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Purchasing Behavior and Marketing Mix Affecting Cloth Mask Purchasing Decision in Prevent COVID-19

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Abstract: Due to COVID-19 outbreak from late 2019 and Thailand being one of the countries affected early on by the virus, Thailand has been praised by other countries for its COVID-19 handling which results in low numbers of infection and deaths. The result has been achieved through government measures (security authority, Ministry of Public Health and other relevant authorities) and public cooperation strictly following the authorities' advices particularly regarding mask wearing. Masks can prevent the spread of COVID-19 up to 80%, and Thailand has the highest mask wearing rate in Asia and in the world. Thailand makes masks compulsory until medicines or vaccines are discovered. Hence, the market value of cloth masks in Thailand is approximately 50,000 million baht and may increase to 2 – 10 times more if marketers can deliver customer value - this is the importance of this research in addition to health benefits. The purpose of this research is to study (1) Covid-10 outbreak situation in Thailand, (2) preventative measures employed by the public considering advices issued by Ministry of Public Health and other relevant authorities, (3) consumer behaviors regarding cloth mask purchasing decisions, and (4) customers' opinions on priorities of marketing mix. Primary data and secondary data are collected for this research. Primary data is collected by survey method by asking sample group to complete 400 questionnaires and the information thereof is analysed by descriptive method.

The research finds that (1) Thailand ranked below 50th considering the numbers of the infected, deaths and recoveries, (2) emergency decree was issued for (i) a curfew between 22.00 – 4.00, gathering ban and false information ban, (ii) a lockdown including restricted use and access to buildings, (iii) state quarantine with cooperation from government departments and Ministry of Public Health, (iv) village health volunteers and delegation of power to each province's governor to impose other measures including alcohol sales ban, and (v) daily announcement from Center for COVID-19 Situation Administration (CCSA), (3) preventative measures practiced by the public are staying home to stop the spread for the nation, eating cooked food, using personal cutlery, social distancing, washing hands frequently and everyone wearing a mask at all times, (4) consumer behavior regarding cloth mask purchasing were (i) (what) buying both medical masks and cloth masks, (ii) (when) buying cloth masks when medical masks weren't available, (iii) (where) purchase were made online and open air market, (iv) (why) purchase were made to prevent COVID-19, (v) (who) purchase was made by oneself, (vi) (whom) purchases were also made for the household, (vii) (how) each purchase were for 2 masks, (viii) (how much) each purchase costed more than 100 baht, (ix) (how often) purchase decision making took less than 1 day, and (x) (how long) purchase was made every 2-3 days, and (5) customers' opinions towards marketing mix are low particularly where core, style and size of the product are concerned, and a similar trend is reflected in answers from open-end questions showing that masks allowing makeup application to be seen, masks infused with skincare and masks which can eliminate bad odor are desirable, while price, place and promotion are adjusted to align with product.

Index Terms - Purchasing Behavior, Consumer Behavior, Marketing Mix, Cloth Mask, Purchasing Decision.

I. INTRODUCTION

For this study secondary data has been collected. From the website of KSE the monthly stock prices for the sample firms are obtained from Jan 2010 to Dec 2014. And from the website of SBP the data for the macroeconomic variables are collected for the period of five years. The time series monthly data is collected on stock prices for sample firms and relative macroeconomic variables for the period of 5 years. The data collection period is ranging from January 2010 to Dec 2014. Monthly prices of KSE -100 Index is taken from yahoo finance. Coronavirus 2019 (COVID-19) first detected in a patient on 1 December 2019 did not cause much concern until it was reported by health authority in Wuhan, China that the number of infected patients rose to more than 180 on 12 December 2019 (Theera, 2019). All these patients were infected with the novel COVID-19. The number of infected cases was 266 at the end of 2019 and increased to 381 on 1 January 2020. Subsequently, the first patient outside China and the first patient of Thailand is found on 8 January 2020. World Health Organisation (WHO) declared Covid-10 as a global health emergency (WHO, 2020) on 30 January 2020 and its official name on 11 February 2020 (WHO, 2020). On 6 March 2020, there was an outbreak in Thailand from a pub in Thonglor and a boxing arena before the WHO declared COVID-19 outbreak as a pandemic on 11 March 2020. Thai government found Center for COVID-19 Situation Administration (CCSA) on 12 March 2020 and enacted an emergency decree under the Emergency Decree on Public Administration in Emergency Situation, B.E. 2548 from 26 March 2020 to 30 April 2020. In order to curb the spread of COVID-19, the government launched a campaign to encourage its citizens to eat only cooked food, use its own cutlery, wear a mask, wash hands frequently, practice social distancing, and stay home to curb the spread and prevent deaths as a collective national effort.

The global spread of the COVID-19 outbreak is a collective challenge that global citizens, including Thais, must overcome. Cooperation is one of the stop measures. In addition to emergency decree issued under the Emergency Decree on Public Administration in Emergency Situation, B.E. 2548, the public is urged to follow a guideline to: “wear a medical mask or a cloth mask at all times after leaving home as if a mask was another organ” from Ministry of Public Health and CCSA.

It appears that cloth masks are an effective preventative tool in suppressing the spread and infection of COVID-19, and it seems that the Covid-10 situation may last until medicine or vaccine is found. Such medicine or vaccine is predicted to be commercially available during the next 12 - 18 months. Thus, cloth masks are essential for covering everyone's face for at least the next 12 months which makes the value of its market in Thailand 53,281 million baht (the estimate is based on: 69.43 million population (Ministry of Interior, 2019) x 2 masks/person x 12 months x 35 baht/mask (this price is based on a mask made from muslin because of its ability to prevent COVID-19 better than other types of cloth rendering its price higher than others)).

The estimated value of cloth market above is minimum estimate on the basis that everyone goes through 2 cloth masks monthly, everyone uses only 1 mask daily (which should be more if used correctly because masks should be changed after coming into with bodily fluid whether it be a sneeze or a cough or being a crowded place), and COVID-19 situation ceases after the 12 months' period due to discovery of medicine or vaccine. However, the reality is that the period of 12 months is likely to be extended as it depends on the discovery of medicine or vaccine and its distribution may well extend the period to 18 - 24 months, and cloth masks can be different selling at higher price than 35 baht apiece; therefore, the real market value of cloth masks is likely to be 2 - 5 times higher than the estimate totaling 100,000 - 250,000 million baht. Professor Yong Poovorawan, MD states that wearing a cloth mask is wearing an accessory as a new normal practice. However, cloth mask and medical mask worn over an extended period or all day long by doctors and medical staff causes sores or ulcer on face, nose, nape and behind ears. Both of these cases can be a sizeable marketing opportunity for marketers and business owner of small, medium and large enterprises as this means the value of cloth market will increase significantly in accordance with the increased value that marketers can deliver to consumers.

As seen from the above-mentioned value estimates, profit generation or customer value creation by studying consumer behavior and consumers' opinion towards marketing mix to create value can help businesses increase market value, market share and profits easily. On the other hand, creating and delivering value to customers with masks can reduce the government funds required for COVID-19 prevention and medical bills substituted by government (1,000,000 baht per patient).

From an economic perspective, the economy would be able to recover much quicker without the spread of COVID-19 because businesses can resume to operate normally. The government won't have to spend its funds on COVID-19 measures and will be able to receive tax revenue from operating businesses. This can be achieved if every Thai person wears a cloth mask every day when coming into contact with others to help oneself, the nation and the economy recover at low cost without any technology involved - this is the source and the importance of this research.

II. CONCEPTUAL FRAMEWORK

Consumer behavior is behavior that consumers demonstrate while searching, buying, using and evaluating for consumption of products and services by using existing resources of what, why, when, how, where and how often to buy in acquiring and using products and services and it is an act by any person for personal consumption, not for use in production process or any further processing. In answering consumers' needs over a period relates to emotions and management; therefore, consumer behavior reflects 5 components: totality of decisions, consumption, offering, decision-making units, and time. Consumer behavior is a basic psychological process with 5 stages hidden in consumer behavior model. The 3 black boxes are (1) stimuli, marketing stimuli using 4 marketing tools, altogether is marketing mix or 4Ps and other stimuli, e.g., economic conditions, physiology, society, culture, politics, law, technology, natural disaster, epidemic, etc., (2) different characteristics of purchasers or consumers molded by culture, society, personality, and psychology which result in different reaction to stimuli and the buying decision process starts once the stimuli are administered, and (3) reaction which is purchasing behavior.



Figure 1: Maslow's Hierarchy of Needs

Marketing mix is a stimulus which makes consumers more aware of their needs. Marketers employ marketing mix as tactic tools for strategy and delivering customer value at the excellent level, delight, and such marketing mix is used together to cater to the needs of target market. Marketing mix comprises 4 tools or 4Ps as shown below.

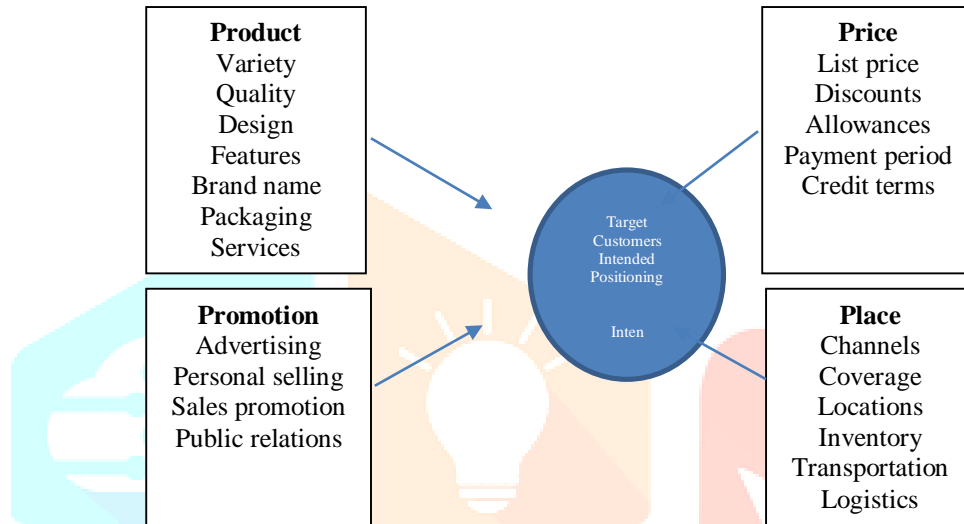


Figure 2: The Four Ps of the Marketing Mix
Source: Kotler and Armstrong, p76

(1) Product is delivering customer value to satisfy customer's need with goods and service. The greatest achievement of a brand is the successfulness of products focused on delivering high customer value and innovation at all times which keeps the brand alive. (Kotler & Keller, 2016). Product differentiation and design are competitive advantages. (2) Price is the amount of money purchasers have to pay sellers to acquire products and services. The easy access to price by consumers and middle man pressures the seller to gain easy access to price and to set the price lower in digital world (Kotler & Keller 2012). The decision on price setting is complex as cost is expenditure or cost of buyer, demand, competition, laws and desired profit. (3) Place of sales is the distribution from product source to place of consumption. A successful value delivery is a creation to successfully satisfy wants by successful value delivery particular in e-commerce where goods are sold online and m-commerce where goods are sold via mobile phones and tablets; these are called integrating mutational marketing systems and are used to complement marketing mix. (4) Promotion stands out more with rapid evolving of technology enabling marketing through online media which allows communication to be quick, accurate, clear, and widespread without border with internet and online channels, e.g., facebook, twitter and line, on top of traditional way of communications and offline media, and there has been a change from the manufacturers, middlemen and consumers who can access news worldwide. There are more than 5,112 million mobile phone users and 3,484 million social media users (Digimusketeers, www.digimusketeers.co.th); 52 million Thais, around 72% of the population, have access to social media (Social Media Insight 2020). The other 5 marketing tools are altogether employed in communicating online and offline, and another current obvious change in consumer behavior is that consumers research product information online but only purchase after trying out products in retail stores for value. However, the emergency decree issued under the Emergency Decree on Public Administration in Emergency Situation, B.E. 2548 ordered retailers and department stores to close down, except restaurants and essential stores, which renders online shopping and delivery necessary and inevitable.

2.1 Perimeter of the Research

1. The research is conducted only on Thai consumers.
2. The research is only for the period that the emergency decree under the Emergency Decree on Public Administration in Emergency Situation, B.E. 2548 in in effect to control the outbreak of COVID-19 (23 March 2020 - 30 April 2020).
3. The research is done only in Business to Consumer (B2C) market.

2.2 Conceptual Framework

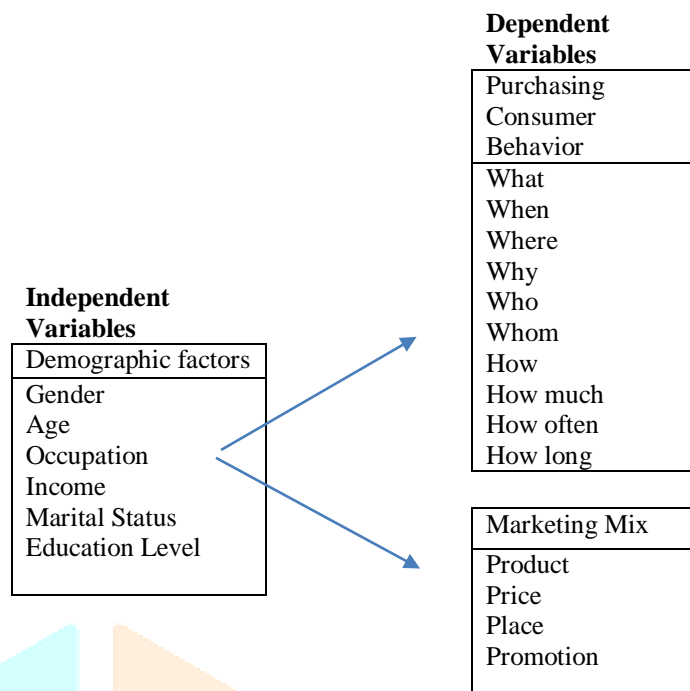


Figure 3: Conceptual Framework

2.3 Research Methodology

2.3.1 Type of information

This research will use 2 types of information as follows:

- (1) Secondary data from various offline and online sources, e.g., books, journals, textbooks, articles, research, websites, internet, etc.,
- (2) Primary data by way of survey method from questionnaires - respondents fill in their answers on google doc.

2.3.2 Population and Sample

The population for the research is Thai consumers who use cloth masks to prevent COVID-19. As for sample group, since the population is not known for certain, the number of sample group must be ascertained by using Cochran's sample size formula for categorical data for an alpha level a priori at .05 (error of 5%) = $n_0 = (t)^2 * (p)(q) / (d)^2 = 384$ which produces the sample group number at 400.

Sampling method employed is non-probability with convenience sampling.

2.3.3 Statistical Tools

The research uses questionnaires which can be divided into 4 parts:

Part 1: Demographic factors of respondents or sample group (6 multiple choices questions)

Part 2: Consumer behavior of cloth mask purchases (10 close-ended questions (Hoyer and MacInnis, 2010))

Part 3: Levels of consumers' opinions towards marketing mix (McCarthy, 1960) in purchasing cloth masks ascertained by applying Likert Scale to measure the amount of agreement/disagreement which consists of 5 levels: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree (20 questions) (Kotler & Armstrong, 2016)

Part 4: Suggestion (open-ended question)

2.3.3.1 Descriptive Statistics

Quantitative analysis is applied to part 1, 2 and 3 of the questionnaire in descriptive method, such as frequency, percentage, mean and standard deviation (S.D.), while questions using Likert Scale will be graded in 5 levels: 1, 2, 3, 4 and 5 for levels of opinions (strongly disagree, disagree, neither agree nor disagree, agree and strongly agree), then further analysis is applied to the scores of levels of opinions which are divided into 5 equal intervals of 0.8 point and can be translated to strongly disagree (1.00-1.80), disagree (1.81-2.60), neither agree nor disagree (2.61-3.40), agree (3.41-4.20), and strongly agree (4.20 - 5.00).

III. RESULTS AND DISCUSSION

Consumer behavior (in consumer market) means behavior of the ultimate consumer for personal consumption. Each consumer has different characteristics caused by 4 factors which are (1) cultural factor (culture, sub-culture and social class), (2) social factor (reference group and family, status), (3) personal factor (age and life cycle stage, occupation, economic situation, lifestyle, and personality and self-concept), and (4) psychological factor (motivation, perception, learning and beliefs and attitudes). Such different characteristics result in consumers' differing needs and wants and different reactions and acceptances towards stimuli. The result of the research finds that the majority of sampling's characteristics is female, aged between 18 – 25 years, studying or employed, with a monthly income of 9,000 – 15,000bht, and an undergrad. Marketers will use marketing mix (4Ps: Product, Price, Place and Promotion) as marketing stimuli, and there are other stimuli affecting sampling which are economic, technologic, social, legal, cultural stimuli and COVID-19. These 2 categories of stimuli make consumers or buyers want or need products and services. The result shows that other stimuli affecting decisions to purchase cloth masks are COVID-10 outbreak, legal and social stimuli resulting in consumers' need to buy cloth masks, while consumers disagree with the importance of marketing mix (4Ps). The importance of product is particularly low regarding core product, style, size and quality; thus, the same opinion can be deduced from open-end section of the questionnaire – there are 80% respondents who answered this section. The aforesaid respondents are grouped according to their opinions towards products which are (i) respondents would like their makeup to stay in place and not rubbed off by cloth masks, (ii) respondents would like cloth mask to have skin nourishing features, (iii) respondents would like cloth mask to be able to eliminate

unwanted odours from breathing and saliva, (iv) respondents would like mask to be perfect fit to their faces, (v) cloth masks' ability to prevent COVID-19 more, and (vi) respondents would like to have a wider range of colours and more fashionable. The respondents would like the price to match the quality (price), easy to buy (place), and sales promotions (promotion).

After consumers accept the 2 categories of stimuli, the consumer shall enter the buying process consisting of need recognition, information search, evaluation of alternatives, purchase decision and post-purchase behavior. The research shows that the consumers recognise the need in accordance with the second stage of Maslow's hierarchy of needs, safety needs. The consumers then go through the second and third stages of the buying process which lead to the fourth stage, purchase decision, and such purchase decision is demonstrated through consumer behavior or purchasing behavior. The purchasing consumer behavior reflects the totality of decisions which are (i) (what) buying both medical masks and cloth masks, (ii) (when) buying cloth masks when medical masks weren't available, (iii) (where) purchases were made online and open air market, (iv) (why) purchase were made to prevent COVID-19, (v) (who) purchase were made by oneself, (vi) (whom) purchases were also made for the household, (vii) (how) each purchase were for 2 masks, (viii) (how much) each purchase costed more than 100 baht, (ix) (how often) purchase decision making took less than 1 day, and (x) (how long) purchase was made every 2-3 days.

IV. SUGGESTION

Therefore, marketers should focus on answers of open-end section which can help products to increase customer value in order to be able to set a higher price, attract more customers, and substantially increase profits, customer equity and brand equity through product differentiation. Each product differentiation listed below constitutes 6 intended positionings which attract wider segments of customer.

1. makeup concern;
2. skin nourishing features;
3. odour eliminating features;
4. mask fitting;
5. more preventative quality; and
6. more colours and more fashionable.

The six intended positionings above are what customers perceive as priorities in customers' minds while making purchasing decisions. These six intended positionings can be paired up to create product differentiation, a competitive advantage, to align with brand image.

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