

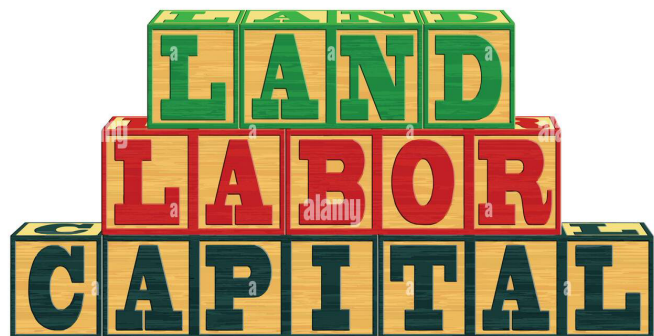
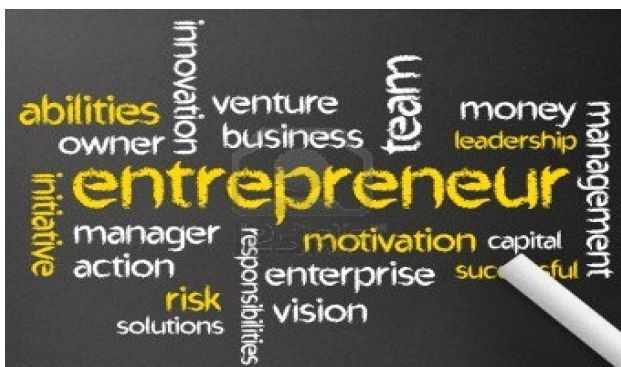
Econ-Hub Rapid Revision Classes

Factors of Production & Related Concepts

BOOK [2]

Theory Recap Material [TRM]

2027 A/L Edition



Coverage

- ✓ Defining and Classifying Productive Resources
- ✓ Classifying Economic Resources
- ✓ Defining and Understanding the Characteristics and Types of Economic Resources
- ✓ Understanding Factor Productivity
- ✓ Division of Labour and Specialization in Production



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**Distinguishing between ‘Economic Resources’ and ‘Non-economic Resources’**

Productive resources which are limited in supply, are termed as ‘Economic Resources’ or ‘Scarce Resources’.

At a given point of time, the endowment of economic resources available for the use of a country to produce goods and services to fulfil their society’s unlimited wants, tends to be comparatively limited. The use of economic resources shall result in the creation of opportunity cost, due to its relative scarcity and alternative uses.

Economic Resource	Alternative [1]	Alternative [2]
Land	Natural Resources	Property Resources
Capital	Humanmade Resources	
Labour	Human Resource	Human Resources
Entrepreneurship	Special Human Resource	

Productive resources which are unlimited in supply (relatively unlimited) are known as free or non-economic resources. Unlimitedness in supply means, these resources are available at zero price and opportunity cost (hence termed ‘free’ resources)

Free resources do not necessary mean that they can be obtained limitlessly; it only means that when they are being supplied (available), these resources are available at no cost

Common Examples: Sunlight, air, sea water.....

**Also, Relevant [6]:****Production & Productive Resources**

[A] Production: the process of converting inputs into outputs, through a specific technical methodology. Rational business organizations attempt to engage in production at productive efficiency.

- **Inputs** [Factors of Production]: Labour, Land, Capital driven by Entrepreneurship.
- **Technical Methodology:** the specific **technical** or **scientific** method used to convert inputs into output (the **production process**)
- **Product** (Output): Tangible **goods** and intangible **services**

[B] Productive Resources [Factors of Production]:

Anything used as an input in the process of producing goods and services, required to satisfy human wants. How many goods and services a country can produce shall mainly depend on the endowment of production resources held by the country at a given point of time. Such production resources shall consist of:

- ✓ **Economic Resources**
 - ✓ Non-economic (free) Resources
-

Land Resources

Land is a **natural resource** which includes raw materials and substances found in nature that are extracted (exploited or used) by humans for economic and other activities.

Production factors are considered as 'Land' when in its natural state and tends to be fixed in supply. Economic price/reward for all land resources used in production is known as 'Rent.'

Examples: forest resources, petroleum resources, marine and water resources, atmosphere, all natural resources below and above the surface of the earth.

Characteristics (Features) of Land Resources

- A gift of nature (a natural resources)
- The supply is fixed (perfectly inelastic), i.e., even if the price paid for land is raised the supply of land will not increase.
- The society will not have to bear a cost to supply land.
- Land is not a unique factor, i.e., land has alternative uses and can be used to fulfil different objectives or purposes.
- Immobile in nature (geographically immobile: cannot be physically moved from one place to another)
- Land is a Primary Factor of Production (land will NOT become a part of the product produced, nor will disappear within the production process.
- Exists in the form of renewable and non-renewable.
- Nonhomogeneous in nature (quality differs or changes from country to country)

[1] Land, Natural Resources & Natural Capital

Land is a **natural resource** which includes raw materials and substances found in nature that are extracted (exploited or used) by humans for economic and other activities.

Examples include:

Minerals, forests, water, and fossil fuels. **Forest resources, fisheries resources, biofuels**
Energy sources such as **solar, tidal, geothermal, wind, biomass**

Main Characteristics:

- ✓ **Renewable** and **Non-renewable** in nature
- ✓ **Tangible** (physical raw materials) and **Extractable** (harvested or exploited)
- ✓ **Direct Utility** (directly used for production and consumption purposes)

Natural Capital comprises of the overall environmental systems (ecosystems) and the activities taking place within such systems. Natural capital focuses on the **ecosystem services** of clean air, water filtration, soil fertility, pollination, and climate regulation, **supporting life**, provided by the natural environments such as forest, wetlands, oceans and natural habitats.

Main Characteristics:

- ✓ **Holistic** (Includes ecosystems, biodiversity, and the services they provide, such as, in addition to natural environment).
- ✓ **Long term Economic** and **Ecological Value** (valued for its economic contributions and role in supporting life and ecological balance), and **provides Productivity**
- ✓ **Sustainability Focus** (Emphasizes the sustainable management)

Natural Resources is broad concept which comprises of all extractable natural resources (land resources) and the different ecosystem services which support life provided by the natural environment (natural capital).

Distinguishing ‘Renewable’ and ‘Non-renewable’ Resources

Nonrenewable natural resources are such resources that depreciate with usage cannot be replaced once used, while they are essentially lifeless resources.

Examples: **Crude oil deposits and coal, natural gas and mineral deposits**

Renewable natural resources are such resources which can be replenished or regenerated (renewed) over time and with use, mainly through a natural process or supported by human intervention. These are generally live or living resources.

Examples: **Forest resources, fisheries resources, biofuels**
Energy sources such as **solar, tidal, geothermal, wind, biomass**

Note: Certain renewable resources, such as forest or wildlife resources, may become extinct due to overuse. Thus, **‘Sustainable’** use natural resources is important.

Capital Resources

Capital as a factor production in economics are human made real assets which aid or assist in the process of producing goods and services.

Capital is known as a real and a stock concept. The use of capital tends to increase labour productivity. Economic price/reward for all capital resources used in production is known as 'Interest.'

Examples:

Plant and machinery, equipment, vehicles, buildings, factories, weapons, defense systems, irrigation facilities, livestock, research, development, computers, software

Key Point:

Money is not capital. Money is not a factor of production, nor an input used in the production process, nor can it be actually used to produce anything.

Money is merely a financial capital or asset. Money or financial capital only has a derived demand to be used in acquiring real assets or capital resources used in production.

Characteristics (Features) of Capital Resources

- 1) A **human creation** (Man-made or produced input used in production)
- 2) A **real concept**: not a financial concept or money is not capital in economics.
- 3) A **stock concept**: a value that exists at a given point of time.
- 4) **Durable** (can be used repeatedly and over a long period) **and** subject to **Depreciation**
- 5) **Investment** is required to formulate and maintain the capital stock
- 6) Has differing levels of **mobility** and **multiple productive impacts** on the economy

Distinguishing: 'Human Capital' and 'Social Capital'

Human capital refers to **competencies, skills, knowledge, and interpersonal skills** acquired and developed by a given individual through investments in **education, receiving training and experience**.

Human capital is a competency which is **intangible** unlike physical capital, and human capital is a combination of attributes from both labour and capital resources.

Social capital consists of **inter-personal relationships**, norms and variety of behavioral ethics which emerge through **self-support groups, social networks** and **organizations** created to fulfill objectives related to **common wellbeing** of people both qualitatively and quantitatively.

Alternatively:

Social capital is something which emerges through **mutual trust and understanding** among a group of people (society) who **work together** with the aim of achieving some **common welfare-based** objectives or goals which **benefits all in society**.

Examples:

Farmers association, women's societies, credit granting societies, charity organizations and different establishments' setup to assist special groups such as widowers, orphans, and disabled soldiers etc.

Distinguishing: 'Capital' and 'Human Capital'

Capital in economics refers to manmade production aids. Such capital items 'directly contribute' in the process of producing goods and services. Capital consists of real assets such as factories, machinery and equipment, raw material stock etc.

Human capital refers to competencies, skills, knowledge, and interpersonal skills acquired and developed by a given individual through investments in education, receiving training and experience.

Specific distinctions between capital and human capital tends to be:

- Human capital is a competency which is intangible unlike physical capital.
- Human capital is a combination of attributes from both labour and capital resources.
- Unlike the investments made in other assets, the investment in human capital is specific to the individual.

Distinguishing 'Fixed' and 'Circulation Capital'

Fixed Capital refers to the capital that is invested in producing fixed assets mainly for businesses. These are real assets that improve a country's production capacity or potential. These capital assets tend to depreciate over time with use in production (known as Consumption of Fixed Capital: CFC).

Fixed capital includes items such as tools and equipment, buildings (used in production), plant, machinery, power stations, weapons, transportation goods, water supply systems, cultivated land, animals used in production and intellectual properties (exploration, research and development, computer software).

Circulation Capital is the stocks or an inventory of goods that ease or provide convenience in the process of producing goods and services.

Circulation of capital makes the production and selling process highly convenient. Items such:

- Raw material
- Semi-finished goods (work in progress) and
- Finished goods in stock for sale

Distinguishing ‘Economic’ and ‘Social’ Overhead Capital

Economic Overheads (Economic Infrastructure)

- An important element of an economy’s stock of fixed capital.
- Formulated for the purpose of making the **production** and **exchange** processes **convenient and efficient**.

Examples:

- Transportation systems (road, expressways, railways, ports and airports)
- Communication networks (telecommunication, internet, broadband, Wi-Fi facilities).
- Electricity and energy related facilities, Irrigation facilities

Social Overheads (Infrastructure)

- Formulated or provided to **fulfil and improve standards of basic human needs** such as nutrition, health standard, education standard, and housing, maintain law and order, sports (recreation) and cultural aspects of life.

Examples:

- Educational facilities (school buildings, equipment, libraries)
- Healthcare facilities (hospital building, equipment)
- Housing, sanitation facilities and water supply networks
- Playgrounds, sports and recreational centres
- Police stations, fire and rescue facilities and equipment
- Art galleries, parks and cultural centres

‘Capital Formulation’ and Main Sources of funding investment:

Capital formulation (or **investment**) is the process of adding new capital goods to a country’s or business organization’s capital stock. In other words, this is the process of investing or allocating resources for the production or formulation of capital goods (real assets).

Investment is identified as a flow concept, while capital is a stock concept. Capital formulation is identified as an important component in the process of achieving economic growth.

Investment can also be in the form of re-formulation, which is the process of replacing or substituting depreciated capital assets with new capital assets. This process is important to maintain the existing capital stock at the same level and will not result in an expansion (change) in a country’s production capacity or possibility.

The main sources of funding capital formulation or investment can be listed as follows.

(01) Domestic Sources	(02) Foreign Sources
▪ Household Savings ▪ Business Savings ▪ Government Savings	▪ Foreign loans and Grants ▪ Foreign Direct Investments (FDI)

Labour Resources

Labour as a factor of production in economics is the mental and physical effort of humans used in the process of producing goods and services. Labour is a human resource.

Payment for and earnings from providing labour are 'Wages' and salaries. The level of labour used or employed in each activity is measured using labour hours.

Examples: Farmers, Physical labourers, drivers, teachers, lawyers, doctors, engineers, actors, musicians etc

Determinants of 'Labour Supply' of a country:

- Population Size and Age Structure
- Size of the Labour Force (Population → Working Age Population → Labour Force)
- Time devoted for work by each person
- Efficiency of the Labour Force:
 - ✓ Health standards and physicality of the population
 - ✓ Education standard and skills level of the population

Main Characteristics (Features) of Labour Resources

- Labour is a live resources or factor
- Labour is a mobile resource (occupational and geographical)
- Labour is not person or the labourer, rather only the physical or mental efforts of the labour unit.
- Quality of labour is different from one person to another (non-homogeneous).
- The productivity of labour can be improved through education, training, and technology.
- Demonstrates ability to make decisions and organize
- There is an interrelationship between time and labour (with time, labour is also foregone)

Entrepreneurship Resources

Entrepreneurship is the **special ability** held by an individual (special type of human resource) to **organize** and lead the process of **producing** goods and services, by **mobilising land, labour and capital resources**. Entrepreneurs willing to undertake the **risk** of business, while introducing **innovations** and making **strategic business decisions**

Functions (Roles) of an Entrepreneur:

- **Organizing Production:**
The entrepreneur shall mobilize production factors and initially organize and engage in the process of producing goods and services.
- **Introducing Innovations:**
The entrepreneur shall introduce innovation from a business perspective, i.e., he or she shall introduce new goods, new equipment, new production methodology, and business organizations.
- **Undertaking Risk:**
The entrepreneur provides risk capital, i.e., he or she shall combine resources and engage in producing an innovative good or service which may or may not be successful in the marketplace. The entrepreneur shall receive profits if the product is successful and faces the risk of incurring losses.
- **Strategic Decision Making:**
The entrepreneur is expected to make basic strategic business decisions and formulate policies upon which business activities shall be conducted.

Main Characteristics (Features) of Entrepreneurship Resources

- ✓ Introducing innovations and creative thinking
- ✓ Facing risk (risk taking ability or attitude)
- ✓ Taking initiative and proactiveness
- ✓ Visionary leadership qualities
- ✓ Mobilizing resources
- ✓ Agility (adoptability) and resilience
- ✓ Passion, persistence and self-discipline
- ✓ Creating value (adding value)
- ✓ Accurately identifying and exploiting market opportunities

Distinguishing: Entrepreneur and Labour

Entrepreneurship is the **special ability** held by an individual (special type of human resource) to **organize** and **lead** the process of **producing** goods and services, by **mobilising land, labour and capital resources**.

Labour refers to the **physical and mental efforts** of **humans** used in the process of **producing goods and services**.

- The **benefit** in return for **entrepreneurship** efforts is termed as '**profits**' or '**profit share**', while the return or **reward** for **labour** is termed as '**salary**' or '**wages**'.
- An entrepreneur persistently attempts to **introduce commercially viable innovations**: innovative products, production methods and business models, while **labour units** generally **do not represent such motivation**.
- **Entrepreneurs** tend to be **highly risk prone** (have a high-risk appetite or willing take risk) and can attain prosperity by successfully taking and facing risk. On the contrary (opposite to which) **labour units** are **risk averse** and attempt always avoid risk.
- The **entrepreneur** does not make day to day (routine) business decisions, rather **strategic and policy level decisions** which decide the direction of the business. **Entrepreneurs hire or employ labour units** as managers and workers to carry out their strategic decisions.

Distinguishing: Entrepreneur and Manager

Entrepreneurs:

- ✓ The entrepreneur is the founder of the business and leads the business by introducing innovations and facing risk
- ✓ Entrepreneurs have attributes such as creativity, visionary thinking, resilience, undertaking challenges and persistence
- ✓ Initiating business based on new and revolutionary ideas and concepts

Managers:

- ✓ Managers and executive level employees tasked with leading day to day (routine) business operations
- ✓ Managers engage in the functions of planning, organizing, directing and controlling to successfully attain business objectives
- ✓ Managers have a unique skills to lead, communicate solve operational problems and make operational decisions
- ✓ Generally managers operate under a specific organizational structure upon the strategies and leadership provided by entrepreneur

Functions of 'Profits' within a market economy

- Encouraging the introduction of innovations
- Making resource allocation among different sectors of the economy efficient
- Providing market signals (directing resource flow towards industries with high profit potential)
- Providing funds required for business expansion (retained profits: shareholders are encouraged to invest more in shares, if more profits are declared dividends)
- A source of tax revenue to the government

Productivity Related ↓

Productivity

[Fundamental concept of 'Factor Productivity']

- Indicator or measurement (benchmark) of the productive efficiency of factors of production.
- A higher level of productivity (or enhancement in productivity) indicates that the output that can be generated using a given amount resources has increased.
- Measured in real terms as an average value (amount) of output which can be produced per unit of input at normal rate of use

Factor Productivity [General Formula]:

$$\text{Productivity} = \frac{\text{Output}}{\text{Inputs}}$$

Input Measures:

- **Labour Units/Hours**
- Capital Units/Hours
- Land Unit/Acres

Determinants of Labour Productivity:

- ✓ Physical Capital
- ✓ Natural Capital
- ✓ Human Capital
- ✓ Social Capital
- ✓ **Technological Knowledge**
- ✓ **Division of Labour** (Specialization)
- ✓ Attitudes and Incentives

Strategies to improve labour productivity:

- Re-train workers to become more skilled
- Use new and more efficient machinery and Introduce new working practices
- Introduce incentive schemes to encourage people to work hard
- Offer attractive bonuses and share company profits among workers

‘Division of Labour’ and ‘Specialization’

Division of labour is the separation of the production process into several tasks, with each task performed by a separate person or group of persons, instead of all tasks being performed by the same person or the same group.

It is generally applied in organizations engaging in mass or large-scale production, specially using assembly line and automated modern production.

Specialization:

When a person is dedicated to a job for a considerable period, he or she becomes competent in the given task, and it is known as specialization.

Specialization can be defined as specialized skill or knowledge gathered by focusing on an individual effort of a single task. Thus, specialization is generally a result of division of labour

Evaluating: ‘Division of Labour’

Advantages (Merits) & Disadvantages (Demerits):

- Increase in quantity and quality of production and reduction in the cost of production
- Maximum utilization of machinery and incentive to engage in large scale production
- Maximum use of everyone’s ability
- Saving of time and expenses in training
- Management control
- Encourages inventions.
- Increase in efficiency of workers and their skills
- Increases mobility of labour and employment opportunities

Disadvantages (Demerits):

- Possibility of over-production
- Lack of responsibility
- Increased dependence of on machines
- People become dependent upon each other
- Administrative difficulties and industrial disputes
- Worker feels bored or workers becomes monotonous. Workers may even feel that they are alienated
- Fear of unemployment

[Source: P.Perera, 2020; p 33 - 34]

Link between Money, Division of Labour & Specialization:

- 'Specialization', 'Division of Labour' and 'Trade' are highly interconnected processes.
- If a given individual is engaged in producing only one given good or services, i.e., practicing specialization, the individual will have to sell the excess output of the chosen good, in order to attain other goods and services required.
- In the past, with in a direct exchange system or barter system exchanging such excess output to attain other goods (non-specialized goods, by bartering) becomes extremely difficult, time consuming and overall costly, especially due to the requirement to achieve a double coincidence of wants for each transaction. Accordingly, the practice of specialization is discouraged.
- The introduction of money as a commonly accepted medium of exchange, shall eliminate such difficulties faced within the barter system and rapidly increase the volume of trade, while creating a highly encouraging situation for the practice of specialization within the production processes.
- Division of labour is a modern production technique in which the overall production process of a certain product is divided into several production stages or units and each stage is assigned to a given worker or group of workers (team) with a specialized skill and experience in performing this part of the production process with a high level of efficiency.
- A complicated process such as Division Labour will only be effective and derive efficiency, if businesses are engaging in large scale production with the intention of supplying to a large market with high volume of trade. Accordingly, the use of money shall expand markets and trade volumes, which creates the ideal environment for the practice of division of labour (division of labour also shall complement specialization).

