals, distribution intensity, store image and advertising expenditure. Based on the explanation of brand equity dimensions, this study used four dimension conducted by Al-Dmour et al (2019) and support by Fathian et al (2017) that modify from various study about dimensions' brand equity. The element is perceived quality, brand image, brand awareness and brand loyalty. Brand image is used interchangeably with brand association. According to Keller (2018), brand image relates to the associations related to the brand that exist within the minds of customers, and comprises all expectations and knowledge relating to a particular product or service. Brief explanation of each dimensions of customer-based brand equity is:

- Brand awareness dimensions relates to the likelihood that a brand name will come to mind and the ease with which it does so or how well do the brands serve their function (Keller, 2018).
- Perceived quality dimensions defined as the consumer's judgment about a product's overall excellence or superior (Keller, 2018).

Yoo et al. (2018) explore how brand equity can be created by certain marketing mix elements. The paper outlines a conceptual framework describing the relationship between various dimensions of marketing mix and brand awareness , perceived quality. The research found that highly level of marketing mix element such price, promotion and distribution, positively correlated to increasing brand awareness and perceived

quality. Rajh & Dosen (2019) also explore how various marketing mix elements affect brand awareness and perceived quality. This research showing how different elements have different effects on brand awareness and perceived quality. The findings draw conclusions relating to the necessity for concerted efforts regarding employees, advertising, price level, interior appearance and service operation, as each of these factors positively affects brand awareness and perceived quality. The results indicate how important it is to build service brands strategically, with a primary long-term goal to establish service brand equity. However, the research model in this study will show in the picture below:

Research Variables:



According to those introductions, this study was conducted to examine about how the effect of service marketing mix element on the Brand awareness and perceived quality of company based on customer based in Egypt telecommunication service. This

research has two purpose; they are to investigate the influence of service marketing mix element by mobile telecommunication service provider on brand Awareness and perceived Quality. And the second purpose is to find out the element of service marketing mix that has greatest impact on brand Awareness and Perceived Quality.

2. Description of Data and Sample

This research is a causal or explanatory research using survey methods in the process of collection of data. Primary data was collected by direct distributing questionnaires. The descriptive and statistical analysis method was used in this study. Populations of this study are all customer of Egyptian mobile telecommunication service providers.

Probability sampling was used to this study. Sampling was taken by using convenience sampling method, it means the sample that will be chosen based on easier to collect the data, research can be collect in everywhere. The questionnaire used closed-ended questions with 5-point likert scales, scale 1 mean strongly disagree and scale 5 related to strongly agree. Content of questionnaires adopted from study that conducted by Akroush and Al-Dmour, 2018; Yoo et al, 2018; and Al-Dmour et al, 2019. The questionnaire was distributed for 120 people, according to study conducted by Anderson et al (2018) that argued if the sample size of 100-200 is adequate for the research. Data was collected in Cairo and Giza City. All of data analysis data in this study calculated using SPSS 23.0 for Windows. Validity test and reliability test was measured before data can be analyze. Validity test used to know about the validity of questionnaire as measurement tool and reliability test was used to measure questionnaire whether it is appropriate to use as a measurement tool or indicator of variables. To measure the validity, researcher used structural equation modeling and

Cronbach Alpha statistical test (α) as reliability test measurement tool. Item of questionnaire can be stated as valid item if the loading factor values higher than than 0.3, and a questionnaire can be reliable if the result from test (α) is should not bellow 0.70 (Nunnally and Bernstein, 2016). Multiple linear regression analysis was used to figure out how big the influence of independent variable to dependent variable. Accuracy function regression in estimating the actual value can be measured from statistically test at least this can be measured by the value of the statistic value F-test, T-test, and the value of the determination coefficient (R^2). Statistical F-test basically used to find out whether the regression model can be used to predict the dependent variable or not. There are some criteria for making decision, H1 can be accepted if sig. probability < 0.05 and F calculated $> F$ tabulated. Statistical T-tests basically show how far the influence of one independent variable individually in the dependent variable explained variation. There are some criteria for making decision, H1 can be accepted if sig. probability < 0.05 and T calculated $> T$ tabulated. Finally, determination coefficient test (R^2) is carried to measure how far the ability of framework model for explains about variation by dependent variable. Value of determinant coefficient is between 0-1. Low value of R^2 , mean that ability of independent variable to explain about variation of dependent variable is limited. So, if the value is high or closely to 1, its mean that ability of independent variable to explain about variation of dependent variable is good or almost provide all information needed to predict the dependent variable.

2.1 The Independent Variable (Services Marketing Mix)

Which is defined as “the set of tools available to an organization to shape the nature of its offer to customers” (Keller, K, 2018). These elements are:

1) Service element is defined as the intangible activities and performance designed by interactive process in order to satisfy customer needs and expectations, and convince them, this process could be done by using tangible products (Keller, K, 2018).

2) Price element is defined as the value of items which are needed for the acquisition of a product (Keller, K, 2018).

3) Channels of Distribution element involve the distribution channels, distribution coverage, outlet locations, inventory levels and location (Keller, K, 2018).

4) Integrated Marketing Communication (Advertising) includes all of the tools available to the marketer to transform their message about the product strategy to the target market; moreover, this consists of communication mix (Keller, K, 2018).

2.2 The Dependent Variables (Brand Image, Brand Loyalty)

2.2.1 Perceived Quality

Perceived Quality: “The consumer's judgment about a product's overall excellence or superiority” (Aaker, D, 2018).

2.2.2 Brand Awareness

Brand Awareness: how well a potential buyer is able to observe and remember that a brand lies within a particular class of products (Keller, K, 2018).

3. Methodology

This research used The structural equation modeling which is a multivariate statistical analysis technique that is used to analyze structural relationships between services marketing mix and perceived quality and brand awareness as this technique is the combination of factor analysis and multiple regression analysis, and it is used to analyze the structural relationship between research measured variables.

4.Results

This section presents the data analysis part of this paper. The analysis of this study was done using the statistical package for social sciences (SPSS V26) for both descriptive and inferential statistics, and (SPSS AMOS V22) for confirmatory factor analysis (CFA) and path analysis. A preliminary data analysis is given in section one; this includes screening for missing data, finding outliers, testing data normality, and investigating common method bias. Section two provides the measurement model assessment through reliability and validity analysis through CFA. The correlation and descriptive analysis were given in section three. Hypothesis testing underlying this research was given in chapter four using path analysis.

1. Data Examination

The issues of collected data including missing data, outliers, normality and common method bias (CMB), should be inspected (Hair et al., 2017). Therefore, those primary data issues are examined using SPSS. The issues of missing data and outliers were inspected and found that no problems were found. CMB can be detected through Harman's single-factor test, which is commonly used by researchers, the percentage of the factor's explained variance determines whether the bias is present or not. If the total variance of the factor is less than 50%, then the common method bias does not affect the

data. It was indicated that the first factor explained 45% of the total variance. As the value was below 50%, it can be concluded that the issue of CMB had not been detected. The results of the normality statistics show that the values of Skewness and kurtosis for all the constructs of the model were within the range of ± 2 , therefore the variables were normally distributed (Trochim & Donnelly, 2006; Gravetter & Wallnau, 2014), see table (3).

2. Confirmatory factor analysis

Confirmatory factor analysis (CFA) is conducted to quantify, test and confirmed a priori proposed or hypothetical structure of the relationships among a set of considered measures (Raykov & Marcoulides, 2008). The purpose of the CFA is to identify latent factors that account for the variation and co-variation among a set of indicators. Instead of using a correlation matrix, CFA typically analyses a variance-covariance matrix needed to produce an unstandardized CFA solution (Brown, 2015). A sample of 100 cases is acceptable, but a sample size of more than 200 cases is preferable. The researchers generally would not analyze a sample of fewer than 50 cases, and preferably the sample should be 100 or larger (Hair et al., 2010). In this study, CFA was conducted on the data collected from 191, and AMOS 22 was carried out to test the measurement model. As recommended by Hair et al. (2014), the validity of the CFA should be evaluated by two steps: (1) goodness-of-fit (GoF) indices, and (2) validity. Accordingly, this study considers these two stages to validate its CFA.

According to Hair et al. (2010), at least four tests of model fit should be applied for CFA and the structural model. This study applied six goodness-of-fit indices: normed chi-square (CMIN/DF), incremental fit index (IFI), Tucker-Lewis Index (TLI), comparative

fit index (CFI), Root Mean Square Residual (RMR), and root mean square error of approximation (RMSEA).

Table (1): Goodness of fit indices

<i>Indices</i>	<i>Criteria</i>
<i>Chi-Square/Degree of Freedom</i>	<5
<i>Incremental Fit Index (IFI), Tucker Lewis Index (TLI) Comparative Fit Index (CFI)</i>	>0.9
<i>Root Mean Square Residual</i>	<0.1
<i>Root Mean Square of Approximation</i>	<0.08

2.1 CFA for Services Marketing Mix

This scale consists of four dimensions with different items for each. None of the items were removed as the standardized regression weight for all indicators is higher than 0.3.

The results of the final CFA were satisfactory, as presented in table 2 and figure 1.

Considering the analysis results attained; the factor loadings of the observed variables were above 0.483 and were statistically significant. This provides a clear evidence of validity. The model fit indices are shown in figure 1, where CMIN/DF is less than 5, RMR is less than 0.1, RMSEA is less than 0.08, and the other indices are above 0.9.

Therefore, the CFA for Services Marketing Mix scale has higher level of fit.

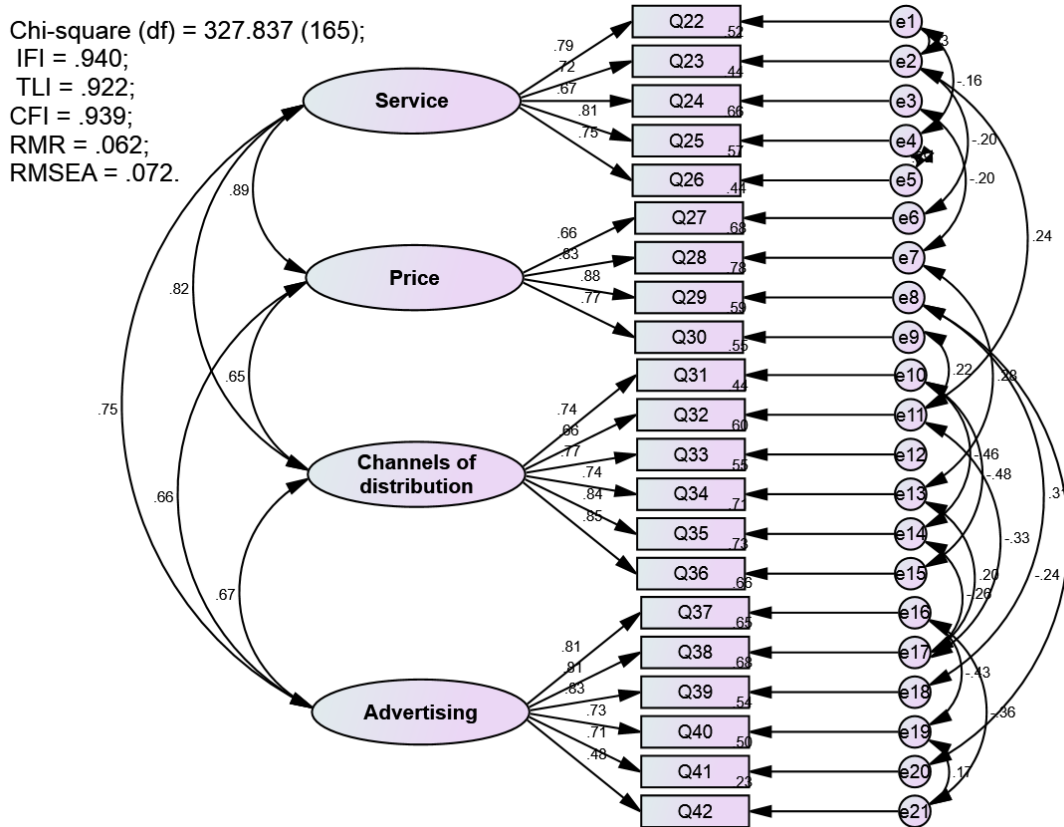


Fig. 1: CFA for Services Marketing Mix

Table 2: Regression weights for Services Marketing Mix items

<i>Items and Scales</i>			<i>Estimate</i>	<i>S.E.</i>	<i>C.R.</i>	<i>P</i>
Q22	<---	Service	0.788			
Q23	<---	Service	0.719	0.088	12.06	***
Q24	<---	Service	0.665	0.069	9.534	***
Q25	<---	Service	0.81	0.083	11.316	***
Q26	<---	Service	0.753	0.074	11.054	***
Q27	<---	Price	0.662			

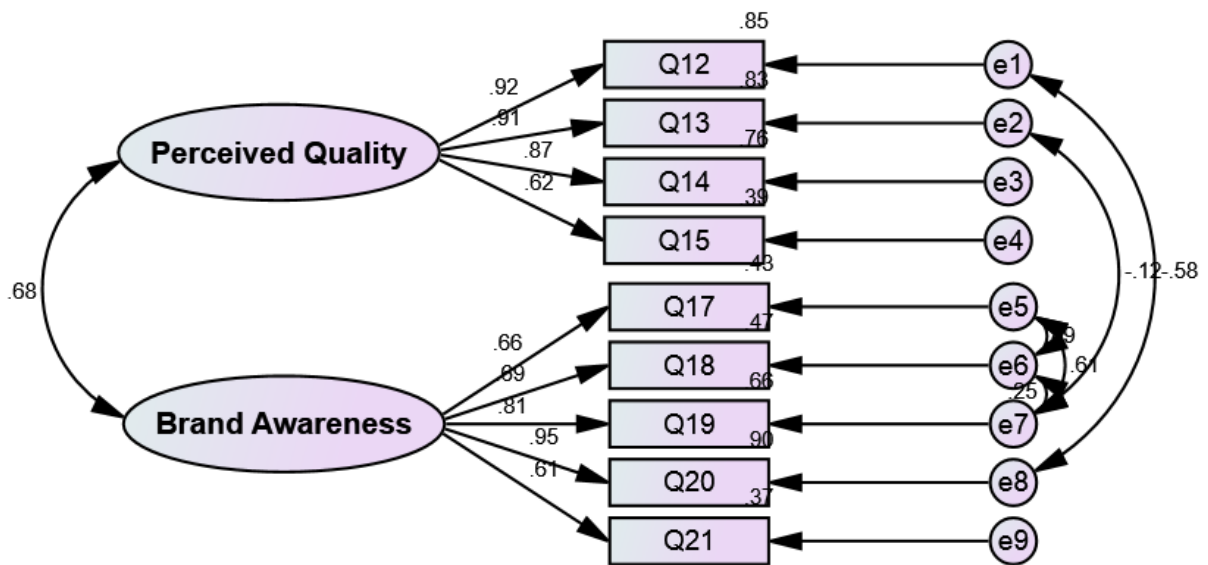
Q28	<---	Price	0.826	0.141	9.921	***
Q29	<---	Price	0.882	0.166	10.426	***
Q30	<---	Price	0.767	0.147	9.334	***
Q31	<---	Channels of distribution	0.739			
Q32	<---	Channels of distribution	0.664	0.11	9.073	***
Q33	<---	Channels of distribution	0.772	0.1	10.277	***
Q34	<---	Channels of distribution	0.742	0.097	9.988	***
Q35	<---	Channels of distribution	0.842	0.122	9.668	***
Q36	<---	Channels of distribution	0.853	0.117	9.757	***
Q37	<---	Advertising	0.812			
Q38	<---	Advertising	0.808	0.08	12.682	***
Q39	<---	Advertising	0.827	0.087	12.907	***
Q40	<---	Advertising	0.733	0.116	9.217	***
Q41	<---	Advertising	0.706	0.094	10.526	***
Q42	<---	Advertising	0.483	0.101	5.907	***

*** All coefficients were significant at 0.001 level of significant

2.2 CFA for Perceived Quality and Brand Awareness

This scale consists of two variables with different items for each. One item (Q16) was removed as the standardized regression weight is less than 0.3 and all other items were retained. The results of the final CFA were satisfactory, as presented in table 3 and figure 2. Considering the analysis results attained; the factor loadings of the observed variables

were above 0.61 and were statistically significant. This provides a clear evidence of validity. The model fit indices are shown in figure 2, where CMIN/DF is less than 5, RMR is less than 0.1, RMSEA is less than 0.08, and the other indices are above 0.9. Therefore, the CFA for perceived quality and brand awareness scales has higher level of fit.



Chi-square (df) = 33.687 (21);
 IFI = .990; TLI = .983; CFI = .990;
 RMR = .054; RMSEA = .056.

Fig. 2: CFA for perceived quality and brand awareness

Table 3: Regression weights for perceived quality and brand awareness items

<i>Items and Scales</i>		<i>Estimate</i>	<i>S.E.</i>	<i>C.R.</i>	<i>P</i>	
Q12	<---	Perceived Quality	0.923			
Q13	<---	Perceived Quality	0.909	0.049	20.392	***
Q14	<---	Perceived Quality	0.874	0.05	18.515	***

Q15	<---	Perceived Quality	0.625	0.058	10.07	***
Q17	<---	Brand Awareness	0.659			
Q18	<---	Brand Awareness	0.685	0.08	11.922	***
Q19	<---	Brand Awareness	0.813	0.079	14.714	***
Q20	<---	Brand Awareness	0.947	0.131	10.087	***
Q21	<---	Brand Awareness	0.607	0.118	7.651	***

*** All coefficients were significant at 0.001 level of significant

3. Reliability, Descriptive statistics and multiple correlations

Reliability, according to Hair et al. (1998), is “an assessment of the degree of consistency between multiple measurements of a variable. Composite reliability (CR) is a test of the reliability and consistency of data; for every latent variable, the composite reliability needs to be calculated. Janssens (2008) recommends a composite reliability value of at least .70. In this research, composite reliability was adopted to test the internal consistency of the data and assess the scale reliability. All values of CR and maximum reliability (MaxR(H)) were above 0.7. Those findings provide evidence of the high reliability and sufficient internal consistency of the constructs. It is worth noting that the results of reliability and validity given in table 4 were extracted using the ‘Validity Master Plugin’ in AMOS (Gaskin & Lim, 2016).

Table 4: Reliability and bivariate correlation

<i>Construct</i>	<i>Service</i>	<i>Price</i>	<i>Channels of distribution</i>	<i>Advertising</i>	<i>Perceived Quality</i>	<i>Brand Awareness</i>
<i>Services Marketing Mix</i>	.913***	.865***	.844***	.829***	.775***	.640***
<i>Service</i>	1	.755***	.724***	.668***	.785***	.642***
<i>Price</i>		1	.614***	.595***	.688***	.502***
<i>Channels of distribution</i>			1	.597***	.599***	.556***
<i>Advertising</i>				1	.598***	.511***
<i>Perceived Quality</i>					1	.583***
<i>Brand Awareness</i>						1
CR	0.854	0.867	0.896	0.879	0.904	0.895
AVE	0.541	0.623	0.593	0.554	0.707	0.636
MaxR(H)	0.862	0.897	0.91	0.897	0.935	0.926

*** All correlations were significant at 0.001 level of significant

Table 5: Descriptive statistics

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
<i>Perceived Quality</i>	191	1.00	5.00	4.0275	.90624
<i>Brand Awareness</i>	191	1.20	5.00	3.8314	.98058
<i>Service</i>	191	1.40	5.00	3.8147	.91823
<i>Price</i>	191	1.00	5.00	3.7866	.96551
<i>Channels of distribution</i>	191	1.17	5.00	4.0087	.86514
<i>Advertising</i>	191	1.33	5.00	3.7504	.91445
<i>Services Marketing Mix</i>	191	1.61	5.00	3.8401	.79034

After establishing the reliability and validity of the variables, it's time to provide some descriptive statistics and multiple correlations between the selected constructs. These include; Pearson correlation coefficient, mean (M) and standard deviation (SD) were calculated and reported in tables 4 and 5. The Pearson product-moment correlation coefficient was calculated to determine the strength and the direction of the relationship between the dependent and independent variables. Table 4 shows the matrix of Pearson correlation coefficients between all variables in the study. The correlation coefficients suggest that there is a statistically significant positive correlation among all variables. These correlation coefficients ranged from medium relationship (0.502) to strong relationship (0.913).

4. Path Analysis

According to Byrne (2016), Structural Equation Modeling (SEM) is a collection of statistical techniques that allows a set of hypothesized relationships between a number of variables to be examined, including regression, confirmatory factor analysis, and path analysis. In this section, path analysis was performed by utilizing the path coefficients produced by AMOS and examining the statistical significance at a p-value equal or less than 0.05. According to Hair et al. (2010), using the standardized regression weights produced by AMOS is possible to examine the comparative impact of each independent construct on the dependent variable.

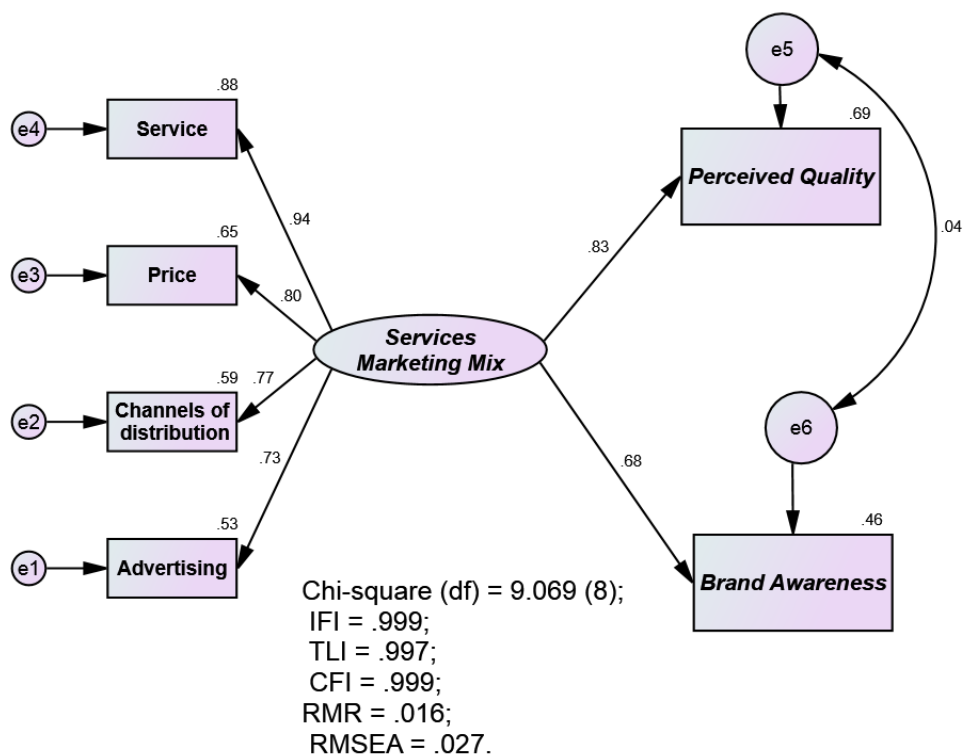


Figure 3: Path analysis for the proposed model

By the use of the regression weights it can be concluded whether the research hypotheses could be rejected or accepted. The regression weights reference values that were used in this research are in accordance with the suggestions of Kline (2005). Kline (2005) categorizes the regression beta weights in the standardized output with total value of 0.1 as having small effects, 0.3 as having moderate effects, and 0.5 as having large effects of the independent construct on the dependent variable. In path analysis, the measurement of the significance of the path is assessed by the p-value. If the p-value is equal or less than the 0.05, the path is considered to be statistically significant. In the following subsections, the estimates of path coefficients (regression weights) of the various paths in model are presented.

Table 6: Path analysis estimates

<i>H</i>	<i>Path</i>		<i>Estimate</i>	<i>S.E.</i>	<i>C.R.</i>	<i>P</i>	<i>Remark</i>	
<i>H1</i>	<i>Services Marketing Mix</i>	→	<i>Perceived Quality</i>	0.831	0.1	11.392	***	Supported
<i>H2</i>	<i>Services Marketing Mix</i>	→	<i>Brand Awareness</i>	0.681	0.109	9.233	***	Supported

*** All coefficients were significant at 0.001 level of significant

The results of hypothesis testing in table 6 and figure 3 showed that Services Marketing Mix yielded a significant direct positive effect on Perceived Quality since ($\beta = 0.831, C.R. = 11.392, P < 0.001,$), consequently, the first hypothesis is confirmed. Finally, Services Marketing Mix construct yielded a significant direct positive effect on Brand Awareness since ($\beta = 0.681, C.R. = 9.233, P < 0.001,$),

consequently, the second hypothesis is confirmed. The model fit indices are shown in figure 3, where CMIN/DF is less than 5, RMR is less than 0.1, RMSEA is less than 0.08, and the other indices are above 0.9. Therefore, the path analysis for our model has higher level of fit. The results of R Square are reported in figure 4. The R-Square value of Perceived Quality equals $R^2 = 0.69$ meaning that about 69% of the variations in Perceived Quality were explained by the variation in Services Marketing Mix. Finally, the R-Square value of Brand Awareness equals $R^2 = 0.464$ meaning that about 46% of the variations in Brand Awareness were explained by the variation in Services Marketing Mix.

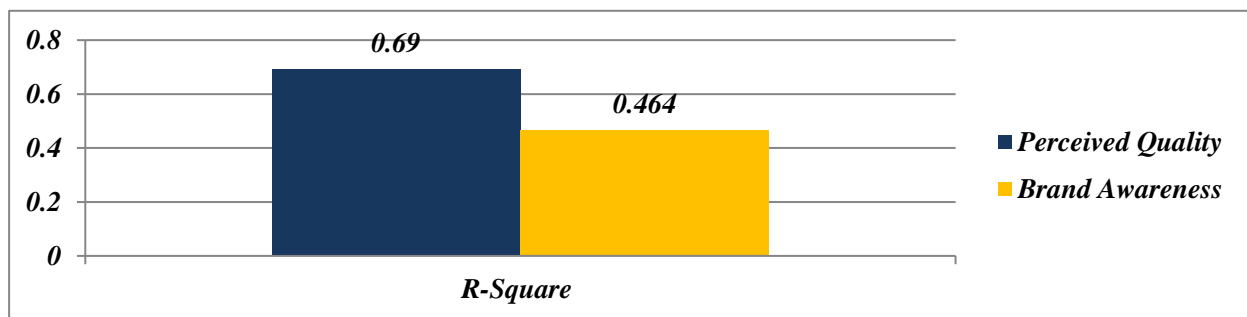


Fig. 4: R Square Values

Conclusion

This research aims to find out the impact of services marketing mix on perceived quality and brand awareness. The respondents consisted of 100 mobile service users in Cairo and Giza. Considering the data collected and data analysis conducted using multiple linear regression table, it can be concluded that Services Marketing Mix (X1) impacts perceived quality. Services Marketing Mix (X1) impacts Brand Awareness. .

Considering the result of structural equation modeling, it can be concluded that Services

marketing mix impacts brand awareness and perceived quality for mobile service users in Cairo and Giza.

5.References

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