

A Review of Value Creating Motive and Business Model in Smart Technology

Hong Joo Lee

Dept. of Industrial Management Engineering, Kyonggi University, Suwon, Korea
blue1024@kgu.ac.kr

Abstract. Many countries, including the US, Europe and Korea, are eager to conduct diverse researches and projects in relation to such smart technology in the hope of utilizing those opportunities, and domestic universities and research institutes also are active to implement relevant researches. Yet, smart technology has rarely been conceptualized, with only superficial studies about it conducted. In this paper, I studied value creating motive and literature review for development of business model to be applied to actual business, based on characteristics of smart technologies.

1 Introduction

As ‘Smart Technology’ is rapidly growing in recent days, off-line and on-line are being integrated into a single space, creating a totally new concept of space and more business opportunities utilizing it. Many countries, including the US, Europe and Korea, are eager to conduct diverse researches and projects in relation to such smart technology in the hope of utilizing those opportunities, and domestic universities and research institutes also are active to implement relevant researches. Yet, smart technology has rarely been conceptualized, with only superficial studies about it conducted. In addition, relevant studies have been excessively focused on its hardware, resulting in only case studies through scenarios.

Service scenarios applying enabling technologies, application systems, and simple enabling technologies in business can bring technical innovation, but they do not last long. In this paper, I studied value creating motive and literature review for development of business model to be applied to actual business, based on characteristics of smart technologies.

2 Literature Review

2.1 Ubiquitous Technology and Environment

“Ubiquitous” is a Latin word meaning “Being or seeming to be everywhere at the same time.” In terms of IT, this refers to an environment where you can easily use

the computer in any place anytime. You can access specialized, context-aware services, which are subject to change with place and time, by sensing or tracking pervasive computing. [8]

Table 1. Definition of Ubiquitous Technology

Researchers	Definition
Mark Weiser	The calm technology, that recedes into the background of our lives.
N.R.I	Today's information appliance-based computing environment accessible to the Internet through wire/wireless network
Hong Joo Lee	All objects in real space are equipped with information devices and connected to one another through network

In the respect, it is of significance to take 'technical feasibility' into account in establishing a business model based on smart technology such as ubiquitous technology.

2.2 Business in Smart Technology

There are broad discussions being carried out on new business in smart technology environment, as well as partial, fragmentary discussions on a certain aspect. Table 2 shows business phenomena mainly suggested in prior literature for years.

Table 2. Phenomenon of New Business

Global Networking[15]	A weaving together of our lives, minds, and artifacts into a global scale network
Frictionless interaction and coordination[5]	Interaction is almost free so that it is no longer a constraint to business
Positive feedback and Increasing returns[4]	The tendency for that which is ahead to get further ahead, for that which loses advantage to lose further advantage.
The experience Economy[6,10,14]	Own and design their experience, not their products. Be responsible for the total experience of customers, not a Fragment of it
Mass customizing and Presumption[18]	Offering should be tailored one on one for each consumer. A consumer designs her own product.
New economics of Information[7]	The traditional trade-off relationship between the richness and reach of information no longer holds.
Value at linking[18]	Value is generated at linking as well as at manufacturing

Considering those phenomena occurring in new business environment, it is critical to figure out business proper for technology environment and analyze individual's needs, in deriving business factors appropriate to new technology environment and develop business models [11].

2.3 Research on Business Model

The business model refers to a company's business method and structure, that is the company's overall design about how to create values in which market, based on which activity mechanism, and with which products [2]. While a strategy means a specific activity plan in a certain sector, a business model is a systemic whole of individual strategies [1,3]. New business phenomena are giving rise to fundamental changes in business method and structure. Traditional business models based on the physical value chain are being replaced with new business models. Here, the business model means a strategic means needed to perform persistent business while generating revenue [16,18]. A business models appropriately designed will bring competitive advantage in the industry, as well as more profits.

Therefore, the business model should have answers to such questions as which value should be provided for users, which strategy should be applied to provide users with differentiated value, and what benefits the company can gain by providing the value [18].

2.4 Business Revenue Models and Value Creating

The revenue model is related to how each company can create revenue within the context of a business model [17]. The key to studying business models is discussions on which role the individual entity plays in the business model and which revenue it can create through the process. The business model and revenue model are connected in two steps.

First, a conceptual model for corporate revenue-creating is developed based on roles and functions of a company within the business model.

Second, a specific revenue-creating form is examined within each value-creating relationship structure, such as chains, shopping malls, marketplace, and communities, based on the conceptual model for revenue-creating [15]. Revenue-creating can be defined as seeking a role worthwhile to pay compensation for business entities (customers) [18]. Companies create revenue based on this definition, as seen in Table 3.

Table 3. Revenue-creating method

Revenue-creating Method	Definition
Execution driven revenue	Revenue resulting from companies' business activities (ex: How efficiently companies operate, how much active the corporate culture or business structure is, etc.
Relationship structure driven revenue	Revenue through value-creating relationship structure

2.5 Value-Creating Motives

Value of a business model depends on which value-creating motive works in designing and realizing the model [12,13].

Thus analyzing value of the business model begins with figuring out how the business value-creating motive appears. Value-creating motives of business models can be reviewed in light of technology and business. In technical aspect, the value-creating motive is triggered by technology.

With enabling technology foundation allowing new business methods, how to utilize business opportunities and enabling effects provided by the technology in the company's value-creating is analyzed.

On the contrary, the value-creating motive in the business aspect is promoted by business considerations, therefore overall business motives. Such as which goods/market should be chosen or which business method should be designed, are considered. The technical motive and business motive are related to each other, however, and give rise to diverse value-creating motives in combination. Previous researches suggest that value-creating motives of business models originate from 4 sources.

First, the motive originates from technology's enabling effects. Second, the motive originates from characteristics of technology business. Third, the motive originates from morphological characteristics of value-creating relationship structure. Fourth, the motive originates from functional characteristics of value-creating relationship structure.

3 Conclusions and Future Works

This study was aimed at value creating motive and developing business models in smart environment. In this paper, I analyzed value of the business model begins with figuring out how the business value-creating motive appears. And I studied those value-creating motives of business models can be reviewed in light of technology and business. With enabling technology foundation allowing new business methods, how to utilize business opportunities and enabling effects provided by the technology in the company's value-creating is analyzed.

On the contrary, the value-creating motive in the business aspect is promoted by business considerations, therefore overall business motives. However, in applying the results to actual business, customers' needs for advanced business model should be examined as well.

As technology is continuously evolving, business models and customers' needs are also changing. Therefore, there should be continuous research conducted on development of proper business models. Following this study, it is one of urgent tasks to present a research system for producing business factors, complying with new technology environment, and ultimately developing proper business models.

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