A Study on discovery strategies of promising convergence items of SMEs

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1. Introduction

As the latest technology is advancing and technology change is accelerating, product life cycle is shortening and needs of consumers for new products are diversifying. In response, convergence business is expanding from technological convergence of discussable perspective to interindustry, product and service convergence. There are two reasons why companies are putting efforts toward convergence management: strengthening of companies' internal competitiveness and finding of external opportunities. Satisfying these, the companies can get advantage of preoccupying future market. Most companies make an effort to initiate a new business that will create sales profit from a convergent point of view. However, securement of standardized and efficient process is difficult. In case of SMEs, they need to come across a SME-customized convergent item. However, it is hard to have such process. This process model is for developing a new convergence business item.

2. The discovery process of new convergence business item

There have been numerous researches to develop a new convergence business item. Collaborative models were suggested for developing convergent technologies among SMEs. Also there were attempts to evaluate industrial convergence utilizing license information regarding technology. However, these research models have their practical limitations to be applied in actual SMEs. For commercialization, the model should be complemented in consideration of not only technology but also marketability. Furthermore, reversed process of understanding SMEs' convergence types from development of convergence research was used instead of discovering new convergence item for the technology. This can explain about current convergence conditions, but needs to be complemented in order to discover a new item.

In this study, the new convergence business item discovery model demands the company's analysis of current needs. Based on the needs, internal analysis of the company is analyzed. A company's internal analysis consists of modules depending on characteristics of a company, such as Business outcome, Financial Analysis, R&D infra Analysis, and Core technology-Core product matching. Especially, in case of a technology-based company, depending on its level of technology contribution, technological attractiveness analysis (technical standard vs. market needs matrix) and contributiveness and extensibility of holding technology is analyzed. The new convergence business item discovery model is as follows:

Figure 1. The discovery process of new convergence business item

Step 2's Company Analysis has its signification in analyzing capability of internalization, when a new convergence business item is discovered. Therefore, it can be considered as building a frame for discovering a convergence item.

Core technology of internal business is analyzed and can even draw extendable domain of technology. In this process, a company is able to find out candidates from the new industry, not from the industry that the company belongs to.

This Business Domain Pool analyzes portfolios in aspects of market (market size and growth rate), and in some sense may be re-clustered. During this process, the company can be aware of attempts for industrial convergence.

If a convergence business domain, which is highly attractive in aspects of technology and market, is selected, the company needs R&D plan for substantive commercialization. Also, building network for the new convergence field is necessary. This can be solved by Step 5's convergence C&D round table. In this process requires participations of corporate developers from existing, technology developers from convergent industry, demanders in need for convergent product development, public institution that will provide the company's un-owned techniques, and

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facilitators who will lead a round table efficiently. After this step, the company's technology commercialization roadmap for convergence business is creates as shown in the following figure, and the company starts convergence commercialization based on it.

This process was applied in a company, K. K has strong consumer bargaining skills regarding order production system of existing target market. Due to the characteristic of business, it experienced repeating cycles of boom and bust. Therefore, K wanted to find a new convergent item. The company started a new business convergence based on technology commercialization roadmap, and built a new network. This helped the company to diversify business lines and to build business portfolio. In nonfinancial performance, there was 30% uplift in sales compared to former existing items. The company's new network can be utilized in the future as in Open Innovation perspective. Ultimately, the company has created not only existing customers but also new customers.

3. Conclusion

As the rate of technological change is accelerating and the needs of market is diversifying and complexifying, a solution in aspect of convergence is necessary in order to solve the problem. The solution varies from technological convergence to product, industry, service convergence. A company commercializes through convergent management. The company's main strategy is to find a new convergent item for expansion of existing business and diversification on perspective of convergence. In order to fulfill this, possessing an efficient and systematic process is essential. Application of the new convergence business item discovery model has created a successful case. However, it is mainly reflected in the qualitative aspects of the process. In order to perform on numerous SMEs, research for complementing quantitative model is necessary.

4. References

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