Sample copy of teachers using ICT for teaching (having PPTs)

Annexure IV-K

Jagan Institute of Management Studies
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Dividend Policy

Chapter 8

EPS < Profit Distributed (Dividend) (Dividend Payout Ratio
[Retain] [Retention Ratio

Ex 2

The term dividend refers to that part of profits of a company which is distributed by the company among its shareholders. It is the reward of the shareholders for investments made by them in the shares of the company. The investors are interested in earning the maximum return on their investments and to maximize their wealth. A company, on the other hand, needs to provide funds to finance its long-term growth. If a company pays out as dividend most of what it earns, then for business requirements and further expansion it will have to depend upon outside resources such as issue of debt or new shares. Dividend policy of a firm, thus affects both the long-term financing and the wealth of shareholders.

Value of Firm = Value of Equity + Value of Debt

$V_f \uparrow = V_E \uparrow$

$V_f \downarrow = V_E \downarrow$

Dividend Decision and Value of Firms: The value of the firm can be maximized if the shareholders' wealth is maximized. There are conflicting views regarding the impact of dividend decision on the valuation of the firm. According to one school of thought, dividend decision does not affect the share-holders' wealth and hence the valuation of the firm. On the other hand, according to the other school of thought, dividend decision materially affects the shareholders' wealth and also the valuation of the firm. We will discuss below the views of the two schools of thought under two groups:

1. The Irrelevance Concept of Dividend or the Theory of Irrelevance, and
2. The Relevance Concept of Dividend or the Theory of Relevance.

Unit -2
Karma: Nishkam Karma and Sakam Karma

"The Balance Between Selfless Action and Desire-Driven Effort"

What is Karma?

Basic Principle
Karma is the universal law of cause and effect. Every action generates a force of energy that returns to us.

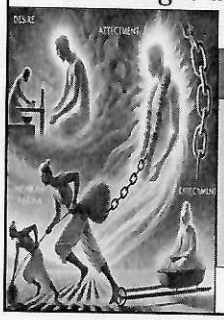
Spiritual Mechanism
It's not punishment but a natural law. Karma helps souls evolve through experiences and consequences.

Beyond Good and Bad
Karma transcends simple morality. It's about intention, action, and the energetic imprint we create.

Understanding Nishkam Karma and Sakam Karma

- Ancient wisdom for modern living. The twin concepts of Nishkam Karma and Sakam Karma offer profound insights into our actions and intentions.
- These philosophies from Hindu tradition guide us toward greater awareness and spiritual growth.
- **Nishkam Karma:** Selfless action performed without attachment to the results.
- **Sakam Karma:** Actions performed with personal desires and expectations.

Challenges and Misconceptions



Inaction vs. Detachment
- Nishkam Karma doesn't mean avoiding action.
- It means acting vigorously while remaining detached from results.

Motivation Without Reward
- Without desire for fruits, what drives us?
- The answer: duty, purpose, and the joy of the action itself

Spiritual Bypassing
- Some use detachment to avoid responsibilities.
- True detachment means full engagement without clinging to outcomes

Sakam Karma: Action with Desire

Meaning: Actions performed with personal desires and expectations.
Philosophy: Actions driven by material gains, rewards, and attachments.
Example: Working for a promotion. Giving gifts expecting appreciation. Helping others for recognition or reputation
Consequences: Creates bondage through attachment. Leads to disappointment when results don't match expectations. Keeps one bound to the cycle of rebirth.
Leads to the cycle of birth and rebirth (Samsara)

Nishkam Karma: Selfless Action

Detached Action
Performing duties without concern for results

Pure Intention
Acting from sense of purpose purpose and duty

Spiritual Growth
Evolution through selfless service

Inner Freedom
Liberation from anxiety over outcomes

Nishkam Karma represents the highest form of action. It aligns with universal dharma while freeing us from the freeing us from the bondage of expectations.

Bhagavad Gita's Teachings on Karma

You have the right to work, but never to the fruits of work. Let not the fruits of action be your motive, nor let your attachment be to inaction.

1. **Krishna's Guidance**
   Lord Krishna instructs Arjuna on the battlefield. He explains the essence of detached action amid duty.
2. **Core Message**
   Focus on performing your duties excellently. Release attachment to specific outcomes or rewards.
3. **Path to Liberation**
   Nishkam Karma frees one from karmic bondage. It leads toward moks (spiritual liberation).

Importance of Nishkama Karma in Modern Life

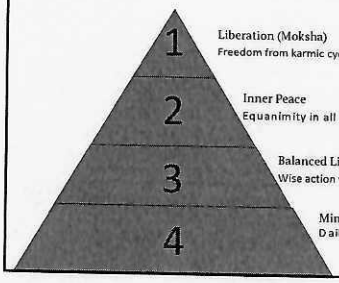
Professional Life

Do your best work without obsessing over promotions. Focus on excellence and service rather than recognition.

Love and support others without expectations. Give freely without keeping score or demanding reciprocation.

Contribute to causes anonymously. Help others without seeking praise or public acknowledgment.

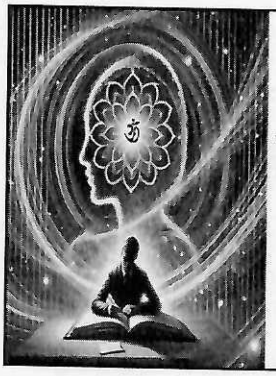
The Path to Inner Peace



1. Liberation (Moksha)
   Freedom from karmic cycles
2. Inner Peace
   Equanimity in all situations
3. Balanced Living
   Wise action with detachment
4. Mindful Practice
   Daily awareness of

The journey between Sakam and Nishkam Karma represents our spiritual evolution. We learn to act with full commitment yet remain remain unbound by results.

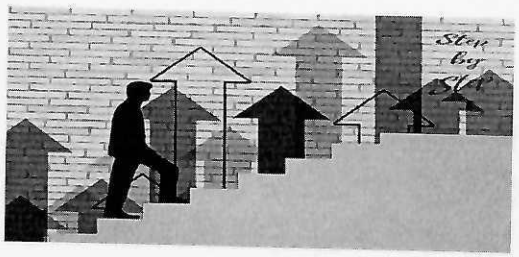
This ancient wisdom offers a practical path to to fulfillment in our modern, achievement-achievement-oriented world.



"Success is in effort, not in results—work hard, stay calm, and trust the process."

Thank You!

Introduction to Growth and Development
Unit -1



By – Dr. Veena Panjwani

ECONOMIC DEVELOPMENT AND GROWTH

In recent years, there has come into existence a new branch of economics known as the "Economics of Development". It refers to the problems of the economic development of underdeveloped or backward countries. In addition to the illuminating reports of the U.N.O. on the subject, some top ranking economists like Nurkse, Dobb, Staley, Buchanan, Rostow and Ellis have made some original contributions to the Economics of Development.

Meaning of Economic Development

- Economic development is a process whereby an economy's ***real national income as well as per capita income increases over a long period of time***. Here, the process implies the impact of certain forces which operate over a long period and embody changes in dynamic element.
- It contains changes in ***resource supplies, in the rate of capital formation, in demographic composition, in technology, skills and efficiency, in institutional and organizational set-up.***
- It also implies respective changes in the ***structure of demand for goods, in the level and pattern of income distribution, in size and composition of population, in consumption habits and living standards, and in the pattern of social relationships and religious dogmas, ideas and institutions***

- Economic development, as it is now generally understood, includes the ***development of agriculture, industry, trade, transport, means of irrigation, power resources, etc. It, thus, indicates a process of development.***
- The sectoral improvement is the part of the process of development which refers to the economic development.

Definition of Economic development:

Prof. Meier and Baldwin According to Prof. Meier and Baldwin; "Economic development is a process whereby an economy's real national income increases over a long period of time". This definition explains three ingredients of economic development.

a) process,
b) real national income,
c) long period.

The discussion of these three factors would help in understanding the concept of economic development.

a) **Process:** The term 'process' here refers to the operation of certain forces which bring about changes in certain variables. Various types of economic changes take place during the development process. The most important of these changes can be broadly divided into two categories;

i) Changes in the supply of fundamental factors, and
ii) Changes in the structure of demand for the products.

b) Real National Income

The real national income is the measuring rod of economic development. Though it may be an imperfect method for measuring development, it is, however, used for global development comparisons. Here emphasis is on the word "real" which signifies that purchasing power of national income should be taken into account for quantifying development.

In other words, the money national income is to be discounted by the price index, as shown by the formula below:

$Yr = Ym / P$

Where, Yr = Real national income

Ym = Money national income

P = Price index

The formula signifies that development can be meaningful if an increase in money national income is not accompanied by increase in price level. It implies that price stability is an essential condition for promoting development. Thus, economic development signifies higher real national income.

c) Long Period

Economic development refers to an upward trend in real national output over a long period. "Although the upward trend means that each successive cyclical peak and trough is generally at a higher level of real national output than the preceding peak and trough respectively, it is the increase in real national income between cycles rather than the increase within a cycle that denotes development". ***Since a major business cycle covers normally 6 to 13 years, long term process here refers to a sustained increase in real output over a period of at least 25 years***.

Thus, economic development is a process consisting of a long chain of interconnected changes in fundamental factor supplies and in the structure of demand for products leading to a rise in real national income over a long period.

Benard Okun and Richard W. Richardson

According to Benard Okun and Richard W, Richardson, "***Economic development may be defined as a sustained secular improvement in well being, which may be considered to be reflected in an increasing flow of goods and services***". According to this definition, economic development implies continuous secular increase in national output for promoting material welfare of the society.

It stresses on three important aspects of development;

a) Economic development is a dynamic and long term phenomenon;

b) It implies improvement in material welfare and

c) National output is the measuring rod of material welfare

Data Structures

What we will learn:

- Why Data Structures?
- Algorithms
- Algorithm Analysis
- Abstract Data Types
- Stacks and Queues

References:

- Data Structures By Seymour Lipschutz and G A V Pai
- Nptel video course on Data Strucrues By Dr. Naveen Garg

Basic Terms

- Algorithm : Outline or step by step instructions which is the essence of computational procedure.
- Program: implementation of algorithm in programming language.
- Data Structure : The way we need to organize data so that we can solve problem and it can be used effectively. For e.g. list, tree or array

Algorithm

- Algorithms describe the series of actions that we need to take on the given input specification to get the desired output.
- There can exist many algorithms to solve a specific problem, just like we can have many input sequences for a particular algorithm.
- A good algorithm is an efficient algorithm in terms of space consumed(should be less) and time taken (least).
- Important to note : Also need to consider increase or decrease in the running time with increase or decrease in the size of the input.

How to measure running time?

- Write Algorithm
- Implement it using any programming language
- Run the program using varied data sets...smaller, larger, complex etc.
- Check how much time it takes. (generally using system utilities or compiler will inform you)
- Evaluate based on time comsumed.

Limitations of programming implementation

- To implement an algorithms you need a programming language, compiler, IDE, hardware and software interface etc.
- You can test it only on limited data sets. Too much of testing in initial phase is not possible. This might not indicate accuracy of algorithm
- To compare two algorithms to solve same problem, we need all other factors as constants e.g. hardware and software configuration, data sets, user interface, other factors etc.

General Methodology for describing an Algorithm

- Use high level description of an algorithm (Pseudocode) instead of testing one of its implementation.
- Take into account all possible inputs
- Evaluate the efficiency of algorithm in a way that is independent of hardware and software environment

Pseudo-code

- To develop general methodology to calculate running time of an algorithm and its efficiency regardless of hardware or software specification, we can develop a **program description called pseudo-code**, and evaluate all input specification on it.
- A pseudo-code is a mixture of high level implementation language and natural language which describes the main idea behind the description or algorithm.
- It is more structured than common language but less structured than programming language.
- It doesn't run on any computing device but conveys the idea behind algorithm.

Sample Pseudocode

- Algorithm ArrayMax(A,N)
  - Input: an array A having n number of integers
  - Output: the maximum element in A
    - currentMax <- A[0]
    - For i<- 1 to n-1 Do
    - If currentMax < A[i] the currentMax = A[i]
    - Return currentMax

What to include in a Pseudo-code

- Standard mathematical and Boolean symbols
  - E.g. use <- or := for assignment operation.
- Method declaration like :
  - return_type methodname(parameters)
- Programming constructs like while, if , do..while, for, arrays, return from method , call method etc

Algorithm Vs Program

- Written at Design Stage
- written by domain expert
- Written in English or a natural language
- Not dependent on hardware or softwre
- Analysed
- Written at implementation stage
- Written by programmer
- Written in a programming language
- Dependent on platform
- Tested

Characteristics of Algorithm

- Input- may or may not have input
- Output- may generate some output
- Finiteness- finite set/sequence of statements, finite duration to be specified
- Definiteness- clear and one meaning (unambiguous)
- Effectiveness- it should serve some purpose

Data Structure

- A logical or mathematical model of a particular organization of data.
- Why study data structure?
  - DS is used to identify and create useful mathematical entities and operations for a problem we need to solve
  - To determine the representation of entities and the implementation of operations on these problems.
  - DS helps to organize, understand and access data in memory in an efficient manner so as to increase the access speed and reduce complexity.

Data Structure

- An implementation of abstract data type is data structure i.e. a mathematical or logical model of a particular organization of data is called data structure.
- A data structure can be broadly classified into
  - Primitive data structure
  - Non-primitive data structure
- Primitive are those data structure that are directly operated upon by machine level instructions i.e. the fundamental data types such as int, float, double in case of 'c' are known as primitive data structures.
- Non primitive Data Structures are of 2 types
  - Linear Data Structure
  - Non-Linear Data Structure

- *Linear Data Structures:-*
  - A list, which shows the relationship of adjacency between elements, is said to be linear data structure. The most, simplest linear data structure is a 1-D array, but because of its deficiency, list is frequently used for different kinds of data.
  - A list has two subsets. They are: -
  - Stack: - It is also called as last-in-first-out (LIFO) system. It is a linear list in which insertion and deletion take place only at one end. It is used to evaluate different expressions.
  - Queue: - It is also called as first-in-first-out (FIFO) system. It is a linear list in which insertion takes place at one end and deletion takes place at other end. It is generally used to schedule a job in operating systems and networks.

- *Non-linear data structure:-*
  - A list, which doesn't show the relationship of adjacency between elements, is said to be non-linear data structure.
  - Trees : - It maintains hierarchical relationship between various elements
  - Graphs : - It maintains random relationship or point-to-point relationship between various elements.

Algorithm Analysis

CHAPTER 3
Basics of Python Programming

HISTORY OF PYTHON

- PYTHON WAS DEVELOPED BY GUIDO VAN ROSSUM AT CWI IN NETHERLAND.
- FIRST VERSION(VERSION 0.9.0) IN FEBRUARY 1991
- IN 1994, PYTHON 1.0 WAS RELEASED WITH NEW FEATURES LIKE LAMBDA, MAP, FILTER, AND REDUCE.
- PYTHON 2.0 ADDED NEW FEATURES SUCH AS LIST COMPREHENSIONS, GARBAGE COLLECTION SYSTEMS.
- ON DECEMBER 3, 2008, PYTHON 3.0 (ALSO CALLED "PY3K") WAS RELEASED.
- THE FOLLOWING PROGRAMMING LANGUAGES INFLUENCE PYTHON: ABC LANGUAGE AND MODULA-3

WHY THE NAME PYTHON?

There is a fact behind choosing the name python. Guido van rossum was reading the script of a popular BBC comedy series "monty python's flying circus". It was late on air 1970s.

Van rossum wanted to select a name which unique, so he decided to select naming python after the "monty python's flying circus" for their newly created programming language.

Features of Python

- Simple
- Easy to Learn
- Versatile
- Free and Open Source
- High-level Language
- Interactive
- Portable
- Object Oriented
- Interpreted
- Dynamic
- Extensible
- Embeddable
- Extensive
- Easy maintenance
- Secure
- Robust
- Multi-threaded
- Garbage Collection

Limitations of Python

Parallel processing can be done in Python but not as elegantly as done in some other languages (like JavaScript and Go Lang).

- Being an interpreted language, Python is slow as compared to C/C++. Python is not a very good choice for those developing a high-graphic 3d game that takes up a lot of CPU.
- As compared to other languages, Python is evolving continuously and there is little substantial documentation available for the language.
- As of now, there are few users of Python as compared to those using C, C++ or Java.
- It lacks true multiprocessor support.
- It has very limited commercial support point.
- Python is slower than C or C++ when it comes to computation heavy tasks and desktop applications.
- It is difficult to pack up a big Python application into a single executable file. This makes it difficult to distribute Python to non-technical.

Applications of Python

- Embedded scripting language: Python is used as an embedded scripting language for various testing/ building/ deployment/ monitoring frameworks, scientific apps, and quick scripts.
- 3D Software: 3D software like Maya uses Python for automating small user tasks, or for doing more complex integration such as talking to databases and asset management systems.
- Web development: Python is an easily extensible language that provides good integration with database and other web standards.

GUI-based desktop applications: Simple syntax, modular architecture, rich text processing tools and the ability to work on multiple operating systems makes Python a preferred choice for developing desktop-based applications.

- *Image processing and graphic design applications:* Python is used to make 2D imaging software such as Inkscape, GIMP, Paint Shop Pro and Scribus. It is also used to make 3D animation packages, like Blender, 3ds Max, Cinema 4D, Houdini, Lightwave and Maya.

Applications of Python

- *Scientific and computational applications:* Features like high speed, productivity and availability of tools, such as Scientific Python and Numeric Python, have made Python a preferred language to perform computation and processing of scientific data. 3D modeling software, such as FreeCAD, and finite element method software, like Abaqus, are coded in Python.

Games: Python has various modules, libraries, and platforms that support development of games. Games like Civilization-IV, Disney's Toontown Online, Vega Strike, etc. are coded using Python.

- *Enterprise and business applications:* Simple and reliable syntax, modules and libraries, extensibility, scalability together make Python a suitable coding language for customizing larger applications. For example, Reddit which was originally written in Common Lips, was rewritten in Python in 2005. A large part of Youtube code is also written in Python.
- *Operating Systems:* Python forms an integral part of Linux distributions.

AREAS TO EXPLORE

- SCIENTIFIC TOOLS : for simulating and analyzing complex systems
- SciPy library is mainly used for numerical integration and optimization.
- NumPy provides N-dimensional array objects which can be used to perform linear algebra, Fourier transform and other mathematical operations.
- Jupyter has revolutionized the way programming is done in Python. Jupyter provides an interactive web-based interface which can be invoked from a browser. Jupyter is used to write Python programs and create embeddable plots to visualize data.
- SymPy library is used to generate symbolic mathematics.
- Matplotlib is the oldest and most popular plotting library available for Python.

AREAS TO EXPLORE

- ***Machine Learning*** : effective and adaptive tool to learn from experience and by a dataset.
- Scikit library is mainly used for numerical integration and optimization.
- NumPy provides N-dimensional array objects which can be used to perform linear algebra, Fourier transform and other mathematical operations.
- SymPy library is used to generate symbolic mathematics.
- Matplotlib is the oldest and most popular plotting library available for Python.

AREAS TO EXPLORE

- ***Natural Language Processing***
  - Natural Language Toolkit (NLTK) is the popular library used for natural language processing in Python. NLTK has numerous trained algorithms to understand the text. NLTK has huge corpora of datasets and lexical resources like journals, chat logs, movie reviews and many more.
- ***Data Analysis***
  - Pandas library changed the landscape of data analysis in Python altogether and is available under BSD license. Pandas is built on top of NumPy and has two important data structures, namely Series and Data Frame.
- ***Statistics***
  - Statsmodels is a Python library used for statistical analysis. It supports various models and features like linear aggression models, generalized linear models, discrete choice models and functions for time series analysis.

AREAS TO EXPLORE

- ***Hypertext Transfer Protocol Library***
  - Python has a standard HTTP library called urllib.request to carry out most of the HTTP operations
- ***Database Connectors***
  - MySQL and PostgreSQL are the popular open source databases.
- ***Webframeworks***
  - Django and Flask are the two most popular web frameworks
- ***Cloud Computing***
  - OpenStack is entirely written in Python and is used to create a scalable private and public cloud.