

Role of Demographic Factors and Stakeholders in Determining the Marketing Strategies of Pharmaceutical Companies in Thailand

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ABSTRACT

Marketing strategies have got much attention in the recent two decades both in domestic and international market. The growth and success of business firms are directly associated to the marketing strategies. However, a range of factors are available having their influence on the overall marketing planning and strategies defined by the pharmaceutical industry. This study aims to analyze the impact of various demographic factors along with the stakeholders on the marketing strategies of pharmaceutical companies in Thailand. This research objective was addressed through data collected from a sample of 463 respondents in the local market of Thailand. For the demographic factors, family profile, gender, age and level of income were selected. Whereas, stakeholders cover the title of 3Ps (payer, patient, and physician), and regulators. Our study has applied the descriptive statistics at first to provide an overview about the collected responses in terms of mean score, standard deviation from the mean, percentiles, kurtosis and skewness respectively. In the next step, pairwise correlation is calculated and presented with the relative p-values of each of the coefficient of correlation. Lastly, results have been shown their regression coefficients, determining the influence of demographic factors, and stakeholders on marketing strategies of pharmaceutical industry. Results have shown that there is a significant and positive impact of family profile, gender and level

of income on marketing strategies. However, significant and negative impact of patient as among the key stakeholders is found. Additionally, payer, physician have also shown a positive influence on marketing strategies, but no impact from regulators is observed under full sample outcomes. Based on the study findings, it is suggested that pharma companies need to consider the stated results where significant and positive influence from majority of the variables is observed except for the physicians. However, our study is limited in some way. First, a traditional regression model was applied and results were discussed. Second, only two dimension of determinants of marketing strategies were observed; demographic factors and stakeholders. Third, study has a limited regional implications based on the Thailand economy. It is highly suggested that future research work would cover these limitations to cover the literature gap.

Keywords: marketing strategies, consumer, leveraging, stakeholders

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INTRODUCTION AND BACKGROUND

When it is time to market their product, several challenges are faced by pharmaceutical companies [1-4]. Observing for false claim, pharmaceutical industry is vastly planned for attracting litigation attorneys. In order to attract the attention of patients as well as recommended surgeons, there are several pharmaceutical marketing strategies [5-7]. Various schemes are identified in the literature to cover the title of factors affecting the marketing strategies of pharmaceutical industry. It is frequently believed that leading drug companies are spending more on marketing than on development of their products and research targets [8]. A range of pharmaceutical marketing philosophies are occasionally believed to be a current phenomenon in the modern economy. To treat illness, drug companies have intensely developed their capacities and upgraded themselves to meet the market needs and latest issues in the medical and health fields [9].

To represent a market product, marketing related actions include all the activities implemented by different personalities or administrations. [10]. In pharmaceutical market, the customer does not purchase anything by himself without the advice of her/his surgeon. Therefore, we can say that the pharmaceutical marketing is an unintended marketing [11]. For example, in females, the cancer is more common whereas ulcer is common in males. However, there is no open campaign on the media to directly target these patients for selling a particular medical product.

various factors are examined in the literature which are affecting the marketing strategies of pharmaceutical

industry. For instance, Gender is an essential demographic characteristic with its significant influence on the value of marketing related activities [12]. Meanwhile, the age factor is a second component which needs serious attention by the pharmaceutical companies to develop a well-designed marketing plan [13, 14]. To develop a good marketing plan through research efforts for the determination of predicting demand for an individual class of prescription product, age is really a significant role player. It is found that usually for pharmaceutical industry, the age group between zero to one and 60-79 is very essential [15]. In addition, income is similarly an essential factor for the marketing plans of pharmaceutical companies for their current and potential customers. However, it is also believed that those who have limited of very low paying capacity for the health related issues like pains, aches and cold normally prefers self-medication.

In addition, another factor which can affect the marketing plan of a pharma company is known as the choice of a physician [16-18]. Therefore, for recommendation drugs, surgeons also establishing a market. The prescribing behaviors of the physicians significantly influence the consumers purchase pattern in the marketplace. However, for budgeting of publicity expenditures, the quantity of physicians in a given specialty is very important. Meanwhile, as they are expected to be less active than youngsters, pharma advertisers habitually ignore physicians over 65 years of age. Meanwhile, some other stakeholders in the pharma industry are the buyers, consumers, and regulators who are directly or indirectly impacting on the marketing strategies.[17] Our

study has intended to examine the influence of demographic factors as well as key stakeholders on the marketing strategies of pharmaceutical industry in the region of Thailand. [18] The overall study is structured as follows. Present section has provided some introductory material on the topic and key variables. Section two is covering the literature material. Section three has provided the overview of the research methods. Section four has provided the study results and discussion too. Last section has covered the conclusion of this research along with some future recommendations.

LITERATURE REVIEW

In Pharmaceutical business, marketing strategies are significantly playing their role in attracting more customers. For this purpose, some research studies have provided their theoretical and empirical investigation. Al-Areefi and Hassali [19] have empirically tested the relationship between the pharmaceutical marketing along with other factors for prescribing decisions in the region of Yemen. For testing this relationship, authors have conducted a semi-structure interview based on the critical incident method for encouraging the physicians while determining the newly marketed drugs. It is found that there are overall 223 critical incidents which are defined as major themes. Meanwhile, authors claim that the process of prescribing is a complex phenomenon which integrates different factors. Another study conducted by [6] have examined the pharmaceutical marketing in the Indian region and more specifically in the city of Bombay. They have claimed that range of studies for the pharmaceutical practices have called the attention regarding the self-medication and medicine experiments. Their paper highlights the prescribing medicines to the public in Bombay. Authors explains that pharmaceutical marketing is significantly determined by the level of prescription as defined the medical experts in the Indian economy. During the start of the last decade, Relman [20] has explored the relationship between the medical education and pharmaceutical marketing. In their study, [23] has explored the concepts of innovation and marketing in the pharma industry. For the better understanding, authors have divided their theoretical contribution in terms of innovation in the pharmaceutical industry under the process of discovery of the drugs and development, managing a portfolio in new drug development, patent expiry and market opportunities for the pharmaceutical marketing, peer to peer marketing, leveraging in social media for the pharmaceutical industry, marketing spending models, direct to consumer marketing and advertising of pharma products, and examining the value chain in pharmaceutical industry.

However, as per the detailed investigation of the literature, it is observed that there is a significant gap to review both in theoretical and empirical perspective for dealing with the marketing strategies and based on the demographic factors and key stakeholders in the marketplace. Hence, our study

has filled this literature gap both in theoretical and empirical perspective.

RESEARCH METHODS

This study has used a sample of 453 respondents from the local community of Thailand as collected over a time of 3 months approximately. To collect the data, a survey questionnaire was conducted, covering the demographic factors, and stakeholders and key independent variables of the study. These variables were measured on the 6 points likert scale covering 1= no impact and 6=high impact for the marketing strategies of pharmaceutical companies as working in Thailand. The collected data was thoroughly checked to deal with the missing observations. Initially, our study has applied the descriptive measures like mean trend, standard deviation from the mean, percentiles, kurtosis and skewness respectively. A range of literature work is found covering the descriptive scores for the better understanding of the data being collected. Notables as found in the research contribution by [22-30]. After applying the descriptive statistics, our study has provided the correlation matrix, covering the level of association along with the significance level. Various authors have provided the evidence for using the correlation matrix in both primary and secondary data [31, 32]. For examining the influence of both demographic and key stakeholders on marketing strategies, lastly, this research has applied regression technique for which results are discussed in the subsequent section.

RESULTS

Given results for this study are covering the descriptive scores of both demographic factors, and key stakeholders having their influence on pharmaceutical marketing in Thailand. For better outlook, respondents are given six points scaling option to provide their valuable response. As per the findings in Descriptive statistics table, overall collected responses were 463 with no missing data. For the mean values, all variables are predicting a mean score of above 3 which specify an above midpoint responses. It is found that highest mean value is reflected by family profile, which is 3.68, followed by age factor; 3.65, and at third, the factor of patient as key stakeholder in pharma industry is 3.52. However the rest of the variables are also showing a mean score of above 3 which reflects overall moderate responses from the key individual as targeted for this research. For the main dependent variable, marketing strategies is selected where the mean trend is 3.43. For the dispersion trend, descriptive table has that highest deviation is provided by gender factor which is 1.775 where age is providing 2nd highest value for the standard deviation in the mean value. Overall study has presented the P1 and P99 which are showing the two key percentile to understand the descriptive nature in a better way. Lastly, Skewness and kurtosis are accepted which are very well measures to analyze the normality of the data points in the collected responses from the targeted respondents.

TABLE 1: Descriptive Statistics

VARIABLES	Obs	Mean	Std.Dev.	Min	Max	p1	p99	Skew.	Kurt.
MARKETING~T	463	3.438	1.748	1	6	1	6	.029	1.671
FAMILY PROFILE	463	3.68	1.71	1	6	1	6	-.034	1.73
GENDER	463	3.566	1.775	1	6	1	6	-.089	1.625
AGE	463	3.65	1.748	1	6	1	6	-.071	1.674
LEVELOFINC~E	463	3.384	1.659	1	6	1	6	.079	1.788
PAYER	463	3.471	1.668	1	6	1	6	.036	1.777
PATIENT	463	3.521	1.72	1	6	1	6	-.025	1.709
PHYSICIAN	463	3.484	1.696	1	6	1	6	.048	1.759
REGULATOR	463	3.354	1.7	1	6	1	6	.144	1.744

Table 2 has shown the pairwise correlation matrix, covering the demographic factors, stakeholders in pharma industry and marketing strategies as main dependent variable. For the correlation between marketing strategies and family profile, value is 0.43, showing low and positive association which is insignificant. The association between marketing strategies and gender factor relationship is 30.4 which indicates low but insignificantly positive relationship between them. Meanwhile the relationship between marketing strategy and age relationship is very low and insignificant as per the results. Besides, as per the stated results under T-2 are showing that there is insignificant relationship between the marketing strategies and all the

explanatory variables. For the family profile as among the key demographic factors, a positive, weak but highly significant relationship is found with the payer of the pharmaceutical industry. It means that family profile and payers for the medicines are directly linked, but their relationship is not very much high. Additionally, it is accepted that there is no significant relationship between any of the explanatory and dependent variable, hence correlation is not accepted in terms of statistical inference. Meanwhile, this trend reflected that there is no issue for the higher interdependency between the variables, hence researchers may move on for the further investigation as observed under regression tables of this study.

TABLE 2: Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1)MARKETINGSTRATE	1.000								
(2) FAMILY PROFILE	0.043	1.000							
	0.358								
(3) GENDER	0.304	0.033	1.000						
	0.939	0.484							
(4) AGE	0.031	-0.020	-0.008	1.000					
	0.512	0.664	0.865						
(5) LEVELOFINCOME	0.054	-0.014	-0.032	0.008	1.000				
	0.242	0.757	0.490	0.859					
(6) PAYER	0.031	0.042***	0.040	-0.069	-0.058	1.000			
	0.499	0.0071	0.391	0.138	0.215				
(7) PATIENT	0.032	0.040	0.002	-0.042	-0.031	-0.032	1.000		
	0.493	0.391	0.968	0.364	0.508	0.492			
(8) PHYSICIAN	-0.083	-0.065	0.017	0.012	-0.085	-0.006	-0.009	1.000	
	0.073	0.166	0.708	0.796	0.066	0.902	0.841		
(9) REGULATOR	0.056	0.043	0.054	-0.014	0.004	-0.005	-0.011	-0.102	1.000
	0.228	0.358	0.247	0.761	0.935	0.919	0.820	0.029	

Figure 1 has shown the conceptual relationship between the key demographic factors like family profile, gender, age, level of income, and stakeholders in the pharmaceutical industry like payers, patients, physicians, and regulators respectively with marketing strategies. It is accepted that all these factors are main explanatory variable entitled as independent variables too, while marketing strategies is

main dependent variable of the study. For reflecting the causal relationship which may indicate whether the change in set of independent variables is affecting the main dependent variable, our study has provided the results through regression coefficients, standard error and individual p-values along with t-score as well.

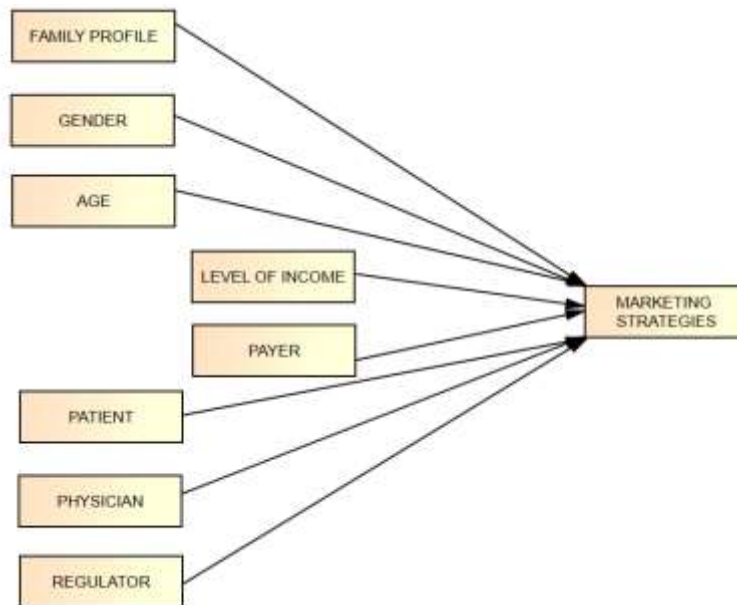


FIGURE 1: Impact of Demographic Factors and Stakeholders on Marketing Strategies in Pharmaceutical Industry
Source: Authors

Table 3 has shown the evidence for the impact of family profile, gender, age and level of income with the payer, patient, physician and regulator on marketing strategy of pharmaceutical industry of Thailand. For individual coefficients, results are justified where the coefficients are significant. For instance, family profile is reflecting a coefficient of 0.039 and standard error of 0.005. It means that one unit increase in family profile is inflect a positive indication for the family profile. This would say that with the more family profile direct influence on marketing strategies in pharma industry of Thailand is recorded. This coefficient has provided the argument that there is a significant and positive influence of family profile on overall marketing strategies of pharmaceutical companies in Thailand.

For the 2nd demographic factors, results are also provided under T-3 where the coefficient of 0.581 indicates a positive impact on marketing strategies. It would explain that gender factor of community members in the local market of Thailand is a direct influencer for the marketing strategies in pharma industry. This coefficient is also significant at 1 percent, providing the evidence that researchers are 99 percent confident to say that there is a significant and positive influence of gender factor on overall marketing planning as conducted by pharmaceutical companies. Contrary to this, the influence of age on marketing strategies is positively insignificant, hence it is accepted that no influence of age on marketing strategies is found. Meanwhile, level of income is also positively affecting the marketing strategies in Thailand as its effect is significant at 5 percent. This fact would justify that with the one unit increase in the level of income of local community, positive influence on marketing related planning will be observed.

After discussing the influence of various demographic factors, next step is to provide the detailed discussion about the relationship between key stakeholders and their impact on marketing strategies. For this purpose, our study has considered the stakeholders under the title of payer, patient, physician, and regulators, etc. The influence from the first stakeholder (payer) on marketing strategies is .841, implying that there is a significant and positive impact of payer on marketing strategies.

In addition, the impact of patient on marketing strategies is -0.035 which shows a negative impact. This influence is further observed as significant at 1 percent chance of error, which means that researchers are 99 percent confident to say that there is an adverse influence of key stakeholders like patient on marketing strategies of pharmaceutical industry of Thailand. The impact of physician on marketing strategy is 0.074 meaning that there is a direct and positive impact by these stakeholders. This outcome specifies that physicians are among those stakeholders for the pharma industry who can directly influence the marketing related planning. However, in the end we have found no impact of regulators on the marketing strategies of pharma industry, although their influence is positive but insignificant at 10 percent chance of error. For the model fitness, F-test is showing the value of 9.56 which reflects that statistically the relationship between demographic factors, stakeholders and marketing strategies of pharma industry is fit where the significance level is 1 percent. Similarly, R² reflects the average change in the main dependent variable due to all the explanatory variables in the model, which is 17.50 percent, reflecting that there is low level of variation in the dependent variable; marketing strategies due to all the independent variables entitled as demographic factors and stakeholders.

TABLE 3: Linear regression

MARKETINGSTRATEGIES	Coef.	St.Err	t-value	p-value	Sig.
FAMILY PROFILE	0.039	0.005	7.80	0.000	***
GENDER	0.581	0.046	12.63	0.000	***
AGE	0.837	0.047	0.78	0.434	
LEVELOFINCOME	0.055	0.030	1.83	0.045	**
PAYER	0.841	0.406	2.07	0.015	**
PATIENT	-0.035	0.015	-2.33	0.000	***
PHYSICIAN	0.074	0.039	1.89	0.083	*
REGULATOR	0.049	0.048	1.02	0.306	
_CONS	2.802	0.506	5.54	0.000	***
Mean dependent var	3.438	SD dependent var	1.748		
R-squared	.1750	Number of obs.	463.000		
F-test	9.56	Prob > F	0.000		
Akaike crit. (AIC)	1840.462	Bayesian crit. (BIC)	1877.701		

*** p<0.01, ** p<0.05, * p<0.1

M-2 reflects the coefficients with their significance level for the marketing strategies for the better understanding of the readers.

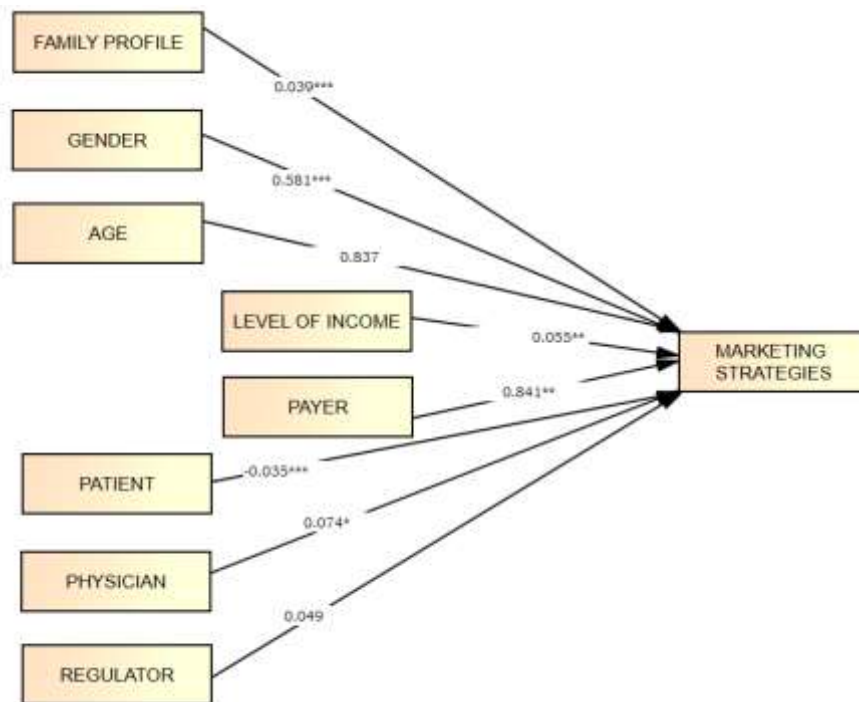


FIGURE 2: Regression Coefficients and Significance level

CONCLUSION AND FUTURE DIRECTION

Marketing strategies are accepted as a need of time in the modern world where business firms are working for their ultimate survival. In health care sector, pharmaceutical firms are serving through range of products and medical equipment. However, there is no direct marketing campaign or the activities which are observed on the print or social media. However, their firms are continuously working on different techniques to attract more and more customers. A set of factors are directly and indirectly affecting the marketing strategies of pharmaceutical firms in different economy. Our study has provided a new insight while

analyzing the demographic factors like age, income, family profile, and gender along with the key stakeholders for exploring the trends in pharmaceutical industry of Thailand. The study has provided a good output with the help of data collected from different respondents through a survey technique. It is observed that from the demographic factors, there is a significant and positive influence of family profile, gender, and level of income on the overall marketing strategy of pharma companies in Thailand. meanwhile, the influence from the key stakeholders like patient, payer, and physician on marketing strategies is significant. More specifically it is observed that patients as a key stakeholder

are negatively impacting on the marketing strategies. This study, thus providing a new insight for the factors that affect the marketing strategies of pharmaceutical industry of Thailand. Such output may provide a good understanding for the marketing managers in such companies for developing some fruitful decisions to get more market share. However, our research is limited in the following ways:

1. This study has implemented the traditional model named as descriptive, correlation, and regression to examine the relationship between demographic factors, key stakeholders and marketing strategies of pharma industry.
 2. This study is conducted in the region of Thailand with limited research implications.
 3. Variety of other factors like patient context, image of pharma company physician factors which are determining the overall marketing strategies are missing
- Future studies are recommended to consider these factors for better implication and more generalization of the results.

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