

นวัตกรรมบนตัวแบบธุรกิจและการประยุกต์เพื่อวิเคราะห์
กับเครือซีเมนต์ไทย

Creating Innovation through a Business Model
Framework and its implications for the Siam
Cement Group

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บทคัดย่อ

การปรับองค์กรให้เข้ากับสภาพแวดล้อมทางธุรกิจก็เป็นประเด็นที่องค์กรควรให้ความสำคัญ โดยเฉพาะอย่างยิ่งในสภาพแวดล้อมทางธุรกิจอย่างเข่นปัจจุบันซึ่งมีความเปลี่ยนแปลงอย่างรวดเร็วและรุนแรง กลยุทธ์หนึ่งที่บริษัทสามารถใช้ฝ่าวิกฤตเหล่านั้นคือกลยุทธ์สร้างความแตกต่างโดยนวัตกรรมตัวแบบธุรกิจ (Differentiation strategy by business model innovation) ในงานวิจัยขึ้นนี้ผู้เขียนมุ่งเน้นในการสร้างกรอบความคิดด้านตัวแบบธุรกิจ (Business Model Framework) โดยแบ่งเนื้อหาออกเป็นสามส่วนคือ การทบทวนวรรณกรรมที่เกี่ยวข้องกับตัวแบบธุรกิจ นวัตกรรมตัวแบบธุรกิจ ส่วนที่สองผู้เขียนได้นำเสนอกรอบความคิดเพื่อสร้างนวัตกรรมตัวแบบธุรกิจ และส่วนสุดท้ายได้ประยุกต์ใช้กรอบความคิดดังกล่าวกับบริษัท บุนชีเมนต์ไทย จำกัด (มหาชน)

กรอบความคิดทางด้านตัวแบบธุรกิจ คือ阴阳的 ในการสร้างนวัตกรรมตัวแบบธุรกิจโดยแบ่งออกเป็นเป็นสามขั้นตอนคือ ขั้นตอนที่หนึ่งกำหนดตัวแบบเดิมที่องค์ใช้ในการดำเนินธุรกิจ ขั้นตอนที่สองคือการปรับเปลี่ยนส่วนประกอบเพื่อสร้างตัวแบบธุรกิจใหม่ และขั้นตอนที่สามคือการอธิบายประเภทของตัวแบบนวัตกรรมที่เกิดขึ้น

สาระสำคัญของกระบวนการสร้างนวัตกรรมตัวแบบธุรกิจมีองค์ประกอบเพื่อพิจารณาในการปรับเปลี่ยนในขั้นตอนที่สองของกรอบความคิดตัวแบบธุรกิจคือ คุณค่าที่มอบให้ลูกค้า (Customer value proposition) สูตรการทำกำไร (Profit formula) ทรัพยากรหลัก (Key resources) ห่วงโซ่อุปทานและเครือข่ายธุรกิจ (Value chain and value networks) และกลยุทธ์ในการแข่งขัน (Competitive strategy)

Abstract

The adjustment of the organization to be in line with the business environment is crucial and should be emphasized by every organization, especially in rapidly changing business environments. However, firms are capable of coping with the critically changing environment through the strategy of innovation through employing a business model. The main objective of this article is to propose a Business Model Framework as a tool for the business practitioner for application to new business model creation. The author has divided this article into three main parts: the review of literature on the business model, the proposal of the Business Model Framework, and the implications of the framework based on a case study of HYPERLINK “<http://www.siamcement.com/>” the Siam Cement Group Company (SCG).

The Business Model Framework is a framework showing the process of creating business model innovation consisting of three main stages: 1) Defining the existing business model, 2) Reconfiguring the business model, and 3) Defining the types of Business Model Innovation. Within the stage of reconfiguration, five main components to create business model innovation are introduced, namely customer value proposition, profit formula, key resources, value chain/networks, and competitive strategy.

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Key words : Business model innovation, differentiation strategy, innovation

Introduction

The intense and high level of competition causes organizations to strive for new effective strategies in order to stay competitive. Therefore, the creation of innovation is one of the strategies used for competing with rivals. Product innovation is one type of creating innovation. However, its development requires investment. Yet there do exist various other innovative formats that can also be used to create differentiation for organizations, such as process innovation, managerial innovation, and business model innovation. According to research on IBM (Giesen, Berman, Bell and Blitz, 2007), these alternative innovation formats, like business model innovation, have lower risks and require less investment than Product Innovation. Nevertheless, the meaning of business model and business model innovation from the perspective of executives is still unclear (Johnson, Christensen, and Kagermann, 2008). The findings of Johnson, Christensen, and Kagermann (2008) reveal two main problems: firstly, there have been few studies on business model development which has led to a lack of definition of the business model, and secondly, few companies are clear about their company business model.

Therefore, in this article, the author aims to define the meaning of business model, and business model innovation and also focuses on business model innovation through the elements of the business model.

The research methodology in this article mainly focuses on content analysis. The author has acquired information from various sources of secondary data including academic articles, company annual reports, business reports of consulting firms, and magazines.

The author has divided the article into three main parts. The first part is the review of literature on the business model, innovation and business model innovation. In the second part, the author proposes the Business Model Framework and its implications in analyzing and creating innovation. Finally, the author applies the Business Model Framework to the Siam Cement Group in order to explain how this company implements business model innovation.

To begin with, let us review the literature regarding the key definitions, the term business model is one much used in Thai society and one that must be clearly defined when doing business in order to have a clear understanding of those particular businesses in question.

Besides, the topic of the business model is also included in the business plan, so that the writer can set out their model. Nevertheless, only a few people are capable of explaining the exact meaning of the business model. Hence, the author addresses the definition of the business model and its elements.

Chesbrough (2007) gave the following brief definition of business model:

“Business model is the concept idea that is beneficial in connecting idea and technology with the economic solution.”

This definition is considered broad when compared to Davila, Epstein, and Shelton (2006) who gave the following meaning:

“Business model is the description of how an organization creates, sells, and delivers value to customers. Also, it includes supply chain, target customer segments, and customer’s perception of the delivered value”

As regards the business model elements, there also exist many differing viewpoints. A summary of which follows.

Chesbrough (2007) divided the elements in creating the business model into six main groups: value proposition, market segment, value chain, revenue generation, value network, and competitive strategy. Johnson,

Christensen and Kagerman (2008) also proposed several identical elements to Chesbrough (2007), namely value proposition and revenue model. However, they included differences with the elements key resources and key Processes, as well as providing more detail for each element in their framework in order for them to become more applicable for users in analyzing the business model.

Mitchell and Coles (2003) provide a different take on the elements of the business model. The components of the business model consist of setting questions about who, what, when, where, how, and how much. However, setting these questions without specifying the topic means that it is quite complicated transforming the acquired information into a clear and precise business model. On the other hand, the use of questions in this model makes it appropriate for the purpose of changing from an exiting business model to a new business model.

As for the definition of business model innovation, in general, most executives have the perception that the creation of innovation is mostly that of technology innovation (Davila, 2006), and they also perceive that it to be the only origin of the new innovation of products and services in the market.

Nonetheless, there are other types of innovation such as the business model innovation that is able to make profit for the organization and a key strategic tool that drives an organization to success.

To clarify the meaning of business model innovation, Chebrough (2007) stated business model innovation to be a path along which an organization creates a new way of doing business or generating profit. Pasu (2008) suggested it was the creation of innovation from the adjustment of the business model into a new format. This new format of business model must not have been present in each of the particular markets before. It is possible that it is similar to an existing product or service but the organization changes the way of operating process or business.

As regards the point of concern about whether it is necessary or not to apply only technology into creating innovation in the organization, Davila et al. (2006) mentioned three types of innovation as classified by the relationship between the business model and technology. First, if the organization creates innovation by using a new business model with new technology, the result is called Radical Innovation. Second, the use of new technology with an existing business

model or applying present technology with a new business model for building innovation is referred to as Semi-Radical Innovation. The last type of innovation, Incremental Innovation, is the process of combining near to existing technology and a near to existing business model. In sum, creating innovation in the organization can integrate both the business model and technology to build innovation.

According to the study of the IBM Institution for Business Value (2008), the format of business model innovation was specified in three major types. Thus, firms that wish to create business model innovation can make use of these three types of business model innovation by either selecting one of them or integrating any of the three together. Therefore, the three types of business model innovation consist of business model innovation by Industry Model, business model innovation by Revenue Model, and business model innovation by Enterprise Model.

Business Model Framework: A Tool for Analysis and Building Innovation

A model is a very significant tool in communicating the ideas of executives to employees within the organization in order to achieve the

same vision and direction. So, in this section, the author would like to propose the Business Model Framework as a tool for analyzing and building innovation.

Research conducted by Mitchell and Coles (2004) involved the interview of the executives in charge of managing 100 public companies in the United States. The main topic discussion was that what factors cause an organization to be successful in its operations. In response to this question, the majority of the executives gave similar answers that the Business Model needs to be continuously modified and changed to meet the demands of customers and stakeholders. Moreover, they perceived efficient organizations to

be those that always make changes to some elements in the business model every two to four years.

Mitchell and Coles (2004) proposed that in order to create business model innovation, the organization should formulate the processes in creating and adjusting the innovation. Therefore, the tool for structuring business model innovation is part of the creation and adjustment of the organizational innovation.

After reviewing the literature on business model innovation, the author formulated the Business Model Innovation Framework which can serve as a tool for executives in thinking and generating business model innovation. The framework is presented below.

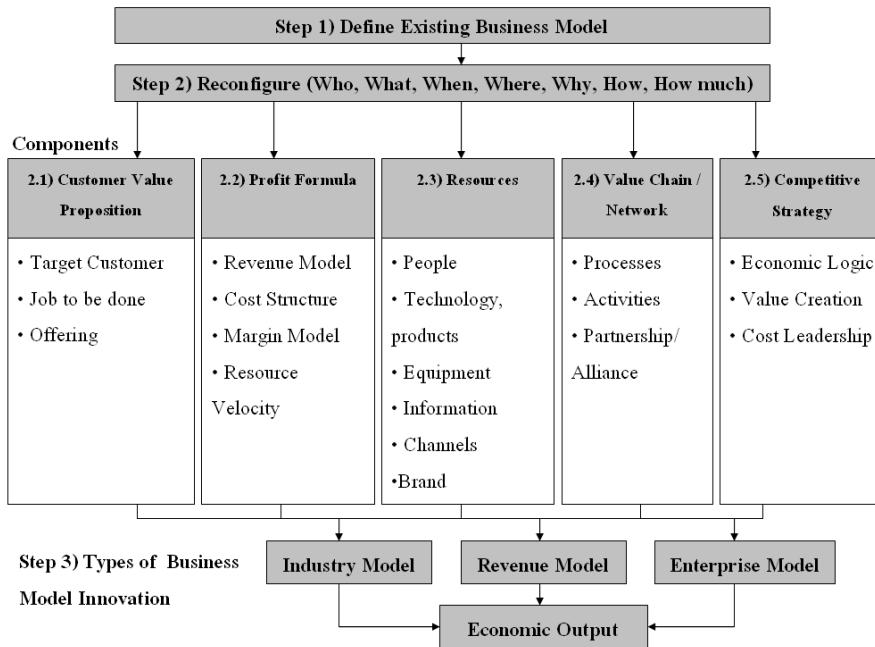


Diagram 1: Business Model Framework¹

As shown above, the executive can create business model innovation through analysis and implementation according to the process set given in the diagram. Diagram1 is divided into three main steps: define the existing business model, reconfigure the business

model, and define the type of business model innovation.

To begin with the existing business model needs to be defined before the organization starts generating ideas towards the creation of a new business model. It's very important for executives

¹ The author applied the framework from the proven works of Donald Mitchell and Carol Coles. 2003. **The Ultimate Competitive Advantage of Continuing Business Model Innovation.** Journal of Business Strategy. Vol.24 (5). pp15-21 Edward Giesen, Saul J. Berman, Ragna Bell, and Amy Blitz. 2007. **Paths to Success: Three Ways to Innovate your Business Model.** IBM Global Business Service. Henry Chesbrough. 2006. **OPEN INNOVATION: The New Imperative for Creating and Profiting from Technology.** Harvard Business School Press Mark W. Johnson, Clayton M. Christensen, and Henning Kagermann. **Reinventing Your Business Model.** Harvard Business Review. December 2008. pp. 51-59

to know the company's current business model or the industry's business model and their format of business operations. For instance, Dell Company, prior to making the decision to sell its products online, first understood and studied the business model of the retail businesses in the computer industry. Additionally, to learn about a present company's business model or an industry's business model, this can be achieved through the analysis of the major elements of business model, which are customer value proposition, profit model, resources, value chain/network, and competitive strategy.

For the second step, the business model is reconfigured with changes or modifications to the existing business model of the organization to the new one. Also, the changes have to be in at least one type of the major elements of the business model. In addition, the changes or modifications can be applied from the principle of Mitchell and Coles (2003), whereby the business model is created through the asking of the questions of who, what, when, where, how, and how much as concerns the purpose of switching from the existing business model to the new one. Hence, the main focus in making changes to the business model is by questioning the existing components.

These questions include: Who is the target market of the organization? What is the value proposition for the target market? When can the company proceed with the business model creation? Where are the proper distribution channels for the product? How can we propose those values successfully? How much should the price be set at to suit customer perception?

Once the questions have been set as the path to creating the new business model, the executives are then able to apply the framework to the new business model properly. The new business model framework consists of identical elements to the existing business model — customer value proposition, profit model, resource, value chain/network, competitive strategy. These elements are valuable tools that help people in the organization view and share the new model that the organization wishes to pursue. By doing so, it also facilitates communication and understanding among employees within the organizations.

Customer value proposition means the way to create value for customers by helping customers to solve their problems. The areas covering the analysis of customer value proposition include target market, respond to

customer demand in products, services, and emotional benefits, and the job to be done in order to serve the customers what they need

Profit formula means the way the company makes profit or creates value from the business model as specified by analysis of profit formula including Revenue Model, Cost Structure, Margin Model, and Resource Velocity (Johnson, Christensen, and Kagermann, 2008). By definition, Revenue Model is price multiple by volume. Cost Structure is the key resources required by the business model prevalently drive cost structure. Cost structure includes direct costs, indirect costs, and economies of scale. Margin Model is an analysis of the profit margin needed from the units sold to attain the expected profits. Resource Velocity is the speed required to make a turnover in inventory, fixed assets, and other assets to achieve the volume and forecasted net income.

Resources refer to the organization's asset use for building value proposition for customers. Resources of organizations include personnel, technologies, tools and equipment, information, distribution channels and brands.

Value chain is the method of creating value by constructing the activities within the value chain that are

able to present value to the customer. Value network creates value by determining the roles of supplier, distributor, and key outside stakeholders to provide the relevant value toward the customer.

Competitive strategy is the tactics at the business level to gain superior advantage over competitors, such as differentiation strategy and cost leadership.

The third step in creating business model innovation is the definition of the types of business model creation that match the types of creation of business model innovation. The new business model is achieved by asking the questions of who, what, when, where, how, how much, and the explanation of the ways of reconfiguring the business model in the second step to employees which requires a certain amount of time. To facilitate the process of communication toward employees, the author took the business model types and definition from Giesen et al. (2007). The innovation is divided into three major types: business model innovation in the Industry Model, business model innovation in the Revenue Model, and business model innovation in the Enterprise Model.

The first type, business model innovation in the Industry Model, means

the type of business model innovation that creates innovation by modifying the value chain of the organization for use in the existing markets or in expanding to new businesses.

The second type, business model innovation, in the Revenue Model is a type of innovation that enhances the revenue of the firm by readjusting product mix, service mix, and value mix, and pricing. It is achieved by providing customer experience, choice and preferences, and new technologies.

The third type, business model innovation in the Enterprise Model, means the type of business model innovation that creates innovation by changing the structure of the organization or its role in the supply chain

To sum up, the analysis and creation of innovation using the Business Model Framework, as shown in Diagram 1, can be carried through three main steps: define the existing Business Model, reconfigure the business model and define the types of business model innovation. The result of using these tools is the explanation of business model innovation via the diagram, and it helps facilitate communication among the personnel in the organization or discussion among executive groups about the new business model as well.

Business Model Framework and its Implications to the Siam Cement Group (SCG)

The Siam Cement Group Company (SCG) is a Thai company that has done business for 96 years, since its establishment in 1913. SCG has adapted its organization under the concept of "InnoPeople-InnoLeader" to support the innovative organization. Besides, there are three major formats to create innovation in the company, namely product innovation, process innovation, and business model innovation. SCG have already created all three types of innovations together side by side. However, Mr. Kan Trakulhoon, Managing Director of SCG is of the view that creating business model innovation is relatively difficult, but that it has higher returns compared to other types of innovative creation.

The company rearranged their previous business model with its unclear divisions into a new business model. The new business model consists of five major groups, namely the petrochemical business, the paper and packaging business, the cement business, the construction equipment business, and the distribution business. Originally, the major consumer group of the organization was business customers

(B2B). However, at present, the organization has placed more emphasis on end consumers (B2C), and this is a clear and distinct change from its previous business model. By creating the new business model, SCG has modified elements of their business model by asking the questions "what, when, where, why, and how". To illustrate the change of business model of SCG, the author selected the construction equipment business as a case study. In addition, the main elements that the organization has changed are listed as follows:

For Customer value proposition, in the past, SCG mainly focused on B2B business. After changing their business model, SCG expanded their target market to B2C. The consumer characteristics of these two groups are different. There are three key differences among the two groups of customers. First, in the new business model, the organization offers fast and convenient services by using information systems to provide better service to B2C. For B2B, the key business success factor required is that of the relationship between company and business customers. The second difference is the product knowledge about which B2B is more likely to have good understanding of the products; in contrast, B2C has more

limited knowledge about the product. Thus, the organization should present the product knowledge to this group of consumers. Third, offering the product in more varieties to suit each consumer group. Regarding this point, Cotto Tiles divided consumer needs into two main groups, namely basic need and value-added need to offer differentiated products and services.

For jobs to be done there are three major Jobs to be done with regard to customers. The first action is to modify the management process to be more efficient by using information technology as a system to connect with dealers. Examples of systems are enterprise resource planning, e-ordering systems that facilitate purchasing online, and the development of the CHAMP system that helps in retail business management. The second action is to educate end consumers. Examples are locating information service centers for these consumers, setting up COTTO Tiles Studios to advise and provide information as a service to consumers. Thirdly, the organization launches a diverse range of products in order to provide choices that can suit consumer demands.

Profit formula, as a formula to create profit for business, the organization creates revenue by offering

more value to customers. In addition, the organization can also gain revenue from differentiating their products and services, such as offering convenient and fast delivery. As regards Profit Formula, in 2006 HYPERLINK "http://www.siamcement.com/" SCG stated the following:

"The business goal is to increase the sales of high-value non-commoditized Products that have the higher return and fewer price fluctuations, and also to continuously research and develop new products."

For resources, the supply that's essential for the organization to create value to customers. SCG has a budget aiming to improve the skills and capabilities of its employees amounting to 500 million baht per year. This budget is allocated to inviting experts in each field to train employees and develop the organization. By doing this, the main purpose is to change the attitudes of personnel and facilitate the creation of innovation.

As concerns the enhancement of business efficiency, SCG has implemented several business practices and the latest technology to improve its working process such as Total Productive Management (TPM), Total Quality Management (TQM), Customer Relationship Management (CRM), Radio

Frequency Identification (RFID), and Global Positioning System (GPS).

Regarding the organization's information system, SCG employs a system that assists the sharing of knowledge and information among personnel in the organization. For instance, Communities of Practice are conducted for the ease of performing the same tasks and sharing knowledge among group works.

As for the distribution channel, the organization has expanded more into retail distribution channels, so that it can better reach end consumers. For example, COTTO Tiles Studio arranges its COTTO Ceramic O.K. Shop as a distribution channel to sell ceramics and related products. In addition, it places their information center in department stores.

Value chain and value networking are the element that SCG has adjusted in a variety of ways. Concerning product distribution, to be efficient, the company has separated the distribution functions into a wholly new company that can focus solely in selling and distributing products. The example of increasing efficiency in their distribution field is that Cementhai Logistics Company (CTL) separates the way it distributes their products into three major types. The first type is On-time, which

means ordering the products in the usual time frames, and the products are completely sent out at once. Also, the shipment dates are clearly specified. The second type is Window and is for when a customer orders product in a small lot and the product will be delivered on time even though the truck is not completely full. The third type is the Hurried Mode. The customers need the product quickly, but the shipment price will be relatively higher, which also later affects the higher price of sales and services. In addition, in the construction business, the company opened Cotto Tiles Studio to provide product information services, to advise consumers, and to check for product availability in warehouses.

Concerning the organization's networking, in order to expand to the Business to Consumer (B2C) market, the organization has created a networking system with dealers to acquire the information. Besides, it jointly owns businesses with other organizations to increase efficiency, such as Thai Olefins Public Company jointly owned with Dow Chemical. Moreover, the organization has also formed alliances, such as that with CPAC Franchise, in which it benefits by being a partner with the company or individual who specializes in mixing concrete as a franchisee. In return, the

organization is responsible in providing knowledge about how to proceed with the business, production formula and branding to the entrepreneur.

The competitive strategy of SCG is the creation of differentiated products and services. They mainly focus on their core business. One strategic tool for creating differentiation is strengthening their brand image under the theme of "Drawing the Future". There are three advertising campaigns that aim to build their corporate image, namely Tree of Imagination, Unlimited Needs, and Idea on Paper.

To conclude, the Siam Cement Group creates Business Model Innovation by integrating the three main types: business model innovation in the Industry Model, business model innovation in the Revenue Model, and business model innovation in the Enterprise Model. Because it adjusted the whole organization to be an innovative organization, it required changes and various ways to create business model innovation. Moreover, it modified the ways to create revenue by offering new products and services to the target market that the organization emphasized, the end consumer. Therefore, it's essential for the organization to change its activities in its value and supply chains to achieve the

innovation that the organization wishes to pursue.

Conclusion

The author presented the Business Model Framework in three major parts. The first part defined the business model of the organization or industry. The second part set the questions of who, what, where, how, when, and how much in the fields related to the elements of business model to create a new business model. The five elements of the Business Model consisted of Customer Value Proposition, Profit Formula, Resources, Value Chain/Network, and Competitive Strategy. Finally, the third part is to define the types of business model innovation: Industry Model, Revenue Model, and Enterprise Model.

To enhance the understanding, apply the business model framework in analysis, and be a tool in creating business model innovation, the author used SCG as a case study with regard to business model innovation. The business model of SCG aims to expand

their target market toward the end customer. In general, in the construction equipment businesses mainly emphasize business customers. In addition, SCG has also made adjustments in many elements to achieve the new business model, such as customer value proposition, profit formula, resource, value chain/network, and competitive strategy. In the third analysis part of the Business Model Framework, SCG Company uses three main types, namely business model innovation in the Industry Model, business model innovation in the Revenue Model, and the business model innovation in the Enterprise Model in order to achieve success in business model innovation.

In sum, the author has clarified the main definitions of the business model, and business model innovation. This article contributes to business practices by purposing Business Model Framework to be a tool for application to the creation of business model innovation. The case study of SCG was selected to illustrate the application of the Business Model Framework.

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