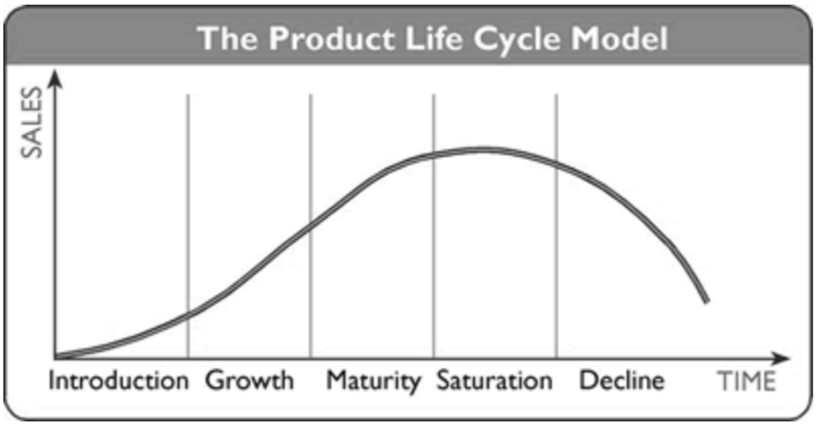
Tools for community economic analysis

GROWTH

Growth economics studies factors that explain economic growth – the increase in output per capita of a country over a long period of time. The same factors are used to explain differences in the level of output per capita between countries, in particular why some countries grow faster than others, and whether countries converge at the same rates of growth.

Much-studied factors include the rate of investment, population growth, and technological change. These are represented in theoretical and empirical forms (as in the neoclassical and endogenous growth models) and in growth accounting.

PRODUCT LIFE CYCLE



It is a generally said that 90% of the products we use today did not exist in their current form five years ago. Similarly, 90% of the products we will be using five years from now do not exist currently. Generally we can all identify products that have changed from their original form and/or content. And, with today's rapid changes in technology, almost every product will undergo some sort of modification during its lifetime.

A Product in its life cycle under goes a lot of stages, sales and profit of a product shows a lot of variation in each stage so it becomes important for a marketer to know the marketing situation and where his product is placed in Product Life Cycle (PLC),thus impacting the marketing strategy and the marketing mix.

Knowledge of the product's life cycle can provide valuable insights into ways the product can be managed to enhance sales and profitability. Marketing activities are heavily dependent on the stage in the product life cycle.

Product Life Cycle has four stages:

1. Introduction
2. Growth
3. Maturity
4. Decline

In reality very few products follow such a prescriptive cycle. The length of each stage varies enormously. For example Fashion products tend to have a short life cycle i.e. the time between the launch of a product and the point at which the product is mature is very quick.

The decisions of marketers can change the stage, for example from maturity to decline by price-cutting.

A marketer needs to study following parameters to know the product life cycle stage :

1. Sales
2. Profits
3. Customers
4. Competitors
5. Cost

Introduction

This is the stage when a product is launched so a marketer knows that his product is in in introduction stage.

During this stage parameters show following features:

1. **Sales**- Product is new and the strategy of the marketer is to make more and more people try the product. The firm will create product awareness & develop a market for the product. Sales are very low as people are little apprehensive in using a new product.
2. **Profits**- Profits are low and for some product they can be even in negative. As sales are low and company is spending a huge amount on promotion to inform potential customers.
3. **Customers**- Customers using these products are innovators.
4. **Competitors**- Competitors are very few as this is a new market. To be the first one to launch the product helps in long run as customer tend to trust the initiator.
5. **Cost**- Cost per customer is high as promotion expenditure is high.

To tackle the challenges mentioned above marketer has to develop a new marketing mix. For this stage marketing mix can be as follow:

1. **Product**- In this stage a product should be in a basic form as this is the first stage. Branding and quality level is established
2. **Price**- Price skimming may be used if the product is a new development & there are no competitors or pricing may be low penetration pricing to build market share rapidly. Low prices encourage more people to discover the new product.

3. **Promotion**- Promotion is mainly aimed at innovators and early adopters. Informative advertising is used until the product becomes known. Limiting the marketing to the target consumers of the product will save money that would cost to send the announcements to everybody.
4. **Place**- Initially selective placement is done that is limited product availability in few outlets.

An example is Iris-based personal identity cards which are in the introduction stage of the product life cycle. Iris recognition is a method of biometric authentication that uses pattern recognition techniques based on high-resolution images of the irides of an individual's eyes.

Iris recognition technology is primarily deployed in high-security physical access implementations substituting for passports and controlling access to restricted areas at airports; database access and computer login;. The most prominent deployments of iris recognition technology have been pilot programs at ATMs in England, Japan, and the U.S One of the largest current deployments of these algorithms is in the United Arab Emirates, where every day about 10 Billion iris comparisons are performed in real-time database searches. Travelers arriving at 35 air, land, and sea ports have their Iris Codes quickly computed and compared against all the Iris Codes in a central database. Altogether, some 60 million persons worldwide have so far had their iris patterns mathematically computed and enrolled by these algorithms.

Iris recognition is forecast to play a role in a wide range of other applications in which a person's identity must be established or confirmed. These include electronic commerce, information security, entitlements authorization, building entry, automobile ignition, forensic and police applications, network access and computer applications, or any other transaction in which personal identification currently relies just on special possessions or secrets (keys, cards, documents, passwords, PINs).

<u>Growth</u>

This is the second stage of the PLC it is marked by high sales. In this stage marketer realizes that the product is valuable to the customer and targets a huge uncaptured market. Parameters of this stage are as follow:

1. **Sales**- High sales as by now the product gains confidence of early adapters and they start buying the product.
2. **Profits**- In this stage profit rise as sales increase tremendously.
3. **Customers**- They are early adopters.
4. **Competitors**- As market starts expanding, number of competitors grow. Some competitors just copy the most successful product or try to improve over the original product resulting in much product variety.
5. **Cost**- It reduces a bit as the demand for the product increases so cost becomes less per customer.

For this stage marketer should develop marketing mix as follow:

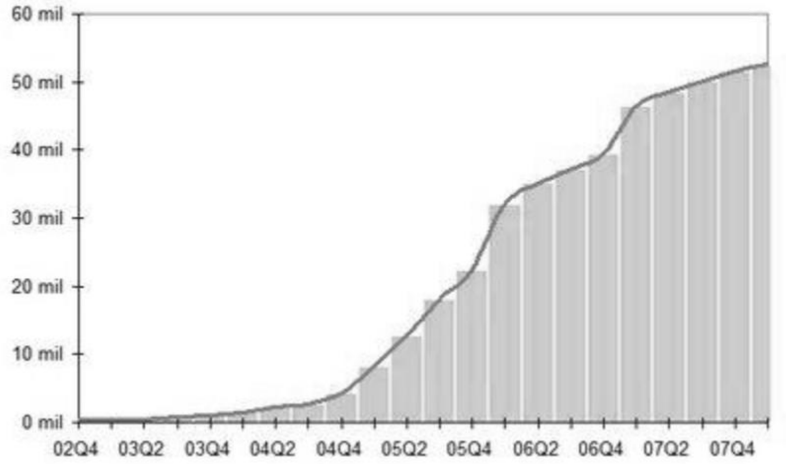
1. **Product**- Company improves the product quality and additional features and support

services may be added to the product. Company can also provide warranty and service. Changes should be made in accordance with the customer needs.

2. **Price**- Price should be such that it can penetrate market. Price is reduced a little due to the entry of the competitors.
3. **Promotion**- Advertising is now more focused on brand building. A shift from product awareness advertising to persuasive advertising is undertaken to encourage brand loyalty.
4. **Place**- Strategy should be to build an intensive distribution channel so that product can cater to increasing demand easily. Its coverage should increase.

An example is ipod which is in its Growth stage.

In the recent years sales of iPods have been slowing. Over the years iPod sales have mirrored the S-curve, depicts the product life cycle.



iPod sales from 2004 to 2007

As is apparent from the sales graph, iPod is in the Growth stage of the PLC.

iPod Growth strategies:

Sales can come from 3 sources

1. <u>Non – users:</u> Apple can't depend on new users to increase the sales as in previous years as with 140 million iPods sold and likely more than 200 million total sold, it's increasingly difficult to keep expanding the market to new users. Yet the market will continue to expand, albeit at a much slower rate.
2. <u>Competitor's customers:</u> The competing devices are cheaper and target more price sensitive consumers. Apple recently cut iPod Shuffle prices from $79 to $49 making iPods more competitive among lower-priced devices. This may slightly increase its market share, but not to an extent large enough to boost sales growth significantly.
3. <u>Current users</u>:They are the largest source of potential sales. Apple is providing some additional features to boost the sales. It has extended its iPod line to include iPod Minis - smaller, cheaper versions of the iPod with less memory - and the iPod Shuffle, a stripped-down player that Apple promotes for its ability to play songs randomly. Apple has also encouraged the development of accessories, including a flashlight that snaps on to iPods. And despite resisting at first, Apple has introduced the iPhoto, which lets users download digital photos from their computers.

Maturity

The marketing mix used by the marketer in the previous stage pushes the product in the next stage of PLC i.e. Maturity. This stage influences the parameters in the following way:

1. **Sales**- In this stage the sales are initially at peak but the rate of growth of sales starts decreasing. So at a later stage of maturity the sales become constant. Decline in sales show that maturity stage is coming to an end
2. **Profits**- Profits are high initially but on a later stage they start decreasing. This is due to promotion costs and price cuts by competitors to attract more business. Thus less efficient firms drop out of the market due to increasing pressure on prices.
3. **Customers**- Majority of target customer is using the product.
4. **Competitors**- Numbers of the competitors become constant. Competition is tougher due to the presence of aggressive competitors.
5. **Costs**- Costs reduces per customers as in this stage a marketer should sale in high volumes and lower margins to maximize the profit thus reducing the cost.

This stage is most challenging stage for the marketer. It becomes very necessary to come up with a strategy to overcome this problem and avoid the entry of its product in decline stage. At this stage marketer tries to sell more to the existing customer this can be done by following marketing mix:

1. **Product**- Marketer needs to diversify brand and product item so that customer buys more. This can be done by providing various varieties of product item.
2. **Price**- It has to be competitive to match the price offered by the other companies.
3. **Promotion**- Marketer needs to stress on brand differences and product differentiation. In this stage companies involve in fierce persuasive advertising battle. Sales promotion tools like premiums, discounts,"free" goods etc.
4. **Place**- Till this stage product already makes sufficient penetration so a marketer should look at those places that have remained undiscovered. Distribution becomes more intensive & incentives may be offered to encourage preference over competing products

Products, when they reach the maturity stage begin to look old and tired. A brand Manager needs to refresh the product's image using **'Repositioning strategy'**. The various repositioning strategies are:

- Image Repositioning: The product and target market stay the same but the product image changes. Eg: Cadbury Snack
- Product Repositioning: Changing the product to make it more attractive to the current market. Eg: Most new models of cars
- Intangible Repositioning: Using the same product to target a different target segment. Eg: Lucozade change from targeting the sick to targeting the athletes.
- Tangible Repositioning: The most radical strategy as both product and target market are changed. Eg: Volkswagen's revitalizing of the Skoda Brand.

Decline

The decline stage is the last stage of the PLC. This stage can be identified by the following changes in the parameters:

1. **Sales**- They are declining in this stage. It becomes really difficult for the marketer to revive the sales or continue with the product.
2. **Profit**- Profits are declining in this stage as sales are diminishing. All though profits can be optimized by reducing the promotional expenditure.
3. **Customers**- They are those people who are innovators and use out of date products.
4. **Competitors**- Numbers are declining as intelligent companies leave these products and start concentrating on those products that are in demand. Some companies completely withdraw from the market.
5. **Costs**- Low cost per customer.

To survive this stage marketer should change the marketing mix. Following marketing mix can be followed:

1. **Product**- At this stage the best strategy is to phase out the weaker product and concentrate on strong product. Maintain the product- possibly rejuvenating it by adding new features & finding new uses.
2. **Price**- Price of the product should be reduced to increase the sales.
3. **Promotion**- It should be just sufficient to retain the remaining users as one cannot capture new customers at this stage.
4. **Place**- Concentrate only on those distribution channels which are still showing sales. All other channels should be phased out.

For example: Typewriters, cloth diapers, black and white televisions, VCR and cassette players

Product Life cycle model though considered as straightforward and powerful model needs to be used carefully as it is hard to tell in which stage the product is as there are constant short term fluctuations due to external factors resulting in incorrect marketing actions. In conclusion the model is useful to identify the symptoms of each stage.

WHAT IS MONEY MARKET

- As per RBI definitions " A market for short terms financial assets that are close substitute for money, facilitates the exchange of money in primary and secondary market".
- The money market is a mechanism that deals with the lending and borrowing of short term funds (less than one year).
- A segment of the financial market in which financial instruments with high liquidity and very short maturities are traded.

MONEY MARKET

- It doesn't actually deal in cash or money but deals with substitute of cash like trade bills, promissory notes & government papers which can converted into cash without any loss at low transaction cost.
- It includes all individual, institution and intermediaries.

FEATURES OF MONEY MARKET

- Transaction have to be conducted without the help of brokers.
- It is not a single homogeneous market, it comprises of several submarket like call money market, acceptance & bill market.
- The component of Money Market are the commercial banks, acceptance houses & NBFC (Non-banking financial companies).
- In Money Market transaction can not take place formal like stock exchange, only through oral communication, relevant document and written communication transaction can be done.

Objective of Money Market

- To provide a reasonable access to users of short-term funds to meet their requirement quickly, adequately at reasonable cost.
- To provide a parking place to employ short term surplus funds.

IMPORTANCE OF MONEY MARKET?

- Development of trade & industry.
- Development of capital market.
- Smooth functioning of commercial banks.
- Effective central bank control.
- Formulation of suitable monetary policy.
- Non inflationary source of finance to government.

COMPOSITION OF MONEY MARKET?

Money Market consists of a number of sub-markets which collectively constitute the money market. They are,

- Call Money Market
- Commercial bills market or discount market
- Acceptance market
- Treasury bill market

INSTRUMENT OF MONEY MARKET?

A variety of instrument are available in a developed money market.

They re

- Treasury bills
- Money at call and short notice in the call loan market.
- Commercial bills, promissory notes in the bill market.

NEW INSTRUMENT

Now, in addition to the above the following new instrument are available:

- Commercial papers.
- Certificate of deposit.
- Inter-bank participation certificates.
- Repo instrument
- Banker's Acceptance
- Repurchase agreement
- Money Market mutual fund

COMMERCIAL PAPER (CP)

- CP is a short term unsecured loan issued by a corporation typically financing day to day operation.
- CP is very safe investment because the financial situation of a company can easily be predicted over a few months.
- Only company with high credit rating issues CP’s.

TREASURY BILLS (T-BILLS)

- (T-bills) are the most marketable money market security.
- They are issued with three-month, six-month and one-year maturities.
- T-bills are purchased for a price that is less than their par(face) value; when they mature, the government pays the holder the full par value.
- T-Bills are so popular among money market instruments because of affordability to the individual investors.

CERTIFICATE OF DEPOSIT (CD)

- A CD is a time deposit with a bank.
- Like most time deposit, funds can not withdrawn before maturity without paying a penalty.
- CD’s have specific maturity date, interest rate and it can be issued in any denomination.
- The main advantage of CD is their safety.
- Anyone can earn more than a saving account interest.

REPURCHASE AGREEMENT (REPOS)

- Repo is a form of overnight borrowing and is used by those who deal in government securities.
- They are usually very short term repurchases agreement, from overnight to 30 days of more.
- The short term maturity and government backing usually mean that Repos provide lenders with extreamly low risk.
- Repos are safe collateral for loans.

BANKER'S ACCEPTANCE

- A banker's acceptance (BA) is a short-term credit investment created by a non-financial firm.
- BA's are guaranteed by a bank to make payment.
- Acceptances are traded at discounts from face value in the secondary market.
- BA acts as a negotiable time draft for financing imports, exports or other transactions in goods.
- This is especially useful when the credit worthiness of a foreign trade partner is unknown.

III. CO-OPERATIVE SECTOR

1. State cooperative
   i. Central Cooperative Banks
      Primary Agri credit societies
      Primary urban banks

   State Land development banks
   - Central land development banks
   - Primary land development banks

DISADVANTAGE OF MONEY MARKET

I
- Purchasing power of your money goes down, in case of up in inflation.
- Dichotomized and loosely integrated
- Irrational structure of interest rates
- Highly volatile market

- Seasonal stringency of loan able funds
- Lack of funds in the money market
- Inadequate banking facilities

CHARACTERISTIC FEATURES OF A DEVELOPED MONEY MARKET?

- Highly organized banking system
- Presence of central bank
- Availability of proper credit instrument
- Existence of sub-market
- Ample resources
- Existence of secondary market
- Demand and supply of fund

RECENT DEVELOPMENT IN MONEY MARKET

- Integration of unorganized sector with the organized sector
- Widening of call Money market
- Introduction of innovative instrument
- Offering of Market rates of interest
- Promotion of bill culture
- Entry of Money market mutual funds
- Setting up of credit rating agencies
- Adoption of suitable monetary policy

NATIONAL INCOME & INFLATION

- Socialistic Pattern Of Society
- Public Utility Services
- Planned Economy
- Balanced Economic Growth
- Creation Of Infrastructure
- Less Profitable And Highly Risky Industries
- Establishment Of Defense Industry
- Foreign Competition And Protection

Government Intervene in…

- Fiscal and Monetary Policy
- Union Budget

- Development Banking
- Industrial Policy Resolutions
- Exim Policy
- Public Sector

Fiscal Policy

- Part of Government policy which is concerned with **raising revenue** through **taxation** and **other means**
- Deciding on the **level** and **pattern** of **expenditure**
- Different policy adopted in different economies

Objectives of Fiscal Policy

- Maximize the level of aggregate saving
- Divert capital resources
- Maximize the rate of capital formation
- Protect the economy from inflation
- Eliminate inequalities and bring equitable distribution of income
- Eliminate sectoral imbalance

NATIONAL INCOME

- In common terms, **National Income** means the total value of goods and services produced annually in a country.
- In other words, **National Income** is the total amount of income accruing to a country from economic activities in a year's time.
- National Income helps us to know the economic progress achieved and to make comparative study.

DEFINITIONS

Traditional Definition

- Proposed by *Marshall*, *Pigou*, *Fisher* discusses about the reasons influencing economic welfare and compares it in different years.

Modern Definition

- *Simon Kuznets* defines it as "The net output of commodities and services flowing during the year from the country's productive system in the hands of the ultimate consumers."
- *JM.Keynes*, a famous economist defined National Income as

- "National Income is the money value of all goods and services produced in the country during a year."

Methods of Measuring NI

- Selection of method depends on the availability of data in the country and the purpose
- Measuring National Income – PM

PRODUCT METHOD

- The total value of the final goods and services produced in a country during a year is calculated at market price.
- All productive activities such as agricultural products, commodities produced at industries, etc are collected and assessed at market price.
- **Only final goods and services are included** and the intermediary goods and services are left

Productive Sectors

Primary	*Secondary*	*Tertiary*
• Agriculture and allied activities	• Registered industries	• Communications
• Forest	• Non registered industries	• Banking/Insurance
• Fishing	• Electricity	• Public Administration
• Mining	• trade	• Health
	• Manufacturing	• Education
		• Other services

PRODUCT METHOD

- GROSS NATIONAL INCOME = Money Value of total goods and services + Income from abroad

Measuring National Income - IM

- INCOME METHOD
    - The net income payments received by all citizens of a country in a particular year are added up.
  - Income details are obtained from Income Tax Dept. (High Income) and Wages Bills. (Workers)
  - Income by way of net wages, net rents, net interest, net profits are added together but incomes received in form of transfer payments are exempted.
- GROSS NATIONAL INCOME = Rent + Wages + Interest + Profit + Income from abroad

Measuring National Income – EM

EXPENDITURE METHOD

The total expenditure incurred by the society in a particular year is added together. This includes personal consumption expenditure, net domestic investment, government expenditure on goods and services, net foreign investment.

- GROSS NATIONAL INCOME = Individual Expenditure + Government Expenditure

Measuring National Income – VAM

- VALUE ADDED METHOD

- The difference between the value of material outputs and inputs at each stage of production is the value added.
- All such difference are added up for all industries in the economy, to arrive at the GDP

Further classification of Inflation

- DEMAND-PULL

1. Excess demand over supply cause rise in price
2. Price rise in proportion to increase in money supply
3. Increase in money supply creates more demand for goods but supply cannot be increased

- COST-PUSH

4. Caused by wage increase enforced by labour unions and profit by employers
5. Also known as ‘New Inflation’
6. Due to wage-push, profit-push

REASONS FOR INFLATION

- Increase in money supply
- Increase in disposable income
- Increase in public expenditure
- Expansion of private sector
- Monetary policy – credit policy
- Black money
- Increase in exports
- Natural calamities
- Artificial scarcities
- International factors

MEASURES TO CONTROL INFLATION

- Credit control
- Demonetization of currency of higher denominations
- Issue of new currency
- Reduction in unnecessary expenditure by Government
- Increase in taxes
- Increase in savings on part of citizens
- Increase production
- Rational wage policy
- Price control by Government Law
- Rationing

REFERENCES

1. New Tools for Economic Development 1st Edition by George Sternlieb