A Study on BMS by BDS for Distribution-Business: Business Model System by Buyer's Decision Step

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Abstract

Purpose - The business model is a method of creating corporate value, in existing "classification of business model", limitations and redundancy phenomena are applied when a new type flows in, and as consumer's purchasing decision of consumer behavior 5 steps. The classification schemes can be used for more accurate data analysis by proposing a new mapping technique in the fourth industry.

Research design, data, and methodology - It was far more classified on the business model (BMS by BDS), and so on. Designing the new horizons of logistics, marketing, methodology by reclassifying these existing data to new useful data with the old methods, in order to analyze the areas where the problem has been raised for the point that the existing methods are not suitable configured. This will be applicable to the system of quaternary industry from the perspective of the buyer.

Results - The mapping results of the consumer purchase decision were as follows,the 1st stage (interest) was 23.73%, 2nd stages (publicity) 33.90%, 3rd stages (sales) 13.56%, 4th stages (decision) 11.86%, 5th stages (repurchaser) 16.95%. This verified that "the business model can be classified through "BMS by BDS".

Conclusions - This structural classification is the basis of logistics marketing in the 4th industry, and proposes a innovative and effective model of constructing theory.

Keywords: Consumer, Purchase, Decision, BMS, BDS, Corporate-Value, Distribution-Business.

JEL Classification: A11, D47, L10, M31.

1. Introduction

1.1. Research Background

The business model describes how to create corporate value in the market by stylizing the flow of products, services, information, etc. It contains the role and interests of stakeholders and the source of sales. According to previous studies, According to existing research, Rappa (1999) defined as "a business scheme to generate sales in a way to keep the company maintained", Slywotzky (1996) mention that "By providing value to customers, Timmers (1998) defined 'product, service, information flow structure, describing the definition and role of various business participants, and modeling the source of profit'. In comprehensive insisted a model that defines the source of value and revenue to achieve a specific purpose and

determines the transmission path of these values.

In the research related to the classification of business models, Paul Timmers categorized as degree of innovation of the value chain In 1998, according to Bambury (1998) classified as an existing model and a transplanted model in the Internet market, according to market dominance Kenneth Berryman classified in Kenneth Berryman in 1998, classified as product distribution process Dawn Jutla in 1999, RAPPA (2006) classified by revenue source celestial body, etc. mention that it were classified collectively according to value, platform, revenue.

The classification system of these business models are classified according to simple classification criteria and there is a limit to the application when new type flows in, and SNS , E-business was fused, overlapping phenomena of classification system occurred, there was a limit to understanding the new business model [4]. In addition, Choi and Kwon (2008) categorized the study of existing business models into three, "Research on the classification of business models of the game industry", but first creates value (Timmers, 1998; Afuah & Tucci, 2000) Secondly, the

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process of the network (including Bambury, 1998; Berryman, 1998), Thirdly, divided to the goal (including Rappa, 2000 or Goldman Sachs, 2001).

1.2. Purpose of research

The objective of this research was to classify existing "classification of business models" into simple types, so when limitations and overlapping phenomena are applied when new types flow in, "create corporate value in the market There is a limit to classifying the business model which is the "method". In this research, therefore, we try to classify business models in 5 steps of consumer purchasing decision of consumer behavior theory.

1.3. Progress of research

In this paper, we explain the background and purpose of research in Chapter 1 Introduction, and introduce the existing business model and reclassify the whole business model and introduce the purchase decision stage of the consumer in Chapter 2 (Theoretical Review).

For verifying the validity of the purpose of this research, in Chapter 3 on an empirical study, we mapped an existing research model in a stepwise manner on the consumer's purchasing decision and finally examined it as a research title, according to consumer's purchasing decision step is classified the business model. In Chapter 4, we will consider the application of this research and present future directions of research.

So, The purpose of this thesis is to demonstrate the BMS by BDS in the paper with the following model.
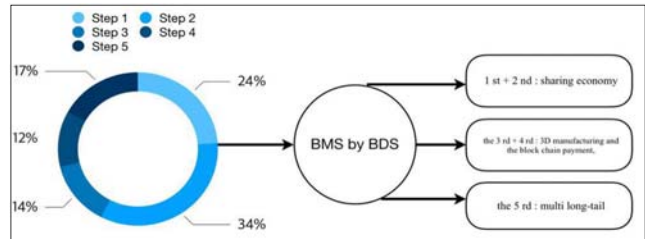

Figure 1 : Research model

2. Theoretical Review

2.1. Business model classification

In this study, the business model was classified into three categories as shown in [Table 1]. Firstly, it is classification based on the maturity of the business model. Timmers (1998) shares with the value chain and innovation with low innovation a single function, high functional innovation multi-integrated. It can be seen as a process to has been divided into grafted model and shared with unique Model to the model matures over time. Secondly, it is classified according to distribution process in which products are delivered.

Secondly, it is classified according to distribution process in which products are delivered. It is the classification by the platform which is the intermediary model, intermediaries, and auction dealers according to the product delivery process.

Thirdly, it is the classification by the platform which is the intermediary model.

RAPPA (2006) was categorized according to revenue sources, and the rest were classified as value, platform, profit, etc. In the end, similar profit model was homogenized and classified as platform.

Table 1 : Business Model Classification(Reconstruction)

Classification standard	Classification criteria / Researcher	Existing research	Mainresearch		
			Initial	Middle	Late
Model Maturity	PaulTimmers, 1998	Value chain and degree of innovation	- Low innovation / Singlefunctionmodel	- Innovative / single-function model	- High innovation / multi-integrated model
	P.Bambury, 1998	Existing and implanted models		- The transplanted physical business model	- Unique Internet Business Model
circulation By course	Kenneth Berryman, 1998	Market power	- Seller controlled,	- Neutral controlled	- Buyer controlled
	DawnJutla, 1999	Product Delivery Process	- Manufacture models	- E-broker models	- Auction models
mediation Model (platform)		-	Offer value By type	How to choose information	Revenue formula
	MICHAEL RAPPA, 2006	Revenue source	- Utility model - Advertising model - Subscription model	- Community model - Affiliate model	- Manufacturer (Direct) model - Merchant model - Brokerage model - Information model
	Nametal, 2015	Value, platform, revenue, etc.	- Payment Agency - Rental type - information type - Marketplace - Shared economy type - Medium type	- Reverse auction type - Filter type - Optional - Customer participation type - List type	- Dues type - Business expansion type - fee type - Auxiliary type

2.1.1. Classification by maturity of business model

Timmers (1998) stated that it is possible to create a new business model through the openness, connectivity and information management functions of the Internet in the Business Model for electronic Markets, and tried to find innovative value creation methods rather than traditional business such as value chain integration. However, it seems that it classifies the old model and the new model accompanying the evolution of the business model rather than classification by value creation. We classified the micro business model into eleven categories based on both the degree of innovation and functional integration, and in the first high innovation - multiple model (1) Value chain integrator: value chain integration to create added value, (2) the general marketing front end of 3rd party marketplace, (3) collaborative platforms, collaborative design, (4) virtual communities : focus on the added value of communication among members. Second, as a high-innovation into a single-functional model, (5) Value chain service provider Supporting part of the value chain, logistics, (6) Information brokers, trust business, business information and consulting, (7) Trust service : Trusted services, Third, its innovation – with a single function model (8) e-shops, publicity, cost reduction additional entrance, (9) e-procurement, (supplier search) (10) e-auction, electronic bidding (no advance movement of goods or trading partners), (11) e-mail, e-store collection, aggregation, industrial market.

In the commercial applications of the Internet, Bambury (1998), has to be understood the business or commerce as a cultural activity, which is a transaction. As a result of the creation of the business, the results are classified into two categories. First, Transplanted Real-World Business Models naturally occurring in the real world and secondly, Native Internet Business Models developed in the Internet environment. However, the business model of Bambury, seems to classify the old model and the new model as the business model evolves. The classification is ambiguous, the branching criterion is not clear, and the classification is simple. (1) the mail-order model, (2) the advertising-based model, and (3) the subscription model, (4) the free trial model, (5) the direct marketing model, (6) the real estate model, (7) Incentive scheme models, (8) Business to Business, (9) Combinations of the above models and Native Internet Business Models (2) The freeware model, (3) The information barter model, (4) Digital products and the digital delivery model, (5) The access provision model, (6) Web site hosting and other Internet services.

2.1.2. Classification by distribution process

According to market power, Berryman (1998), divides market leaders into three categories: seller controlled, buyer controlled, and neutral controlled. There is a lack of explanation about creation. By sorting criteria, the seller is able to effectively set targets for more customers, to acquire

more customers, to provide high quality products and services to ensure market control and buyers can benefit from greater supplier competition, and then third-party intermediaries can benefit from transaction fees and value-added services.

Jutla (1999), presented business model types such as Manufacture models, E-broker models, and Auction models, etc. depending on the product delivery process and product source. This model is also regarded as three fields of the distribution process of the market. In the case of the proposed auction type, the distinction from the intermediary model is ambiguous.

2.1.3. Classification by intermediary model (platform)

Rappa (2006), classified actual business cases concretely and independently on the premise that the business model will develop sustainably, and classified the business model into 9 based on the income source. The revenue source is eventually a platform, and the classification type of the business model overlapped. The basic categories of business models he presented are Brokerage, Advertising, Infomediary, Merchant, Manufacturer_Direct, Affiliate, Community, Subscription, so the 9 business models are: (1) brokerage model, (2) advertising model, (3) information mediation model, and (4) Merchant model, (5) Manufacturer (Direct) model, (6) Affiliate model, (7) Community model, (8) Subscription model, (9) Utility model.

The business model proposed by Nam (2015), Korea is divided into a value chain business model, a platform business model and a business model based on social value, so he tries to be summarized the business model. However, the value chain type business model and the social value based business model publicly used the category of value and overlap with the platform type model. His platform-based business models are : (1) Information flow direction (inside-out, outside-in), (2) platform transaction type (aggregation type, product type, multi-faceted) (3) offer value type (payment agency, lending type, information type, marketplace, sharing economic type, media type) (4) information selection method (reverse auction type, filter type, selective type, customer participation type, list type), (5) revenue formula (membership fee type, business expansion type, commission type, auxiliary type).

2.2. Consumer's purchasing decision step and Proposition

The study reviews and recreates the effects of Consumer purchase stage and Business Model System by Buyer's Decision Step rate on them by stage performance, so as the following hypotheses, we are considering:

Proposition: BMS model in the short-run is related to Consumer productivity and Information flow performance.

Let it prove the First and Second hypothesis with short assumption as the above 'Proposition'.

Hypothesis 1: Maturity in the long-run is related to BDS model from Consumer behavior and validation.

Hypothesis 2: As a result, it appears a long-run stage in equilibrium relationship between a new type inflows, Purchase decision stage rate and Consumer performance.

Consumer behavior is a complex concept involving various internal and external factors and activities, and is a stereotyped behavior that appears in the purchasing decision stage. Among the consumer behavior models, Engel, Balckwell, and Miniard (1986) proposed the EBM model. The EBM model divides the purchase decision process into 5 stages : (1) Problem Recognition, (2) Information Search, (3) Evaluation of Alternatives, (4) Purchase Decision, and (5) Post-Purchase Behavior. Consumer decision-making stages are as shown in [Table 2], firstly, Recognize problems and show interests in purchasing through internal and external exploration, secondly, Discovering and recognizing the collected goods or services. thirdly, Consider whether any product or service can provide maximum satisfaction, fourthly, Paying price, shipping and then obtaining, fifthly, Repurchase after purchase, re-service or re-purchase the derivative products.

Consumers are more likely to engage in internal searches through problem recognition (1) and to solve consumption problems in memory (2), because consumers are affected by exhaustion, environmental changes, changes in financial conditions, advertising, etc., If people do not have information worthy to solve the consumption problem in memory, they will be searching for information through external search, analyzing each characteristic with collected

goods and information, and evaluating the alternative which item will give the maximum satisfaction. (4) the purchasing decision is influenced by the attitude (word of mouth) of the other person and the unexpected situation factor, leading to the purchase. (5) After purchasing, it is evaluated, and it is a step to verify whether the choice is appropriate.

3. Empirical Research

3.1. the validation through business model mapping by consumer's purchasing decision step

In the study, the EBM model of the consumer behavior model was used to map the business model presented by previous researchers according to the decision making step 5 as shown in [Table 3]. The first step is Problem Recognition process that generates interest through media such as virtual community model, free trial model, freeware model, the 2nd step stage is an information search process that promotes products through intermediaries such as marketplace, electronic auction, intermediary model, and customer participation model, etc., the 3rd step is Evaluation of Alternatives process to sell products through producers, such as manufacturer models, producer models, product types,

The 4th step is a process of purchasing decision, such as a mail order model, a buyer model, a fee type, a settlement agent model, the 5th step is a post-purchase behavior process for repurchasing through collaborative platforms, business expansion, etc.

Table 2 : Consumer's purchasing decision stage

Decision stage	Problem Recognition	Information Search	Evaluation of Alternatives	Purchase Decision	Post-Purchase Behavior
Step features	Recognize problem sand show interests in purchasing through internal and external exploration.	Discovering and recognizing the collected goods or services	Consider whether any productor service can provide maximum satisfaction	Paying price, shipping and then obtaining	Repurchase after purchase, re-service or re-purchase the derivative products

Table 3 : Mapping existing business models by consumer's purchasing decision step

step / Classification	(1)Step Problem Recognition (Problem recognition) Interest through media	(2)Step Information Search (Information search) Promote your products through intermediaries	(3)Step Evaluation of Alternatives (Evaluation of alternative) Sales of products through producers	(4)Step Purchase Decision (Purchase decision) Payment and Logistics	(5)Step Post-Purchase Behavior (Behavior after purchase) Repurchase through feedback
Timmers	- Virtual communities - Value chain service providers - value chain integration	- Third-party marketplace - Information brokers - Electronic procurement - Electronic auction	- Electronic store - e-mail		- Trust-based services - Collaboration platform
Bambury	- Free trial model - Incentive planning model - Ad-based model - Freeware model - Information exchange model - Access Providing Model	- Direct marketing model - Library model - Website hosting and other internet services	- Real estate model	- Mail order model	- Subscription model - Combination of the above models - business to business

Berryman, etal			- intermediary	- seller	- buyer	-
Jutla, etal	-		- Intermediate model - Auction model	- Manufacturer model		-
RAPPA	- Advertising model - community model		- Intermediate model - Information intermediation model - Affiliate model - Subscription model	- Producer direct model - Seller model	- Billing model	-
Nam,etal	-	- Medium type - information type - Customer participation type	- Marketplace - Multifaceted type - List type - Set type - Reverse auction type - Optional	- Product type	- fee type - Payment Agency - Dues type - Rental type	- Social value-based business model - Shared economy type - Business expansion type - Filter type - Auxiliary type
sum	59	14	20	8	7	10
%	100	23.73	33.90	13.56	11.86	16.95

3.2. the business model classification by consumer's purchase decision step

Table 4 : The classification of existing business models by consumer purchasing decision step (BMS by BDS)

Classification	Problem Recognition	Information Search	Evaluation of Alternatives	Purchase Decision	Post-Purchase Behavior
Business model (example)	- Aggregate information provision (agency) - Advertisement serving (banner, pop-up) - Sponsorship (text notification)	- Marketplace - Affiliate List (Kadak) - Advertising agency (YouTube) - Place rental (space use fee) - Production agency - Rental type (Rental, WoongjinCoway, Socar) - Sharing economy: Wecab, Air-bnb - Media: Advertising media platform - Fees: Telecommunication fee, electricity fee,	- Manufacturing: Product marketing	- Customer participation (upper map) - Settlement agent (easy settlement) - Royalty (membership fee) - Collection of membership fee by credit card - Commission (settlement agency) - Shipping charges (parcel delivery service, physical distribution expenses) - packaging fee (packaging agent) - reverse auction (pop funding) - warehouse fee (warehouse agent)	- Consumables (printer toner, razor blade) - Multifaceted (niche market, long tail bookstore, OK cashbag) - Insurance products

Source: 101 Business Models for Successful Start-up Stories, Seoul: Hans Media pressed. (2015).

Business model is a way to create enterprise value. When new type is introduced into existing business model classification, there are occurred the application limit and overlapping phenomenon. In order to find a way to classify business models in a comprehensive manner, as a result, the business model (BMS by BDS) was classified into 5 steps of consumer purchase decision of consumer behavior theory.

As an example of a business model for confirming the above, step 1 : Problem Recognition is a process of providing aggregated information (agency), advertising (banner, popup), sponsorship (text notification), and step 2 : information search is Market place (rental, WoongjinCoway, Socar), Sharing Economy (TopCap, Airbnb), media (advertisement media platform), The fee for use (telecommunication fee, electricity fee), step 3 : Evaluation of alternatives is for manufacturing (product sale), step 4 : Purchase decision is for Customer engagement (Wemakeprice), settlement agency (simple payment), loyalty (memberships), collection of dues by credit card, commission (payment agent), transportation cost (courier service, logistics cost), packing cost (wrapping agent), reverse auction (pop funding), warehouse fee, step 5 : Post-Purchase Behavior is included consumables (printer toner, razor blade), multifaceted (niche market, long tail bookstore, OK cashbag), and insurance products.

4. Conclusion

In the paper, the existing model was classified as model maturity, distribution process, and intermediary model. However, as a result of mapping this to the consumer's purchasing decision 5 step, they are possible to classify into 23.73% in the 1st stage (interest), 33.90% in the 2nd stage (promotion), 13.56% in the 3rd stage (sale), 11.86% in the 4th stage (payment) and 16.95% in the 5th stage (repurchase). This confirms that classification according to BMS by BDS. This is newly defined as the case of the 1 st + 2nd : sharing economy, the 3rd + 4rd : 3D manufacturing and the block chain payment, and the 5rd : multi long-tail. As a result of examining the business model to support from this, it was able to be classified into 59 models. Such composition and classification system became the basis of logistics and marketing of the fourth industry and presented a new plan on the original composition theory with creativity.

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