

SUCCESSFUL IMPLEMENTATION OF NPD: A DESCRIPTIVE FRAMEWORK

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Abstract

According to the importance of new product development (NPD) in organizations overall success and in particular in marketing success, and based on the high failure rate of product development projects in world and Iran, this research's aim is to introduce a framework for successful product development process in dairy industry. Research method is case study and necessary data has been gathered by interview, observation and specially by documentary analysis. Data analysis methods are content analysis and theme analysis. Finally, emerged frame works has been compared with existing models of literature.

The result of this research is a comprehensive framework in which, some stages are different from lots of existing descriptive and prescriptive models. The reason relates to the different context of studied company and the unique circumstances of dairy industry.

Key words: New product development, Framework, Ramak Co., Iran.

Introduction

Awa, 2010, holds the idea that new products and financial services, such as; credit cards, insurance programs, and services also face the same failure rates. Havaladar (2006 p. 154) also has found out that some 30-55 percent of new industrial products and some 75 percent of new consumer products will be marked as failure. Although there exists a lot of theoretical issues on the NPD, but over 90 percent of failure in Product Development implementation, the 100% growth rate in NPD over every five years, and the lack of a comprehensive execution framework of product development for dairy companies in Iran, demonstrates that still working on NPD and introducing innovative models is important and necessary.

Cooper and Kleinschmidt, 1991, also underline that some 75 percent of new products are doomed to failure right at the beginning. Balachandra, 1997, points out that in 1991 over 90 percent of new products did not achieve their objectives. The issue of new products failure also applies to Dairy organizations in Iran. For instance, almost 80 percent of new products of understudy companies do not achieve their sales targets. Consequently, the issue has been chosen as the main topic in the present study. In the 1990s the rate of new products that filled supermarket shelves grew by 59% and the trend is continuing with even a faster pace (Sarah, 1997). Although there exists a solid sum of theoretical issues on the topic of the research, the chosen topic signifies its importance due to the failure rate of over 90 percent of Product Development Programs, the doubling of New Products growth rate in every five years, and bearing in mind the lack of a comprehensive execution model of product development for active food companies in Iran.

The present study also enjoys having methodological innovation. because little researches have addressed the issue through pluralism approaches to reasoning (In the present study, use has been made of pluralism methods for reasoning). Scientific contribution of this research, comparing to other frameworks in the theoretical literature, is to provide a rather different framework (applicable and suitable for Iranian dairy companies). Besides, some issues such as lack of practicality and applicability (Hoffman, Kopalle, & Novak, 2010, Cooper & Kleinschmidt, 1995) would not apply to the framework of the present study.

Theoretical framework

Product development is a series of activities that begin with the perception of a market opportunity and end with the production and sale of the product (Hoffman, Kopalle, & Novak, 2010). The most common and the most popular framework of product development, which has been the source of many future frameworks, is the base framework of product development by Booz, Allen, and Hamilton (1982). This framework, which is still vastly in use, can be found in many sales and marketing textbooks and envisions the execution of product development process as a series of sequences of processes, through which a new product in the form of an initial idea develops to a final commercial objective (Figure 1).

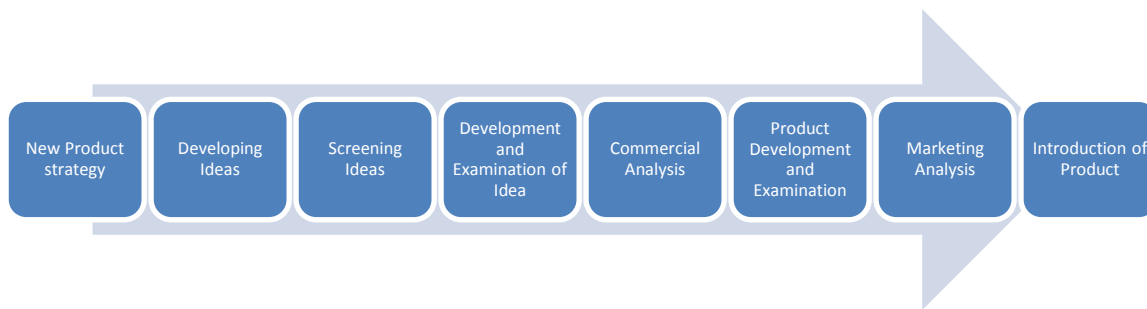


Figure 1: Product-based Development Framework

Source: Booz, Allen, & Hamilton, 1982

Although such frameworks are modified by adding some detailed sub-stages, Inter Departmental Functions, and decision points; (e.g. Mowry, 2007 and Cooper, 2000); it seems that there are still some problems, which has been described as below:

Considering the nobility of local research based on the social constructionist approach and postmodernism (Smith, 2005, p. 87, Rahmanseresht, 1978, p. 389), and considering the fact that the approach of the case study method is a constructionist one (Smith, 2005; p. 98), and that the objective of the researcher is to provide an indigenous framework for product development; in this part of the study a review of the related literature on the influencing factors and recovery strategies in Iran will be presented.

With regard to the research problem (high failure rate of product development projects), and the lack of research and product development frameworks to suit dairy companies; the main research question is as below:
How should be the new product development Frame work in Ramak co?

Research Method

In the present study, the case study method is used since in order to find answers to the research question, the complex process of product development of selected company needs to be studied deeply and comprehensively and the descriptive model of NPD in Ramak Co. has to be introduced. Since the selected case (Ramak co.) is successful in NPD implementation, and has been launched many successful new products in the market of Iran, this companies' descriptive model can be as a prescriptive model for other similar organizations.

In this section of the paper, the research stages are elaborated on in order. The site selection was the first step. stage was done regarding to the potential role of site in providing information, logistical considerations such as proximity and availability, and level of experience. General information of the company in this study, which was selected according to the above-mentioned criteria, is summarized in Table 1. The study was conducted in 2011, and 2012, when the researcher responsible for the marketing unit and product development process and involved in the implementation processes in company.

Table 1. General Information of studied Companies'

Company	Trade Mark	Age (Years)	No. of Personnel	Ranking in Industry based on sales	No. of Products
Ramak Co.	Ramak	16	350	6 th	62

In data collection, in order to improve the accuracy of the data, the researcher used the Triangulation approach. Data collection methods by which data has been gathered are: participatory observation, interview, and document analysis.

For increasing the reliability of data, audio documenting devices (in the case of data obtained from interviews); visual documenting cameras and camcorders (in the case of data obtained from observation); and written documentation of emails, letters and other documents (in the case of data obtained from written documents) has been used.

To analyze data from interviews and documents, content analysis and theme analysis (Braun & Clarke, 2006, P. 80) is used. So, key points of interviews, documentation reviews, and the researcher's reports of observations have been encoded. Then similar codes were combined into themes. Finally, based on the themes, NPD framework has been developed.

Table 3. Codes and Themes' Table of NPD framework in Ramak Co.

Theme Code	Theme	Codes
RPP1	Strategy Determination	PA20, PB18, PC11, PD13,
RPP2	New product team	
RPP3	Identifying Ideas And Feasibility Tests	PA21, PB16, PB17, PB19, PD14, PC16, PE28, PA23, PB21, PC18, PE21,
RPP4	Full Market Research	PA22, PB15, PD16, PC17,
RPP5	Technology Transfer And Market Analysis	PA14, PC13, PE22,
RPP6	Experimental Mass Production	PA26, PB24, PD19, PD20, PC21,
RPP7	Setting Sales Objectives And Training Sales Team	PD21, PE4,
RPP8	Mixed Strategy Of Pressure	PA25, PB23, PC20, PE5, PE23,
RPP9	Sales Tracking	PA19, PB18, PC15, PD22,
RPP10	Cost Reduction Process	PA19, PB14, PB18,
RPP11	Acceleration Of Process	PA18, PA19, PB14,
RPP12	Increasing Coordination	PA27, PB14, PB25, PC14, PD15, PE24, PE25, PC22,
RPP13	Flexibility In Distributed Systems	PA19, PB18,

Findings

The first and maybe most important step is grand strategy and marketing strategy formulation. (KPP1, RPP1, RBPP1, KPP2, RPP2, RBPP2). Idea generation is the next step in which NPD team find appropriate ideas through analyzing inside and outside resources (KPP3, KPP6, RPP3, RBPP3). Feasibility study and idea screening is the third step. In this step a task team is responsible to screen ideas according to criteria such as: compatibility with marketing strategy, consistency with the production facilities of the company, compatibility with distribution and sales facilities of the company, compliance with legal restrictions (KPP3, RPP3, RBPP3). The fourth step is marketing research about competitors, potential market size, market growth potential and even product concept test (KPP4, RPP4, RBPP4). Then if the market assessment is positive, in fifth step, R&D Unit (following reviewing standard brochures) formulates test samples according to the standard brochure or other legal restrictions. The prototype formula, then, will be revised in the Research and Development Unit based on marketing research feedbacks (KPP5, RPP5).

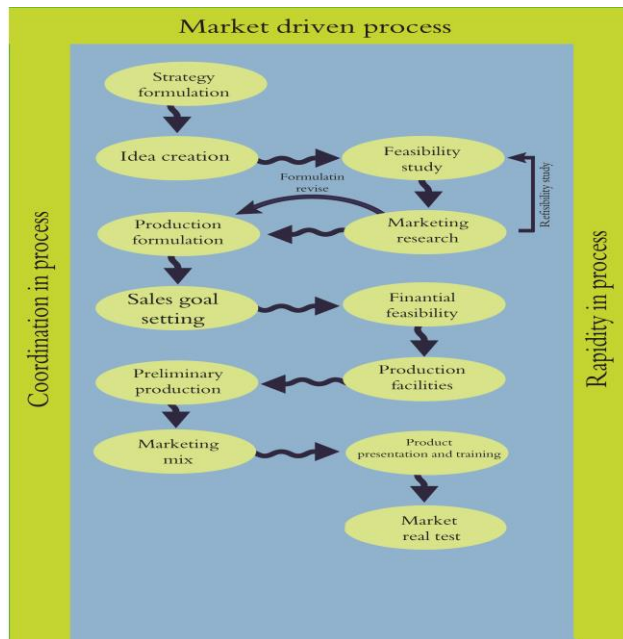
In the sixth step, marketing department determines sales targets (RBPP5, RPP7). In the seventh stage, the financial unit will be in charge of financial feasibility processes and provides a cost-benefit analysis. For doing this stage predicted marketing mix (price, product -B. O. M²- promotion and place) should be determined (KPP6, RBPP6). After these steps, it is possible to modify the formula, re-asses the feasibility, stop the project.

After previous steps, various processes (such as: designing marketing mix, importing necessary material, preparing the necessary equipments, and so on) are being done in parallel to prepare the test production and in particular mass production (KPP6, RBPP6). In the ninth step, test production is done. In this step potential problems will be identified (KPP7, RBPP7).

¹ Ramak process phase 1

² Body of material

Chart 2: The NPD framework



At the 10th stage, the marketing mix which is based on the Push Strategy is defined to realize the sales targets (RBPP8, RPP9). Then at the 11th stage, the diverse marketing elements are introduced and trained to the agents of the distribution network, and the sales target is defined for all branches, resellers, and company reps in categories. In addition one week before the product hits stores, sales team are trained (KPP8, RPP7, KPP8, RPP7). Finally, massive production is started along with testing the real market and introducing the market in a small town or district. If necessary, product is enhanced or even its production is fully terminated (KPP10, RBPP8).

As can be seen, this product development framework is under the positive influence of three process: parallel activities, rapid process (KPP13, RBPP13, and RPP11), and coordination in the implementation of the process (KPP12, RBPP14, and RPP12).

Conclusion

In this research, the contribution to knowledge is introducing a bit different framework for NPD, of course comparing to the existing frameworks in literature. The reason of these differences mostly comes from different environment of Iran and dairy industry's unique condition. For example, in the most of existing models, emphasis is on the pull marketing strategy, while the emphasis in this model is on the push marketing strategy. Because, Ramak's target market is not brand oriented as much as western countries consumers.

Generally, the specific restrictions author faced with, are: time limit, (time needed for case study research is more than other types of research methodologies), impossibility of generalizing the framework to other companies, due to the possible differences among them with Ramak co.

According to the subject and the possible uncertainties, it is suggested that scholars have deeper looks into following subjects: heterogeneous diversification strategy pattern, product development process improvement pattern, discourse analysis of new product development in consuming product industry in Iran, the influence of commission system on sales in capillary distribution network, selecting proper marketing strategy for introducing a new product in Iranian market, evaluation of new product development in Iran, providing exclusive product development pattern for industry, in accordance with each industry's uniqueness.

Author's biography:

Dr Esmail Hasanpour Ghoroghchi is assistant professor in Islamic Azad University. The author has worked in the marketing department of some of Iran's food processing companies. Major of author is marketing strategy. the author has written lots of articles in the field of strategic management and marketing strategy and in particular on NPD.

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