



## The changing pattern of SME's innovativeness through business model globalization

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### ABSTRACT

Globalization has forced small and medium enterprises to change business models with new innovative capabilities. However, it is not clear what those old and new business models are let alone capabilities. Challenging this, we suggest a way of identifying principal types of those business models, and of finding evolving paths of SME's business models with the changing pattern of innovativeness. Based on a survey result of 400 Korean SMEs, four principal types of business models are identified and characterized by distinctive innovativeness. Also, through interviews and additional surveys on 30 globalized SMEs, the four evolving paths of SME's BMs are explored. For small and medium enterprises, our research can be used not only as a strategic reference, but also as a policy tool to design government-funded supporting programs.

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### 1. Introduction

Recently, small and medium enterprises (SMEs) have been regarded as the engine of economic growth and employment. As the growth of industry giants have been slowing, the role of SMEs becomes more important. Actually, Korean SMEs have increased their share both of exports and imports over last decade, and are expected to keep doing so as the driving forces of economic growth and technological innovation. [1]. Led by the Small & Medium Business Administration (SMBA), Korean SMEs definitely play a pivotal role in the national economic growth, accounting for 99.9% of all enterprises (about 3 million SMEs), 87.7% of all employees (13.1 million employees), and 49.4% of total production in 2009 [2].

To boost national innovation and economic growth, it is crucial to drive SMEs' innovation. Despite various suggestions, there is a consensus that innovation should depend on a firm's innovativeness, in other words, the capability to introduce new processes, products, ideas, etc. [3,4] At the outset, innovativeness was defined from various perspectives, but recently is conceptualized as 'strategies and actions that the firm may undertaken in order to actualize corporate orientation and goals' [4]. The focus has made a shift from a traditional mix of product and process innovation to a market-oriented strategic process. As for SMEs, the basic definition is same, but responsiveness to changing economic and technological landscape is emphasized [5,6]. Considering these, we can define SME's innovativeness as ever-changing environment-responsive strategies and actions to achieve corporate goals.

A number of studies have suggested a variety of key determinants on SME's innovativeness, and further investigate how those affect SME's business and innovation performance [4,7,8]. Some studies try to bringing together determinants in a systematic manner. Notably, Keizer, Dijkstra and Halman build taxonomy, suggesting that key determinants could be classified into those internal and external [9]. External variables cover all the opportunities SMEs can seize from a surrounding environment, including variables such as 'Collaboration with other firms', 'Linkage with knowledge centers', 'Utilizing financial resources or support

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regulations', and others. Among external variables, recent studies have found that collaboration with other players such as suppliers, business partners or customers should become more important for SMEs' innovation [10–13]. Focusing on knowledge acquisition and sharing, some studies argue that the linkage with knowledge centers which stimulate university-SME technology/knowledge transfer be also a key factor, emphasizing the role of bridging institutions [10,14]. Finally, another consensus is that most SMEs have difficulty in financing. That is why R&D funding availability, government subsidies and supporting regulation are regarded as important factors [13,14].

To the opposite, internal variables include characteristics of SMEs and government policies for SMEs. Those can be roughly divide into 'Strategy', 'Structure', 'Technology policy', 'Level of education' and 'Investments in R&D' categories. Typical managerial factors such as organizational structure or corporate strategy have also been studied [16,17]. It is worthy of mentioning some previous efforts as follows. Birchall, Chanaron and Soderquist and Carrier suggest that the appropriate strategy could stimulate both internal creativity and risk-taking behavior [10,18]. Hoffman et al. also find that strategic factors like marketing involvement have contributed a lot to successful innovation [14]. Larson, Gobeli & Grey and Meer et al. examined the relationship between management structures and innovation activities, suggesting the importance of appropriate structure [19,20]. Oerlemans, Meeus and Boekema argue that technology policy should have bearing on firm's innovativeness [12,15]. Recently, Radas and Bozic stress the importance of market factors such as international market presence [7].

So far, looking into determinants, it is notable that those are composed of SME's structures and strategic behaviors to be more responsive to external opportunities than as it was. Although several taxonomies and concepts have been suggested, the business model (BM) is one of the most appropriate to bring those together in a systematic manner. Above all, BM constitutes a holistic concept, encompassing most of above-mentioned elements that build the anatomy of a firm's core logic for value creation and appropriation [21–23]. Further, recent studies argue that the BM should be a key driver of innovation, allowing entrepreneurs to identify opportunities and thus to bring innovation into existence [24,25]. Put simply, BM is not only a system of innovation, but a way of doing innovation. Also, the focus lies on responsiveness to seize opportunities from market and technological change which is SME's innovativeness itself. Thus, BM is better at explaining any SME's innovation rather than some of above-mentioned elements. That is why we use BM as a framework to explain SME's innovation.

Thus, this paper aims to identify principal types of SME's BMs, understand how these BMs are composed of, analyze what kinds of innovation BMs drive, and thus to explain SME's innovation in terms of BM. As for Korean SMEs, one thing to note is the effect of globalization. Recent study reports that the globalization should have forced Korean SMEs to develop a variety of global-level capabilities, and contributed a lot to enhancing innovativeness [26]. Under the condition of a saturated domestic market and global companies' penetration, SMEs cannot help competing with global leaders in a global market. Another thing to note is that BM of any company goes through transformation, augmentation, extension or evolution to sustain competitiveness [27]. Considering these, we also try to finding several paths of developing global BMs.

## 2. Research framework and methodology

The overall process of our research is shown in Fig. 1. Creating Korean SME's BM space based on key dimensions, we can trace the places where Korean SMEs' BM have been, and is now heading into. Reviewing 125 previous BM studies, we extract four key BM components, and reduce those to three dimensions. This is mainly due to easy-to-understand visualization of Korean SMEs' principal BMs. A survey was made on 400 Korean SMEs to collect data of their current status of BM components. With preprocessed data, principal types of Korean BMs are identified by using K-means vector clustering. SME's BM vector is constructed

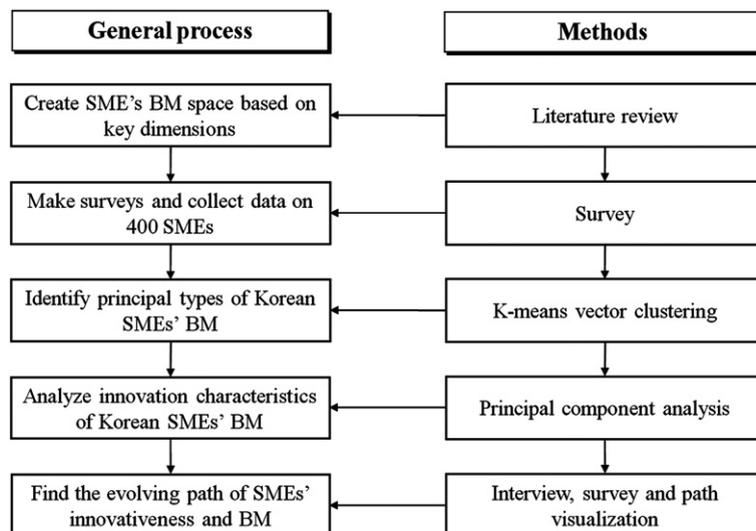


Fig. 1. Research framework.

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