

Welcome students to my session on geography. The course name is geography of commercial activities. The topic is **basic aspects of transportation**. I'm Mrs Ishani Roy, associate professor of geography from Government College, Pernem presenting the topic.

Let's see the outline of the course.

First introduction, modes of transportation, infrastructure, network, flexibility of transportation, and lastly cost of transportation.

The learning outcome;

- The student will be able to understand the concept of transportation.
- They will be able to describe the Parameters of transportation and able to explain various aspects of transportation and their features effectively.

The introduction;

Movements of people, goods, and information have always been fundamental components of human societies, so transportation is defined as the movement of goods and persons from place to place, and the various means by which such movement is accomplished. Various means made by train, by land transportation by air transport, or by water transport. The levels of mobility and accessibility determine the growth of economic processes. Transport represents one of the most important multi-dimensional activities worldwide because it involves management and the transportation of resources as well as distribution of resources. Transport creates valuable links between the regions and economic activities and considered as lifeline of a nation. For example, the primary and secondary activities totally depend on the effective tertiary activities like transportation. Various aspects of transportation can be geographical and economic. The few basic aspect of transportation will be discussed here, which includes modes. Infrastructure, cost, flexibility, etc.

First modes of transport.

Now transportation modes are the means through which the mobility is supported. Hence, an essential aspect. Transportation modes can be land. To land there are rail roads. There can be airplanes and by water also. Modes are grouped into 3 broad categories. Therefore, based on the medium it can be land transport, the land transport and its infrastructure consume huge spaces. Each mode has own set of technical, operational and commercial characteristics.

Water and air transport has moderate level of physical constraint. Because all the terrain, all the topography is not fit for rail transport or land transport. So there is different type of level of physical constraint according to the mode.

First is rail which has average level of physical constraint depending on the terrain because

in the high mountain regions broad gauge railways is difficult to maintain. It is characterized by a high level of economic and territorial control because it has monopoly almost in the entire world, in all countries. The rail is mainly operated by either government or two or three private sector. Road which have lower level of physical constraint though additional costs are added to construct on the rivers. Those started with non-motorized forms like walking animal, riding the horses, motorization has shaped this development as all of you know. After industrial revolution the machine has totally changed the concept of motor traveling.

Next is pipeline. It is one of the modern mode of transportation. Pipeline represents a complete different system of freight distribution where liquid's specially oil and gases are transported over long distances. These routes have low constraint as they can be laid on the land or underwater.

Next is water transport.

Maritime transportation is the most effective boat for moving large number of cargoes due to the less physical constraint of water. Maritime routes consisting of ocean, seas, rivers, lakes and channels which offer better accessibility. However, it involves huge terminal cost for building port infrastructure. Though the ocean and rivers are free, movement is free, so that cost is not involving by making the routes, but making the terminal, it cost a huge.

Next is air transport. Air transport is having multi- dimensional constraints like space, weather condition and aerial currents. However, air routes are practically unlimited, though concentration is found over specific region like over Atlantic. Speed is the main advantage of air transport which surprised other features like cost, fuel consumption and limited carrying capacity. Today everyone has time constraint. Everyone wants to reach faster, so speed is the main advantage of air transport.

Next aspect is infrastructure;

Infrastructure is the backbone of transport system which determines the strength, efficiency, cost and speed. Transport infrastructure is composed of fixed installation like roads, rails, canals, waterways, Airways, subway, bridges, and terminal. Bus stand, centers, warehouse, airport seaports, stations and metro. Transport infrastructure is vital for a country's economic progress. Development of infrastructure is linked to well-being of economic activities. More the infrastructure of transport in places is developed; more will be effective economic activities and more smooth operation.

Next aspect is network;

The term network refers to the framework of roots within a system of locations, which is called as nodes. It's like a wave. It's like a wave different from one place to another place. Different places are connected to different network. A route is a single link between two nodes which are

part of a larger network like rail and roads. For example, A point to B, the route is a single link. Between A&B point transportation system is commonly represented by networks for their structure and flow. Transportation networks are generally consisting of a set of location and set of links between locations. So number of location within a region can have number of bus stop number of rail stations, metro stoppage and all will be linked with a different routes or transport network represent either a permanent track, for example, roads, rails. Or a schedule service like airline and train. The key elements of network are nodes, links, flows, hubs or corridors. The

Next aspect is cost of transport;

One of the basic aspects of transport is cost. Transport cost determines the level of mobility and the trade flow. Cost includes tariffs, locations, salaries, infrastructure and fare which are changing constantly and each has a huge effect on the development of transport. Transport cost has significant impacts on economic structure. An international trade more the cost less will be the accessibility. Factors affecting cost are geographical because of the nature of product. Highly costly product, industrial product like oil, economies of scale, energy, infrastructure and mode, it becomes very competitive in view of regulation and competition.

Flexibility is next aspect. Flexibility of the transportation system refers the level of capability to handle or absorb changes. It determines the amount of change the system can accommodate. Flexibility includes internal link like mode, fleet, node link capacity, routes as well as external like products, volume, delivery and access.

In conclusion we can state that from the earliest times, man have exchanged and traded goods from different regions of the World .Trade of all kinds is entirely dependent on the availability of transport with the new innovation and development transport system is progressed far beyond. It resulted in increased speed and range of transport networks. Today, with modern technology, networks are reached every corner of the world. Well-developed transport and communication system is vital for political stability, national unity, efficient administration and progressive economy.

For my presentation I have used these references for further study. Student can easily go through these references.

Thank you all.