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## UNIT 2 PRODUCT LIFE CYCLE (PLC)

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### Objectives

After reading this unit you should be able to:

- discuss the concept of the product life cycle
- explain the stages in the product life cycle
- operationalise the PLC concept
- understand the product life cycle, its characteristics, objectives and strategies
- describe the role of PLC in product management decision making
- understand the diffusion of innovation theory and its relevance.

### Structure

- 2.1 Introduction and Theoretical Background
- 2.2 Product Life cycles Implications of Product life cycle
- 2.3 Product Life Cycle (PLC) an aid to Product Planning
- 2.4 Operationalising the Product Life Cycle
- 2.5 Product Life Cycle as a Guideline for Marketing Strategy
- 2.6 Product Life Cycle as a Guideline for framing Market Share Strategy
- 2.7 Summary of PLC Objectives, Characteristics and Strategies
- 2.8 Evidence and Critique for the Life Cycle Concept
- 2.9 The Diffusion of Innovation Theory – A Parallel theory
- 2.10 Summary
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## 2.1 INTRODUCTION AND THEORETICAL BACKGROUND

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Take a little time away from your busy schedule and look around and you will find for yourself that everything in the market place is presumed to be going through several phases or stages in their life cycle from introduction until its decline. When a product or a brand is launched, it grows, attains maturity, and starts declining to be phased out or may be for a re launch. A Product is basically a need satisfier. In reality there may be several products satisfying the need of a customer. For example, the need for a document and producing multiple documents was existent since human civilization started communication. As civilization matured, the need for documentation has also grown. This change in the level of need is captured by the demand life cycle. For every need cycle there is a sequence of phases starting with emergence, accelerating growth, decelerating growth, maturity, and decline. (The four stages of a product life cycle)

Historically speaking a product is an embodiment of technology, and the technology, in fact, satisfies the need. Let's look at the need for a document was first satisfied by a mud tablet and progressed through palm leaves, copper leaves, paper and has now reached the electronic pages stage. Succeeding technologies normally satisfy the need better than their predecessors. Once you consider the need for multiple copies of the same information, modern

technology would suggest use of carbon papers, cyclostyling, photocopying, printing and more convenient and efficient forms of duplication.

The introduction and decline phases of products are common themes in our everyday lives. The cassette tapes have replaced the vinyl records, and currently CDs, digital mini discs, VHS and DVDs tapes have been largely replaced by MP3 digital files. These innovations a result of technology development and technology adoption show that products, markets and competition change over time. Revolutionary products create new product markets. Correspondingly, competitors are developing and copying new ideas and products making existing products out of date more quickly than ever. Think of Nokia and Blackberry and consider how quickly these brands faded in the market. Products, like consumers, go through their respective life cycles.

Roger Everett's Diffusion of innovations theory explains the process of new product adoption over period of time. Both the Product Life Cycle (PLC) and the Diffusion curve are concerned with the changes in the adoption of products over time, the cumulative diffusion curve and PLC curve exhibit considerable similarity. However, there is a difference in terms of the parameters used. PLC depicts absolute sales over time while the diffusion curve relates cumulative percentage of potential consumers over time. Diffusion theory presents a five-stage adoption process, starting from, innovators, early adopters, early majority, late majority, and laggards.

Monopolistic Competition theory explains the variations in the number of firms at different stages of the PLC. Monopolistic competition involves many firms competing against each other, but selling products that are distinctive in some way. Examples include stores that sell different styles of clothing; restaurants or grocery stores that sell different kinds of food; and even products like golf balls or beer that may be at least somewhat similar but differ in public perception because of advertising and brand names.

In the initial stage, the number of firms in the business will be lower, many players would not enter the market due to the risk involved in the new product. Once the product acceptance is realized more firms would enter the market, this leads to the growth in the market. During the maturity stage, the number of firms entering and number of firms leaving the market would be more or less equal. On the decline, only those firms, which choose to specialize, would stay in the market and others would leave the market.

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## **2.2 IMPLICATION OF PRODUCT LIFE CYCLE**

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A company's positioning and differentiation strategy must change as its product, market and competitors change over the product life cycle. A product life cycle implies the following:

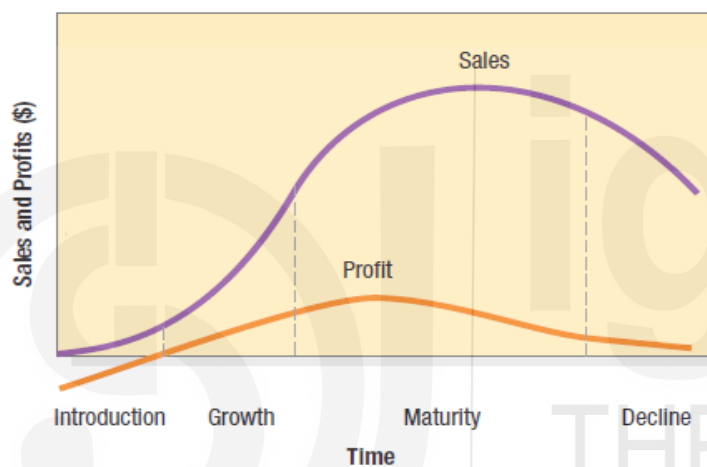
- Products have a limited life
- Product sales pass through distinct stages, each posing different challenges, opportunities, and problems to the seller
- Profits rise and fall at different stages of the product life cycle
- Products require different marketing, financial, manufacturing, purchasing, and human resource strategies in each life-cycle stage

### **Concept of Product Life Cycle**

Most product life cycles are portrayed as bell-shaped curves, typically divided into four stages: introduction, growth, maturity, and decline

- Introduction: A period of slow sales growth as the product is introduced in the market. Profits are non-existent because of the heavy expenses of product introduction
- Growth: A period of rapid market acceptance and substantial profit improvement
- Maturity: A slowdown in sales growth because the product has achieved acceptance by most potential buyers. Profits stabilize or decline because of increased competition
- Decline: Sales show a downward drift and profits erode

The figure below shows a growth slump maturity pattern, characteristic of small kitchen appliances like bread makers and toaster ovens. Sales grow rapidly when the product is first introduced and then fall to a “petrified” level sustained by late adopters buying the product for the first time and early adopters replacing it.

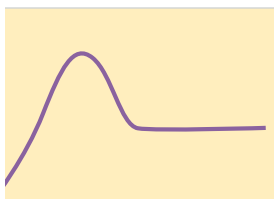


Source: Philip Kotler Marketing Management 15e

The re-cycle pattern in the figure below describes the usual pattern for new drugs.

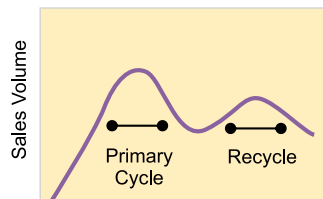
The pharmaceutical company aggressively promotes its new drug, producing the first cycle. Later, sales start declining and another promotion push produces a second cycle, usually of smaller magnitude and duration.

a) Growth Slump Maturity



Time

(b) Cycle-Recycle Pattern



Time

(c) Scalloped Patt



Time

Source: Philip Kotler Marketing Management 15e

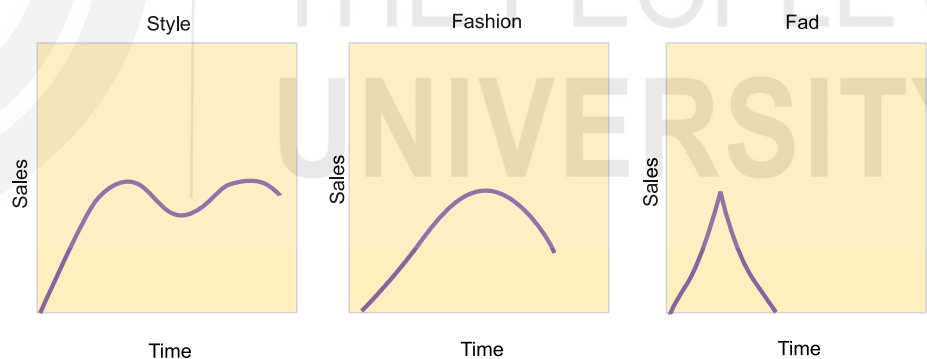
### Style, fashion and fad cycles

A style is a basic and distinctive mode of expression appearing in a field of human endeavour and can last for generations and go in and out of vogue.

Thus clothing can be formal, casual or sporty and art realistic, surrealistic or abstract.

- A fashion is a currently accepted or popular style in a given field. Fashions pass through four stages: distinctiveness, emulation, mass fashion, and decline. The length of a fashion cycle is hard to predict. What is currently popular can shift rapidly. Certain colour or style of clothing -baggy jeans, mini -skirts or four inch wide ties may be in fashion on season and outdated the next. Marketing managers who work with fashions have to make really fast fashion changes .For Example, Zara, a fashion retailer headquartered in Spain, takes only about two weeks to go from a new fashion concept to having items on the racks of its stores. One view is that fashions present a compromise and consumers start looking for the missing attributes. For example, if automobiles become smaller and less comfortable, consumers start wanting larger cars. Another view is that if too many consumers adopt the fashion others are discouraged. An alternative view to both the preceding is that the length of a fashion cycle depends on whether the fashion meets a genuine need, is consistent with other trends, satisfies societal norms and values and keeps within technological limits as it develops.
- Fads are fashions that come quickly into public view, are adopted with great zeal, peak early, and decline very fast. Their acceptance cycle is short and they tend to attract only a limited following searching for excitement or wanting to distinguish themselves from others. Examples are fads like the hula hoop, the Rubik’s cube, or bell – bottom trousers which came and went.

Fads decline because they don’t normally satisfy a strong need. The marketing winners are those recognize fads early a leverage them into products with staying power like Crocs did.



Source: Phillip Kotler Marketing Management 15e

As discussed, a product or brand goes through several phases from birth until its death. Firstly a product is launched; it grows, attains maturity, then starts declining and, finally, is ironed out. Accordingly, the product life cycle is explained by the following stages; (i) Introductory stage; (ii) Growth stage; (iii) Maturity stage and (iv) Decline stage.

### **Stages in the Product Life Cycle:**

#### **1. Introductory Stage**

The introductory stage of a product are believed to be relatively slow, even after its technical problems have been ironed out, due to a number of marketing forces and consumer behaviour factors. The major marketing obstacle to rapid introduction of a product is often distribution. Retail outlets

are often reluctant to introduce new products, and may prefer to wait until a track record has been established before including them. in their stock.

Consumer acceptance of new products tends to be relatively slow. The newer the product, the greater the marketing effort required to create the demand for it. The length of the introductory period depends on the product's complexity, its degree of newness, its fit into consumer needs, the presence of competitive innovations of one form or another, and the nature, magnitude and effectiveness of the introductory marketing effort.

At this stage it is usually assumed that there are no competitors, the market structure is defined as 'Virtual Monopoly'. But there are very few really radical innovations with no existing substitutes. Most new products and services face considerable competition from existing products, and also experience severe competitive pressure from other new products.

There are many cases where two firms introduce similar products almost at the same time, which is possible if the two companies are working on similar technological developments. On noticing the success of the test market conducted by one company, others may follow suit with similar products. If two or more firms introduce products at about the same time, the result is likely to be a shorter introductory period. The length of the introductory period is a crucial aspect of the PLC. From the managerial point of view, the shorter this stages the better.

The consumers who buy the product in the introductory stage itself are called innovators, and those who buy later are called late adopters or laggards. This may sometimes be misleading, for example in the case of a buyer who hears about a product for the first time two years after its introduction, buying it at once.

## **2. Growth Stage**

The growth stage begins when demand for the new product starts increasing rapidly. If innovators are satisfied with the trial, they move to repeat purchase. They then influence others by word-of-mouth, which is often considered the most effective mode of communication. The product availability and visibility in distribution and in use (e.g., new cars on the road) tend to bring new triers into the market. At this stage, the entry of competitors increases the total demand for the product through their advertising and promotional efforts.

## **3. Maturity Stage**

The maturity or saturation stage occurs when distribution has reached its planned or unplanned peak and the percentage of total population that is ever going to buy the product has been reached. Volume (reflecting the number of customers, quantity purchased, and frequency of purchase) is stable. At this stage it becomes difficult to maintain effective distribution, and price competition is quite common.

## **4. Decline Stage**

Changes in competitive activities, consumer preferences, product technology and other environmental forces tend to lead to the decline of most mature products. If decline is for a product and not brand, producers may withdraw from that product category. The typical reason for a product decline is the entry of new products and decreased consumer interest in the specific product. One of the few options left for keeping a brand alive is price reduction and other drastic means that depress the profit margin and lead to product withdrawal. Product decline occurs when most customers no longer buy the product and only a few loyal customers remain. The latter continue buying the product in spite of no advertising or promotional campaign. The company may decide to follow a 'milking or harvesting

strategy' i.e., retain the product with meagre marketing support as long as it generates some sales. But this requires maintaining distribution of the product, which becomes less profitable.

**Activity 1**

1. Trace the PLC of Blackberry cell phones. What were the reasons for their decline?
2. What could they have done to extend the life cycle?

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### **2.3 PRODUCT LIFE CYCLE (PLC) – AN AID TO PRODUCT PLANNING**

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The Product Life Cycle concept, as a tool of product planning, has had its share of criticism as well as support. Let us look at some empirical evidence in this context.

The S Shaped logistic curve has been widely accepted as a representation of the life cycle of a product, having four visible stages; a long phase (introduction), an exponential phase (growth), a stationary phase (maturity and saturation) and a decline phase.

The empirical support for the S shaped product life cycle is not universal and the evidence regarding its validity is, therefore, not conclusive. This general pattern was found to exist in certain product classes. Puzzle and Cook in their study of 192 consumer products in 1969 found that 52 per cent of the products followed the general pattern of the product life cycle. A number of studies on industrial products also showed that a fairly large percentage of them approximate to the PLC representation.

Sales of 'mature' products however, did not necessarily follow the predicted pattern. Three variations in the maturity phase were observed -- the expected stable maturity, a growth maturity due to changes in the market variables, and an innovative maturity due to some innovations introduced in the product. Similarly for the decline stage, it has been shown that the stage is not inevitable for products like milk, bread etc.

It must however, be clearly understood that products do not follow a natural and inevitable cycle of birth, growth and death as organisms do. The product life cycle that they follow is, to a large extent the result, and not the cause, of marketing strategies. The sales and profit graphs do respond to marketing inputs and a sales decline does not necessarily mean that the product has entered an irreversible decline phase. As the life cycle stages do not have predictable duration and inevitable sequence, the product life cycle concept can at best be used as a general guideline for planning future action. It has to be supplemented by a deep and thorough study of the market and competitive conditions characterising a product, in order to

serve as a productive or planning tool. The usefulness of the PLC concept varies in different decision situations. As a planning tool, it emphasises the type of main marketing challenges a product is likely to face in the different phases, and suggests major alternative strategies that may be followed at each stage. As a tool for control, the PLC concept enables comparison of product performance against similar products in the past.

## 2.4 OPERATIONALISING THE PRODUCT LIFE CYCLE

In order to utilize the product life cycle effectively it is necessary to understand how one can unambiguously determine the position of a product in the context of its life cycle. Putting the PLC concept into operation would require the following decisions to be taken:

### a) Deciding upon the unit of analysis.

As the actual shape of the product life cycle curve may differ for product form, product class, or an individual product and a brand, it is important to decide which particular unit of analysis is being considered. The PLC analysis can be undertaken for each of these units, both at the firm and the industry level. The importance of explicitly defining a unit of analysis will become apparent to you when you consider an example of whether all TV sets should be considered or the focus should be on either black and white or Colour sets, or portable versus non-portable ones - it is apparent that no set rules can be prescribed as to the correct unit of analysis. Based on their needs and intention of how to use the PLC, Management should define and select the relevant unit of analysis.

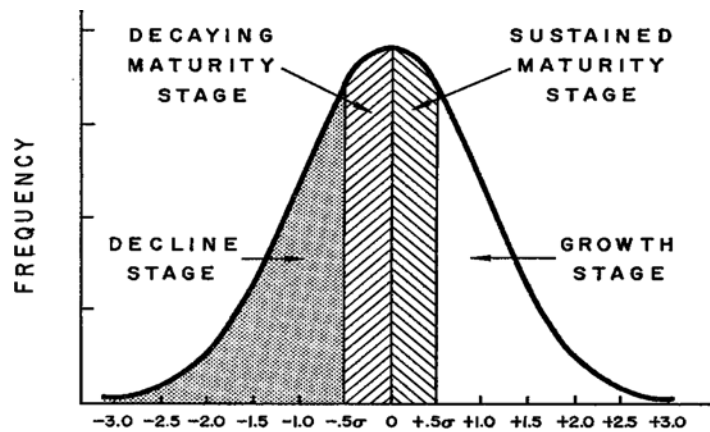
### b) Definition of relevant market

Normally, the PLC approach assumes a single homogenous market, which is further segmented by the difference in adoption behaviour of the consumers i.e. the early adopters, late adopters and, finally, the laggards. Generally, PLC studies focus on the product sales at the total market level. However, it is sometimes useful to consider the PLC by type of market (for example international versus domestic market), distribution pattern (direct versus retail distribution) or market segment (organisational buyers versus individual buyers).

### c) Identification of the Product stage in the PLC

In order to use the PLC concept one would need to answer two related questions (a) how to determine the stage of a product in the life cycle (b) how to determine when the product moves from one stage to another. Since the shape of the PLC curve varies widely for products, as does the duration of the different stages, it is not possible to assess the stage of a product in the life cycle and its transition to another stage, merely by observing the historical sales graph of the product.

Let us consider the operational approach suggested by Polli and Cook as represented in the figure below:



The approach is based on the measurement of the percentage change in real sales from one year to the next. These changes are plotted as a normal distribution. Change in real sales from year to year is then measured. Products having a percentage change less than  $-0.5$  are classified as being in the decline stage, those having percentage change greater than  $0.5$  were classified as being in the growth stage while those in the range of  $+0.5$  were classified as being in the maturity stage, which was further divided into decaying maturity and stable maturity.

As far as the duration of a stage in the PLC of a product and the exact point in time of the transition of a product from one stage to another, no generalised conclusions can be drawn since the duration of each PLC stage depends on a large number of variables like product characteristics, market acceptance and competitive action.

#### Defining the Unit of Measurement

Though most analyses of PLC are based on actual sales it is important to determine:

1. Whether to use unit sales or rupee sales as unit of measurement?
2. Should actual sales figures or adjusted sales figures be used?
3. Should real or projected prices be used as units of measurement?
4. Should sales be allowed to function as the sole yardstick or should other criteria like profit and market share used to estimate PLC curve?

#### Determining the time unit

Annual data generally forms the basis of PLC analysis. As the life periods of products are shortening, and as some classes of products are prone to wide seasonal fluctuations, it may sometimes be considered desirable to use quarterly or monthly data to develop PLC graphs. Depending upon its needs and the product characteristics, management must decide in advance what should be the unit of time chosen.

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## 2.5 PRODUCT LIFE CYCLE -- AS A TOOL TO PLAN MARKET SHARE STRATEGIES

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Determining the market share strategy of a product is also one of the key factors in product development. When a product manager is faced with a number of products which are doing well presently he has to come to a decision regarding the long term market share target for each of the products. Given the market share to be obtained, the other elements of the marketing mix can then be decided upon. How do we go about making decisions regarding the market share objectives? What criteria do we use?

A framework to evaluate a product's position vis-a-vis its long term growth prospects has been developed by Bernard Catry and Michel Chevalier. The proposed framework is given below:

**Framework Suggested:** The first market criterion used is the stage of the product life cycle in which the currently product is. This gives a good indication of the trend in demand as well as competitive patterns. The three phases of a product life cycle used here are introduction, maturity and decline.

The second criterion consists of placing the firm into one of three categories on the basis of its market share. A firm can therefore be placed in (i) small market share (ii) average position (ii) dominant position.

On the basis of these two criteria the firm can choose whether to (i) increase its position (ii) maintain its position at the same level; (iii) reduce its market share.

Table 1 given below indicates the different alternative positions that exist over time in a product group. Each cell corresponds to a different investment or a different expected gain. The term investment in this case means that a firm deciding to increase its position at the introductory stage must make production and marketing investments that will enable it to increase both its brand awareness in its market coverage and its production facilities. On the other hand, a firm which has to maintain its position in a slow growth market may not require as much investment. In the table, the amount of investment necessary is suggested by the number of pluses and minuses following the letter I, while the amount of expected cash return is indicated by pluses and minus following the letter E. An overall value can thus be obtained for each cell by computing the arithmetic sum of cash investments and expected cash returns in the short run. This forms a basis for comparison to arrive at a decision on the appropriate strategy.

**Table I : Market share Diagnosis**

Product Life Cycle : Market Share Position of the Firm									
Strategic Alternatives	Introduction			Maturity			Decline		
	Small	Average	Dominant	Small	Average	Dominant	Small	Average	Dominant
Increased	I ++	I ++	I +++	I ++	I +++	I ++++	I +	I ++	I ++
Investment	E +++ <sup>1</sup>	E ++ <sup>(1)</sup>	E ++ <sup>(1)</sup>	E + <sup>(1)</sup>	E + <sup>(2)</sup>	E + <sup>(3)</sup>	E -- <sup>(3)</sup>	E -- <sup>(5)</sup>	E -- <sup>(6)</sup>
Marketing	I	I +	I ++	I	I	I	I +	I	I --
Position	E <sup>0</sup>	E + <sup>0</sup>	E ++ <sup>0</sup>	E <sup>0</sup>	E +++ <sup>3</sup>	E ++++ <sup>4</sup>	E + <sup>2</sup>	E + <sup>1</sup>	E ++ <sup>3</sup>
Disinvestment	I	I -	I -	I -	I ---	I ----	I -	I ---	I ---
	E <sup>0</sup>	E <sup>1</sup>	E <sup>0</sup>	E + <sup>2</sup>	E +++ <sup>6</sup>	E ++++ <sup>4</sup>	E <sup>1</sup>	E ++ <sup>4</sup>	E ++ <sup>5</sup>

The action implications arising out of this table can be summarised as under:

1. In the introduction stage of the product life cycle the best short term strategy for a weak brand is to invest in market share. On the other hand, for the dominant firm the best strategy would be to harvest.
2. Firms with a small market position are advised not to invest for more market share at a very late phase of development of the market.

## 2.6 PRODUCT LIFE CYCLE AS A GUIDELINE FOR MARKETING STRATEGY

In considering the possible relationship between marketing strategy and the product's life cycle, one should see whether companies should adopt their marketing efforts according to the product life cycle or whether the firm's marketing strategy can change the course of the product life cycle. But, unfortunately, most studies of the determinants of product sales are not concerned directly with the product's PLC. Knowledge of the product's

stage in its life cycle gives useful but only partial input for the design of the product's marketing strategy.

Recommendations have frequently been made concerning the type and level of advertising, pricing, distribution, and other product/marketing activities required at each of the product life cycle stages. Some of the more common recommendations are discussed below, but should be viewed as hypotheses, and not facts or normative prescriptions.

**Advertising:**

In the introductory stage, advertising informs customers about the existence, advantages, and uses of new products. During the growth stage -advertising stresses the merits of the products in comparison to competing product. In the maturity phase, advertising attempts to create impressions of product differentiation. It appeals to pride and non-economic utilities. Massive advertising campaigns attempt to attract attention. Finally, in the decline stage, the percentage of sales going into advertising decreases.

**Product Changes:**

Product changes to be made at each stage of the product life cycle are as follows:

Introduction: new product; Growth: product modification; Maturity: product modification and differentiation; Saturation: product modification, differentiation and diversification; and Decline: product diversification. While at the maturity stage new versions are introduced, at the decline stages, stripped down versions are introduced.

**Pricing:**

Price is usually believed to be high at the introductory period and to decline with the product life cycle stages, as it becomes an increasingly important competitive weapon, especially at the later stages of growth, maturity and decline. Although price-cutting is quite common in many industries as the product matures (e.g.: Reduction in prices of cell phones, calculators and digital watches over time), many managers prefer to engage in non-price competition. Price cutting in the saturation stage, although common, is far less important than changes in the product, promotion, and distribution policies. In determining the product's price strategy, not only the introductory price should be considered, but also what the next move might be, given alternative competitive actions. A relatively low introductory price should not be ruled out automatically but should be fully examined.

**Distribution:**

Initial distribution is slow since distribution channels are still being set up to reach its full coverage at the growth stage when retail outlets are seeking the product. At the maturity stage, retail outlets are the first to suffer from changes in consumer purchase patterns; hence manufacturers may start losing outlets. At the same time, efforts are made by manufacturers to establish new methods of distribution e.g. e-commerce and new outlets

The above attempts to prescribe a marketing strategy and guide the allocation of marketing resources over the stages of a product's life cycle assumes that at any one stage of the PLC the firm has only a single reasonable marketing strategy it can flow. This is misleading as it constrains management's creativity in generating new marketing strategies and ignores differences among products, markets and firms. In the real world there is seldom only definitive strategy

**Activity 2**

Pick up any two products- one each from consumer goods and consumer durables of your choice. Identify the stage of PLC that they are in. As the

Product Manager propose a suitable marketing strategy for products?

Product Life Cycle (PLC)

Product A.....

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Product B.....

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## 2.7 PLC: CHARACTERISTICS, OBJECTIVES AND STRATEGIES

TABLE 12.2 Summary of Product Life-Cycle Characteristics, Objectives, and Strategies				
	Introduction	Growth	Maturity	Decline
<b>Characteristics</b>				
Sales	Low sales	Rapidly rising sales	Peak sales	Declining sales
Costs	High cost per customer	Average cost per customer	Low cost per customer	Low cost per customer
Profits	Negative	Rising profits	High profits	Declining profits
Customers	Innovators	Early adopters	Middle majority	Laggards
Competitors	Few	Growing number	Stable number beginning to decline	Declining number
<b>Marketing Objectives</b>				
	Create product awareness and trial	Maximize market share	Maximize profit while defending market share	Reduce expenditure and milk the brand
<b>Strategies</b>				
Product	Offer a basic product	Offer product extensions, service, warranty	Diversify brands and items models	Phase out weak products
Price	Charge cost-plus	Price to penetrate market	Price to match or best competitors'	Cut price
Distribution	Build selective distribution	Build intensive distribution	Build more intensive distribution	Go selective: phase out unprofitable outlets
Communications	Build product awareness and trial among early adopters and dealers	Build awareness and interest in the mass market	Stress brand differences and benefits and encourage brand switching	Reduce to minimal level needed to retain hard-core loyals

Source : Phillip Kotler Marketing Management 15e

## 2.8 EVIDENCE AND CRITIQUE FOR THE LIFE CYCLE CONCEPT

### A) Evidence for the Product Life-Cycle Concept

New consumer durables show a distinct take-off, after which sales increase by roughly 45 percent a year, but they also show a distinct slowdown, when sales decline by roughly 15 percent a year. Slowdown occurs at 34 percent penetration on average, well before most households own a new product. The growth stage lasts a little more than eight years and does not seem to shorten over time. Informational cascades exist, meaning people are more likely to adopt over time if others already have, instead of making careful product evaluations. One implication is that product categories with large sales increases at take-off tend to have larger sales declines at slowdown.

## B) Critique of the Product Life-Cycle Concept

PLC theory has its share of critics who claim life-cycle patterns are too variable in shape and duration to be generalized and marketers can seldom tell what stage their product is in. As a tool for control, the PLC concept enables comparison of product performance against similar products in the past. It has got a limited utility as a forecasting tool as sales histories of products differ widely and the life cycle stages exhibit varying duration. Further, market evolution takes pace and companies affected by new needs, competitors, technology, channels, and other developments, change product and brand positioning to keep pace. Also like products, markets evolve through four stages: emergence, growth, maturity, and decline, making forecasting uncertain.

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## 2.9 THE DIFFUSION OF INNOVATION THEORY

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This is a theory which runs concurrently with the Product life Cycle theory and should be considered complementary in framing of marketing strategy.

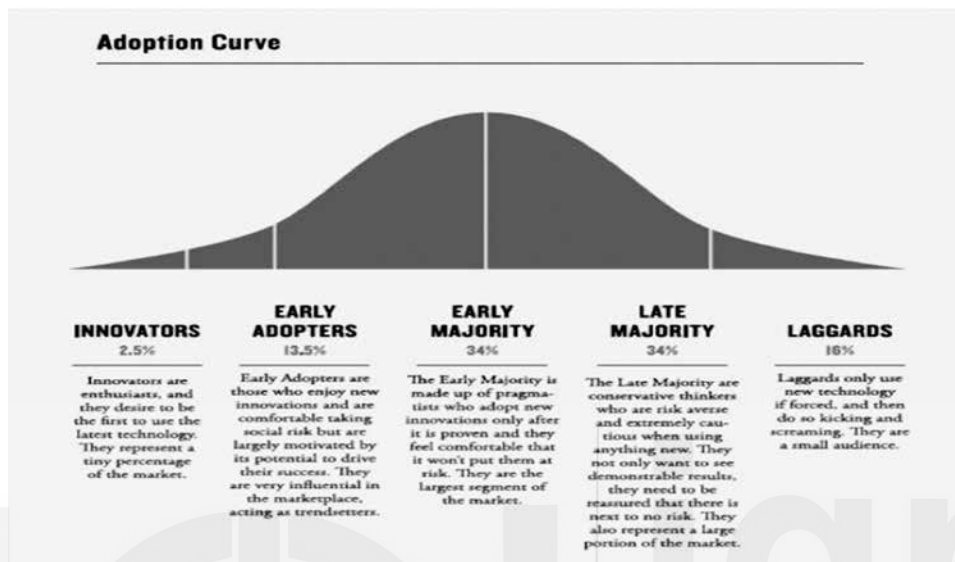
Diffusion of Innovation Theory, developed by E.M. Rogers in 1962, is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behaviour, or product. Adoption means that a person does something differently than what they had done previously (i.e., purchase or use a new product, acquire and perform a new behaviour, etc.). The key to adoption is that the person must perceive the idea, behaviour, or product as new or innovative. It is through this that diffusion is possible.

Researchers have found that people who adopt an innovation early have different characteristics than people who adopt an innovation later. When promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation. There are five established adopter categories, and while the majority of the general population tends to fall in the middle categories, it is still necessary to understand the characteristics of the target population. When promoting an innovation, there are different strategies used to appeal to the different adopter categories.

1. **Innovators:** These are people who want to be the first to try the innovation. They are venturesome and interested in new ideas. These people are very willing to take risks, and are often the first to develop new ideas. Very little, if anything, needs to be done to appeal to this population.
2. **Early Adopters:** These are people who represent opinion leaders. They enjoy leadership roles, and embrace change opportunities. They are already aware of the need to change and so are very comfortable adopting new ideas. Strategies to appeal to this population include how-to manuals and information sheets on implementation. They do not need information to convince them to change.
3. **Early Majority:** These people are rarely leaders, but they do adopt new ideas before the average person. That said, they typically need to see evidence that the innovation works before they are willing to adopt it. Strategies to appeal to this population include success stories and evidence of the innovation's effectiveness.
4. **Late Majority:** These people are sceptical of change, and will only adopt an innovation after it has been tried by the majority. Strategies

to appeal to this population include information on how many other people have tried the innovation and have adopted it successfully.

5. **Laggards:** These people are bound by tradition and very conservative. They are very sceptical of change and are the hardest group to bring on board. Strategies to appeal to this population include statistics, fear appeals, and pressure from people in the other adopter groups.



### Everett Roger's Diffusion of Innovation Curve

The stages, by which a person adopts an innovation, and whereby diffusion is accomplished, include awareness of the need for an innovation, decision to adopt (or reject) the innovation, initial use of the innovation to test it, and continued use of the innovation. There are **five main factors that influence adoption of an innovation**, and each of these factors is at play to a different extent in the five adopter categories.

1. **Relative Advantage:** The degree to which an innovation is seen as better than the idea, program, or product it replaces.
2. **Compatibility:** How consistent the innovation is with the values, experiences, and needs of the potential adopters.
3. **Complexity:** How difficult the innovation is to understand and/or use.
4. **Trialability:** The extent to which the innovation can be tested or experimented with before a commitment to adopt is made.
5. **Observability:** The extent to which the innovation provides tangible results.

The relevance of this theory would lie in achieving a degree of fair accuracy in forecasting sales and setting sales targets at different stages of the PLC

## 2.10 SUMMARY

This unit describes the Product life cycle which is one of the enduring and widely publicized frameworks in marketing literature. Both, theory of innovations and diffusion, as well as theory of monopolistic competition complement and endorse this framework. In this model it is conceptualized that product goes through four distinct phases, namely introduction, growth, maturity, and decline. There are controversies about the causality of product life cycle; hence, it is important to take adequate precaution while applying the PLC concept for decision making. PLC can be of diverse shapes, such as the classical bell shaped curve, scalloped, style and so on. The PLC can also be viewed from different levels of product, like core product, product

category, brand and so on. The shape may change depending on the markets served. In marketing literature several prescriptions have been proposed for using PLC for marketing strategy formulation. However, it is important to consider the decision context, product in question, market conditions and other factors before using PLC for strategy formulation.

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## **2.11 SELF – ASSESSMENT QUESTIONS**

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1. Cell phones are a part of our everyday lives. At what stage of the PLC do you think they are? What will marketers have to do to sustain them in future? Or will they die out and be replaced by newer technologies? Think futuristically.
2. Coco Cola and Pepsi have been in a mature stage of the Product Life Cycle for many years. What are these soft drink marketers doing to prevent their decline?
3. Can brands live forever if marketed well or must be they have a finite life? Your views? Trace the history of 3 long - lived brands and find out the reasons for their long term survival.

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## **2.12 REFERENCING/FURTHER READINGS**

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