

Lecture 24-25

Infrastructure Facilities

- Infrastructure is defined as the basic physical systems of a business, region, or nation and often involves the production of public goods or production processes.
- The infrastructure is important for **faster economic growth and alleviation of poverty in the country.**
- It supports the growth of the business

Following Infrastructure Facilities is needed for any kind of business

- Highways,
- Streets,
- Bridges,
- Water supply and distribution systems
- Mass transportation facilities and equipment,
- Telecommunication facilities,
- Sewage treatment facilities,
- Wastewater treatment facilities,
- Airports, railroads

Types of Land valuation

- **Development method of land valuation**

This method is primarily used in deciding the worth of plots and apartments that are built on such plots. Also known as the residual land value method, this globally accepted approach helps one to gauge the potential of a land parcel.

Land and building method of land valuation

Under this method of land valuation, **the value of land is separately assessed and the value of the building is added to the number to arrive at the final value.** using this method, one could arrive at land valuation as well as property valuation.

Belting method of land valuation

- To assess the worth of a large land parcel in urban areas, the belting method is most effective and generally used. For this purpose, the entire land parcel is divided among three belts, with the greatest weightage given to the part closest to the main road.
- Typically, the front belt could stretch up to 10 ft and the second belt up to 50 ft. The part thereafter would be the third belt. While 75% of the value of the first belt could be assigned to the second belt, half of its value could be assigned to the third belt.

Guidance value method of property valuation

- For some of us, the job becomes easy since authorities have carried out the onerous task and have allocated a specific guidance value — also known as circle rate, ready reckoner rate, etc. — to land. This is done by states in order to levy stamp duty and registration charges on transfer of properties.

Key points to remember during land valuation

- **Location of the property:** Location plays the biggest role, in determining the worth of land. The scale of development in a locality, decides its worth or the lack thereof. This is why a large land parcel in a developing locality would fetch much less money than a tiny piece of land in a well-developed area. The increase in land prices near the Jewar Airport, in Noida, is a fine example of this.
- **Quality of construction:** Second in determining the value of land comes the quality of construction of the building standing on it. In the same locality, a building will cost much more if premium materials have been used to build it. Do note that you have to hire technical experts to gauge the construction quality, as you may lack the expertise to do so on your own.
- **Age of the property:** Age is another factor that impacts the worth of a property. An old construction would cost much less than a new construction in the same location.
- **Builder brand:** In case of a building, the brand of the developer will also have an impact on the pricing. A project by a well-known developer will, for instance, cost more than a project by comparatively less-known developer.

How will you determine the working capital requirements of a manufacturing company?

- To calculate working capital requirements
- **Working Capital (WC)** = Current Assets (CA) – Current Liabilities (CL)

Four main components of working capital
inventories, accounts receivable, accounts payable, and cash.

Factors that Determine the Requirements of Working Capital

- Sales. For any business, the size of the sale matters. ...
- Length of the Operating Cycle. ...
- Inventory Management Policy. ...
- Size of Business. ...
- Credit Policy. ...
- Seasonality of Business. ...
- Nature of Production Technologies. ...
- Contingencies.

How do you calculate cost of machinery?

- (Investment HC) = (Investment Value) / (Payback period) / (Estimated Hours of operation) ...
- (Electricity HC) = (Machine power consumption in kW) * (Cost of electricity in [Euro/kWh]) ...
- (Labor HC) = (Operator HC) * (% of time for machine assistance)

HC : Hourly Cost

The Equipment Validation Process

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An IQ, OQ, PQ is a three-step equipment validation process.

- It ensures that your instrument operates properly and is appropriate for its intended use.
- The three steps – IQ, OQ, and PQ – stand for Installation Qualification, Operation Qualification, and Performance Qualification

- **Installation Qualification**

- The first step, the Installation Qualification, ensures that the instrument is properly installed, and that the environment that it is installed in is appropriate for the use of this instrument.

- **Operation Qualification**

- Next is the Operation Qualification. The purpose of this step is to document that the instrument is operating according to its specifications. This includes testing the general functions of the instrument.

- **Performance Qualification**

- The last step is the Performance Qualification. This is the process of demonstrating that the instrument performs according to a specification appropriate for its routine use. During this step, the instrument must pass specific tests which ensure that it will reliably perform adequately for its intended use.