

A Theoretical Approach to New Product Development Strategies

Assist. Prof. Dr. Yakup DURMAZ¹ & Merve Can ŞİRİN²

Abstract

Companies have to develop their products on a constant basis to keep up with the technologic developments, respond to clients' demands, keep the advantage over the rivals. A decrease in the product lifespan forces the manufacturers to change constantly. However the design, production and marketing of the developed product are all tedious processes. That's why companies have to make careful decisions and make competitive choices to keep the advantage over rivals .Otherwise a process where there's no turning back will emerge to set a failure in profit loss, against all the forecasts of benefit .

Key Words: product development, new product, new product development process.

1. Introduction

Today companies are in a mandatory process of change as the outer environment factors the companies are in make the change inevitable .So as the companies to keep their existence on, the change needs to be controlled and closely inspected. The change in the customer needs technological advancements and developing new products to ensure their continuity in the market have become a major goal of companies. Speed and flexibility are important in the new product development process. Companies cannot go on to develop new products with outdated approaches .To realize this goal, companies caring for research and development have been developing their actions in strategic levels. While they take advantage of off-the company factors, companies put heavy emphasis on in-the company actions to put out new creative ideas .With the information retrieved in accordance with the sources of innovation, they start the process of product development.

¹ Hasan Kalyoncu University, Havalimanı Yolu Üzeri 8. Km. Gaziantep, Turkey. Tel: 90-342-211-8080. E-mail: yakup.durmaz@hku.edu.tr and yakupdu@hotmail.com

² Business, Hasan Kalyoncu University, PhD Student. Turkey. E-mail: a.mervecan@gmail.com

Having addressed to the terms “product” and “product development”, we went on to talk more on the steps that make up the whole process of new product development. Just as the techniques involved are mentioned, strategies of new product development will be explained, as well.

2. Concept of Product

A product which is subject to change and has a property to fulfill a need can be anything marketed in order to satisfy a need to consume, takeover, be recognized and use. Just as it could be a physical material, it could also be a service or a rationale (Sezer, 2014:5). Product is the visible side of a company. Companies are remembered for the quality of the products they produce. Because there needs to be a constant change in client/customer need and this necessitates the manufacturer to search for new designs, make changes in the current product, and make innovations.

Every product has a life course. This stands for everything from the product making its way to the market to fade away from the market. Life course initiates with the product being released for the first time. In this phase, clients aren't familiar with the product. In the following step, there is a maturation going on and customers are now familiar with the product and begin to demand. In the following step, the maturity slowly comes to an end with the rival productions being released. Moreover, in the final phase, the sales go down. This stems from the change in taste, expectations of clients, as well as emergence of new products in the market.

3. The Concept of New Product Development

Companies increase their image recognition and market share to the extent to which they dissimilate their line of products. This is called “new product development” or “product development”. Product development gives the companies superiority in time, costs and competition (Emiroğlu, 2011:2). Changing clients needs, advancements in technology, shortening of product life course scale leads to the new product development because it's the only way the companies can dominate other companies.

The basic goal for a company in the new product development is to increase the profit or avoid the decrease of profit. To improve the profit goal within the company by developing new product, three sub goals have to be achieved. These are: ensuring the company's existence, providing the constancy of the level of effort and productive use of resources (Şen, 2006: 6).

Develop a new product necessitates serious Investments, time, effort, pace of working, a background knowledge, communication skills. Having a positive outcome out of the process where all these are involved is as well important. Islamoglu listed the reasons why each product fails to succeed (İslamoğlu, 2000: 307):

1. Failed marketing researches, consumer behavior and failure to assess the remaining environmental factors.
2. Negative aspects of the new product regarding the pollution, consumers' safety etc.
3. Failure in design to ensure the compatibility with the consumers' consuming system.
4. Failure to technologically develop the idea of new product due to the lack of resources.
5. Implementation of the new product idea earlier by other companies or being built with better specifications.

3.1-The Process of Developing a New Product

New product concept is a pretty extensive concept including the concepts such as developed product, original product, and altered product. Developing a new product is, on the other hand, a long tedious and risky process by the company in order to make a brand new product. This process is affected by outer environmental elements as well as in-the company factors (Cengiz, Ayyıldız, Kırkbir, 2005:134). New product development is an important element in organizations' expansion and increase of the future success. Developing products faster has become a critical topic for the product's success. Developing products faster than the rivals increases the market share, profit-worthiness, and long-term competitive advantage (Yayla, Yıldız, 2010:7).

In a setting where products are constantly revised, increased attention towards design and innovation is inevitable. Design which is accepted as a crucial sub-process in product development is the basic function of product revision process and applied to improve the competitiveness (Büyüközkan, 2005:279).

3.1.1 - Producing Ideas

This is the first vital step of product development. Hundreds of ideas can be produced when needed. In general, new ideas can be put forward in the new product development process with the aid of in and off the company of resources. Being one of the in-company resources, employees' openly expressing their thoughts and suggestions is very crucial for producing a great deal of ideas.

In order not to forget the ideas for developing a new product, it is important to cumulate all of them in a center, as well. In this way, the time needed to gather all the ideas is shortened by avoiding the data being loose and forgotten. The head of strategic product development makes decisions by using Delphi technique, problem analysis and brainstorming in a meeting heads of each department or attendant (Şen, 2006).

3.1.2 - Scanning the Ideas

The step after coming up with ideas is reviewing these and picking up the most relevant one, eliminating thus the remaining ones. The aim of the elimination is to reduce the bad ideas as much as possible. Otherwise, costs will see a great deal of increase. In the process of elimination, it's assessed if the idea coincides with that of the company and also the relevancy of technical knowledge and staff possibilities are evaluated.

In this phase, the companies need to stay away from two types of mistakes. The first one is to leave a good and promising idea aside from development. Another is to bring a bad idea and unpromising idea as far as to the stages of development and commercialization. And this puts costs on the company resulting in time loss (Ünlü, 2006: 22).

3.1.3 - Concept Development and Testing

In the phase of concept testing, technical constructability, potential in the market and customer acceptance of the accepted idea of new product are assessed with research methods such as face-to-face interview, counseling and survey (Cengiz, Ayyıldız, Kırkçbir, 2006: 445). Differences between the concept of “product”, idea of product and image of product matter here. The concept of product means the form of product ideas that are meaningful with the language of consumers. The idea of product is defined as a possible product the company may release on the market. The image of the product is defined as the image the consumers retrieve about a real or possible product. This phase is made up of three sections namely as: concept development, locating and testing (Ünlü, 2006: 23).

In this phase, people on duty are never happy about a single option is favored and elected. That's to say it is preferred to integrate most of the ideas into a single concept order (in its single order) as much as possible while the other options are being ruled out. Thus, the possibility to reach more to the eliminated ideas is enabled (Duran, Saraçoğlu, 2009: 66).

3.1.4 - The Development of Marketing Strategy Phase

In the marketing phase of developed product, which strategies are to be implemented is figured out. In the determination of a marketing strategy, consumer behavior matters. The market the company is situated within must be analyzed. Strengths and weaknesses of the rivals, their economical and technological advantages, and potential customers in the market need to be investigated.

3.1.4.1 - Determining the New Product Development Strategy

A company aiming at the leadership of the product in the market and making Innovations has to adopt an improvement/Innovation strategy. It has to adopt a more direction oriented approach such as dominating the rivals, providing the masses of clients with the most relevant products and services in accordance with predetermined principles. Today, successful companies have missions that specify markets, things to be done and technologies by specifying their fields of action (Kulaklı, 2005:267).

Now product strategies of companies work in two ways. The first of these is to “have”. This can happen in a variety of ways: acquisition of a company, acquisition of patents, license agreements, mimicking etc. License is some sort of an agreement and a company is basically letting another one use the patent or technical knowledge. With the acquisition of the authorization, new products and technology is taking over fast. The second way is that the company develops a new product with its research and development department. This application has many advantages in that the company can use its own resources quite accurately and economically, as well. However its being time-consuming and expensive and having many other drawbacks are disadvantages of this way (Ünlü, 2006:30).

3.1.5 - Work Analysis

In this phase, it's determines if the new product development process will go on or be terminated in accordance with the amount of data collected. There needs to be detailed financial assessments such as determining if the investments in the new product development will be afforded and risk analysis. Also, in this step, approximate retail price, sales volume and profitability and break-even point calculations are carried out (Kulaklı, 2005: 268).

3.1.6 - Product Development Phase

The new product which was only an idea in the preceding phases is targeted to be materialized by admitting it to research and development department and production department. That's to say that the development phase is comprised of trying out the physical properties of the product, building the prototype, and testing it. This phase requires financial investments. Apart from that, its consuming way too much time is another aspect that attracts attention.

Research and development are systematic and creative works aiming at giving birth to new products and processes of production. Research and development, are constructed efforts towards product and process innovation or increasing scientific knowledge (Zerenler, Türker, Şahin, 2007:657). The term R-D includes both the R-D activities in R-D departments and irregular and seldom emerging R-D activities in other departments (Acül, 2008:2). They are three in number: basic research, applied research, experimental development (Ünal, Seçilmiş, 2013:13):

Basic Research: Free of goals of profit, these are researches to improve the scientific knowledge and explore the realms of the unknown. Basic researches are usually conducted in Universities or public Institutes.

Applied Research: By using the findings retrieved from basic research, these are types of researches that are oriented towards having new scientific knowledge and technique in products and production processes and that hold the goal of profit.

Experimental Development: These are systematic studies to produce new materials, products, circuits, processes, systems, services and improve the already produced ones under the light of knowledge from current research and experiences.

3.1.7 - Test Marketing

The aim of market testing is to observe consumers' reactions towards the product right before it's released to the market. Products are produced within smaller units for this test. Test marketing for consuming goods provide opportunities for companies to better forecast the frequencies of trying, re-buying and buying. There are various methods to test market such as sale-wave research, simulated shop technique, controlled test marketing and standard test markets. These methods are explained below (Ünlü, 2006: 51).

3.1.8 - Commercialization

The process of product development ends with the release. This phase is commercialization. At this stage companies confirm the point their products came along and accept the cost of production. On condition that the new product is released right on time, the company will benefit. After the market release, companies have to take precautions by following all updates, consumer reactions and criticisms related to the product and conduct studies about this (Ünlü, 2006). Trade marking actions for the product are comprised of such components as name, price, wrapper, logo, patent etc. Here, means of sale and distribution, environments where the product will be promoted, messages helping the customer perceived easier and active market locating are put into action (Kulaklı, 2005:269).

4. Results

Companies in Turkey are inferior in comparison to those in developed countries in the aspects of product development. The underlying reason why is exporting the technology rather than producing it. Companies will succeed as long as they're the ones to put forward their own styles, not mimicking that of others. In that aspect, Universities are given huge importance and responsibility. And also Universities need to be granted with the resources to implement the actions needed. So as the companies to dominate the rivals, in competitive superiority, they have to put heavy emphasis on product design. However in order companies to succeed in product and development processes, they have to carefully evaluate their current resources and put out a design that actually care for their customers opinions.

Another important aspect in the product development is to carefully select the personnel work in the process. Personal to work in these units needs to be selected throughout a tedious process. By enabling the employees to actively participate in process and contributing to the current values at maximum level, a quality product development can be facilitated.

References

Acül H. (2008). Omnidirectional Structuring In Research And Product Development Department In SMEs And Recommendations On Systematic Management, 5. SMEs and Productivity Congress 25 - 26 November 2008, Istanbul.

- Büyüközkan G., (2005). Support Design Techniques for Product Development Process And Key Success Factors, V. National Manufacturing Research Symposium, Istanbul Commerce University, 279-283.
- Cengiz E., H. Ayyıldız, Kırkçbir F. (2005). Factors That Affect The Success Of New Product Development Process, Erciyes University Journal of Economics and Administrative Sciences, 24: 133-147.
- Duran C., Saracoglu M. (2009). The Relationship between Innovation and Creativity And Development of Innovation Process, Management and Economics, 16 (1): 57- 71.
- Emiroglu A. (2011). Project Risk Management In New Product Development. Organization and Management Sciences Journal, 3 (2), 1-11.
- İslamoğlu A. H., 2000, Marketing Management (Strategic and Global Approach), Beta Edition, 2nd Edition, Kırklareli.
- Kulaklı A. (2005). Importance Of Information Sharing Value And Contributions To The Creation In New Product Development Process, V. National Research Symposium, Istanbul Commerce University, 265-271.
- Kulaklı A. (2005). Process The Importance Of Information Sharing In New Product Development And An Application, Istanbul Commerce University Journal of Science, 8 (2), 99-114.
- Sezer, F. (2014). New Product Marking Food Industry: A Comparative Analysis Of Different Products Marking The Istanbul Culture University, Institute of Social Sciences, Master Thesis, Istanbul.
- Sen A., (2006). New Product Development Process Management and A Model for Combi Production, Istanbul Technical University, Institute of Science and Technology, Master Thesis, Istanbul.
- Unlu B. (2006). New Product Development Process And An Application Of Turkey Powder Sweet Market, Istanbul Technical University, Institute of Science and Technology, Master Thesis, Istanbul.
- Unal T., Secilmis N. (2013). R - D Indicators In Terms Of Comparison With Turkey And Developed Countries, Journal of Business and Economics Studies, 1 (1), 12 - 25.
- Unal T., Secilmis N. (2013). Comparison of Turkey With Developed Countries in Terms of R&D Indicators, Journal of Business and Economics Studies, 1 (1), 12 - 25.
- Yayla Y., Yıldız A. (2010). The Effect Of The Leader's Product Development Methods And Application Performance, ITU Journal, 9 (2): 3-12
- Zerenler M., Türker N., Şahin E., Global Technology, Research - Development (R - D) and Innovation Relations, 653-667.