

## **A Classification for Business Model Types of Pharmaceutical Firms in Thailand**

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**ABSTRACT:-** Pharmaceutical industry has high potential with Thailand as an emerging market. An important managerial question is which type of business model would expedite the growth of this market. Business model has been variously defined and classified. This study aims to classify type of business model of pharmaceutical industry by using Thailand as example for emerging market. The method used in this study was qualitative analysis with interview method. Twelve in-depth interviews were conducted with the majority of the interviewees from multinational pharmaceutical companies. From the analysis, business models were classified as public health, innovative, or mixed that were differentiated by answers toward seven themes. This method of classification could be adopted to test with pharmaceutical companies in other countries. Further research would be to identify success factors for difference business model.

**KEYWORDS:-** pharmaceutical, multinational pharmaceutical companies, business model, business model innovation, business model classification, public health, innovative

### **I. INTRODUCTION**

Pharmaceutical industry consists of private companies or public organizations that both discover medicines, research and develop medicines and/or manufacturing medicines (McKinsey & Company, 2015). In addition to discovering and manufacturing medicines, commercialization is a crucial aspect (Sweiti, 2019). Commercialization connects research and development, which is value creation, to the external environment and business opportunity serving as value delivery. The value delivery in pharmaceutical companies does not only involved sales and marketing functions. Scientific affairs and market access functions work toward finding business model to optimize accessibility and the delivery of value of a medicine throughout its lifecycle (British Medical Association, 2013).

Multinational pharmaceutical companies have three common operation levels so called Global, Regional, and Local. Global is usually the central team at the head quarter who develops overall strategy for the company. Regional defines a group of Local or branches in different countries. They can group either by geographic or by potential. Examples of regional teams are Europe Region, North America Region, Asia Pacific and Emerging Markey Region. These Regional teams are the connectors to the Local teams in different countries helping Local or branch markets adopt global strategies to local implementation. The local implementation is crucial to maximize value delivery or access of the medicine to different countries. As different countries have different needs and culture, the local team has to be able to address market needs and engage right key stakeholders to maximize value delivery of the medicines (Sweiti, 2019).

Thailand is an important branch market for many multinational pharmaceutical companies with the value over \$5.0 billion, which is the second largest market in Southeast Asia (Thailand Drug Market Update, 2017). This market continues to grow as the value will be doubled by 2020 and sales per-capita in also increasing to be \$125 by 2024 (Thailand Drug Market Update, 2017).

Thailand pharmaceutical markets depends on three main channels: public hospital, private hospital and drugstores that require different business models and strategies. The largest channel is public hospital accounting for over 60% (Tunpaiboon, 2017). Public hospital channel has been relied on a traditional business model that is facing short-term revenue shortfall, sensing the need for business model innovation (Kessel, 2011).

Business model innovation can be via different customer approaches that local branch markets utilize and thus business model innovation and eventually firm performance can be influenced by different customer approaches at different levels in Thailand (Liamsuwan & Chomvilailuk, 2019). To maximize value delivery of multinational pharmaceutical companies in Thailand, in addition to understanding different influential customer approaches, we need to understand what are different types of business models are and how to classify them. There is limited knowledge on the classification. This study explores how to classify business models and what are related value types for pharmaceutical companies in Thailand.

This study will guide management of pharmaceutical companies in Thailand to consider different types of business models to expedite growths in an emerging market like Thailand. The results could be adopted to other emerging markets.

## **II. THEORETICAL BACKGROUND AND RESEARCH FRAMEWORK**

### **A. Theoretical Background**

The term Business model has been defined by several experts in various studies (Birkinshaw & Ansari, 2015). For example, Business model is the underlying structures of how companies create, deliver and capture value (Clinton & Whisnant, 2019). The business model correlates with financial performance, which is determined by costs and revenues and depending on market environment. The market itself is also influenced by three factors: 1) the unmet need, 2) the situation of pharmaceutical industries such as competition levels and company strategies, and 3) public policies, especially pricing and reimbursement (Dubois, 2015; Varol, Costa-Font, & McGuire, 2012).

In pharmaceutical industries, business model innovation comes in different forms but all require better understanding on key stakeholders including patients, payers and healthcare professionals (Hunter & Stephen, 2010). An example of business model innovation is the integration of all key stakeholders and activities together, which can improve productivities and save resources (Herzlinger, 2006). Another example is partnering with external research organizations to overcome the challenge on R&D productivity. For instance, Mitsubishi Genetic Therapies Centre partners with Imperial College to discover new medicines (Tralau-Stewart, 2009). Partnering approach is becoming more utilized in pharmaceutical industry.

In addition to R&D productivity challenge, transitioning of commercial models is another main challenge. The traditional commercial model, which relies on physicians as the primary key decision makers, is declining due to cost, regulations and lack of differentiation. Business model innovation is necessary to address this challenge (Gilbert, Henske, & Singh, 2003). New business model requires understanding of market and customer needs, reflected as patient journey (PWC, 2015).

In addition to focusing on the efficacy and safety of the product, which is value creation, pharmaceutical companies now have to pay attention to health outcome and healthcare financing system, which relates to value delivery and value capturing respectively.

The pharmaceutical industry market is increasing with increasing in aging population (Morgan, 2005). Aging population is defined as the population of people aged 65 and above (World Health Organization, 2015). The aging population is increasing rapidly in emerging countries (Goldstone, 2010). Emerging countries today are in Asia, Latin America, Middle East, Africa and Russia (Gautam, & Pan, 2016). The healthcare spending in emerging countries is as high as 49% by 2019 (Tannoury & Attieh, 2017).

In summary, the research objective of this study is to classify types of business model of pharmaceutical industry by using Thailand as example for emerging market.

## **III. METHODOLOGY**

### **A. Research Design, Samples and Population**

The qualitative analysis was done by analyzing results from 12 in-depth interviews conducted. This qualitative analysis was used to classify types of business model as well as to refine the questionnaires for a larger study quantitative study in the future.

The 12 interviewees were staff ranges from management level to operation level. Representative from all customer facing-functions were also included.

The screening questions used included

- i) Are you currently working in a Pharmaceutical company?
- ii) Have you worked in Pharmaceutical industry for more than 5 years?
- iii) Do you currently work with external customer approaches?

If the interviewees pass the screening questions, they will have to answer questions for different type of pharmaceutical company including multinational and local pharmaceutical companies.

The semi-structured interviews (Adams, 2015) were to use to identify two main points. First point is related to current approach the interviewee uses for work and current understanding of the definition of value and awareness on current value adding approach. For example, "please describe current practice that your company are using to create value for customer?; what do you think about business model in your business?". Then, the second point was to classify type of business model by using open questions.

### **B. Data analysis**

The interviews were recorded and transcribed in Thai. The transcribed interviews were translated into English and checked for accuracy by two independent members of the study team who are natively bilingual. Quotes were coded in English and then back-translated into Thai to ensure accuracy in interpretation. Prior to analysis, the transcriptions were verified and de-identified.

To evaluate whether the sample size was sufficient, the transcripts were read in their entirety to evaluate for thematic saturation, which is defined as having no additional higher-level themes emerged after coding additional interviews. Iterative inductive-deductive approach was used with the transcripts to develop a hierarchical coding structure. The transcripts were coded by two members of the study team independently. If differences occurred, they were resolved by having a consensus. Each statement was treated as a quote and a statement could be assigned up to seven different codes. Analysis consisted of interpreting the coded quotes and identifying higher-order themes, using an iterative inductive-deductive approach. Management of transcripts, quotations, and codes used Microsoft Excel.

#### IV. RESULTS

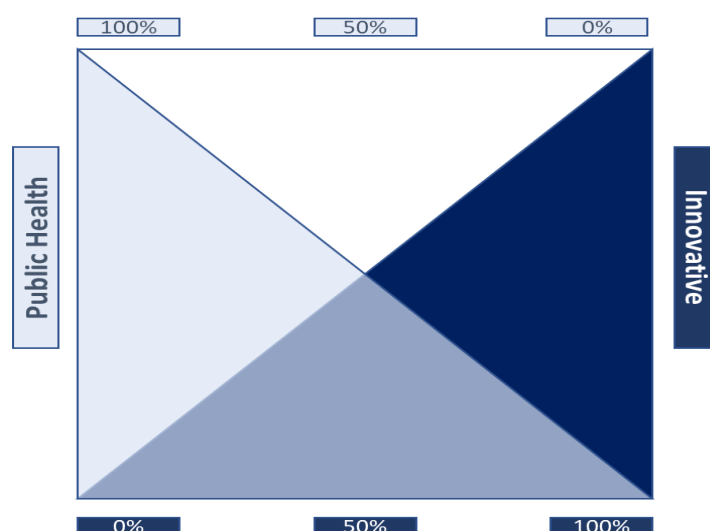
The qualitative analyses of 12 interviews resulted in classification of pharmaceutical business model as public health, innovative or mix (Fig 1.). The scale for each of the three characteristics ranges from 0% to 100%. In case of 50% public health and 50% innovative, the classification of business model is considered mixed.

##### 4.1 Demographics

Nine participants out of 12 were from multinational pharmaceutical companies, which is accounted for 80%. In Thailand market, 80% of top 20 pharmaceutical companies are multinational pharmaceutical companies. All 12 interviewees have worked over 5 years in pharmaceutical industry in Thailand with experience in customer facing.

##### 4.2. Conceptual model

Using the inductive-deductive approach, we identified 7 key themes: 1) Market 2) Customer 3) Product 4) Price 5) Strategy 6) Cost management and 7) Performance. These 7 themes were consolidated into 3 main business model classifications: Public Health business model, Innovative business model and Mixed model (Fig. 1).



**Fig 1. Pharmaceutical business model classification: Public Health, Innovative and Mixed models**

The conceptual model highlights how perceived business implementation into business model in pharmaceutical industry. Base on qualitative analysis of 12 in-depth interviews, there are 7 themes that are classified and then grouped with details in table 1.

**Table 1. Pharmaceutical Business Model classification and themes**

Theme	Public Health	Innovative
<b>Market</b>	Public market	Self-pay
<b>Customer</b>	Board access	Targeted
<b>Products</b>	Standard	First in class
<b>Price</b>	Accessible	Premium
<b>Strategy</b>	F2F/Sale force	Mixed/Various
<b>Cost</b>	Saving	Efficiency
<b>Performance</b>	Revenue	Margin

From the in-depth interviews, there are different focuses in public health business model and innovative business model. Companies with public health business model focuses on public market with board access to patients. This business model highly focuses on standard treatment products with accessible price. For example, one interview mentioned that "Focusing on listing products into the National List of Essential Medicines (NLEM) that can increase access into Universal Coverage patients. However, we have to low the price to win in this listing". This public health business model uses sale force as a core strategy to engage customers and pays attention on revenue making and cost saving. On the other hand, companies with innovative business model highly focuses on private market with targeted customers. "Launching new products, going for self-pay market in private hospitals as priority, being more flexible on process and selling at more premium price in comparison to products in NLEM". Many companies have to manage many product portfolios, which require more than one business model or mixed business model between public health and innovative. For Mixed business model, the proportion of being innovative and public health could be different for different companies.

## V. CONCLUSIONS

Determining which business model to utilize is a crucial factor for management. Classification of business models and related theme presented in this study could be as a guideline for management to decide which business model is suitable for their products. The results from this study in Thailand can be adopted to test in other countries as the study is focus both multinational and local pharmaceutical companies. However, classification of business model could be different in different healthcare system and policy. Further research would be to identify success factors for different business model.

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