

# Importance of Innovative Product Launching and Product Life Cycle Management in Small Scale Consumer Industries

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## ABSTRACT

Perfect launching of a new or upgraded product at right time is a key factor of any successful industry. In today's competitive market, product life cycle is becoming shorter while industries face pressure from competitors and customers for up gradation of product almost every day. Up gradation of a product as per customer expectation at a competitive price is a real challenge for small scale industries. Product life cycle management is a tool that ensures product success in the market and helps in making strategies for a new or up graded product. Product fit to customer expectation, effective marketing strategies and perfect product cannibalization are the key elements for successful product life cycle management. In this paper, the importance of innovative product development and product life cycle management of a product for successful product cannibalization has been described.

## General Terms

Product Life Cycle Management, Product Development

## Keywords

Consumer Products, Product Life Cycle, Perfect Product Launching, Product Cannibalization, New Product Development, Return on Investment.

## 1. INTRODUCTION

Manufacturers of consumer products (CPs) are constantly working under tremendous pressure to generate revenue and improve operating efficiency [1, 2]. Challenges in meeting targets include changes in consumer's demographics, competition in mature markets, expenditure on services, rise of private labels and the low success rate of new brands [3]. Today market is in an era of innovation and heavy competition. It is pervasive and influencing every industry or company. Today, companies think about virtually every aspect of research, marketing, product development, suppliers, materials management, manufacturing, distribution, warranty and defect management, maintenance repair and overhaul, and product end-of-life and disposal [4, 5]. Innovation is global and without any boundaries [6]. Its growth is being nurtured by active investments, grants, and tax incentive policies of established industrialized nations and emerging economies. In this era of innovation, the "perfect product launch" and lifecycle management is now viewed in a different and expanded way [7, 8].

## 1.1 Value of Time-to-Market in PLM

The perfect product launch involves managing the development and support of complex products and services throughout the entire lifecycle from product design to product build to post-sale service [9]. It includes the integration of traditional new product with sourcing and procurement, supply chain planning and execution, and service—the entire product lifecycle management. The importance of being first to market is being discussed extensively [10]. Besides the instinctive idea that it is best to be first, other measurable benefits are shown in Figure 1. These benefits are for those who get to the market sooner with innovative products and services. The benefits are as follows:

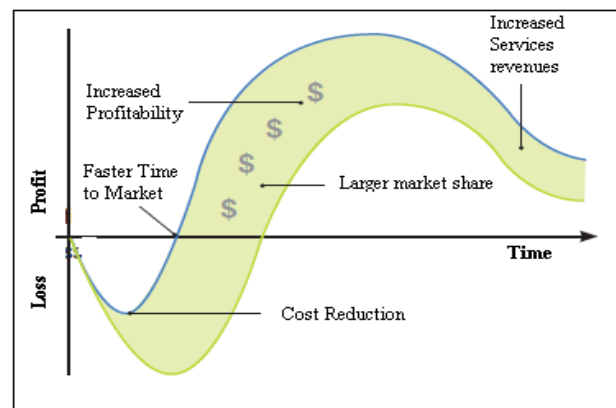


Figure 1: Market Sooner in PLM

### 1.1.1 Increased sales through longer sales life

The earlier the product reaches the market, relative to the competitors, the longer its life can be [11].

### 1.1.2 Increased margins

The more innovative the product, the longer it remains in the market with little or no competition as also the longer consumers pay a premium purchase price [12].

### 1.1.3 Increased product loyalty

Getting the first opportunity to attract customers, especially early adopters, offers an advantage in terms of customer loyalty; customers will most likely upgrade, customize or purchase companion products [13].

### 1.1.4 More resale opportunities

For components, commodities or products that other companies can Private-label, being first to market can often help and ensure enhanced resale value [14].

### 1.1.5 Greater market responsiveness

The faster companies can bring products to market that satisfy new or changing customer needs, the greater the opportunity to capitalize on those products for margin lift and to increase brand recognition [15].

### 1.1.6 Increased product loyalty

Getting the first opportunity to attract customers, especially early adopters, offers an advantage in terms of customer loyalty; customers will most likely upgrade, customize or purchase companion products [13].

## 1.2 Successful Innovation

Successful innovation has become a key driver for revenue growth, competitive margins and, in some cases, even for survival [16]. The ability to bring innovation to market quickly, efficiently and ahead of competitors is becoming increasingly important. An efficient product launch requires integration and coordination among multiple functional areas, including product design, procurement, planning, manufacturing process, sales and marketing [17].

In addition, as organizations increasingly leverage core capabilities of other companies, innovation has to be delivered through virtual networks, working with partners in a collaborative environment to bring product and services to market faster, smarter and cheaper [18]. Consequently, organizations now not only need to integrate internally, but also externally with suppliers and customers, creating end-to-end supply chain processes and capabilities which differentiate on product and customer requirements [19]. Improved learning capacity of organization is necessary to launch the product early in the market [20]. Early launching of product always results in an increase in cash flow as shown in Figure 1.

## 1.3 Successful Product Cannibalization

Successful innovation is of tremendous benefit to the organization while launching a new product. If the company can launch the product early in the market, it leads to the chance to acquire greater market share in introduction and growing phase of product life cycle management [21, 22]. Product launching time is also very important for successful launch. Many parameters are important for successful product cannibalization [23]. Many parameters are important before launching the product. Customer psychologies, customer need, number of competitors in the market, price driven by the market are most critical and important parameters for successful product cannibalization. For successful product cannibalization study of product development phase and marketing phase is necessary [24].

## 2. KEY STRATEGIES FOR NEW PRODUCT DEVELOPMENT

Five parameters - Product best fit for customer, innovative product, low service cost, low product cost and product first to market are deciding factors in development of a new product.

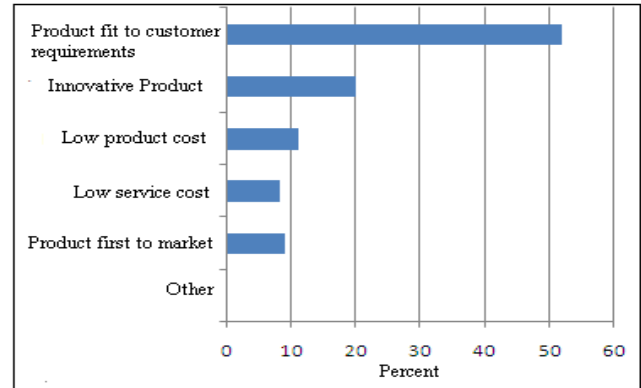


Figure 2: New Product Development

A study conducted in the case of a seasonal consumer product confirms these parameters. For launching a new seasonal product, product fit to customer requirement is the crucial factor. Near about 52 % industries give importance to customer satisfaction and need as shown in Figure 2. In view of this, market research is a very important aspect to be conducted for perfect launch. For production of more and more innovative product, company has to concentrate on research and development sector. With increase in learning capacity of industry, innovative product comes out as per customers' requirements. Study of Product Life Cycle reveals that customers' view points are the key factors for manufacturing a product fit for customer requirements [25].

## 3. UNSUCCESSFUL LAUNCHING

Mainly five parameters are responsible for unsuccessful launching of a product. (see Figure 3). Here main cause of unsuccessful launching is that the product attributes fail to address the customer needs.

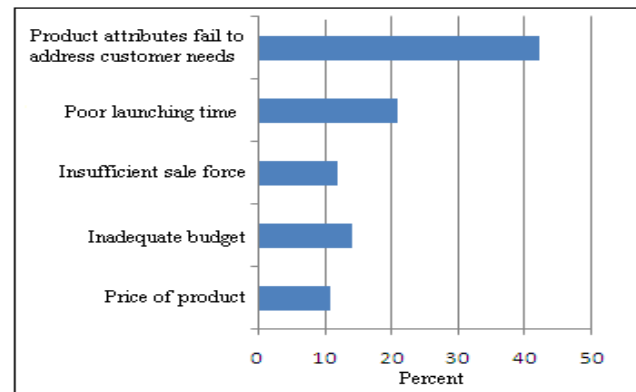


Figure 3: Causes of Unsuccessful Launching of Product

Approximately 42 % small scale consumer seasonal industries confirm this fact that the failure of a product is due to its

attributes which fails to address the customer needs and ultimately results in unsuccessful launching of a product. 21% companies are of the opinion that poor launching time is the main cause of unsuccessful launching of a product. For successful launch companies has to concentrate on customer needs and right launching time.

#### 4. KEY STRATEGIES FOR SUCCESSFUL PRODUCT LAUNCHING

For successful product launching mainly two parameters are vital as shown in Figure 4. Product attributes as per customer needs and effective marketing strategies are the key factors for successful product launch. Nearly about 21 % the companies are of the opinion that scientific launching process is a vital parameter for successful product launch.

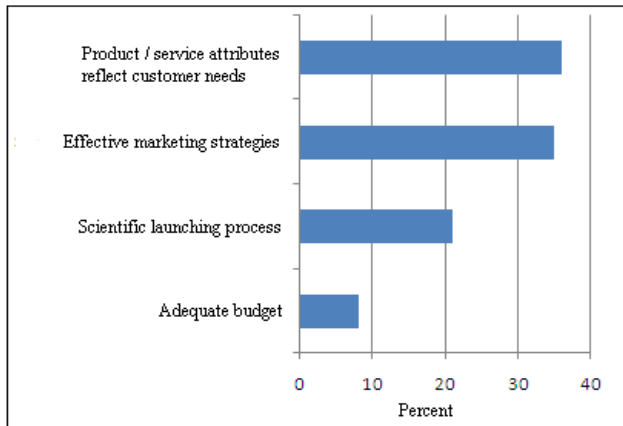


Figure 4: Key Strategies for Successful Product Launch

#### 5. PRODUCT LIFE CYCLE

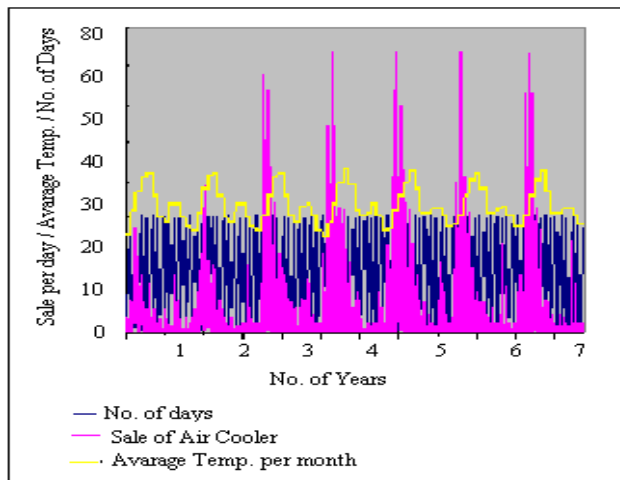


Figure 5: Product Life Cycle of air cooler

Product Life Cycle of an air cooler industry product in India is shown in Figure 5. The study conducted covered a total sale of air coolers 11,021 in 2559 days i.e. on an average more than four air coolers were being sold in a day. In the region where the coolers are used, the atmospheric temperature varies from 26°C

to 42°C in twelve months. Rise of temperature starts from February and ends in the June. In hot atmosphere, demand of air cooler is more. In March, April and May more number of air coolers is sold by the company. As atmospheric temperature decreases, sale of air coolers keeps coming down.

Thus, for a seasonal product, sales fluctuate as per customer demand and season. Customer demand not only depends on atmospheric temperature but also on up gradation and quality of a product. Sale volume in initial two years was less; however, after two years, sale volume increased rapidly. In third to the seventh year sales volume did not change drastically. Product Life Cycle not seems to be healthy

#### 6. PERFECT PRODUCT LAUNCH

The overall net profit in every season is shown in Figure 3. In third to seventh year, sale volume of air cooler has not changed drastically but profit volume has reduced drastically. After 901 days profit of air cooler has reduced continuously.

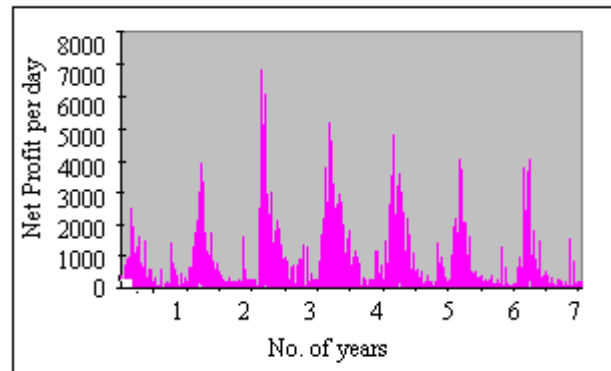


Figure 6: Profit Trend and Variation

Here manufacturer has not thought about new product development. In the fourth season, company should have thought of launching of new updated air cooler. But unfortunately company did not develop new version of air cooler. Mean while customer expectation has increased continuously and loyal customers have shifted to buy new version of air cooler from competitors. In PLM, the focus should be on how to satisfy the customer need by developing new products.

#### 7. PRODUCT CANNIBALIZATION

Here perfect product cannibalization is the way for getting more profit. Perfect product development and perfect product launching are essential for getting maximum profit in product life cycle. Here, study of strategies related to perfect product development and perfect product launch are very necessary. Prices of air coolers should be increased during hot season but in rainy and winter season prices should be cut down to generate profit. Prices of air coolers are more during hot season but in rainy and winter season prices are comparatively less. After 3 years, prices have remained constant for one year and it fell suddenly for next few years. When prices are comparatively constant or variation in prices are little and cost of product increases constantly, then that is the right time for product cannibalization in product life cycle. As shown in Figure 6 and 7, overall profit decreases every day, whereas quantity of sale

has not decreased at all. Here company must develop a new upgraded product for perfect launching. Thus proper strategies for product development and perfect product launch are important.

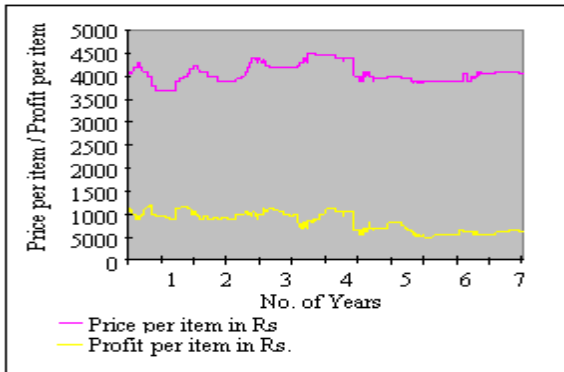


Figure 7: Price-Profit Trend and Variation

### 8. EFFECT OF COMPETITORS

It is very interesting to see the effect of competitors on profit of product. As shown in Fig. 8, numbers of competitors were less in first year. From first year to seventh year price of the air cooler has not increased or decreased drastically, where as profit was healthy in some initial year but after three years it is decreasing continuously. As competitors increased continuously, profit of air cooler get reduced (see the Figure 9).

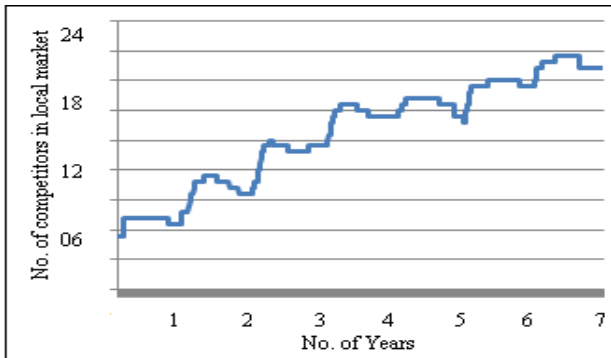


Figure 8: Competitors in the market

It is also very interesting to find out the correlation coefficient between approximate profit per item and number of competitors in market in a seven years period. Square of coefficient of correlation will give the value of coefficient of determination.

$$\text{Coefficient of correlation} = R = -0.8151$$

$$\text{Coefficient of determination} = R^2 = 0.6634$$

From sample of data in the study, it is observed that profit is decreasing after 3<sup>rd</sup> year and main cause of decreasing in profit is the increase in competitors in the market. From above mentioned statistics, it is clear that near about 66 % impact in reduction of profit is mainly due to the increased competitors per year

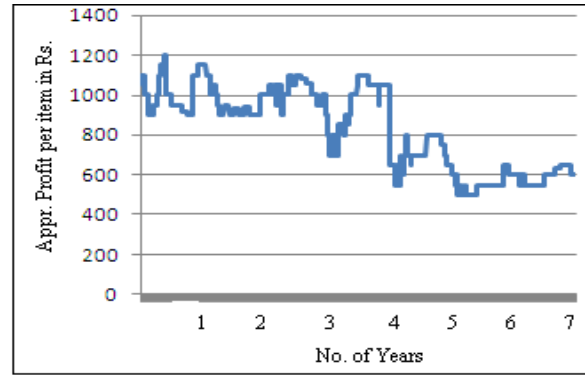


Figure 9: Decreasing Profit in PLM

In such a situation, the company is not able to increase the price of item due to entry of new competitors. Actually, the price of the product is driven by the market. Every company tries to reduce the manufacturing cost. In this case, company is not able to reduce the cost of product due to increase in competition. Day by day profit of product gets reduced and product will be dead after some years. Company can not stop increasing competitor in the market so company has to produce new or upgraded product as per customer requirements. Company has to increase their learning capacity to introduce researched useful product in the market. Becoming more competitive in the market is the key of success for healthy product life cycle.

### 9. IMPACT OF POOR QUALITY ON SALE

In Air Cooler products, mainly water leakage from cooler tank and side panels are major issues. As per the data available and presented in Figure 10, leakage problems are major in second and third year.

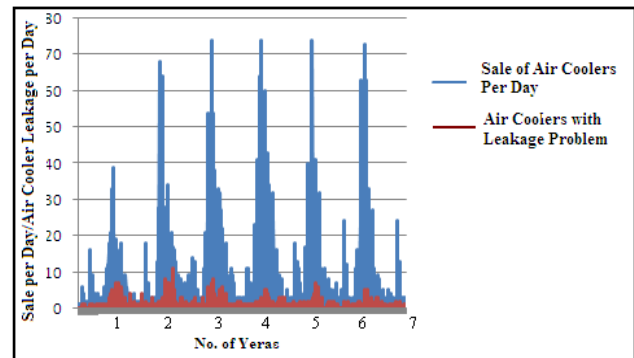


Figure 10: Leakage of Air Coolers and Total Sale

Sale of Air Cooler has not increased after second year. Product Life Cycle does not seem to be healthy and hence quality check is necessary to investigate this problem. Coefficient of correlation between sale and number of air coolers leakage  $R = 0.1278$  and coefficient of determination  $R^2 = 0.0163$ , shows a very minor impact of leakage problem on sale. Approximately 1.6 % overall impact shows on sale. From the above it is clear that major issue related to sale and decreasing profit is increasing competitors in the market.

## 10. CONCLUSION

Small scale consumer industries have not paid special attention to the concept of product life cycle management. In today's competitive world, up gradation of old product and launching of new product as per the customer demands at right time is very important. For successful product cannibalization, some important strategies have been studied and explained in this paper. Here product life cycle of a small scale air cooler industry has been studied to find out the problem related to perfect product launch and successful product development. Product best fit to customer expectation is a vital strategy for product development process. Product attributes that fails to address the customer expectation and poor launching time of products are the vital contributors for unsuccessful product launching. Increasing competitors in the market has shown a huge impact on reduction of profit, coefficient of determination being around 66 %. When the profit of the product starts decreasing continuously and cost starts increasing, then the company should go for product cannibalization. For successful product cannibalization, product and service attributes should reflect customer needs. Effective marketing strategies are also very important for getting maximum return on investment.

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