

Understanding Innovation Strategies for New Product Development

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ABSTRACT

The current literature indicates a high rate of New Product Development (NPD) failure. Many of them believe that the main reason behind such failures is the way the NPD process is managed. Though the scientific literature employing the term is not structurally consistent enough, it has attained a widely spread implementation-based response in the shape of national and regional innovation systems, as well as other innovation fostering initiatives. Innovation reflecting the perspective of companies on change creates value through change. In today's business world, there are true opportunities for the ones that can manage the process of change well. It includes a lack of clear project definition, too much focus on internal processes and procedures ignoring customer needs and requirements, lack of communication and knowledge transfer among various people within the organization, etc. The current study provides an analytical tool in the form of a two dimensional matrix that maps various stages of the NPD process to the existing innovation strategies. This analytical tool can be used by business analysts to assess the degree of innovativeness of various activities involved in NPD process, as a basis for enhancing the effectiveness of the overall product development initiatives.

Keywords: Innovation strategy; new development; new development activities; new product development strategy

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INTRODUCTION

The paper aims to develop an analytical tool for assessing the innovativeness of various activities of the NPD process. Several studies highlight the importance of NPD projects to the survival, growth, and sustainability of firms and emphasize the need for innovative methodologies for tackling the current high rate of NPD project failures. The latter being a major challenge for both business practitioners and academics. This paper ventures into theorizing of innovation strategy alignment with various stages of NPD process, and aims to raise awareness and understanding about the adoption of innovation strategies in the practice of NPD.

The present writing on new item advancement shows that organizations give

more consideration to growing new items with the goal that they are in a superior position to endure, develop, and flourish. The significance of new items to the achievement of firms has brought about emotional increments in the quantity of new items being presented over the most recent couple of decades. Notwithstanding, NPD is an unsafe business and the rates of disappointment are high going from 30 percent to as high as 95 per penny, with a normal of 38 percent.

The above findings indicate that while some of the factors contributing to the failure of NPD projects are external factors beyond the boundaries of the firm, such as changing market conditions or strong competitors are potentially under the

management's control. The purpose of this paper is to propose a synthesized theoretical model called "*Innovative NPD Activity Matrix*" for new product development that explicitly links various innovation strategies with various NPD process activities. Individual cells of the matrix can then be assessed as the first step towards evaluating the innovativeness of the existing NPD process. Such assessment can then be used as precursor to development of innovative new products and services [1].

LITERATURE REVIEW

The sources in which the company should concentrate should be generated from four main sources; the choice-of-customer, internal resources of the company, a deep market research for the future trend and needs and analysis of the competitor's product. The study is mainly focused on literature review and in-depth interviews. The author has used different reliable sources such as books, magazines, online articles and other internet sources to create a product launch model. Because the final outcome of this thesis is a tangible product and not a research, the theoretical review plays the most important role in this thesis. From the theoretical review only the relevant information that applies to Company X's business case is analyzed and then compared with the existing approach that Company X has been following so far. [2].

A review of the literature on three key constructs relating to this study, namely, product innovation, product innovation strategies, and NPD process is provided in this section. These are explained below:

Item Advancement

An early meaning of advancement by (Schumpeter, 1939) characterizes development as "the setting up of another creation work" where "generation" signified "consolidating gainful

administrations". In this way, "another generation work" can mean another ware, another type of association, for example, a merger, or opening up of another market. All the more as of late, be that as it may, the Association for Monetary Co-task and Improvement has given an a lot more extensive definition for advancement to mirror the numerous jobs development plays in cutting edge business. It characterizes development as: "the usage of another or essentially improved item (great or administration), or procedure, another showcasing strategy, or another authoritative technique in business rehearses, working environment association or outer relations".

The significance of advancement to the improvement of the economy, the personal satisfaction, and in illuminating natural and social issues, for example, environmental change, wellbeing and destitution, has been all around acknowledged. Advancement drives monetary improvement through a dynamic procedure in which new technologies replace previous technologies, and helps companies gain competitive advantage. Innovation plays a key role within the extremely competitive international business, is related to firm's performance in terms of revenue and growth, and is thought to be a component of firms' strategy for competitive advantage. [3].

OECD (2005), supported its add the realm of innovation in many countries, has return up with a listing of varieties of innovation that has been wide brought up in current literature that divides innovation into 2 main categories: (1) technological innovation, and (2) non-technological innovation. There are 2 sorts of innovation below technological innovation, namely, product innovation and method innovation.

Some manufacturing firms rely entirely on incremental innovation and use tools such as "Total Quality Management", "Lean

Manufacturing”, and “Continuous Improvement” to make many small changes to the organization (Ibid).

PRODUCT INNOVATION STRATEGIES

Although the subject of product innovation strategy has been widely studied, there is no uniformity in the typology of innovation strategies. Individual authors or groups of authors propose their own typologies. For example, refer to radical innovation and incremental innovation as innovation strategies for firm to choose when making their strategic choices. On the other hand, some authors, notably, focus on the concept of “open innovation” as a key strategy for firms to enhance their innovation performance. The fundamental contention here is to recognize sourcing learning and aptitudes for advancement forms only from inside corporate limits, extensively assigned "shut development", and sourcing information and abilities for development forms from both inside and outside corporate limits, named "open development". Underneath, we depict and clarify the key item development procedures, as these are accounted for inside the writing. [4].

Open Innovation

Defines *open innovation* as “the use of purposive inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation”. The main activities for inbound open innovation include: co- creation with customers and consumers; informal networking with other organizations; funding of research projects carried out by outside researchers; participating in government-sponsored R&D projects; and contracting with external specialized R&D service providers, while the main activities for outbound open innovation include: investment in joint venture partnership; selling of market-ready products to other

firms; participating in public standardization programs; corporate incubators to develop new ideas and provide support to entrepreneurs inside the organization; and selling or licensing of intellectual property to other organizations.

Networking

A key strategy firms can enhance its product innovation performance is to engage in *networking strategy*. One of the networking strategies is to collaborate vertically among firms in the same industry, from manufacturers to distributors to retailers to leverage market information and technological capabilities. Firms can also collaborate with actors from several different groups including scientists, competitors, inventors, universities, investors, and independent entrepreneurs [5]

Resource-based Strategy

For firms that have diversified into several industries, a product innovation strategy that these firms deploy to improve their product innovation outcomes is to make use of the excess resources in production capacity pooled knowledge, combined research, technologies, marketing, talents, and other resources. Firm resources refer to knowledge, assets, information, capabilities, firm attributes, organizational processes, etc. controlled by a firm that enable the firm to formulate and execute strategies that enhance its effectiveness and efficiency.

Technology Make vs. Technology Buy Strategies

Firms that use the technology buy strategy, mainly through the purchase of machinery and equipment, or firms that use the combination of technology buy strategy and technology make strategy, are more successful in their innovation endeavors than firms that rely entirely on their internal resources to develop the technologies. It has also been found that

the success of innovation is dependent on skills of workforce and management, and access to finance.

NPD Process

NPD process begins with the identification of a market opportunity and ends in the production, sales and delivery of a new product. However, other authors stress that product development is the first, yet very important, phase of product innovation which extends to cover downstream phases such as manufacturing, and after-sales services.

The NPD process consists of all the activities that firms undertake when they develop and introduce new products. The NPD process can be the target of innovation (Francis and Bessant, 2005). In general; the new product development process is conceptualized as consisting of five stages: (1) Ideation; (2) concept development; (3) product design, (4) product testing, and (5) product launch [6.]

Knowledge Gap: Proposed Integrated Model for Innovative NPD Process

This paper argues that not every NPD initiative is necessarily innovative and to have an innovative new product, an appropriate innovation strategy needs to be built within the NPD process. Currently there are few studies that explicitly integrate innovation strategies with the NPD processes.

One major theoretical contribution of the current study is the development of an integrated model for innovative NPD process by combining innovation strategies with stages of NPD process as shown in Table 1 below.

Due to the similarities among arguments in relation to various NPD activities, and due to the limitations of the researcher, the current study provides a simplistic view of the NPD process by classifying the NPD activities/stages into two major groups of

activities called ‘front end’ activities and ‘back end’ activities. In the above table, rows correspond to two groups of NPD activities and columns represent various innovation strategies. Each of the 10 cells of the above matrix corresponds to the mapping of one product innovation strategy and on activity of the NPD process [7].

Table 1. An integrated model for innovative NPD process called ‘Innovative NPD Activity Matrix’.

Product Innovation Strategies	Front-end activities (Ideation, concept development)	Back-end activities (Product design, product testing)
Open innovation	1	2
Networking	3	4
Resource-based	5	6
Technology make	7	8
Technology buy	9	10

**This perspective also represents knowledge-based perspective as a subset.*

CONCLUSIONS

In this paper, we review extant literature concerning product innovation, product innovation strategies, and NPD process. The first conclusion to be drawn from our review and analysis is that product innovation is crucial to the performance of firms. Secondly, our analysis shows that several innovation strategies have been adopted by firms in order to improve NPD performance. Thirdly, our analysis demonstrates that the NPD process consists of several distinct stages. [8].

This ‘work in progress’ study is part of a larger study that investigates the way existing NPD processes can become innovative. As the first step of the above project the current study identified various activities involved in NPD process as well as various NPD strategies from the existing literature, and synthesized a two-dimensional matrix that explicitly maps each strategy to various NPD process activities. However, since not every NPD

process is necessarily an innovative NPD process, in the next stage of the project that constitutes a future work by the authors, a detailed set of criteria will be developed that can be used to identify improvement areas within the existing NPD processes so that these processes can become more innovative.

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