Chapter 6

Product Life Cycle

The concept of product life cycle was popularised by Theodore Levitt in 1965. The product life cycle may be short for some products and long for others. Some products fail immediately while others live for a longer period. The product, thus, has a 'life cycle' just as human beings have. Its life begins with its market introduction, then goes through a period during which its market grows rapidly, eventually it reaches at maturity and then stands saturated. Afterwards, its market declines and finally its life comes to an end. The stages through which a product passes are collectively known as product life cycle. The life cycle of a product commences with its birth and ends with its obsolescence. During the life of a product, profits rise and fall. It is therefore necessary for the firm to devise appropriate marketing, financial, production and purchasing strategies for each of the stage of the product life cycle.

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6.1 CONCEPT AND SIGNIFICANCE OF PRODUCT LIFE CYCLE (PLC)

What is Product Life Cycle ?

Every product passes through a number of stages, namely, introduction, growth, maturity, decline and abandonment. These stages are collectively referred to as *Product Life Cycle*.

Product, like people, have a certain length of life, during which they pass through different stages. For some the life cycle may be as short as a month, while for others it may last for quite a sufficiently long period. The examples may be of a trendy dress or an electrical appliance. From the time the product idea is born, during its development, and upto the time it is launched in the market, a product goes through the various phases of its development. Its life begins with its market introduction; next it goes through a period during which its market grows rapidly. Ultimately, it reaches maturity stage after which its market declines and finally the product dies.

The product life-cycle may move through the following five stages :

1. Introductory, pioneering or development stage.
2. Growth or the market acceptance stage.
3. Maturity stage.
4. Decline stage.
5. Abandonment stage.

It is worth noting that the duration of each stage is different among products. Some products take years to pass through the introductory stage, while others may be accepted in the market in a few weeks. Further, not all products pass through all stages, some fail in the initial stages, others may reach the maturity stage after a long time. In virtually all cases decline and possible abandonment are inevitable because (*i*) the need for the product disappears; (*ii*) a better or less expensive product is developed to fill the same need; or (*ii*) a competitor does a superior marketing job.

Features of Product Life Cycle

The concept of PLC has the following features :

(*i*) All products generally pass through the five stages of PLC.

(*ii*) There is no clear-cut demarcation between one stage and the subsequent stage.

(*iii*) Different products do not have identical life cycles.

(*iv*) At any given point of time, the same product might reach different stages in different market segments.

(*v*) There is a specific time limit of PLC of a product or any of its stages.

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Significance of Product Life Cycle

The concept of product life cycle indicates that sooner or later all products die and that if management wishes to sustain its revenues, it must replace the declining products with the new ones. The product life cycle concept also indicates as to what can be expected in the market for a new product at various stages. Thus, the concept of product life cycle can be used as a forecasting tool. It can alert management that its product will inevitably face saturation and decline, and the host of problems these stages pose. The product life cycle is also a useful framework for describing the typical evolution of marketing strategy over the stages of product life cycle. This will help in taking sound marketing decisions at different stages of the product life cycle.

After a product has been developed, it is launched in the market with the help of various promotional devices such as advertising, sales promotion, publicity and personal selling. In other words, product development (some people call it **incubation stage** of product life cycle) must be followed by the successful introduction of the product in the market. For this, planning for introduction of the product starts during the process of product development itself. Every firm makes sale projections during introduction, growth and maturity stages of the product life-cycle. To achieve the projected sales target, it formulates promotional, pricing and distribution policies. Thus, the concept of product life-cycle facilitates integrated marketing policies relating to product, price, promotion and distribution.

The advantages of forecasting the life cycle of a product are as follows :

(*i*) When the product life-cycle is predictable, the management must be cautious in taking advance steps before the decline stage, by adopting product modification, pricing strategies, distinctive style, quality change, etc.

(*ii*) The firm can prepare an effective product plan by knowing the product life-cycle of a product.

(*iii*) The management can find new uses of the product for the expansion of market during growth stage and for extending the maturity stage.

(*iv*) The management can adopt latest technological changes to improve the product quality, features and design.

(*v*) The management can abandon the product which is not demanded by the customers.

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6.2 STAGES IN PRODUCT LIFE CYCLE

The product moves through five stages, namely, (1) introduction, (2) growth, (3) maturity, (4) decline, (5) abandonment. As the product moves through different stages of its life cycle, sales volume and profitability change from stage to stage as shown in Fig. 6.1. The management emphasis on the marketing mix elements also undergoes substantial changes from stage to stage. A brief discussion of the marketing strategies in different stages of the product life cycle is given below :

1. Introduction Stage

The first stage of a product life cycle is the introduction or pioneering stage. Under this stage, competition is almost or non-existent, prices are relatively high, markets are limited and the product innovation is not known much. The growth in sales volume is at a lower rate because of lack of knowledge on the part of the customers and difficulties in making the product available to the customers. During this stage, high expenditure has to be incurred on advertising and other promotional techniques. Prices are usually high during the introduction stage because of small scale of production, technological problems and heavy promotional expenditure.

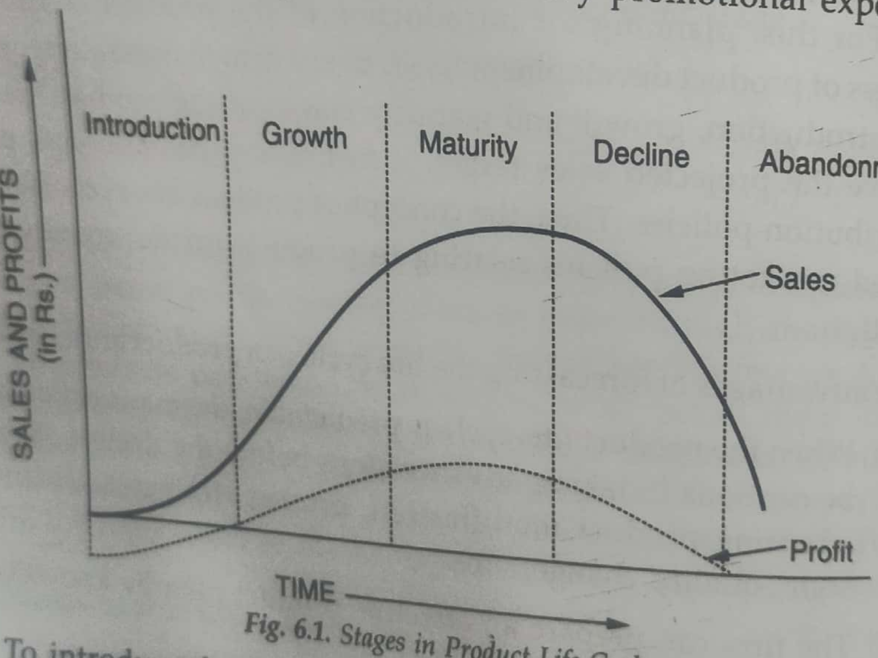

Fig. 6.1. Stages in Product Life Cycle.

To introduce the product successfully, the following strategies may be adopted :

(*i*) Advertisement and publicity of the product—'Money back' guarantee may be offered to stimulate the people try the product.

(*ii*) Attractive gifts to customers.

(*iii*) 'Price off' as an introductory offer, *i.e.*, introducing the product at a discount to attract the people.

(*iv*) Attractive discount to dealers.

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(v) Higher price of product to earn greater profit during the initial stages *i.e.*, skimming the cream pricing policy. If there is competition in the market, the firm may fix lower price to penetrate the market.

2. Growth Stage

As the product grows in popularity, in moves into the second phase of its life cycle, *i.e.*, the growth stage. During this stage, the demand expands, price fall, competition increases, and distribution is greatly widened. The management focuses its attention on improving the market share by deeper penetration into the existing markets and entry into new markets. Sometimes, major improvements also take place in the product during this stage. The promotional expenses remain high although they tend to fall as a ratio to sales volume. The falling ratio of promotional expenditure to sales leads to increase in profitability during this stage.

The following strategies are followed by the business firms during the growth stage :

(*i*) Advertisement and publicity of the product.

(*ii*) Incentive schemes may be offered to stimulate more people to try the product.

(*iii*) New versions of the product are introduced to cater to the requirements of different types of customers.

(*iv*) Channels of distribution are strengthened so that the product is easily available wherever required.

(*v*) Brand image of the product is created through promotional activities.

(*vi*) The price of product is competitive.

(*vii*) There is greater emphasis on customer service.

3. Maturity Stage

The product enters into maturity stage as competition intensifies further and market gets saturated. Profits come down because of stiff competition, and marketing expenditures rise. The prices are decreased because of competition and innovations in technology. This stage may last for a long period as in the case of many products with long-run demand characteristics. But sooner or later, demand of the product starts declining as new products are introduced in the market. Product differentiation, identification of new segments and product improvement are emphasised during this stage.

In order to lengthen the period of maturity stage, the following strategies may be adopted :

(*i*) Product may be differentiated from the competitive products and brand image may be strenghtened further.

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(ii) The warranty period may be extended. For instance, some manufactures of TVs have introduced the concept of life time warranty.
(iii) Reusable packaging may be introduced.
(iv) New markets may be developed.
(v) New uses of the product may be developed.

4. Decline Stage

This stage is characterised by either the product's gradual displacement by some new products or change in consumer buying behaviour. The sales fall down sharply and the expenditure on promotion has to be cut down drastically. The decline may be rapid with the product soon passing out of market or slow if new uses of the product are found. To avoid sharp decline in sales, the following strategies may be used :

(i) New features may be added to the product and its packaging may be made more attractive.
(ii) Economy packs or models may be introduced to revive the market.
(iii) Promotion of the product may be done on a selective basis to reduce the distribution costs.

5. Abandonment Stage

Many firms abandon the obsolete product in order to put their resources to better use. Innovative products are introduced in the market to take place of the abandoned products. As far as possible, attempts should be made to postpone the decline stage. But if the decline is rapid, the product model may be abandoned and the new model with unique features may be introduced. If it is not possible or there are heavy losses, the manufacturer may seek merger with a strong firm.

TABLE 6.1 Characteristics of PLC Stages

	Characteristics					
Stages in PLC	**Objectives**	**Sales**	**Costs per unit**	**Profits**	**Competitors**	**Customers**
1. Introduction	Product awareness	Low	Very High	Negligible	Few	Innovators
2. Growth	Maximize market share	Fast Growth	High	Rising	Growing	Early Adoptors
3. Maturity	Maximize profit and retain market share	Peak Level	Lowest	Peak Level	Many	Mass Market
4. Decline	Minimize expenditure	Declining	Low	Low	Declining	Loyal Customers

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Factors affecting Life-Cycle of a Product

Some of the important factors affecting life cycle of a product are outlined as follows:

1. Rate of technological change : If technological changes take place in the country at a very high rate, the life cycle of products in that country will be short because new and improved products take place of the old products.

TABLE 6.2 Marketing Strategies during PLC Stages

Stages in PLC	MARKETING-MIX VARIABLES			
	Product Strategy	*Pricing Strategy*	*Promotion Strategy*	*Distribution Strategy*
1. Introduction	Iron out product deficiencies	Higher price	Create awareness of product's potential, stimulate primary demand through heavy sales promotion and advertisement.	Selective distribution
2. Growth	Focus on product quality. Introduce variants of product.	High price	Selective advertising of brand. Heavy advertising to create image.	Extended coverage
3. Maturity	Product adjustments for further brand differentiation	Moderate price	Build and maintain brand image. Sales promotion to encourage brand switching.	Close dealer relationships
4. Decline	Simplify product-line. Seek new product uses. Introduce changes to revitalise product.	Price cut	Minimum advertisement and sales promotion to retain loyal customers.	Selective distribution

2. Rate of market acceptance : If the customers of a country accepts a new product very fast, the life cycle of products in such country will be limited because the customers who have accepted a product so fast can accept another product on next day.

3. Ease of entry of competitors : If the competitors can enter into a market very easily, the product life cycle will be short because the competitors can make the products out.

4. Risk bearing capacity : The companies having more risk bearing capacity can keep their products standing in the market for a long period.

5. Economic and managerial strength : If an enterprise has good economic and managerial strength, the life cycle can be longer.

6. Protection by patent : If the patent of the product is registered, the product life cycle can be fairly long.

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Limitations of Product Life Cycle

The following limitations of the concept of PLC may be noted :

(*i*) It is very difficult to determine the particular stage in which a product is.

(*ii*) The determination of length of each stage in the life cycle is a complicated process.

(*iii*) It is not necessary that all stages can be applicable to every product.

(*iv*) Product life cycle alone cannot be a device for marketing success.

The life cycle model can lead marketers into thinking that products are born with a predetermined life span - that they will sell for a period of time and then inevitably go into decline. But well managed products can live for decades. For example, Procter and Gamble's Ivory soap was introduced in 1879. By adapting the marketing mix as market conditions changed, P&G kept the brand healthy for over 130 years.

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