

# A Business Model Feasibility Evaluation Method for Enterprise Collaborative Business Innovation

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## ABSTRACT

In innovative eras, business models (BMs) are the key factor driving business success. However, implementing innovative BMs is time-consuming and high-risk. Therefore, conducting BM feasibility evaluations after their initial design is important, but some unsolved problems remain in the assessment of the feasibility of BMs. Deciding whether to implement innovative BMs is difficult for all enterprises. The business model canvas (BMC) methodology has been widely adopted by enterprises that are designing innovative BMs. This study proposes a BMC-based feasibility evaluation method geared towards SMEs or new entrepreneurs. The study verifies the proposed method by designing BMs for a non-profit organization and an innovative coffee shop. The rationality of each dimension of the two BMs is calculated to generate a radar chart, and based on the results, advantages and disadvantages are discussed. The proposed method can be used to guide designers of innovative for-profit and non-profit BMs in evaluating feasibility and identifying strengths and weaknesses in each BM block.

## KEYWORDS

Business Model, Business Model Canvas, Collaborative Innovation, Feasibility Evaluation

## 1. INTRODUCTION

Business environment changes occur very quickly in the era of innovation. Businesses in all industries pursue innovative capacity, as they must constantly evaluate how to position themselves in a changing and uncertain Internet-based environment. Thus, successful businesses are those that invest funds into the innovation of their business model (BM; Cosenz & Bivona, 2020) or technology. A BM specifically defines a company's target consumers, as well as the methods the company will use to achieve its plans and generate profit. Kaplan (2012) defined a BM as a method adopted by businesses to create, deliver, and capture value for customers.

Business operators are currently challenged when it comes to innovating or reengineering BMs. Souchkov (2010) mentioned that a smart BM can help a company to expand its market even without introducing new products or developing new technologies. Therefore, business model innovation (BMI; Tykkyläinen & Ritala, 2020; Heider et al., 2020) is even more important than product and technology innovation.

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Although new products and technologies can be used to generate opportunities for businesses and overcome unfavorable conditions (Palo & Tahtinen, 2013), BMs remain the key factor driving business success. Studies (Brettel et al., 2012; Afuah, 2004; Jiebing et al., 2013; Ghaziani & Ventresca, 2005) have described the BM as a source of business competitiveness. With the emergence of the Internet, the trend for major business and new technology developments has been toward electronic, optimized, mobile, or intelligent-based BMs.

In open innovation and especially in an electronic-based collaboration environment, businesses benefit differentially from adopting open innovation strategies (Saebi & Foss, 2015). Thus, new evaluation and management methods for technology and BM innovation are necessary to assist businesses in responding to drastic changes (Kaplan, 2012; Lendel & Varmus, 2014).

A BM requires timely, appropriate adjustments in accordance with the changing business environment. With market globalization and variability, even enterprises in the traditional manufacturing industry can face tremendous pressure and require greater capabilities for BM innovation to attract customers (Leitao et al., 2013). For example, Jia et al. (2016) presented an innovative BM for the chocolate industry using 3-D printing, offering customers enhanced product value and a personalized consumption experience.

BM methodology experts had developed a systematic method to assist BM designers in collaboratively developing and improving BMs. This method is referred to as the business model canvas (BMC), the applicability and simplicity of which can help organizations create value and explore the future (Toro-Jarrín et al., 2016). The BMC consists of nine blocks from different facets related to the planning and design BM. The BMC is particularly useful in the early development stage of a BM for delineating products, services, interactive models, processes, and a variety of related norms and rules. However, after the initial BM is collaboratively designed, developing evaluations that can predict the BM's feasibility and potential benefits remains an unsolved problem. Deciding whether to execute an innovative BM is difficult when its feasibility is unknown. The feasibility study is the first and most important factor, as it uncovers the investment project's strengths and weaknesses (Jo et al., 2015). Lendel and Varmus (2014) highlighted the possibility of creating evaluations for innovation performance. Enterprises implementing new BMs are likely to encounter many problems, such as resistance from internal staff and difficulty in merging old and new BMs, business processes, and business information systems. If the feasibility of the BMs can be evaluated in advance, it would increase the likelihood of success in the implementation.

However, studies on evaluation methods for feasibility analysis have been limited in the past, and they are especially rare in the BMI area, although analytical hierarchy process (AHP) and multi-criteria decision analysis have been used to evaluate BM effectiveness or to select an ideal business plan. In AHP research, costs may serve as the goal and criterion for evaluation, but costs may not accurately reflect the enterprise resource status that can support BMI. In the BMI stage, the feasibility of the BM must be evaluated continually until the ideal BM has been determined. Questionnaire methods that involve interviewing customers are not appropriate for examining the feasibility of new BMs because only the internal members of an enterprise clearly understand what resources they have at their disposal. Especially, small and medium-sized enterprises (SMEs; Heider et al., 2020; Cosenz & Bivona, 2020) and new entrepreneurs are limited by enterprise and human resources (Wang & Lin, 2009; Islam et al., 2011).

Implementing an innovative BM is time-consuming and high-risk. Since SMEs have more limited resources than large enterprises, BM feasibility studies play an important role, enabling decision makers to obtain information for determining an investment project's viability. However, prior methods have not been appropriate for evaluating feasibility of innovative BMs, and evaluation methods based on cost and revenue are urgently needed to help enterprises conduct analyses at early stages to identify advantages and disadvantages of their BMs.

This study proposes a BMC-based BM feasibility evaluation method for enterprises. This method is more appropriate for SMEs, which have few personnel and other resources. The method includes an

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