

# A Survey of Demand Factors Utilized in the Facial Surgery Service Business Using BCG Matrix

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## ABSTRACT

This paper presents a survey of the demand factors utilized in the facial surgery service business using BCG matrix. The theory has focused on studying and analysing the factors affecting the selection of facial surgery services through social media. In this paper, the collected data from 400 people are from internet users in Thailand. These data are analysed by using BCG Growth-Share matrix and descriptive statistics. The results are shown in the form of percentage, average and standard deviation. The results show that nose surgery service are high in the following areas: growth rate, market share, and quantity of demand in surgery business market. The office workers are selected for the first ranking from the survey results of marketing mix. It means that the samples are interested on famous surgery doctors whose names appear in Thai surgery doctors' list and medical council. The direct marketing is ranked to the first from the survey results of the integrated market communication. It means that the customers almost are interested to specially offer via the social marketing. Therefore, this study can help entrepreneurs in making decisions and in developing business plans to create a market strategy for attracting consumers.

**Keywords:** Business Surgery , BCG Growth-Share Matrix , Demand Survey , Marketing Online , Marketing Mix / Integrated Marketing Communication

## 1. INTRODUCTION

In today's world, information technology is always rapidly changed. It can be noticed that the various technologies are developed modernly, resulting in the convenience of current usage. Moreover, information technology is likely to play more important role in human society's life. Several data are collected and recorded into the business system causing the convenient access from everywhere. In addition, the updated data can be immediately utilized by users to support their decisions for purchasing the

products and services through the websites and social networks, such as Line, Instagram, and Facebook etc.

Today, the world is moving on the phrase of social media development. The consumers can access internet more than the past. Online marketing has higher rate of usage because everyone has the smart-phone for accessing internet, everywhere and anytime. Meanwhile, buyers and sellers can negotiate a product price as required. Moreover, there are several online services for more convenient operations to support their users. The numbers of worldwide internet users were approximately at 3,345,823,772 people as of November 15, 2015. In the Asia, the highest percentage of internet users was at 48.1%. The second was Europe with 18.1% of internet users.

For Latin America and America, their percentages are respectively at 10% and 9.8% of internet users. Due to the fact that Asia is the mainland of high population density, the number of internet users reached 48.1 percent of the world [1]. The number of internet users in Thailand surveyed by the digital agency in Singapore. This agency surveyed and collected the statistical data of the consumer usage behavior on internet and social media from countries around the world including Thailand. After searching for the data of world's internet users as of January 2016, it was found that the number of Thai population was approximately at 68 million people.

In this point, 38 million people (56%) were internet users who also used the social media. In case of registered mobile phones and SIM cards, there were totally 82 million numbers which consisted of 34 million people who accessed the social media on smartphones. The number of online purchasers on devices in Thailand. This agency collected statistical data and surveyed the consumers' behaviour on using internet and social media from countries around the world including Thailand. After searching for the data of world's internet users as of January 2016, it was found that the number of Thai population was approximately at 68 million people. During the past 30 days, there were 44% of people who purchased goods and services on internet, while the percentage of searching for items was 48%. In case of ordering products via laptop or computer, it was 40%.

Lastly, ordering products by smartphone was 31% [2]. This result was demonstrated from the behavior of social media usage operated by the company analyzing the data of the social network in 2014. After surveying more than 655 Thai people, it was clearly that the most impressive marketing activity was the

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comment reply on post being up to 91%, while like or share activity was 79%. For sharing video clips and taking pictures with products, they were 68% and 96% respectively. From the result, we could see the most impressive marketing activity was given to comment reply on posts. It was because of the ease of use and uncomplicated step.

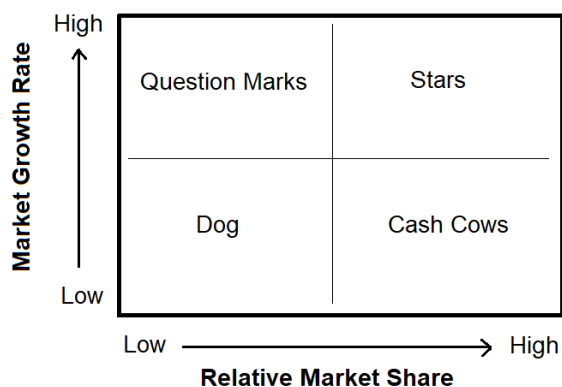
According to the present, all operations have to be performed fast, compact and uncomplicated. For the least impressive marketing activity, it was taking and uploading pictures with products. This might cause from many cumbersome steps [3]. The surgery survey of World's Plastic Surgery Statistics in 2014 conducted by International Society of Aesthetic Plastic Surgery. The result showed the plastic surgery in Thailand were the 22nd rank of the world [4]. For the year 2016, the Ministry of Health has estimated that the medical and aesthetic business was likely to take the first place continuously for 5 years because of the health and beauty services trend to be increased more.

## 2. LITERATURE REVIEW AND THEORY

### 2.1 BCG Growth-Share Matrix

Boston Consulting Group or BCG Matrix was the model for financial investment analysis. It helped the business owner to determine marketing strategy and improve brand of product. There were 2 consideration criteria which were relative market share and market growth rate. These 2 part were used to divide the axis of BCG Matrix. As shown in Fig.1, there are 4 parts of BCG Growth-Share Matrix [5] as follows:

- 1.Stars : high growth rate and high market share
- 2.Question Marks : high growth rate and low market share
- 3.Cash Cows : low growth rate and high market share
- 4.Dogs : low growth rate and low market share



*Fig.1:* BCG Growth-Share Matrix Model [5].

Guan and Yin [5] have proposed the strategy comparison of two B2C E-commerce companies which are Amazon and Dang. Their strategy can be analyzed from their business data by BCG matrix model. It

can analyze situation of their business in the present and can predict to trend of this two company how to change it. Zheng et al. [6] have introduced about selection the leading industry in the service sector of Xiacheng district in Hangzhou, for deserving to obtain support from government. This study has used BCG Matrix in analysis from their growth rate and adding value account.

Wei Shi and Kan Shi [7] have studied about cost analysis of resource by using BCG matrix. The divided market share had several methods of measurement for further study. This article was an analysis of internal organization data. It was the quantitative analysis that could be applied to analyze the market share. In addition, BCG matrix could help to increase more understanding it. Golovkova et al. [8] have proposed about the project and innovation of Portfolio. It is an analysis basic of Portfolio and BCG matrix. It is also used to analyze the risks. There are many risks in the project which are important factors because there is less risk to the many risks associated with data distribution based on project preparation and operation. It can reduce future risks and to effectively investment.

Chen et al. [9] have studied research on the strategic posture analysis model and development approach for Chinese tourism market. In the case study of Hupei province, BCG matrix method has been used for analyzing and forecasting model of national tourism market development trend in Hupei Province. It can also improve performances to increase opportunity and effective potential in tourism market of Hupei. Anogrut et al. [10] have surveyed the requirement and analyzed the factors affected to buy dresses on social media. The objective has also to study customer behaviors using requirements and the factors. For 400 samples of users, the results were shown in term of percentage, average, and the standard deviation. Both Preppy style and Korean style were high popular products for the most of woman demands. It also had high growth rate of sale and market share. The survey results of marketing mix showed that the women tended to focus on the purchases. For the product, they had focused on image, price, determining price, distribution channel, delivery product, and new promotions.

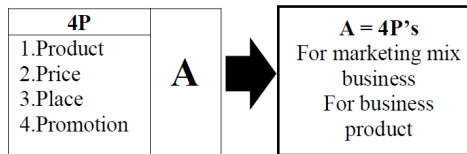
### 2.2 Strategic Theory of Marketing Mix

Table 1 shows the comparison of Marketing Mix meant marketing tools that can be controlled. Companies normally have combined these tools to meet the requirements and satisfy the target customers. Marketing mix consists of everything used in business in order to influence company's product requirement. Marketing mix was divided into 4 groups which the well known group was 4 Ps [11]. 4 Ps consisted of product (Product), price (Price) distribution (Place) and promotion (Promotion), as shown in Fig.2.

As shown in Figure 3, Service Marketing Mix or 7Ps based on Philip Kotler's concept said the Marketing Mixed consists of 4Ps which were 1) Product,

**Table 1::** The comparison of Marketing Mix.

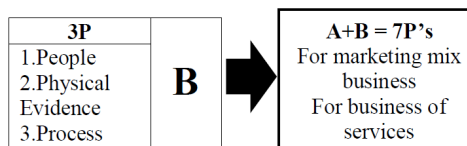
Marketing Mix	4p	7p	8p
1. Product	/	/	/
2. Price	/	/	/
3. Place or Distribution	/	/	/
4. Promotion	/	/	/
5. People	x	/	/
6. Physical Evidence	x	/	/
7. Process	x	/	/
8. Productivity and Quality	x	x	/



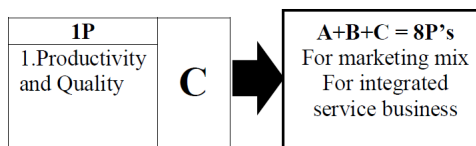
**Fig.2::** The 4P's of Marketing Mix.

2) Price, 3) Place and 4) Promotion, while 7Ps had another 3Ps which were: 5) People or Employee who had ability to respond to user requirements and solve problems in order to create organization's value, 6) Physical Evidence/ Environment and Presentation for adding overall quality to the image of products and services, including other physical improvements, and 7) Process for products and services management which consisted of clear and quick rules of conduct. It helped to increase user impression [12].

Cosmetic surgery business was a type of services. The concepts used in this study was marketing mix for integrated service business or 8Ps. For another added P, it was Productivity and Quality of the service, as shown in Fig.4. Lovelock and Whight, proposed marketing mix for integrated service business. All 8Ps were the elements that work consistently. These components were involved in decision making of service operators. The marketing mix for service



**Fig.3::** The marketing mix for service business (Service Marketing Mix) or 7P's.



**Fig.4::** The 8P's Marketing Mix of Integrated service business.

business consisted of 8 parts as follows: [13].

1.Product means anything that could be offered to the market in order to attract the interest, the need for holding, and consumption. It was a thing that might respond to the user's need and satisfaction. Products consisted of shaped object, service, event, person, place, organization, and other related to all of them

2.Price means the amount of money being charged for goods/services or the sum of value exchanged for consumers to obtain benefits from having/ using the products/ service

3.Place means bringing the products to the market which consists of the activities that help finding the product, anywhere and anytime, for the customers. Selecting location for surgery clinic is very important.

4.Promotion means the composition of pushing effort to promote products and services, including the advertising and the selling by sales staff, direct marketing, news and PR.

5.Physical evidence means the enterprise components that customers could have their experiences. It could contribute to increase the customers' confidence

6.People means the persons in the organization who serve the convenience to the customers.

7.Process means the various stages of activities from start to end.

8.Productivity and quality: productivity means the amount of available services under the goals or the greatest number of service. The quality is the conversion of productivity

**2.3 Integrated Marketing Communication**

Integrated Marketing Communication (IMC) that it is the development process of marketing communication plan. It continuously requires the several forms of motivation. The target of IMC is to make the behavior of target group according to the market requirement by considering the brand contracts. Consumers would feel familiar with products. IMC is the basic communication process survey for target receiver. IMC planning [14] can be described as follows:

1. Advertising is non-interpersonal communication. It is a mass communication. The sender have to pay the service charge for communicate messages. They can be private company, organization or personnel. The receiver get information from the advertisement. The sender hope to convince those customers to follow the advice posted on Medias. Advertising is the tool for informing, Persuading, Reminding and Adding value.

2.Publicity and Public Relation is using planned effort to create and maintain values in order to create a common understanding between organization and relation community.

3.Personal Selling is a direct communication form between sender and receiver. The sender can suddenly perceive and estimate the result from those news which means Salesman or Sales Person is the person who is responsible for acquiring customers.

Interesting offer helps to encourage customer to buy products.

4.Sales Promotion is an important marketing communication tool which is designed to stimulate the consumers to response faster, as well as being beneficial to the parties involved.

5.Directing marketing is an approach that marketers use to promote their products and services directly to end customers and generate an immediate response.

6.Event marketing means that companies or organizations set up special events so everyone can participate. Its objective are to reinforce a positive image for the company and reiterated its selling points

### 3. DATA ANALYSIS

This research is to survey and analyse of the demand factors in the facial surgery service business through social media.The data collected by online questionnaire of Thailand’s internet users with the total 400 people. The questionnaire is divided into three parts :

Part 1 : The general information: It includes status, age, education, current residence, occupation and average monthly income.

Part 2 : The survey of the selection of cosmetic surgery service through social media.

Part 3 : The surveys of the demand factor, marketing mix, and integrated marketing communications related to the cosmetic surgery services on social media.

Research and analyzing percentage and relationship of individual factors of respondents, choose BCG Matrix theory for analyzing demand factors of products and services with collecting data from questionnaires. The 3 levels of data analysis are demand factors of cosmetics surgery through social media are as follows :

(1) 0.00 means the low demand of goods and services.

(2) 1.50 means the medium demand of goods and services.

(3) 3.00 means the high demand of goods and services.

### 4. RESULTS AND DISCUSSION

For the collecting data from questionnaires, there are 400 respondents in the representative sample of internet users in Thailand. The structure of questionnaire form consists of 3 parts as follows. Part 1 shows individual information of respondents. The survey results have reported for 57% (female), 43% (male), 44% (between 21-25 years), 75% (single), 72% (bachelor degree), 55% (live in Bangkok and perimeter), 48%(employee) and 55% (monthly income between 10,001-20,000 Baht). Part 2 proposes behaviors of respondents in selecting cosmetic surgery services through social media. These results have reported for 56% (the use of internet for 4-5 years), 44% (the use of internet for 4-6 hours/day), 91% (the

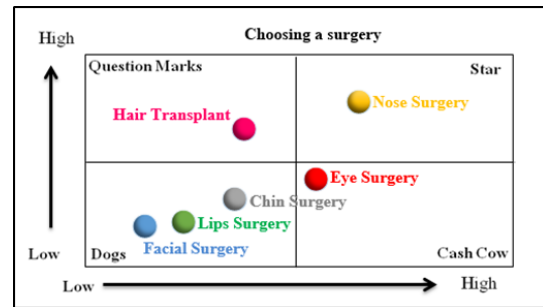


Fig.5.: The BCG matrix of choosing a surgery.

use of Facebook) and 93% (the use of smartphone). Part 3 is to the use of demand factors, marketing mix (8Ps) and communication, integrated marketing in cosmetic surgery services through social media.The results show that there are 6 phases as follows : 1) Facial Surgery, 2) Eye Surgery, 3) Rhinoplasty or Nose Surgery, 4) Genioplasty or Chin Surgery, 5) Hair Transplant and Brow Surgery, and 6) Lips Surgery.

#### 4.1 BCG matrix :

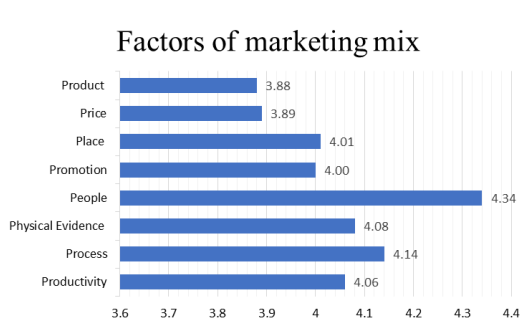
As shown in Fig 5, the analysis of BCG Matrix table by using surgery status of consumer and the requirement of facial cosmetic surgery is revealed the nose surgery is in the star group. It can create a lot of money and capital because the market share is high. In addition, it is in the facial surgery group that spends large amount of cost and resources to make the business grow steadily. For the eyes surgery, it is in the Cash Cows group. Most consumers have already used these services which it is the cause of low service requirement when compared in terms of marketing. These services are available at a low growth rate, high market share, create profit continuously. The next one is Hair Transplant and Brow Surgery. It is in Question Marks group which spends a lot of money to increase market share. This business can move to star group if the good strategy is used continuously. If the problem is unable to solve, it can move to Dog group as well. The last three parts which are Facial Surgery, Chin Surgery and Lips Surgery are unwanted service. They are in Dog group because it is not popular.

#### 4.2 The analysis of marketing mix (8Ps):

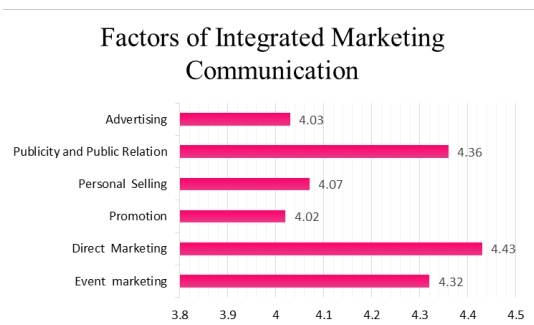
According to each respondent in using cosmetic surgery services, most of answers are reasons that showed in chart of Fig. 6. For the results of the study of market mix (8Ps) in terms of people summary, the most significant is cosmetic surgeon must be the famous and be in the registration of the society of plastics and reconstructive surgeons of Thailand i.e. the medical council of Thailand ( $\bar{x} = 4.34$ ).

#### 4.3 The analysis of integrated marketing communication (IMC) :

According to each respondent in using cosmetic surgery services, most of answers are reasons that



**Fig. 6:** Comparison of the analysis of marketing mix (8Ps)



**Fig. 7:** Figure 7. Comparison of the analysis of integrated marketing communication (IMC)

showed in chart of Fig. 7. For the results of the study of integrated marketing communication (IMC) in term of direct marketing, the most significant is the way to inform special offer through social marketing ( $\bar{x} = 4.43$ ).

## 5. CONCLUSION

This paper has presented the survey of the demand factors utilized in the facial surgery service business using BCG matrix. The survey results showed that the most of respondents is between 21-25 years old (single and live in Bangkok and perimeter). The most of the respondents working as employee have been the bachelor degree of educational level (income between 10,001-20,000 Baht). The overviews of the study showed that BCG Growth-Share Matrix (analysis tool of financial and marketing investment) is credibility as 95% significantly. It helps making business plan, marketing plan, and developing continuous business growth.

The overview of the study showed that most of cosmetic surgery part is rhinoplasty, which in the "Stars" group. Eye surgery is in "Cash Cows" group, is less growth. But it can be developed by using innovations and make more safe, better solutions, less pain, and upgrade to be in "Stars" group depend on more demands. The surgery of hair and eyebrows is in "Question Marks" group, which use high investment to take more market share. It can be upgrade to "Stars" Group by using better strategies continuously. But if it gets into insoluble problems, it may

be downgrade to "Dogs" group. And the surgery of face, shin and lips is separated, they are in "Dogs" group, not the favorite of market.

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