

Influence Of Marketing Mix On Customer Satisfaction In Real Estate: Mediating Effect Of Technology & Moderating Effect Of Government & Building Process In Bangladesh.

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Abstract:*In Bangladesh the Housing and Real Estate Industry is one of the rapid growing and pioneer business sector. The rapid urbanization needs more accommodation and housing supply, which creates a huge market for the real estate industry in Bangladesh. Brick is one of the main building materials for the construction industry. Brick manufacturing in Bangladesh is done with traditional methods. The fixed chimney kiln (FCK) are used to produce the bricks which consumes coal & fertilized soil and releases pollutants into the atmosphere, leading to harmful effect on animals, human beings and agricultural yields. At present there are number of alternative products are available instead of burnt clay bricks, which are cost effective, environment friendly, and disaster resistant. The Objective of the study is to reviewing literature on the topics, develop a conceptual framework for this research field and investigate the impact of customer satisfaction of the using of these alternative building materials and the technology as a mediating effect within the marketing mix and the role of government & building process. The study would be conducted in Dhaka, Bangladesh where customers & stakeholders would be provided structured questionnaire. The questionnaire would adapt from literature and the study will be conducted with a deductive approach and would be follow quantitative method and positive paradigm. The survey population would be selected from the Dhaka city and among the selected respondent 380 would be the sample size. Convenience sampling method would be applied. The data analysis would be followed descriptive Statistics and regression analysis methods. The analysis would be done by using Smart PLS. The Study would adopt three underpinning theories to establish the relationship among variables. The theories are: Marketing mix theory, the Dissonance theory and the Technology acceptance Model (TAM) theory. The expected findings would be providing a comprehensive view of the customer satisfaction of using alternative building materials and would contribute to body of knowledge theoretically and the practical knowledge will help the policymakers, the government of Bangladesh, managers, and other stakeholders to formulate the next policy and practice. In future, comparative researches can be carried out by collecting samples from other cities of the country. Another research can be done including other social compliance variables which were not*

included in this study.

Keywords: *Marketing Mix, Customer Satisfaction, Technology, Brick, The fixed chimney kiln (FCK)*

INTRODUCTION

Housing is a basic need for societies and part of our everyday life. Affordable housing problems are increasing rapidly with about 33% of the urban population in the emerging world in 2012, or around 863 million people, living in slums. (UN-Habitat,2012)

Rapidly growing urban population, and with the growing need to accommodate them is a key factor boosting this Housing and Real Estate market. Bangladesh is a developing Country located between Myanmar and India and in the northeastern Asia with a land area of 147,570 sq.km, Its vast population 161.4 million (World Bank, 2018). Dhaka is the capital city of Bangladesh and its population is 21.006 million. (the World Fact Book,2020). Dhaka receives an estimated 300,000 to 400,000 new migrants annually (Mohit.M.A.,2012). It's a fast-growing mega-city in the world. This rapid urbanization needs more adaptation and housing supply, which could generate a vast market for the real estate industry. The current value of real estate, leasing & business service sector in Bangladesh is BDT 562,968 million, which contribution to GDP 6.37% and growth rate 4.47% (BBS,2015-2016)

Brick is the one of the main building materials for the construction industry. The Fixed Chimney Kiln (FCK) dominates the brick sector in Bangladesh. Brick kilns are responsible for extensive harm for soil. Normally, brick kilns use the quality topsoil of farming land as raw material, which is a major ecological concern as studies mentioned (M. A. Hossain, Zahid, Arifunnahar, & Siddique, 2019). Usually, the alluvial soils of the land considered valuable than others for farming. According to the department of environment of Bangladesh, the country has above 7,000 brick kilns and nearly 23 billion bricks producing every year. Moreover, the country has become the fourth largest brick producer all over the world (Ministry of Environment and Forests, 2017). Besides the use of the quality topsoil, brick kilns are also responsible for low-quality wooden fuel in production, illegally fixed chimneys and the violation of laws that leads to a major cause of agricultural productivity deteriorate, environmental degradation and harmful for social health (Al Nayeem, Hossain, Majumder, & Carter, 2019, M. I. Haque, Nahar, Kabir, & Salam, 2018)

Bearing in mind of all issues the Government & other Private organization's in Bangladesh are producing alternative to burnt clay bricks. Thermal block is alternate of brick and which is widely used in Europe & Middle Eastern countries as well. Other than this there are more substitute, cost effective, environment friendly and disaster resistant building materials and construction technology they are providing (HBRI, 2020). But due to communication gap and lack of proper marketing initiatives, still many people are not aware of this in Bangladesh.

1. LITERATURE REVIEW

The Marketing Mix has many components, these elements can be specified according to the main goal of the organization, the main elements of Marketing Mix refer to the 4 _P's (product, price, place or distribution, and promotion), these Marketing Mix may strengthen the customer satisfaction's level (Raewf & Thabit, 2018)

Product

A product as whatever that can be accessible to a market for courtesy, achievement, use, or

intake that might fulfil a want or need (Kotler and Armstrong,2010). Moreover, a consumer product as the product purchased by the final consumer for personal utilization. Customers buy products frequently, with cautious preparation, and by competing brands based on price, quality and variety. (Mohammad, Wang and Sunayya, 2012) In a different perspective as a real presence of the product, packaging, and labeling. Communication, which can also influence whether consumers notice a product in-store, test it, and purchase it. Past researchers have clearly suggested that product influences have a significant impact on business performance. (Kazem and Heijden, 2006; Kemppainen, Vepsäläinen, and Tinnilä, 2008; Ogunmokun and Esther, 2004; Owomoyela, Oyeniya and Ola, 2013).

Accordingly, to the dissonance theory a person who expected a high-value product and received a low-value product would identify the difference and face a cognitive dissonance (Cardozzo, 1965). That is, the negative, anticipations create a state of dissonance or a psychological discomfort (Yi, 1990). According to this theory, the existence of dissonance produces pressures for its reduction, which could be achieved by adjusting the apparent discrepancy. This theory holds that "post exposure ratings are primarily a function of the expectation level because the task of recognizing disconfirmation is believed to be psychologically uncomfortable. Thus, consumers are posited to perceptually distort expectation-discrepant performance so as to coincide with their prior expectation level" (Oliver, 1977, p. 480). For instance, if a discrepancy exists between product expectations and product performance, consumers may have a psychological tension and try to reduce it by changing their perception of the product (Yi, 1990).

According to the Research Framework the Dependent Variable Customer Satisfaction depends on the Independent Variable Product. quality. If the Customer expectation as high value product and received low -value product then it would identify the discrepancy and Customer's understanding would be as cognitive dissonance.

Price

The second most important element in the Marketing Mix is the price. Price masks the actual amount the end user expected to pay for the product. Pricing is a very vital area for making decision as it has the impact on the need for the product and also on the profitability of the organization (Singh, 2012)

Price as a cost of making, carrying and promoting the product charged by the organization and is of the view that monetary cost is one of the factors that influence consumer's perception of a product's value. (Zeithaml 2008). Price can be stated as the actual or rated value of a costly product which is up for exchange, other clarifications were further illustrated as the amount of money paid for product (Kotler, Ang, Leong & Jan, 2005). In other studies of Colpan, (2006); Dooleet, Grimes & Demack (2006) and Owomoyela et al, (2013) they argued that the established significant relationship between price and business performance. The price you set for your product or service plays a large role in its security. It is further clarified by (Jones, 2007) as

Pricing for products or services that are more commonly available in the market is more flexible, meaning that unit sales will go up or down more responsively in response to price changes. Customer Satisfaction also related with the price changes.

Promotion

Promotion is all activities undertaken to communicate and promote products or services to

the target market. (Gituma, 2017). It includes the activities as branding, advertising, PR, corporate identity, sales management, special offers and exhibitions etc.

Zeithamlet, Valerie, Berry, Leonard, and Parasuraman (2005) describe promotion as part of specific effort to inspire customers to tell others about their services. According to Duncan (2005), promotion is the key to the market exchange process that communicates with present and potential stakeholders, and the general public. Every firm or store must cast itself into the role of correspondent and promoter. Hakansson (2005) also reports that promotion appears as an issue of how to create an best mix of marketing communication tools in order to get a creation's message and brand from the producer to the consumer. Borden, (2004) defines promotion as sales promotion, advertising, personal selling, public relations and direct marketing. Kotler, (2007) discovers that promotions have become a critical factor in the product marketing mix which contains of the specific blend of advertising, personal selling, sales promotion, public relations and direct marketing tools that the company uses to pursue its advertising and marketing objective. Previous researches (Amine and Cavusgil, 2001; Francis and Collins-Dodd, 2004) have recognized significant relationship between promotion and business performance. Many researchers have highlighted the importance of promotional mix to export markets as a valuable tool for reaching performance. Sales, economic and customer performance is achieved through promotional mix by gaining experience in the opportunities and problems rising in specific export markets, boosting communication, initialing relationships, and encouraging a team spirit with customers abroad, and providing timely response and instant support to the export venture _s needs (Kaynak and Kothari,2004). The study by Styles & Ambler, (2009) checked six promotion-related variables, that is, advertising, sales promotion, personal selling, trade fairs, personal visits, and promotion variation, for their effects on export performance. Most of the promotional related variables were found to be positively linked to firm performance. Review of literature shows that the use of trade fairs to promote exports has been inspected in several studies (Bello & Barksdale, 2009; Rosson & Seringhaus, 2009)

Place

Another very significant element of marketing is a place that is also called the distribution, which is defined as the procedure and methods by which products or services reach customers. The organization must choose whether to sell directly to the persons or through the distributors. It can even plan to sell it directly to Customers (Thabit & Raewf, 2018)

In the marketing mix strategy, the distribution channel is an important component as it serves for the stipulation and obtainability of products to various export markets. It is these structures in place that makes sure that products manufactured in one country crosses borders to beat into global markets, in the process sales performance is accomplished. The findings of the meta-analysis results done by Louter et al., (2008) indicated that this disagreement is valid to the extent that distribution strategy absolutely impacts firm performance in terms of export proportion of sales and profit level. The study adds that the relationship between export channel negotiator type and overall export performance is significantly linked. The adaptation or standardization approach do not have much effect of it on total firm performance, however, is slightly in support of adaptation strategy. Its function is making sure that products are accessible in targeted markets internationally. This study model takes into reflection that the appropriateness of a particular channel of distribution is not stagnant but depends mainly on the conditions of the foreign market, such as economic situation, the structure of distribution, and competitive practices.

Customer Satisfaction

The word "customer satisfaction" is so common that it is easy to get into marketing literature and other literature and has a very deep sense, so that the expectations and goals can be met by a business organization nowadays (Othman et al., 2019). Throughout modern times, the use of the term "satisfaction" appears to broaden and is synonymous with the terms "satisfactory" (suitability) and "satisfies" (made into fun), but the term "customer satisfaction" has a very specific meaning throughout sales management itself. Arsanam (2014) notes that satisfaction is an answer to the evaluation of customer satisfaction on the fulfillment of needs, wishes, aspirations and goals chosen in accordance with the criteria of enjoyment, perception, fun and satisfaction. Expectation disconfirmation theory explains that fulfillment is a difference that satisfies needs and desires with the desired goal, continuing disparity between expectations (Sukanto & Lumintan, 2015).

Customer Satisfaction has long been a fundamental topic in Marketing research and practice. High customer satisfaction ratings are widely believed to be the best indicator of a company's future profits (Kotler 1991).

Technology

In Housing and Real Estate industry 'Technology' interpreted in a wide sense to incorporate innovative software, hardware, materials, construction and design (The Real Comm Conference Group LLC, 2015). At present 'green buildings' concept is gaining importance in all over the world and all associated hardware, infrastructure and equipment are linked with technology. The building materials used, the construction and design process, the specialized equipment used to create, track and monitor energy consumption are effect of technology. Technology are used in all advanced infrastructure, foundations, roofing, piping, service equipment, telecommunications, cabling and reticulation, as well as database administration and architecture (National Institute of Building Sciences, 2016).

Technology has worked to remove blocks and tear down walls, creating a system in which data is more valuable when shared than when gathered Currently, advances in computer technology and the growth of the worldwide web are putting pressure on real estate firms and challenging the old assumptions about the real estate transaction. In the future, we expect this trend to continue and intensify, changing the relative influence and the role of real estate professionals in the transactions and resulting in a more important place for the household. (John A. Tuccillo, 1997)

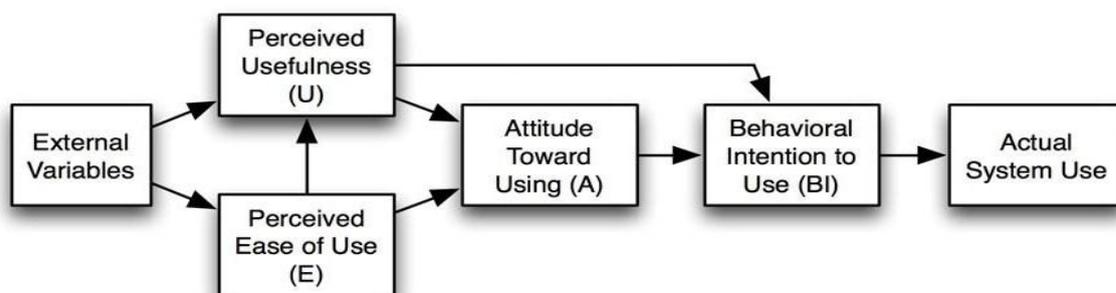


Fig.1. The technology acceptance model (TAM)

Technology has affected and will continue to affect the structure of the real estate industry. With the decline in the position power enjoyed by the realtor has come the need to develop products and systems that add value for the consumer. Simply conveying information will no longer command any great degree of compensation in the marketplace. Rather, the ability to connect the consumer quickly and effortlessly with other settlement service providers, so that the consumer achieves his or her buy and sell goals in less time and with less stress, is the value-added framework the real estate firm must adopt. (John A. Tuccillo, 1997)

Technology Acceptance Model (TAM) has been developed by Davis (1989) is the most popular research models to predict use and acceptance of information systems and technology by individual users. TAM has been widely studied and verified by different studies that examine the individual technology acceptance behavior in different information systems constructs.

TAM is one of the most significant extensions of Ajzen and Fishbein's theory of reasoned action (TRA) in the literature. Davis's technology acceptance model (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989) is the most widely applied model of users' acceptance and usage of technology (Venkatesh, 2000). It was developed by Fred Davis and Richard Bagozzi (Davis 1989, Bagozzi, Davis & Warshaw 1992[1]). TAM exchanges many of TRA's attitude determines with the two technology acceptance measures—ease of use, and usefulness. TRA and TAM, both of which have powerful behavioral elements, assume that when someone forms an intention to act, that they will be able to act without limitation. In the real world there will be many restrictions, such as limited freedom to act (Bagozzi, Davis & Warshaw 1992). In this study the key variables are Marketing Mix as Independent Variable. Customer Satisfaction is Dependent Variable. Technology is inflicting as Mediator in Marketing Mix and Customer Satisfaction.

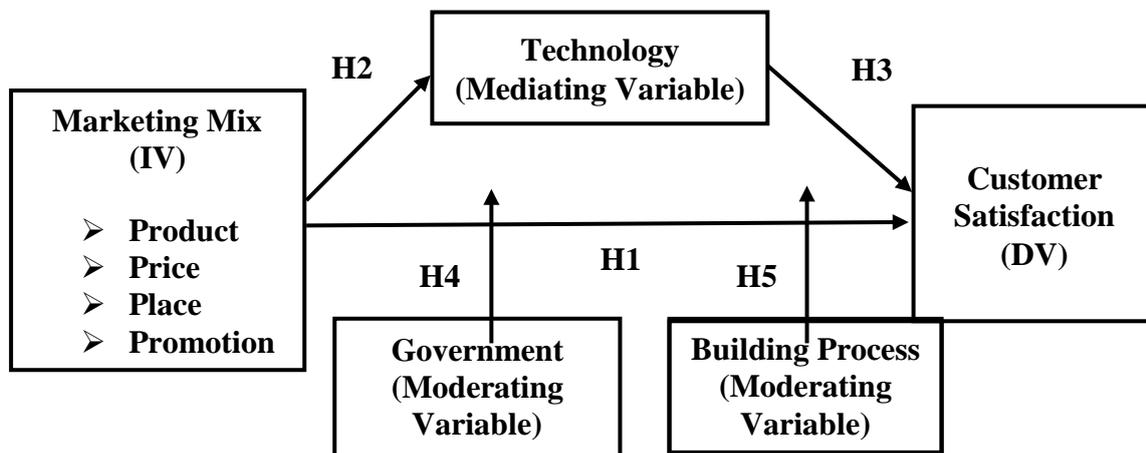
Real Estate Industry in Bangladesh

In Bangladesh due to high population growth rate and rapid rural–urban migration, the urbanization become very high day by day (The Daily Star, 2016). The trend of urban growth is about 3.55 per cent per annum. Urban population represents 34.3 per cent of total population and population in major urban areas (2015 estimate, The World Fact Book, 2016). Due to this rapid urbanization, it needs more accommodation and housing supply, which can create a huge market for the real estate industry in Bangladesh

Three key products, such as commercial units, residential units and a combination of the two are offering by the Real Estate Companies in Bangladesh. Commercial units include shopping malls, shops and office buildings, which are used for commercial purposes. Residential units include two segments—plot units and flat units. Plots are segment of a land area with a certain boundary where the land is developed by the real estate developers. Flats are buildings with flats of different sizes and designed to live in. Combination units comprise buildings which are used for both living and commercial purposes. Generally, the lower floors of a project are rented for commercial purpose leaving the upper floors to sell as flats. Recently the real estate companies have introduced new and diversified products. Model towns are built with the structure of a small town and include all facilities for people, such as shopping mall, school, swimming pool, gymnasium, bank, power plant, etc. (The Daily Star, 2015. Jashim, 2017)

Real estate is playing a significant role to solve the housing problem and influence to the economy. Real estate business is also becoming more vital business in the last couple of years. The business of real estate is the profession of buying, selling or renting land, building or housing. Few years back people were unwilling to live in flats in Dhaka city, as mentioned earlier the main reason is economic condition due to increased land cost as well as construction cost and other reasons such as refusal of individuals to spend time and energy in house construction, increased the awareness of apartment living and western culture also influence a lot. As a result, apartment-owning is becoming progressively popular and demand. Many apartment builders have appeared in the market in recent years. Twenty years ago, there were less than five companies in Bangladesh engaged in developing apartments while today there are more than 2000 developers. It may be stated here that in 1988 there were less than 20 such developers in Dhaka, now-a-days 1500 & above developers are working in Dhaka City between them 1226 developers are members of Real Estate & Housing Association of Bangladesh (REHAB). (Mohiuddin, 2014)

Conceptual Framework



Source: Author

Hypotheses Development

In order to check the relationship between the independent and dependent variables, Mediating and Moderator variable five hypotheses were developed. The nature of all the relationships is expected to be positive and significant.

H1A: Product has a significant impact on customer satisfaction.

Product has directly influenced customer satisfaction. Quality of product can give the optimum level of customer satisfaction. During the last four decades, satisfaction has been considered as one of the most important theoretical as well as practical issues for most marketers and customer researchers (Jamal, 2004). Satisfaction referred to a consumer’s judgment that a product or service feature, or the product or service itself, was providing a pleasurable level of consumption-related fulfillment, including levels of under- or over-

fulfillment (Oliver, 1997). Customer satisfaction can be seen as a fulfillment of consumers' consumption goals as experienced and described by consumers (Oliver, 2006)

H1B: Price has a significant impact on customer satisfaction.

Price has directly influenced customer satisfaction. If the price is competitive then customer would buy the products. Customers are very sensitive of high prices. Pricing and customer satisfaction are critical issues for Internet retailers. In the past, many Internet retailers focused on building up a large customer base, using some combination of low prices and high advertising spending to attract new buyers. For this approach to succeed, e-tailers had to transform first-time buyers into long-term, loyal customers. The length and depth of a customer's relationship with an e-tailer determines whether the e-tailer can recover its acquisition costs, a prerequisite for profitability.

H1C: Promotion has a significant impact on customer satisfaction.

Product Promotion is one of the important offers to the customers. Customers are always deserving promotion and discounted offers. Promotion attracts Customers. Aldred (2005) stated that loyalty is more about sales promotion than relationship marketing, the importance of customer loyalty is widely discussed in relationship marketing recently. Berry (1991) first introduced the idea of Relationship Marketing in Service marketing literature. The ultimate goal of marketing is to retain customers with whom proprietors aim to build relationships in order to create loyalty. It is merely an intermediate process to attract new customers. Relationship marketing has been emphasized since the last two decades. Some researchers also find that the prime cost of obtaining new customers is five times than retaining original customers (Kotler P, 2000)

H1D: Place/logistics has a significant impact on customer satisfaction.

Convenient place and location are the important matter for the Customer Satisfaction. Convenient place and logistic support always attracts Customers. The quality and expectations of service and products are not the only factors to influence customer satisfaction. Managers and researchers alike have recognized that store environment and location also an important marketing tool and quality inferences influence consumer's purchase decisions (Sherowski, 1983; Darden and Schwinghammer, 1985; Olshavsky, 1985). Furthermore, research has found that store image influences consumers' perceptions of quality, value and willingness to buy (e.g., Dodds, Monroe and Grewal, 1991). Bitner (1992) suggested that consumers perceive their environments holistically and that it is "the total configuration of stimuli (in the environment) that determines ones (sic) response to the environment". A key role that store environment plays is to provide informational cues to customers about merchandise and service quality (Gardner and Siomkos 1985; Zeithaml 1988). Merchandise quality and service quality have been identified as critical components in the consumer's decision-making process (Dodds et al., 1991; Kerin, Howard, and Jain, 1992).

H2: Technology has a significant impact on Marketing Mix

At present Technology plays a vital role in Marketing. In Digital Marketing implementation technology directly involved in Marketing Mix. Technology can be defined broadly as "know-how," more specifically (with respect to a firm), as the information required to

produce and/or sell a product or service. Though technology is typically an exogenous variable in classical economic theory, the definition offered here reflects the emerging tradition within economics of viewing technology, in general, as that which changes the firm's production function (Mansfield 1966) and, in particular, as the stock of relevant knowledge that allows new techniques to be derived (Nelson, Peck, and Kalachek 1967). Three components, or sources, of know-how can be identified: product technology (the set of ideas embodied in the product), process technology (the set of ideas involved in the manufacture of the product or the steps necessary to combine new materials to produce a finished product), and management technology (the set of management procedures associated with selling the product and administration of the business unit).

H3: Technology has a significant impact on customer satisfaction

Customer Satisfaction could be easily measured by the Technology in Digital Marketing. Technology has added a new dimension in Customer satisfaction. Technology is profoundly changing the nature of services and the ways in which firms interact with their customers. The technology presents for firms to develop new services, and provide better, more efficient services to customers as well as the paradoxes and dark side of technology and services. Customers still demand quality service no matter how the firm chooses to structure the relationship. It is incumbent upon firms to develop technology-based services that can provide the same high level of service that customers expect from interpersonal service providers. (Mary Jo Bitner, 2001)

H4: Government has a significant impact on customer satisfaction and Marketing Mix

Government has the vital role in Marketing field. For Marketing Mix Product, Price, Promotion and logistic fields government rules, Policies and Tax can play huge contribution in Marketing and Customer Satisfaction.

The National Building Code implementation is major contribution and influence for the customer and Housing industry. The purpose of the Code is to establish minimum standards for design, construction, quality of materials, use and occupancy, location and maintenance of buildings within Bangladesh in order to safeguard, within achievable limits, life, limb, health, property and public welfare.

H5: Building Process has a significant impact on customer satisfaction and Marketing Mix

Building Process and Technology has the vital role in Marketing and Customer Satisfaction field. For Marketing Mix Product, Price, Promotion and logistic fields are related according to the Building Construction, Architectural design, Location, Price etc.

Customer Satisfaction has a vital role in Building Process. It is usually accepted that the customer (client) plays an important role in many industries, especially in-service business. As noted by Boyd and Chinyio (2006) for construction industry, clients are the reason that industry exist, hence the industry should try to understand clients' need and fulfill clients' satisfaction. What they focus on is a better engagement between the industry and its clients. On the other hand, empirical analyses on the satisfaction of facility management service (FMS) have traditionally focused on the service remuneration or the competitive position of

the facilities management (FM) supplier, whereas neglecting the unique needs of its customer (Shaw and Haynes, 2004). This may lead FM in danger of becoming simply a commodity service bought at the lowest price from a range of non-differentiated suppliers (Loch, 2000). As Shaw and Haynes (2004) argue, FM should develop models that are more sensitive to the needs of the customer and support the customer in meeting their core objectives. Customer satisfaction and loyalty, as an effect of high quality, provides long-term survival and success (Robledo, 2001).

Marketing Mix impact on Building process in different ways as marketing mix affect to the customer buying decision making process. A real estate agency is actually a service business, So the product (building materials, apartment, flat etc.) is the service that provided in Real Estate Industry. Pricing strategies are just as important when selling housing units & other building materials. In housing & real estate Place or positioning is very important as this is the location where the product or service is made available to the customer. Promotion is important to remember, have to enter digital marketing, have to make a mix of online display ads, and have to do more social media marketing.

Research Methodology

The research objectives or hypotheses that are based on the research problem or question(s) considered above will indicate the reader what exactly the researcher intends or wants to investigate. This section offers the researcher the opportunity to explain how the research will be carried out. The research methodology is the strategy of investigation, which is about the whole dissertation or thesis from the beginning to the end including how the research objectives have been founded from the research problem, how the literature review has been carried out, pilot studies, data collection, analytical methods, and the process of developing findings and conclusions (Farrell, 2011).

Population:

The targeted population for this study is all real estate developers, investors, Customers, manufacturers. We have selected the Population of the Capital Dhaka City. The population of this city is 17.598 million (2015 estimate, the World fact book,2016). Dhaka is the fast growing mega -city in the world.

Sample and Sampling Procedures:

For this study sample would be a small delegate portion of a target population. In this study the survey should be conducted in Dhaka city. The population is 17.598 million. (2015 estimate, the World Fact Book,2016). The sample Size: 380 (Sample Size Determination Using Krejcie and Morgan, 1970) This study will be conducted with a deductive approach and would be follow Quantitative Method (Positive Paradigm). Research would follow convenience sampling method.

Instrument Design:

For this study primary and secondary both sources of data should use. Through literature review, discussion with industry experts and field survey with open ended questionnaire we have to prepare. After several round revisions the total number of attributes should be

considered for designing final questionnaire. To test the reliability of the questionnaire a pilot survey should be used. To test the internal consistency, we should apply the Cronbach's Alpha reliability analysis.

According to Chandran (2004), Questionnaires provide a largest part of data normalization and execution of simplified information between any population. It's beneficial in a descriptive study where there is need to quickly and easily get information from people in a gentle way. They provide flexibility at the creation phase in deciding how questions were processed. Secondary data would gather through analysis of literature on trends and effects of Marketing mix.

The questionnaires contained of close ended questions most of which are prepared in matrix format with various dependable scales specified. Where necessary, open ended questions were used to allow the respondent clarify and state the answer in details. The questionnaires would physically deliver to respondents who were informed on the objective of the study and allowed to ask any question they felt mandatory before filling the questionnaire. The questionnaires should leave for conclusion for about two weeks after which we could collect the completed questionnaires.

2. DATA COLLECTION:

For this study data should be collected through a survey conducted in the major areas of Dhaka using a detailed structured self-administered questionnaire. The respondents were asked about different attributes of the research study. The study involved the use of questionnaires because questionnaires are not only convenient but also effective in the collection of data. For the purposes of this study, questionnaires were self-administered and collected after a few days. The types of questions included both open and closed ended. Closed ended questions should use to ensure that the given answers were relevant. The questions should phrase clearly in order to make clear dimensions along which respondents were to be analyzed. The questionnaires should administer on the basis of drop and pick later as per the agreement that the researcher made with the respondents.

Data Analysis Method:

After collection of data Exploratory Factor Analysis (EFA) should apply using Principle Components Analysis (PCA) as method of convergence and Kaiser as method of normalization. The CFA (Confirmatory factor Analysis) should conducted to test the model with factors identified through EFA. All data should analyze using PLS-SEM, techniques using smart PLS. and finally report should produce based on the analyzed data.

The field data should clean by checking for any lost or wrong data. After completing data cleaning work, the quantitative data have to coded and entered in the computer for analysis using PLS-SEM, techniques using smart PLS. The quantitative data obtained from the questionnaires should analyzed using descriptive statistics such as frequency counts and percentages. The results of the data analysis should present using frequency distribution tables, bar graphs and charts according to the objectives and research questions.

3. CONCLUSION & IMPLICATIONS

In recent decades, the demand for affordable housing has been increasing over the world until today. Bangladesh is the world's 8th-most populous country. Affordable housing is very challenging due to high construction price & high rate of building materials. To keep up with the rapid growth of modern technology & development of insubstantial, cost effective & enduring materials for future construction, people have to stop the use & production of conventional bricks which damages the agricultural land, emits greenhouse gases and also threaten the food security of the country. Have to grow more awareness regarding the new alternate housing & building materials through Marketing Mix and should get the feedback from valued customers.

This research would help to know the customers satisfaction & dissatisfactions causes of the use of these alternative building materials which would help to solve the issues of affordable housing problem and also help to develop the housing and real estate business, developers, stack holders, policymakers and government in Bangladesh. There is not that much research have done regarding marketing mix towards customer satisfaction with mediating & moderating effects of technology, government & building process in real estate industry in Bangladesh. As developed a conceptual framework, there is a huge opportunity for empirical research on this field with new variables as well. The knowledge from this study would help others to go for further research in housing & real estate sector and help to enhance their knowledge and contribute to the society.

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