Affecting of Marketing Mix to Decision Making of Customer on Cement Products in Surin Province, Thailand

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ABSTRACT : *The objectives of this research were 1) to study the relationship between marketing mix and decision making 2) to create a predictive equation for the decision making of customer on cement products in Surin province. The sample was 400 customers in Surin province, Thailand. The sample was selected by simple random sampling using questionnaires as a data collection tool. Statistics that use Pearson correlation coefficients and predictive equations created by multiple regression analysis found that the marketing mix consists of product, price, place and promotions and decision making are middle positively correlated by the coefficient of 0.505-0.752.Promotion and decision making have the highest positive correlation coefficient of 0.752. And product, price, place and promotions together predicted 71.6 percent of decision making with the statistically significant of 0.01.*

KEYWORDS *-Marketing Mix, Decision Making, Cement Product*

I. INTRODUCTION

The current industrial business trend in 2021-2023 is construction business has a recovery direction with overall construction investment expected to grow by 4.5-5.0% in 2021 and 5.0-5.5% in 2022-2023. This trend was driven by the government's large-scale infrastructure investment and the gradual economic recovery that support the construction of residential and commercial buildings from the COVID-19 situation. The adaptation approach of most middle and small contractors is family-run with limited funds and therefore has lower bargaining power so they would subcontract from larger contractors, especially large government projects and also looking for ways to increase income from building repairs and renovations. Overall construction material prices are expected to increase slightly during a period of economic and investment recovery combined with major contractors have bargaining power over manufacturer, the price increase is mainly driven by the amount of public construction work project, which mainly focused on the use of large quantities of cement and concrete materials. Meanwhile, steel prices will continue to decline in line with world market prices from world stocks that remain high [1]. This is because Surin is a less visited province that has received continuous attention in natural tourism, arts, culture and lifestyle of local people. The current situation is Surin has an economic structure with the expansion rate of 1.9 percent and entrepreneurs see the opportunity to grow in the modern construction materials business, which can be seen from the economic and social structure of the province, and real estate (Construction) with the launching of more than 28 new housing projects, condominiums, and building projects [2] As a result, the construction material business manufacture cement-based products used in decorative designs such as Roman cornices, various types of Roman columns, ancient Greek-Roman architecture pieces, modern style cornices, stucco cornices, readymade cornices, exterior cornices, window cornices, cement cornices, readymade cornices for round columns, slender columns, thick columns, square columns from the ancient Greek architecture, according to the design that needs to be manufacture to be used in contemporary works and various construction projects, which can be viewed from the 2021 home decor trends. One-story modern house is design according to the current economic situation where there is demand for

housing to support the aging society although sometimes affected by economic, political, social, environmental and business competitors resulting in the market for cement-based products continues to be competitive. For the business survival, the production of cement-based products in terms of product development, design, quality, production process, and the study of market demand in order to meet the needs of consumers has to improve and increase the process efficiency of cement-based products which requires good planning and management. In order to provide consumers information and decision regarding cement-based products purchase, researchers are interested in studying the marketing mix factors that affect the decision to purchase cement-based products to develop and modernize cement-based products, cornice moldings, Roman columns that contain a mixture of cement business in Surin province and to save time in the production of Roman columns while meet the needs of consumers. The results of the study will be useful to cement-based product entrepreneurs as well as consumers and used as guideline for marketing planning, determine the scope of product selection, as well as improve business efficiency and meet the needs of consumers in the future.

II.   OBJECTIVES/RESEARCH QUESTIONS

This research paper examines 1) to study the relationship between marketing mix and decision making2) to create a predictive equation for the decision making of customer on cement products in Surin province, Thailand.
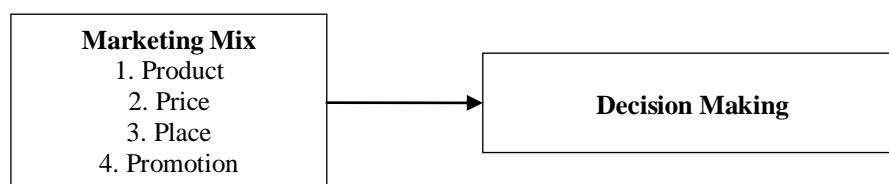

Figure 1 Conceptual framework

III.   METHODOLOGY

This study is quantitative research that provides broad, empirical data that can be applied to all areas to check with the theoretical framework set forth by the researcher based on the principles, concepts and theories to get the findings on key issues. The researcher collected data using a questionnaire with customer on cement products in surin province, Thailand. We determine sample sizes that are 400 by using formula for non-population. The tools of research by questionnaire, created a questionnaire based on the operational definition that the developer of the instrumentation and has been improved to fit the research. A questionnaire have been developed to the experts to examine the content validity of the question from the study of related theoretical and literary concepts. After the questionnaire matched with the characteristics of the research objectives to be measured, content validity and suitability and cover the content that the researcher wants to study. The reliability of the questionnaire war tested by 30 participants. This is not a research sample. The reliability of the questionnaire was 0.939 with the α value of 0.70 and above was considered to be the confidence question [3]

Data analysis: the researcher took the data from the distribution of questionnaires. All of them were analyzed and calculated by means of Pearson Correlation coefficients and predictive equations created bymultiple regression analysis.

IV.   RESULTS AND DISCUSSION

The findings indicate the researcher divided the topic into two parts, with the details as follows.
1. Average data of variables; marketing mix and decision making.

Table 1 Average data of Marketing Mix

Marketing Mix	$\overline{\text{X}}$	S.D.	Mean
Product	4.442	0.413	Highest
Price	4.395	0.419	Highest
Place	4.382	0.427	Highest
Promotion	4.400	0.438	Highest
Total	**4.404**	**0.351**	**Highest**

From the table 1 of the opinionlevel of marketing mix, the overall result was at a highest level ($\bar{x}$= 4.404, SD = 0.351) found that the marketing mix had a highest level of product opinion ($\bar{x}$ = 4.442, SD = 0.413), followed by the promotion at a highest level ($\bar{x}$= 4.400, SD = 0.438), followed by the price highest level ($\bar{x}$= 4.395, SD = 0.419), and the place highest level ($\bar{x}$= 4.382, SD = 0.427), respectively.

Table 2 Average data of Decision Making

Decision Making	$\overline{X}$	S.D.	Mean
Problem Recognition	4.436	0.457	Highest
Information Search	4.444	0.461	Highest
Evaluation of Alternatives	4.400	0.413	Highest
Purchase Decision	4.409	0.470	Highest
Post purchase Behavior	4.463	0.475	Highest
Total	**4.428**	**0.375**	**Highest**

From the table 2 of the opinion level of decision making, the overall study was at a highest level ($\bar{x}$= 4.428, SD = 0.375). It was found that the post purchase behavior had a highest level ($\bar{x}$= 4.463, SD = 0.475), followed by the information search at the highest level ($\bar{x}$= 4.444, SD = 0.461), followed by the problem recognition at a highest level ($\bar{x}$= 4.436, SD = 0.457),followed by the purchase decision at a highest level ($\bar{x}$= 4.409, SD = 0.470) and the evaluation of alternatives was at a highest level ($\bar{x}$= 4.400, SD = 0.413), respectively.

2. The findings relationship between marketing mix consists of product, price, place, promotion and decision makingand predictive equations decision making with product, price, place and promotion factor using Multiple Regression Analysis.

Table 3 Descriptive data and Pearson Correlations among all variables in this study

Variable	Decision Making	Product	Price	Place	Promotion
Decision Making	1.000	0.661**	0.653**	0.699**	0.752**
Product		1.000	0.606**	0.547**	0.505**
Price			1.000	0.546**	0.607**
Place				1.000	0.629**
Promotion					1.000
Mean	4.428	4.395	4.382	4.400	4.442
Standard deviation	0.375	0.419	0.427	0.438	0.413

**p<.001 (n=400)

From the table 3 shows that the factors affecting the decision making have statistically significant relationship at the 0.01level with the correlation coefficient between 0.505-0.752. The variable with the highest correlation coefficient was decision making and promotion with the correlation coefficient of 0.752. The variable with the lowest correlation coefficient was product and promotion with the correlation coefficient of 0.505.

Table 4Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.846[a]	.716	.713	.201	1.958

a. Predictors: (Constant), product, price, place, promotion
b. Dependent Variable: decision making

From the table 4 the product, price, place and promotion have effective 0.716 or 71.6%. It is 0.284 or 28.4% effective of other factors.

Table 5 Compare Decision Making

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.

	B	Std. Error	Beta		
(Constant)	0.489	0.128		3.835	.000**
Product	0.227	0.032	0.250	6.998	.000**
Price	0.115	0.034	0.129	3.403	.001**
Place	0.215	0.033	0.245	6.608	.000**
Promotion	0.336	0.032	0.393	10.386	.000**

a. Dependent Variable: decision making
**p<.001 (n=400)

From the table 5 compare decision making of product, price, place and promotion. It is found that the effective as promotion have the highest influence, have statistically significant relationship at the 0.01level
Predict equation in raw score form
$y = 0.489 + 0.227(\text{Product}) + 0.115(\text{Price}) + 0.215(\text{Place}) + 0.336(\text{Promotion})$

V.   CONCLUSION

From the study on the affecting of marketing mix to decision making of customer on cement products in surin province, Thailand.The result found that the factors affecting the decision making have statistically significant relationship at the 0.01level with the correlation coefficient between 0.505-0.752. This may be due to the marketing mix which is considered a factor that stimulates users to demand products and service. Can be said a marketing stimulus is an incentive to purchase a product or service [4]. Consistent with research ofPiyawan et al. (2023) to study demographic characteristics and marketing mix factors affecting purchasing decision behaviors of dietary supplement products in Bangkok. It also found that the marketing mix factors, i.e., product, price, distribution channel, marketing promotion, service personnel, service process, and physical feature were related to decision making behavior in purchasing dietary supplements in Bangkok at a significance level of 0.05.[5]

The affecting of marketing mix to decision making of customer on cement products in Surin province, Thailand. It was found that the marketing mix has influenced decision making of customer. This is because customers decide to buy products they must learning, search for information, which evaluates that alternative. Customers will take into account or give importance to product, setting the right selling price, ease of use,distinction in the design of the service model and marketing promotion such as giving discounts for old customers. [5]Consistent with the study ofSiemieniako et al. (2011) that said, decision making is how a person should behave for maximum effect [6],and Ketwalee et al.(2021) Study to the development of marketing mix based on customers' needs for ceramics entrepreneurs in upper north Thailand, found that ceramics entrepreneurs should provide made-to-order ceramic products to meet consumers' needs focusing on the use and function of household items. Tradeshow and exhibitions can be effective marketing strategies to motivate consumers' buying decision. [7]

VI.   Acknowledgements

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