

Internet Industry Business Models, Intellectual Capital and Their Evolution

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Abstract

Internet brings huge impact on traditional business, thus some practitioners address some “new” business logic, such as attraction of eyeballs more important than revenue. Meanwhile, there is another group of people urging that business runners should be back to normal track. They think that value innovation is still the key to success in internet industry(Kim & Mauborgne,1999). Basically, I identify myself as a member of the second group, so as this paper.

Many researchers tried to categorize internet business into several types according to different criteria, such as B2B, C2C, C2B and B2C (based on sellers and buyers), or ISP, ICP, and aggregators (based on their main function). From my perspective, those categorizations are all within internet business logic, which is hard to link with traditional business logic. Therefore, it is easy to confuse us with a set of brand new logic, but forget that value and profit are the basic requirements for business. Without real profit, internet “bubble” or “illusion” concerned lots of researchers.

The aim of this paper is to categorize internet business into several types from value creation perspective, that is, value chain, value shop, and value network. Value chain concept has been long accepted in management field. Stabell & Fjeldstad(1998) raised another two value creation logic to complement value chain concept, and the value creation logic is basically built on Thompson’s (1967) typology of long-linked, intensive and mediating technologies.

Intellectual capital concept (Steward, 1997) can be treated as a extension of resource-based theory, which emphasis the importance of intangible assets rather than tangible assets while value a firm. To connect value creation logic with its valuation of an internet firm, this paper will observe different business models and their corresponding intellectual capital instead of core competence.

Besides, if we observe some successful web sites such as Yahoo, we can find obvious evolution path in their business models. Because of special characteristic of internet, internet business runner has different approaches in their starting points such as attracting lots of visiting substitute of revenue. However, it is just a starting point, not the whole story. From my perspective it is a part of evolution. Therefore, if we do research about internet business, we need to follow their all evolutionary path. By accumulating intellectual capital step by step, internet business runner can evolve their business models gradually.

To sum up, this paper tries to build a model to describe different business models from value creation logic and predict their evolutionary path. In the meanwhile, corresponding intellectual capital will be linked with the categorization of business models, and treated as the motives of evolution of business models.

1. Introduction

Internet brings huge impact on traditional business, thus some practitioners address some “new” business logic, such as attraction of eyeballs more important than revenue. Meanwhile, there is another group of people urging that business runners should be back to normal track. They think that value innovation is still the key to success in internet industry(Kim & Mauborgne,1999). Basically, I identify myself as a member of the second group, so as this paper.

Many researchers tried to categorize internet business into several types according to different nature, such as B2B, C2C, C2B and B2C (based on sellers and buyers), or ISP, ICP, and ASP (based on their main service). From my perspective, those categorizations are only within internet business characteristic, which is hard to link with traditional business logic. Therefore, it is easy to confuse us with a set of brand new logic, but forget that value and profit are the basic requirements for business. Without real profit, internet “bubble” or “illusion” concerned lots of researchers.

First of all, the aim of this paper is to find a dominant dimension that can well describe how an internet firm works. I call it business models here. In order to link with traditional business logic, and stress the importance of value creation, this paper will categorize internet business into several types from value creation perspective, that is, value chain, value shop, and value network(Stabell & Fjeldstad, 1998). Value chain framework (1985) has been long accepted in management field. Stabell & Fjeldstad raised the two other value creation logic to complement value chain concept, and the value creation logic is basically built on Thompson’s (1967) typology of long-linked, intensive and mediating technologies.

Furthermore, resource-based theory development begins from recognizing difference existence across firms, which was an invaluable part in industry and competitor analysis.(Foss, Knudsen, Montgomery,1996) Resource- based theory stresses the existence of fundamental diversity among firms, therefore firms has path-dependent, sticky knowledge endowment differentiating from other firms. Thus A firm’s competitive advantage comes from its set of core competence accumulating upon the time. Intellectual capital concept (Steward, 1997) can be treated as a extension of resource-based theory, which emphasis the importance of intangible assets rather than tangible assets while value a firm. To connect value creation logic with its valuation of an internet firm, this paper will observe different business models and their corresponding intellectual capital instead of core competence.

From the practical world, if we observe some successful web sites such as Yahoo, we can find obvious evolution path in their business models. Because of special characteristic of internet, internet business runner has different approaches in their starting points such as attracting lots of visiting substitute of revenue. However, it is just a starting point, not the whole story. From my perspective it is a part of evolution. We need to follow their all evolutionary path to get the whole picture about an internet firm. By accumulating intellectual capital step by step, internet business runner can evolve their business models gradually.

Evolutionary approaches have has a long history in economics, and it applies to the field of strategic management in analogizing to the biological concepts of variation, heredity, and selection. According to Foss, Knudsen, Montgomery(1996), evolutionary approach have primarily been conceptualized as possessing path-dependent knowledge bases. Besides, evolutionary approach is process-centered and more focus on technological evolution, which fits internet industry well.

To brief, his paper tries to build a model to describe different business models from value creation logic and predict their evolutionary path. In the meanwhile, corresponding intellectual capital will be linked with the categorization of business models, and treated as the motives of evolution. That is, as

intellectual capital evolves, or accumulates new intellectual capital, business models will evolve as well.

2.Value creation logic and intellectual capital

According to Stabell & Fjeldstad(1998) , the value chain model the activities of a long-linked technology, which the value shop models firm where value is created by mobilizing resources and activities to resolve a particular customer problem, and the value network models firms that create value by facilitating a network relationship between their customers using mediating technology.

Many researchers have split intellectual capital in to different categories (Steward,1997; Edvinsson & Malone, 1997; Brooking, 1997). Basically, intellectual capital includes four core elements, that is, human capital, process capital, innovation capital, and customer capital. Human capital comprises management team, expertise, and their cohesion. Process capital implies all the process and routines of operation management, quality management, knowledge management, and the flexibility of organization. Innovation capital is the key technology, intellectual property, research and development input, and innovative culture. Customer capital stands for the size and growth rate of customers, customer management tools and reputation.

In a value chain model, technology development is performed to either reduce the cost of a product, or to raise the commandable price by improving the adaptation of the product to Buyer Purchasing criteria. Therefore, added-value enhancement comes from the process capital, such as all the process and routines of operation management, quality management, knowledge management, and the flexibility of organization.

In a value shop, to resolve customer's particular problem is the key of value creation, the main activities of value creation are selection, combination, and order of application of resources and activities according to the requirements of the problem at hand. The shop metaphor signals that organizations with intensive technologies often both improve performance and reduce costs by incorporating the object worked on, be it by hospitalizing patients, by performing education in the classroom, or by providing consulting service on customer premises. Therefore added-value enhancement comes from the innovation capital to satisfy all customers' needs. In other word, those key technology, intellectual property, research and development input, and innovative culture are critical assets for a value shop.

In a value network, value-creation is to facilitate a network relationship between their customers through mediating technology. In this case, the contracts and standards are key to facilitate network exchange. The most important of all is the scale because service value is a function of positive network demand side externalities. Adding one more customer to a network directly affects the value of the service to other customers. Therefore value-added creation is assured by customer capital, that is, the size and growth rate of customers, customer management tools and reputation.

3.Conceptual framework

From the above discussion, we can have a rough picture about the relation between value creation logic and intellectual capital. In order to link with traditional business logic, and stress the importance of value creation, this paper will categorize internet business into several types from value creation perspective, that is, value chain, value shop, and value network. Thus we can construct the relation between the first two variables, business models and intellectual capital. Regarding to the evolution of intellectual capital, we need to have further observation in empirical study.

The conceptual framework of this paper is as figure 1.

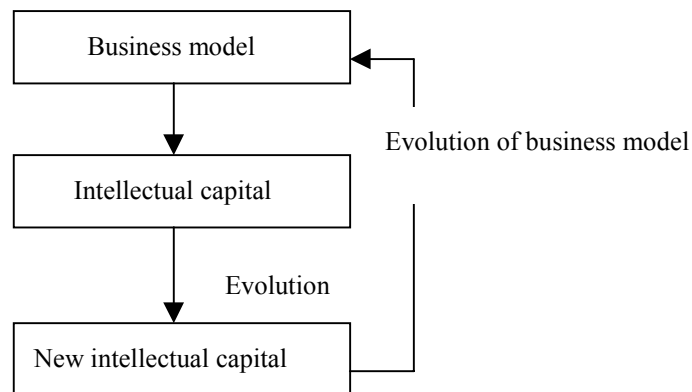


Fig.1 The conceptual framework

4.Method

This study is a exploratory research that tries to construct the relation between variables. Therefore, based on the conceptual framework, case study will be used in this study to further explore the relation between variables. According to the definition of technology and corresponding value creation logic, this study take Amazon, Yahoo, and e-Bay three representative web sites as cases. Among them, Amazon stands for a value chain, yahoo a value shop, and e-Bay a value network.

5.Case Analysis

After reviewing the data of cases, three cases analysis are organized as the following tables(table1,2, 3).

Table 1 Amazon

Case	Amazon
Business model type (now)	Value chain
Description	Biggest On-line bookshop (Long-linked technology)
Intellectual capital (now)	Process capital
Description	Database Excellent customer service and quality control
Intellectual capital (future)	Customer capital
Business model type (future)	Value network
Description	??
Main source of revenue (now)	Sales from books, CD, Toys and so on

Table 2 Yahoo

Case	Yahoo
Business model type (now)	Value shop
Description	Resolve customer internet-related problem Search engine Internet Content provider(Media) One-stop shopping , whole service (Portal)
Intellectual capital (now)	Innovation capital
Description	Continuous innovation in service
Intellectual capital (future)	Customer capital
Business model type (future)	Value network
Description	Virtual mall (facilitate consumers and venders' deals and charge a certain percent of sales)
Main source of revenue (now)	Advertisement

Table 3 e-Bay

Case	e-Bay
Business model type (now)	Value network
Description	Biggest on-line auction site
Intellectual capital (now)	Customer capital
Description	Biggest on-line auction site
Intellectual capital (future)	Customer capital
Business model type (future)	Value network
Description	??
Main source of revenue (now)	A certain percentage of transaction amount from seller

According to the above cases analysis, the relation between variables can be identifies as table 4.

Table 4 the relation between business model, intellectual capital and their evolution

Business model	Value chain	Value shop	Value network
Intellectual capital	Process capital	Innovation capital	Customer capital
Evolution of Intellectual capital	Customer capital	Customer capital	Customer capital
New Business model	Value network	Value network	Value network

From table 4, the tentative propositions can be developed as follows.

- Proposition 1: In a business model of value chain, the key intellectual capital is process capital.
- Proposition 2: In a business model of value shop, the key intellectual capital is innovation capital.
- Proposition 3: In a business model of value network, the key intellectual capital is customer capital.
- Proposition 4: In an internet industry, process capital might be evolved into customer capital.
- Proposition 5: In an internet industry, innovation capital might be evolved into customer capital.

Proposition 6: In an internet industry, customer capital might be evolved into customer capital.

Proposition 7: While evolved into new intellectual capital, business model will be evolved as well.

6. Conclusion

6.1 Conclusion

This paper tries to categorize internet business models from value- creation logic, that is, value chain, value shop and value network. With different value-creation logic, I advocate internet firms should have different intellectual capital. As intellectual capital evolved, the possible business model will evolve in the future.

The summarized conclusion of this study is as table 5.

Table 5 summarized conclusion

Business models	Value chain	Value shop	Value network
Value creation logic	Transformation of inputs	Resolving customer problems	Linking customers
Primary technology	Long-linked	Intensive	Mediating
Core Value	1. Reorganize value chain—efficiency 2. More added value-basically information.	1. One-stop shopping 2. Personalized service	1. Efficiency in scale 2. Positive feedback effect of network 3. Reliable mediating brand
Compared with other categorization	B2C	Portal · B2C	C2C · B2B · C2B
Representative site	Amazon	Yahoo	e-Bay
Primary intellectual capital	Process capital	Innovation capital	Customer capital
Primary source of revenue	Profit in e-commerce	Advertisement	A certain percentage of transaction from seller
Possible path in the future	Professional information seller	e-Mall	
Possible evolution of business models in the future	Value network	Value network	Value network

6.2 Future research

If we observe different business models, we can find that each model has its primary type of revenue (table 5). In an internet industry, different type of revenue stands for different potential of profit, which will prove the excellence of a specific business models than others. We can further analyze the main source of revenue in each business model, and identify if there is any difference or excellence in different models.

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