

Framework for Developing a Korean Industrial Convergence Business Model

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Abstract

Although creative products are developed through industrial convergence, the reality is that the success of the products is not assured in the market due to the lack of purchase desire and sympathy of consumers. Thus, this study aims to build a framework for developing a business model in the industrial convergence field so that industrial convergence technology can lead to a business success, beyond commercialization or industrialization. In particular, the present study attempts to set the stages for possibility of commercialization, materialization of infra, business direction, and business goal by reflecting the characteristics of the business environment in Korea and the commercialization process of convergence items, and to provide a tool that can be practically utilized in small and medium enterprises by presenting the components of each stage.

Keywords: Business Model Framework Introduction, Industrial Convergence, Korean Business Model

1. Introduction

As convergence business has increasingly drawn interest in recent years, a number of creative products not existed in the existing market have been rolled out by small and medium enterprises, which depend their business on ideas, by collaborating with heterogeneous industries. In reality, however, the success of the products are not guaranteed, despite their innovative features, due to the lack of appealing point of products, sympathy, and new value to consumers. Thus, small and medium enterprises, accounting for more than 99% of domestic firms, need to establish effective strategies in order to enter and settle in the markets both at home and abroad through the commercialization of convergence ideas and technologies. To this end, it is thought that a guideline for the success based on a business model need to be provided for small and medium enterprises in Korea. This study, therefore, attempts to establish a framework for developing a business model suited for the Korean environment and provide it as a tool to be practically used by small and

medium enterprises, considering the characteristics of the Korean business environment and the commercialization process of convergence items.

2. Previous Studies

2.1 Business Model and Convergence Business

Business model refers to 'a comprehensive plan or idea of how to conveniently provide and how to market certain products or services to consumers and how to earn money'. Timmers² defines business model as a structure of products, services and information flows that include various business participants and roles, and a blue print that describes the potential profit and revenue sources of various participants. Amit and Zott³ also describes that business model explains the contents, structures and management of transaction taking place to create values. However, as convergence items have not been in the market before, it is sometimes not appropriate to apply

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the existing business model framework to them. Thus, the followings need to be additionally considered when applying a business model to convergence items. First, because convergence items are new products or services that have not been existed in the market, the possibility of technical realization and the demand for the items in the market should be confirmed. Second, a specific plan needs to be made with regard to the procurement of internal and external resources because resources from heterogeneous fields, which are not available from the inside, are needed for the production of the items. Third, since convergence items are a creation of new values differentiated from the existing items, a decision needs to be made regarding to whom and how such items will be delivered. Finally, as a new profit model may be created from the new items, a business goal should be established by setting revenue streams in consideration of the new profit model (Table 1).

2.2 Concept of a Korean-style

The concept of a Korean-style in this study is limited to two concepts: one is 'a human network centered on in-group favoritism' that places values on personal ties, represented by blood ties, school ties and regional ties and the other is 'a large firm based corporate ecosystem' reflecting a corporate ecosystem centered on large companies. The reason for limiting to the two concepts is to reflect the actual business environment, so that small and medium enterprises can do their businesses in the commercialization process of convergence items according to the stages presented in this framework.

Of the Korean-styles suggested in this study, the 'human network centered on in-group favoritism' is represented by personal ties. With this type, firms can shorten the time to establish the business base in the beginning as they can expand their scope of resource procurement, including information, money and human resources. On

Table 1. Convergence in terms of commercialization

Commercialization stages		Components of the convergence business model
Stage	Details	
Stage 1 Diagnosis of the possibility of commercialization	At this stage, a diagnosis is made as to the possibility of creating a new market through the commercialization of convergence items by finding out whether convergence items can be materialized in combination with heterogeneous technologies, and by identifying how much demand for the new convergence items exists in the market.	Convergence Technology/Service. Demand of new market.
Stage 2 Materialization of Infra	At this stage, the size of internal resources needed for the production of convergence items is measured; a decision is made from whom external resources will be procured; and the base for the business of convergence items is specifically identified.	Internal Resource. Partner.
Stage 3 Determination of direction	At this stage, the business direction of convergence items is decided by identifying the market leadership and competitiveness of convergence items, analyzing the characteristics of major customers who need such values, and determining which channels will be used to effectively deliver the items to them.	Value Proposition. Target Customer. Channels.
Stage 4 Establishment of business goals	At this stage, the costs to be incurred and the profit to be created are measured with regard to the commercialization of convergence items.	Revenue Streams.

the contrary, when the use of personal ties is beyond the legitimate scope, the business may be at the risk of failure and lose the permanence of the existing benefit, depending on the status of personal ties. The 'large firm-based corporate ecosystem' can be applied to the business items that can be collaborated with large firms. With this type, a stable business operation is available from the entry stage to the distribution and sales stages, through the network of large firms. In contrast, the business may be absorbed into large firms equipped with strong capital bases or threatened by the launch of similar items if they are not collaborating with large firms.

3. Framework for Developing a Korean Industrial Convergence Business Model

3.1 A Korean-style Convergence Business Model

This study attempts to present a framework for developing a business model suited for the Korean situation according to the characteristics of Korean business environment and the commercialization stages of convergence items. In particular, a framework for a business model is presented as follows, considering the Korean business environment

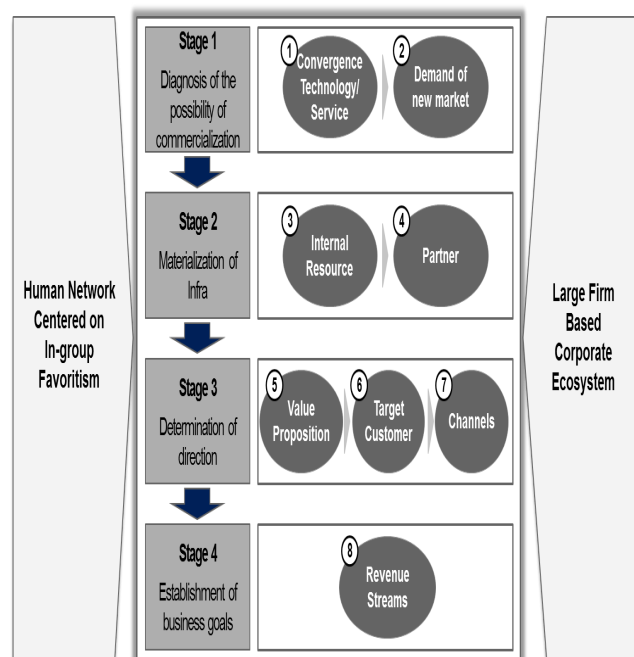


Figure 1. Korean industrial convergence BM.

represented by 'the human network centered on in-group favoritism' and 'the large firm-based corporate ecosystem' and the convergence characteristics in 4 stages with 8 domains (Figure 1).

3.2 Component of the Korean Business Model

The details of the components of the Korean-style converged business model are as follows. First, convergence technology/service is a domain to find out the possibility of actual technical realization and the difficulty of the realization of convergence items, and can be divided into the possibility of realization and easiness of realization. Second, demand of new market is a domain to identify the existence of the customer base that needs convergence items and the size and profitability large enough to create a new market for convergence items, and can be divided into market size and profitability. Third, internal resource is a domain to identify the size of the resources to be internally prepared for the smooth commercialization of convergence items and check the actual possibility of securing the resources, and can be determined by the size of resources and possibility of procurement. Fourth, external partner is a domain to decide the collaborators in procuring external resources for an efficient and stable operation of convergence items, and find out the degree of trust in the collaborators, and is decided by the partner and trust. Fifth, value position is a domain to see whether the newly created value by convergence items has a leadership in the market and what type of differentiated competitiveness can they provide to customers, and is divided into leadership and competitiveness. Sixth, target customer is a domain to decide major customer groups to be provided with the value created by convergence items and identify what characteristics those customers have, and can be measured by customer segmentation and customer characteristics. Seventh, channels are a domain to identify the most effective channel in providing customers with the value of convergence items and whether such channels are systematically linked, and can be divided into distribution channels and mutual relevance. Finally, revenue streams are a domain to identify the costs that may occur during the commercialization process of convergence items and the amount of the costs, and find out the source and size of revenue, the main determinants of which are cost structure and revenue sources.

Table 2. Component of the Korean business model

Component	Details
Convergence Technology/Service	Convergence technology/service is a domain to find out the possibility of actual technical realization and the difficulty of the realization of convergence items, and can be divided into the possibility of realization and easiness of realization.
Demand of new market	Demand of new market is a domain to identify the existence of the customer base that needs convergence items and the size and profitability large enough to create a new market for convergence items, and can be divided into market size and profitability.
Internal Resource	Internal resource is a domain to identify the size of the resources to be internally prepared for the smooth commercialization of convergence items and check the actual possibility of securing the resources, and can be determined by the size of resources and possibility of procurement.
Partner	External partner is a domain to decide the collaborators in procuring external resources for an efficient and stable operation of convergence items, and find out the degree of trust in the collaborators, and is decided by the partner and trust.
Value Proposition	Value position is a domain to see whether the newly created value by convergence items has a leadership in the market and what type of differentiated competitiveness can they provide to customers, and is divided into leadership and competitiveness.
Target Customer	Target customer is a domain to decide major customer groups to be provided with the value created by convergence items and identify what characteristics those customers have, and can be measured by customer segmentation and customer characteristics.
Channels	Channels are a domain to identify the most effective channel in providing customers with the value of convergence items and whether such channels are systematically linked, and can be divided into distribution channels and mutual relevance.
Revenue Streams	Revenue streams are a domain to identify the costs that may occur during the commercialization process of convergence items and the amount of the costs, and find out the source and size of revenue, the main determinants of which are cost structure and revenue sources.

4. Conclusion

This study presented a new 'Korean-style convergence business model' by incorporating converged business and Korean characteristics into the existing business model, so that small and medium enterprises can establish the strategies suited for the current market environment by identifying the value of their convergence items. In analyzing the environment of a new market, this study, unlike the existing business model, presented the sequen-

tial review items according to the correlation between components by considering resource import from heterogeneous fields, and at the same time, took into account 'the human network centered on in-group favoritism' and 'the large firm-based corporate ecosystem' by considering the characteristics of South Korea.

In conclusion, this study has an implication that provides the basic checklist for the success of the converged business of small and medium enterprises, which account for the majority of domestic firms, and new start-ups. It is

considered that a more advanced model needs to be presented in the future through the actual application and test for firms.

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