CHAPTER-6

SECONDARY ACTIVITIES

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secondary activities add value to natural resources by transforming raw materials into valuable products

- Cotton in the boll has limited use but after it is transformed into yarn, becomes more valuable and can be used for making clothes.
- Iron ore, cannot be used; directly from the mines, but after being converted into steel it gets its value and can be used for making many valuable machines, tools, etc.

Secondary activities, therefore, are concerned with manufacturing, processing and construction (infrastructure) industries.

MANUFACTURING

Manufacturing literally means ‘to make by hand'.

However, now it includes goods ‘made by machines'. It is essentially a process which involves transforming raw materials into finished goods of higher value for sale in local or distant markets.

Conceptually, an industry is a geographically located manufacturing unit maintaining books of accounts and, records under a management system

Manufacturing involves a full array of production from handicrafts to moulding

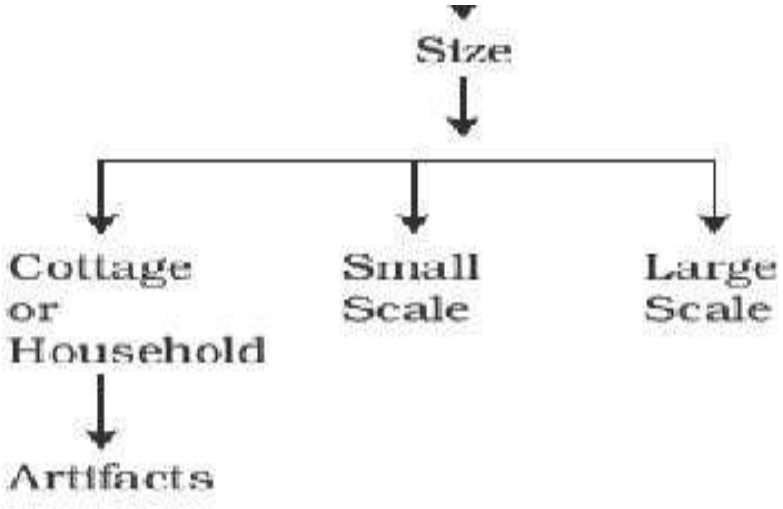
Manufacturing may be done with modern power and machinery or it may still be very primitive.

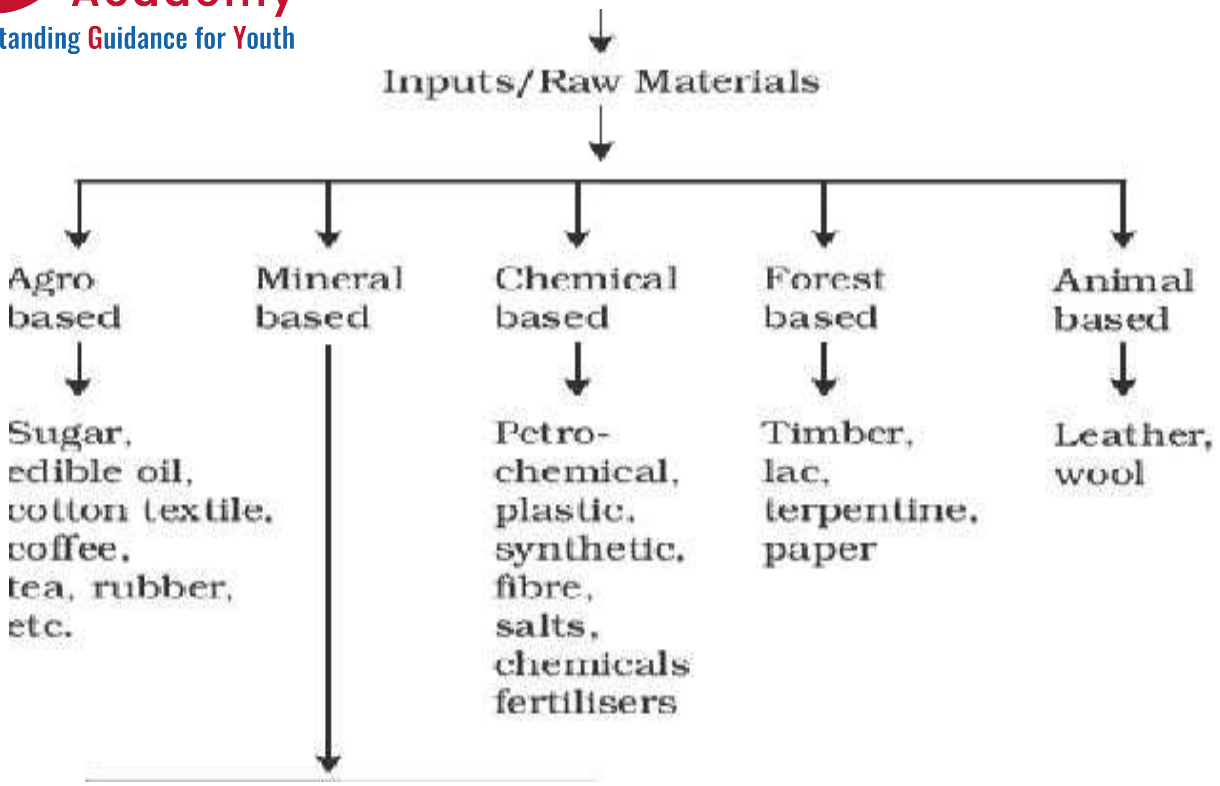
CHARACTERISTICS OF MODERN LARGE SCALE MANUFACTURING

- Specialisation of Skills/Methods of Production
- Mechanisation
- Technological Innovation
- Organisational Structure and Stratification
- Uneven Geographic Distribution
- Access to Market
- Access to Raw Material

- Access to Labour Supply
- Access to Sources of Energy
- Access to Transportation and
- Communication Facilities
- Government Policy
- Access to Agglomeration Economies/ Links between Industries

CLASSIFICATION OF MANUFACTURING INDUSTRIES





HOUSEHOLD INDUSTRIES OR COTTAGE MANUFACTURING

It is the smallest manufacturing unit. The craftsmen or artisans use local raw materials and simple hand tools to produce everyday goods in their homes with the help of their family members or part-time labour. Finished products may be for consumption in the same household or, for sale in local (village) markets, or, for barter. Capital and transportation do not wield much influence as this type of manufacturing has low commercial significance and most of the tools are devised locally Some common everyday products produced in this sector of manufacturing include foodstuffs, fabrics, mats, containers, tools, furniture, shoes, and figurines from wood lot and forest, shoes, thongs and other articles from leather; pottery and bricks from clays and stones. Goldsmiths make jewellery of gold, silver and bronze. Some artefacts and crafts are made out of bamboo, wood obtained locally from the forests.

Small Scale Manufacturing

Small scale manufacturing is distinguished from household industries by its production techniques and place of manufacture (a workshop outside the home/cottage of the producer). This type of manufacturing uses local raw material, simple power -driven machines and semi-skilled labour. It provides employment and raises local purchasing power. Therefore, countries like India, China, Indonesia and Brazil, etc. have developed labour-intensive small scale manufacturing in order to provide employment to their population

Large Scale Manufacturing

Large scale manufacturing involves a large market, various raw materials, enormous energy, specialised workers, advanced technology, assembly-line mass production and large capital. This kind of manufacturing developed in the last 200 years, in the United Kingdom, north-eastern U.S.A. and Europe. Now it has diffused in almost all over the world

Industries based on Inputs/Raw Materials

On the basis of the raw materials used, the industries are classified as:

I. Agro-Based;
II. Mineral Based;
III. Chemical Based;
IV. Forest Based:
V. Animal Based.

(a) Agro based Industries

- Agro processing involves the processing of raw materials from the field and the farm into finished products for rural and urban markets.
- Major agro-processing industries are food processing, sugar, pickles, fruits juices, beverages (tea, coffee and cocoa), spices and oils fats and textiles (cotton, jute, silk), rubber, etc.

Food Processing

Agro processing includes canning, producing cream, fruit processing and confectionery. While some preserving techniques, such as drying, fermenting and pickling, have been known since ancient times, these had limited applications to cater to the pre-Industrial Revolution demands.

MINERAL BASED INDUSTRIES

These industries use minerals as a raw material.

- industries use ferrous metallic minerals which contain ferrous (iron), such as iron and steel industries
- industries use non-ferrous metallic minerals, such as aluminium, copper and jewellery industries.

Many industries use non-metallic minerals such as cement and pottery industries.

(c) Chemical based Industries

industries use natural chemical minerals, e.g. mineral-oil (petroleum) is used in petro-chemical industry. Salts, sulphur and potash industries also use natural minerals. Chemical industries are also based on raw materials obtained from wood and coal. Synthetic fibre, plastic, etc. are other examples of chemical based industries.

Traditional Large-Scale Industrial Regions

These are based on heavy industry, often located near coal-fields and engaged in metal smelting, heavy engineering, chemical manufacture or textile production. These industries are now known as smokestack industries. Traditional industrial regions can be recognised by:

- High proportion of employment in manufacturing industry.
  High-density housing, often of inferior type, and poor services.
  Unattractive environment, for example, pollution, waste heaps, and so on.
- Problems of unemployment, emigration and derelict land areas caused by closure of factories because of a worldwide fall in demand.

The Ruhr Coal-field, Germany

This has been one of the major industrial regions of Europe for a long time. Coal and iron and steel formed the basis of the economy, but as the demand for coal declined, the industry started shrinking. Even after the iron ore was exhausted, the industry remained, using imported ore brought by waterways to the Ruhr.

Concept of High Technology Industry

- ❖ High technology, or simply high-tech, is the latest generation of manufacturing activities.
- ❖ It is best understood as the application of intensive research and development (R and D) efforts leading to the manufacture of products of an advanced scientific and engineering character. Professional (white collar) workers make up a large share of the total workforce.
- ❖ These highly skilled specialists greatly outnumber the actual production (blue collar) workers. Robotics on the assembly line, computer -aided design (CAD) and manufacturing, electronic controls of smelting and refining processes, and the constant development of new chemical and pharmaceutical products are notable examples of a high-tech industry.
- ❖ High-tech industries which are regionally concentrated, self-sustained and highly specialised are called technopolies. The Silicon Valley near San Francisco and Silicon Forest near Seattle are examples of technopolies.

Iron and Steel Industry

The iron and steel industry forms the base of all other industries and, therefore, it is called a basic industry. It is basic because it provides raw material for other industries such as machine tools used for further production. It may also be called a heavy industry because it uses large quantities of bulky raw materials and its products are also heavy.

Iron is extracted from iron ore by smelting in a blast furnace with carbon (coke) and limestone. The molten iron is cooled and moulded to form pig iron which is used for converting into steel by adding strengthening materials like manganese.

The large integrated steel industry is traditionally located close to the sources of raw materials – iron ore, coal, manganese and limestone – or at places where these could be easily brought, e.g. near ports. But in mini steel mills access to markets is more important than inputs. These are less expensive to build and operate and can be located near markets because of the abundance of scrap metal, which is the main input. Traditionally, most of the steel was produced at large integrated plants, but mini mills are limited to just one-step process – steel making – and are gaining ground.

Distribution : The industry is one of the most complex and capital-intensive industries and is concentrated in the advanced countries of North America, Europe and Asia.

In U.S.A, most of the production comes from the north Appalachian region (Pittsburgh), Great Lake region (Chicago-Gary, Erie, Cleveland, Lorain, Buffalo and Duluth) and the Atlantic Coast (Sparrows Point and Morisville).

. In Europe, U.K., Germany, France, Belgium, Luxembourgh, the Netherlands and Russia are the leading producers.

The important steel centres are Birmingham and Sheffield in the U.K.; Duisburg, Dortmund, Dusseldorf and Essen in Germany; Le Creusot and St. Ettienne in France; and Moscow, St. Petersburgh, Lipetsk, Tula, in Russia and Krivoi Rog, and Donetsk in Ukraine.

In Asia, the important centres include Nagasaki and Tokyo-Yokohama in Japan; Shanghai, Tienstin and Wuhan in China; and

Jamshedpur, Kulti-Burnpur, Durgapur, Rourkela, Bhilai, Bokaro, Salem, Visakhapatnam and Bhadravati in India..

Cotton Textile Industry

Cotton textile industry has three sub-sectors

- Handloom, Sectors.
- Powerloom Sectors.
- Mill Sectors.

Handloom sector is labour -intensive and provides employment to semi-skilled workers. It requires small capital investment. Why This sector involves spinning, weaving and finishing of the fabrics.

The powerloom sector introduces machines and becomes less labour intensive and the volume of production increases.

Mill Sector is highly capital intensive and produces fine clothes in bulk.

Cotton textile manufacturing requires good quality cotton as raw material.

India, China, U.S.A, Pakistan, Uzbekistan, Egypt produce more than half of the world's raw cotton.

The U.K, NW European countries and Japan also produce cotton textile made from imported yarn. Europe alone accounts for nearly half of the world's cotton imports.

The industry has to face very stiff competition with synthetic fibres hence it has now shown a declining trend in many countries. With the scientific advancement and technological improvements the structure of industries changes. For example, Germany recorded constant growth in cotton textile industry since Second World War till the seventies but now it has declined. It has shifted to less developed countries where labour costs are low.