

A study on the Influence of Agility of Organizational Operation and Dynamic Business Model on the Corporate Performance

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Abstract

Objectives: This study is intended to suggest agility of organizational operation as dynamic capabilities and perform empirical research on the influence of agility of organizational operation and dynamic business model on the corporate performance. **Methods/Statistical Analysis:** This study reviews existing literature related to dynamic business model, agility of organizational operation and develop research model related to the influence of them on the corporate performance. Data were collected from 92 companies. For the exploratory factor analysis, SPSS 19.0 was used, and confirmative factor analysis and structural equation model analysis are performed by using Smart PLS 3.0. **Findings:** According to the result of research, agility of organizational operation influenced on the corporate performance through dynamic business model and critical capability for value creation, and agility of organizational operation turned out to represent indirect influence through dynamic business model and critical capability of value creation over direct influence on corporate performance. **Improvements/Applications:** In order for a company to practically growth, they are required to exert an effort not only for changes in business model but also for dynamic capability of the organization. In the academic perspective, it is expected to precede more precise and well-established research in dealing with the relationship among them.

Keywords: Agility of Organizational Operation, Dynamic Business Model, Dynamic Capabilities

1. Introduction

In order for a company to continuously grow in various environmental changes, it is very important to change business model^{1,2}. It is very difficult to anticipate when and how business model is changed while implementing it entails much risk. Therefore, it is very important to build capability specifically to come up with changes in business model. Reference^{3,4} has mentioned dynamic perspective as a qualification needed for changes in business model. Dynamic perspective is to rapidly absorb knowledge and re-organize resources needed for a company to accomplish the achievement of a company in the rapidly

changing environment⁵. Agility of the organization as a sub-variable of dynamic perspective is a qualification to rapidly detect changes in environment and swiftly and flexibly correspond with them⁶. This study is intended to suggest agility of organizational operation as a dynamic capability required on changes in business model and perform practical research in dealing with influence of agility of organizational operation and dynamic business model on the corporate performance. For this, Chapter 2 investigates theoretical background on the dynamic capability and changes in business model. Based on them, Chapter 3 suggests research model and hypothesis. Chapter 4 states

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research method, and Chapter 5 states the analysis on the research model and verification of hypothesis. Chapter 6 states discussion and conclusion.

2. Theoretical Background

2.1 Dynamic Business Model

2.1.1 Business Model Outline

In general, business model is to make business activities of a company a conceptual model in order for a company to create values and to deliver relevant values to the clients. Business model entails with components and expresses various company activities by using the sequence of operation and interaction among components. Terms of business model have been generalized partially due to expansion of e-business market. Venture companies in the field of Internet business area in the beginning have mostly been founded according to concept or idea unlike companies that performed in traditional manufacturing-oriented industry. They were known to utilize business model for the investment⁷.

Due to frequent usage of business model, it has been researched. According to reference¹, there were common characteristics based on the definition of business model by many researchers in the past. However, there were partially different characteristics as well. Even though it was difficult to accurately and academically define them, concept of business model has been converged in three perspectives – technology-oriented, organization-oriented, and strategy-oriented. According to reference⁸, flow of research in business model has been analyzed in three directions. First of all, it is a research about establishment of concept and design of business model. Most of the previous researches have touched them. Secondly, it is a research about establishment of relationship between business model and previous managerial theories (especially, strategies). They stated that business model was in the middle of strategy and implementation. Third, it is a research about changes in business model.

According to reference⁹, business model is used in two different approaches. First of all, it is a static approach that is relevant to a blue print for expressing the consistency among components of core business model. Secondly, it is a transformational approach that is relevant to a tool for

mentioning the concept of business model changes and innovation in it or organization. ROCV framework that could include these two approaches has been established and shown in Figure. 1.

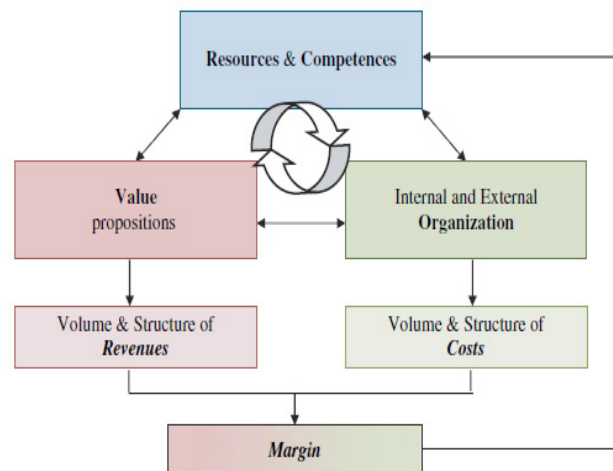


Figure 1. The ROCV framework: main Business Model components and their relationships.

2.1.2 Dynamic Business Model and Capability

In order for a company to successfully implement their business model, capability is required. Reference¹⁰ emphasizes the integration of resource-based view and transaction cost economics based on the theoretical framework of business model. This is because business model mentions internal competitiveness as a basis for company competency, and transactions shall be made to provide values to clients in the use of resources. In other words, it has been insisted that the gist of business model was defined as a combination of transactions in creating values to customers and companies through resources.

In order for a company to maintain predominance in competition in a changing environment, it is inevitable for business model to be evolved. This is an important reason why dynamic business model is convincing. In order for successful business model to be implemented, standard, core, and repetitive processes shall be provided, and changes in these processes create changes in the business model³. In order to continuously create values through dynamic business model, critical capabilities that are regarded to be dynamic are required. Critical capabilities are selected as a strategic action while leading changes in business model⁴. Figure. 2 is a concept map that comprehensively organizes contents^{3,4}.

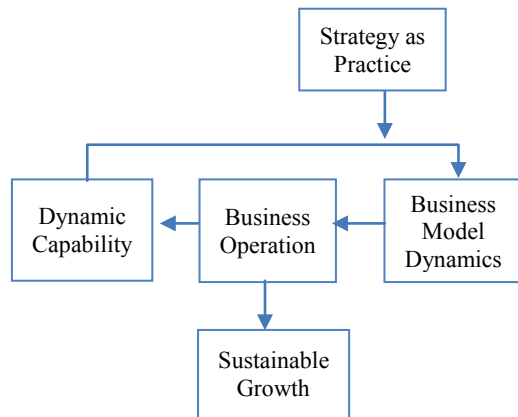


Figure 2. Conceptual framework for dynamic business model and capabilities.

2.2 Dynamic Capability and Agility of Organization

2.2.1 Outline of Dynamic Capability

Company is in possession of various resources for activities. In the resource-based theory, it is important to accurately setup core elements of resources and seek for a method in effectively managing them since characteristics of resources possessed by a company influence on predominance in competition¹¹. However, companies create outcomes in rapidly changing situations that are difficult to predict. Therefore, it is difficult to explain them only with resource-based theory. In order for a company to create outcome in a rapidly changing situation, dynamic perspective is required including re-organization of possessed resources and quick absorption of knowledge⁵.

Dynamic capability is of a highly dynamic approach on resource-based theory that is closely related to static perspective. Especially, dynamic capability that integrates, establishes, and re-arranges resources inside and outside of the company in a rapidly changing and un-predictable market might be of a continuous source of predominance in competition. Dynamic capability indicates a capability for company to preemptively change resources in order to continuously create values in a changing environment¹².

According to reference¹³, dynamic capability is of ability and process of an organization to intentionally modify resources in order to react in a changing environment, is established inside of an organization, and also relies on resources they are already in possession of. At last, capability of possessing absolute resources to be used for creating values in a company and the one for practically

utilizing and using them for creating values by combining resources are a separate concept. Therefore, dynamic perspective is an exclusive capability of an organization that is relevant to the latter concept¹².

Dynamic capability in this study is defined as ability to explore changes in external circumstances and establish new capability of an organization by changing internal resources or processes.

2.2.2 Agility of an Organization

Agility of an organization has been differently defined by scholars including 'ability of coping with predictable and unpredictable changes and utilizing changes as an opportunity' or 'ability in achieving speed and flexibility by re-organizing or learning resources to provide customer-oriented products or services in a rapidly changing market environment.' However, it is mostly defined as a capability of an organization to rapidly detect changes in environment and flexibly cope with them on time⁵.

In addition, dynamic perspective has been defined to explore changes in external environment and to establish new capability of an organization by changing resources or processes in the organization in the previous paragraph. Agility of an organization is of a sub-variable of dynamic perspective⁵.

According to reference¹⁴, agility of an organization is referred to as ability to swiftly integrate required assets, knowledge, and relationship and to detect and identify competitive opportunity in the market and is known to be divided into agility of customers, operation, and partners.

3 Research Model

According to theoretical background in 2.1.2 [Figure 2], research model shown in the following Figure. 3 has been developed. This study suggested five hypotheses to practically verify how organizational agility of operation influenced on critical capabilities for creating values and also on the performance of company in the end.

3.1 Changes in Organizational Agility of Operation and Business Model

In order for a company to continuously create value in a changing environment, they produce business model and evolve it. Core, standard, and repetitive process of the company is related to business model³. Changing business model is to intentionally modify and integrate

resources in order to cope with external environment and to create new capabilities and is hence dynamic perspective¹⁴. The more market environment is competitive, the more they need to swiftly cope with changes in environment. As a sub-variable of dynamic perspective, agility of an organization indicates ability of rapidly detecting changes in environment and flexibly coping with them on time⁵. At last, organizational agility of operation is anticipated to swiftly detect changes in business model, modify and integrate process in the organization, and successfully lead changes in business model. Therefore, following hypothesis is suggested.

H1: Agility of Organizational operation positively influences on changes in business model.

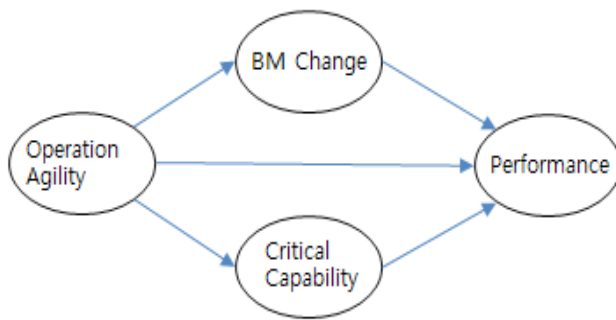


Figure 3. Research Model.

3.2 Agility of Organizational operation and Critical Capabilities for Value Creation

Critical capabilities of value creation in this study are based on reference⁴. Reference⁴ has analyzed successful changes in business model, strategic actions, and capabilities on 25 companies that have continuously been creating values. As a result, three critical capabilities were derived. First of all, it is directivity in experimenting and utilizing new business opportunity. Secondly, it is balanced utilization of resources. Third, it is active and distinctive leadership as well as solid organizational culture. Due to insufficient amount of previous studies in dealing with the relationship between organizational agility of operation and critical capabilities in value creation, Q&A with experts (co-author professor of this study and students in doctoral program) has been performed. As a result, balanced utilization of resources has been excluded. Therefore, following hypothesis is suggested.

H2: Agility of Organizational operation positively influences on critical capabilities for value creation.

3.3 Agility of Organizational Operation and Corporate Performance

There are many of the literature about how agility of an organization influences on achievement of the company⁵. In this study, following hypothesis is suggested to compare and explore influence of organizational agility of operation on achievement of the company through changes in business model and critical capabilities for value creation.

H3: Agility of organizational operation positively influences on Corporate Performance.

3.4 Changes in Business Model and Corporate Performance

There are only few empirical researches in dealing with business model. Reference¹⁵ indicates empirical research about the design of business model and achievement of the company. Among contents in the research, design of model business has been divided into innovative business model design and efficient business model design while investigating the influence of them on corporate performance. Both innovative and efficient business model designs turned out to influence on achievement of the company. Changes in business model include the design of business model as well as a concept of expanding and renewing them. However, design of business model is of basis. Therefore, following hypothesis is suggested.

H4: Changes in business model positively influences on corporate performance

3.5 Critical Capabilities for Value Creation and Corporate Performance

According to 3.2, critical capabilities for value creation have been consulted with reference⁴. Relevant reference stated three critical capabilities to continuously create values. In this practical research, balanced utilization of resources that organizational agility of operation and similarity of concept were highly observed was excluded. Therefore, following hypothesis is suggested.

H5: Critical capabilities for value creation positively influences on Corporate Performance.

4. Research Method

4.1 Development of Measuring Tools

Development of measuring tools in the research model have utilized measuring tools that have been verified with validity in the past and been modified by me as a researcher according to research environment. Measuring items for organizational agility of operation and achievement of the company have quoted reference⁵. Organizational agility of operation has been directly quoted, and five of seven items have been quoted for achievement of the company. Items for measuring changes in business model and critical capabilities for value creation have been developed by referring to literature related to business model according to reference^{3,4} due to lack of cases for practical studies. In addition, Q&A has been performed with co-author of this study (professor) and students in doctoral program for validity of contents while developing five and six items, respectively. All the developed items have been measured by 5-score Likert criteria. Table 1 indicates literature related to operational definition in this study.

Table 1. Operational definition of variables

Research Variables	Operational Definition	Related Literature
Organizational agility of operation	Ability for corresponding with changes in organizational operation	(5)
Changes in business model	Changes in service, product, market, customer, and profit model	(3)
Critical capabilities for value creation	Interaction with employees, open communication, and transparent leadership	(4)
Achievement of company	Return on investment recognized by company when comparing with competing firms, increase in market share, and degree of growth in sales	(5)

4.2 General Characteristics for Data Collection and Samples

In order to identify organizational agility of operation, changes in business model, and critical capabilities for value creation influenced on achievement of the company, data have been collected in the unit of company. Data

have been collected from the end of June to the end of July, 2016. Total 92 valid copies were collected. 51 copies have been collected from domestic online survey company, and the remaining 41 copies have been collected by utilizing Google Docs survey copies after contacting via e-mail and SNS.

According to the distribution of general characteristics among collected data, the proportion of male and female participants was 86% versus 14%. As for age groups, 21% of them turned out to be in their 30s followed by 56% in their 40s and 22% in their 50s or above. As for types of business of company, 31% of them turned out to involve in information communication followed by 30% in service and distribution, 17% in electric and electronics, 4% in chemistry, 4% in machine, and 14% in others. As for the distribution of the number of workers in the company, 24% of them turned out to be less than 20 participants followed by 23% for between 23 and 100 workers, 37% for between 100 to 1000 workers, and 15% for more than 1000 workers. As for the distribution of position, 24% of them turned out to be department chief or below, 41% for director/department chair, 18% for directors, and 16% for CEOs. Most of the CEOs turned out to have less than 50 workers in their companies.

5. Analysis and Conclusion

For statistical analysis on data collected in this study, SPSS 19.0 and Smart PLS (Partial Least Squares) 3.0 have been utilized. In order to verify validity and reliability of measuring model, SPSS 19.0 was used to perform exploratory factor analysis. Smart PLS 3.0 was also used to perform confirmatory factor analysis. In addition, Smart PLS 3.0 was used on structural model analysis. Smart PLS has a weakness for not being able to control measuring errors. However, it is feasible to analyze small-sized samples compared to other methods. In addition, Smart PLS 3.0 is less influenced by residual distribution. Therefore, it is useful in prediction of cause and effect relationship more than verification of entire theories.

5.1 Verification of Validity and Reliability

Items with relatively huge value of cross factor loading has been excluded after implementing factor analysis in the use of orthogonal rotation from major component analysis and Varimax method by setting the number of factors same as the number of potential variables (4 vari-

Table 2. Validity and reliability analysis

variable	test item	factor loading	t-value	AVE	CR	Cronbach's alpha
	OG_2	0.693	6.438			
Operation	OG_3	0.85	28.01	0.657	0.884	0.824
Agility	OG_4	0.856	20.244			
	OG_5	0.83	17.996			
	BC_1	0.847	18.956			
BM	BC_2	0.794	12.197	0.695	0.901	0.854
Change	BC_3	0.823	16.974			
	BC_4	0.868	29.16			
	CC_2	0.775	11.638			
Critical	CC_4	0.857	23.674	0.714	0.909	0.865
Capability	CC_5	0.883	30.278			
	CC_6	0.861	21.238			
	PF_3	0.791	11.629			
Corporate	PF_4	0.808	14.676	0.672	0.891	0.84
Performance	PF_7	0.793	17.23			
	PF_8	0.884	31.407			

ables). As a result, they were classified into four factors that explained 72% of the total variance. According to the result of factor analysis, confirmative factor analysis has been conducted by using Smart PLS 3.0 to verify the convergent and discriminant validity on items. Results are as follows (Table 2).

Convergent validity requires factor loading to be higher than 0.5, AVE (average variance extracted) to be higher than 0.5, and CR (composite reliability) value to be higher than 0.7 in the significant t-value. According to the aforementioned analysis table, all the variables satisfied them. In addition, reliability required Cronbach's alpha value to be higher than 0.6. All the variables turned out to satisfy it. Discriminate validity requires the square value of correlation coefficient to be less than AVE. Table 3 indicates the result of correlation analysis, and bold values in the diagonal lines are the square value of AVE. Since correlation coefficient value is smaller than this value, they all satisfy discriminate validity.

5.2 Verification of Hypothesis

Results of analysis in the structural model are summarized in Figure. 4.

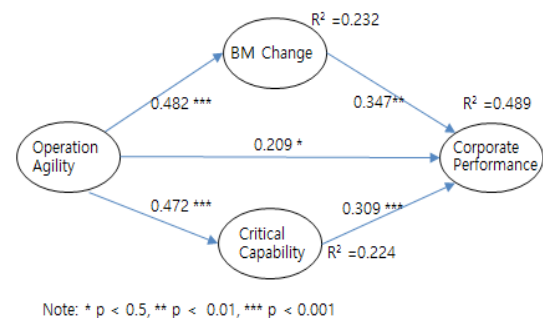

Figure 4. Result of structural model analysis.

Table 3. Result of correlation analysis of variables

	OG	BC	CC	PF
OG	0.810			
BC	0.482	0.883		
CC	0.473	0.463	0.845	
PF	0.552	0.590	0.568	0.820

* Bold values in diagonal lines: Square value of A

According to the result of analysis, all H1, H2, H3, and H4 were accepted. Organizational agility of operation turned out to significantly influence on changes in busi-

ness model ($\beta = 0.482$, $t\text{-value} = 4.621$) also on the critical capabilities for value creation ($\beta=0.472$, $t\text{-value}=5.22$) and achievement of the company ($\beta=0.209$, $t\text{-value}=0.032$). Changes in business model turned out to significantly influence on achievement of the company ($\beta=0.347$, $t\text{-value}=3.243$), and critical capabilities for value creation significantly influenced on achievement of the company ($\beta=2.670$).

6. Result and Discussion

6.1 Discussion

This study has suggested organizational agility of operation that influenced on critical capabilities for value creation as well as dynamic business model and implemented practical analysis as to whether changes in business model and critical capabilities for value creation influenced on achievement of the company through organizational agility of operation.

As a result, first of all, organizational agility of operation turned out to significantly influence on critical capabilities for value creation as well as changes in business model. Companies are required to create new values and change their businesses by coping with changing market environment. Organizational agility of operation for swiftly re-organizing resources and process in the organization is required as a capability for them. This was supported in the previous studies^{7,8}.

Secondly, changes in business model and critical capabilities for value creation turned out to significantly influence on achievement of the company. This practically proves that companies are required to change market, customers, products, and service as components of business model in order to maintain continuous growth in the progress of technology and rapidly changing market environment.

Third, organizational agility of operation turned out to significantly influence on achievement of the company. This is supported by previous studies [reference in IP class] indicating that agility of an organization including the operational agility significantly influenced on achievement of the company.

Fourth, total effect from influence of organizational agility of operation on achievement of the company turned out to be 0.522. Direct effect was 0.209 that was lower than indirect effect, 0.313. This means that organizational agil-

ity of operation more directly and significantly influenced on achievement of the company, but indirect influence on them through changes in business model and critical capabilities for value creation was more effective. This implies that more studies in dealing with the relationship between dynamic business model and dynamic perspective are required for achievement of the company.

6.2 Limitations and Implications of the Study

The objective of this study is to practically prove that changes in business model are required for a company to continuously grow in a changing market environment, and capabilities for changing business model are of a dynamic perspective. For this purpose, organizational agility of operation has been suggested as a dynamic perspective while developing measuring tools for changes in business model and critical capabilities for value creation according to previous literature to practically prove the research model^{7,8}.

This study is meaningful in that it attempted practical research on the relationship between dynamic business model and dynamic perspective for the growth of the company. However, there are following limitation in this study.

First of all, it is shortage in the number of sample. This study has been conducted with practical analysis on 92 companies. In spite of limitation as a research on company, relatively fewer data were used in the analysis. There is a need to verify the results of this study by collecting more data.

Secondly, it is lack of establishment for distinct concept on changes in business model, critical capabilities for value creation, and agility of an organization. As there have not been many practical researches on them, and it was in the beginning of development for the model, exploratory tendency was represented. Measuring tools have been developed by excluding duplicated meanings in this study. However, there is a need to establish more distinctive concepts and develop more refined variables and measuring tools.

7. Acknowledgement

This research was financially supported by Hansung Univerity.

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