

'Least Cost Location Theory'

By

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Introduction:

Proposed by : Alfred Weber of Germany

Year: 1909

In his Book: “Theory of the Location of Industries” (Uber den Standort der Industrien)

His book is translated in English in 1929 and after that this concept became popular.

Objectives:

To find out the minimum cost location for Industrial set up based on three factors –

Transport Cost

Labour Cost &

Agglomeration Economies

Assumptions:

- Isotropic Physical and Socio- Economic Landscape
- Perfect Competition Market
- No Scarcity of Demand
- Static labour Position
- Uniform and Proportionate Cost Structure
- The Entrepreneurs seek to minimize cost
- Uneven Distribution of Natural Resources

Principles

- Transport Cost Principle
- Labour Cost Principle
- Agglomeration Economies Principle

Transport Cost Principle

$$\text{Material Index (MI)} = \frac{\text{Weight of Raw Material}}{\text{Weight of Finished Product}}$$

Example:

Raw Material (Iron Ore) = 5 ton

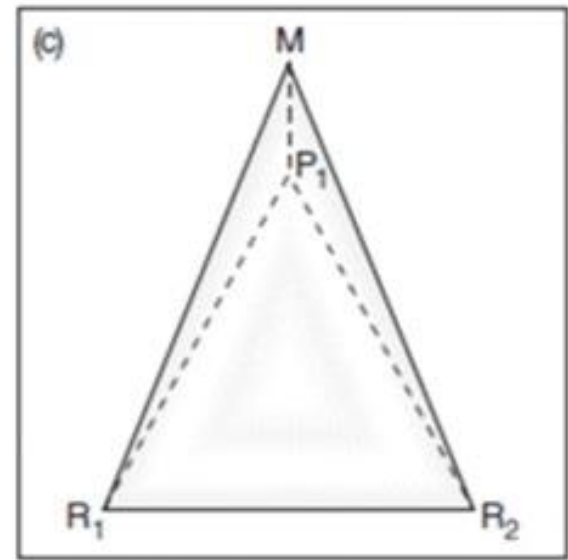
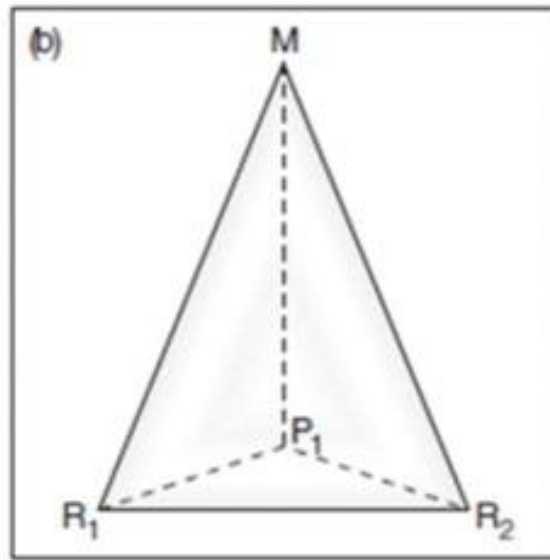
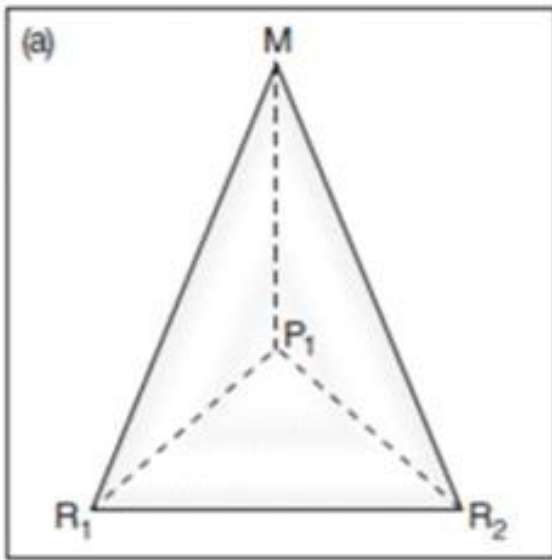
Finished Product (Steel) = 3 ton

$$\text{MI} = 5/3 = 1.67$$

If,

MI is > 1 means Weight Loosing Industry

MI = 1 means Pure or Foot Loosing Industry



M = *Market* (pasar)
R₁R₂ = *Raw materials* (bahan mentah).
P₁ = Lokasi berbiaya terendah.

- Linear Location
- Non- Linear Location (Triangle)

Labour Cost Principle

According to him, Some regions have cheap labour availability. So, an industrialist can shift his industry from initial location to cheap labour cost location.

Condition:

When savings for Cheap Labour > Extra Transport Cost for Shifting location

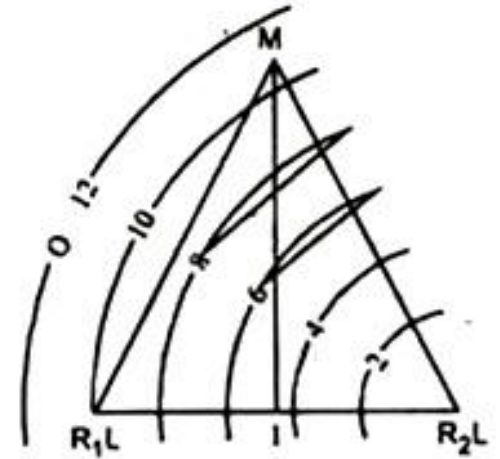
Isotim:

The line joining the places of equal transport cost (raw material cost or cost of delivery).

Isodapane:

The line joining the places having equal total cost.

$$\text{Total Cost} = \text{Raw material Cost} + \text{Delivery Cost}$$



Critical Isodapane:

The line joining the places where savings for labour is equal to extra transport cost is called as Critical Isodapane.

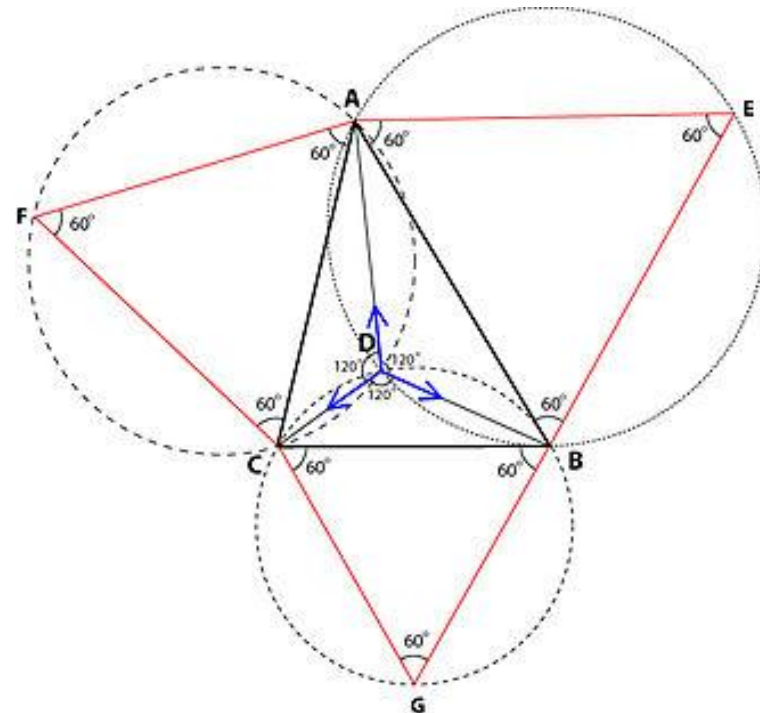
This is the critical line beyond which no industry will go for industrial set up.

Agglomeration Economies Principle

Association of some industries in a particular location can attract an Industry from least cost location perspective.

Due to the availability of facilities like security, economy, total cost etc. Industry can be set up in agglomeration areas.

It will take place in the common areas of their Critical Isodapanes.



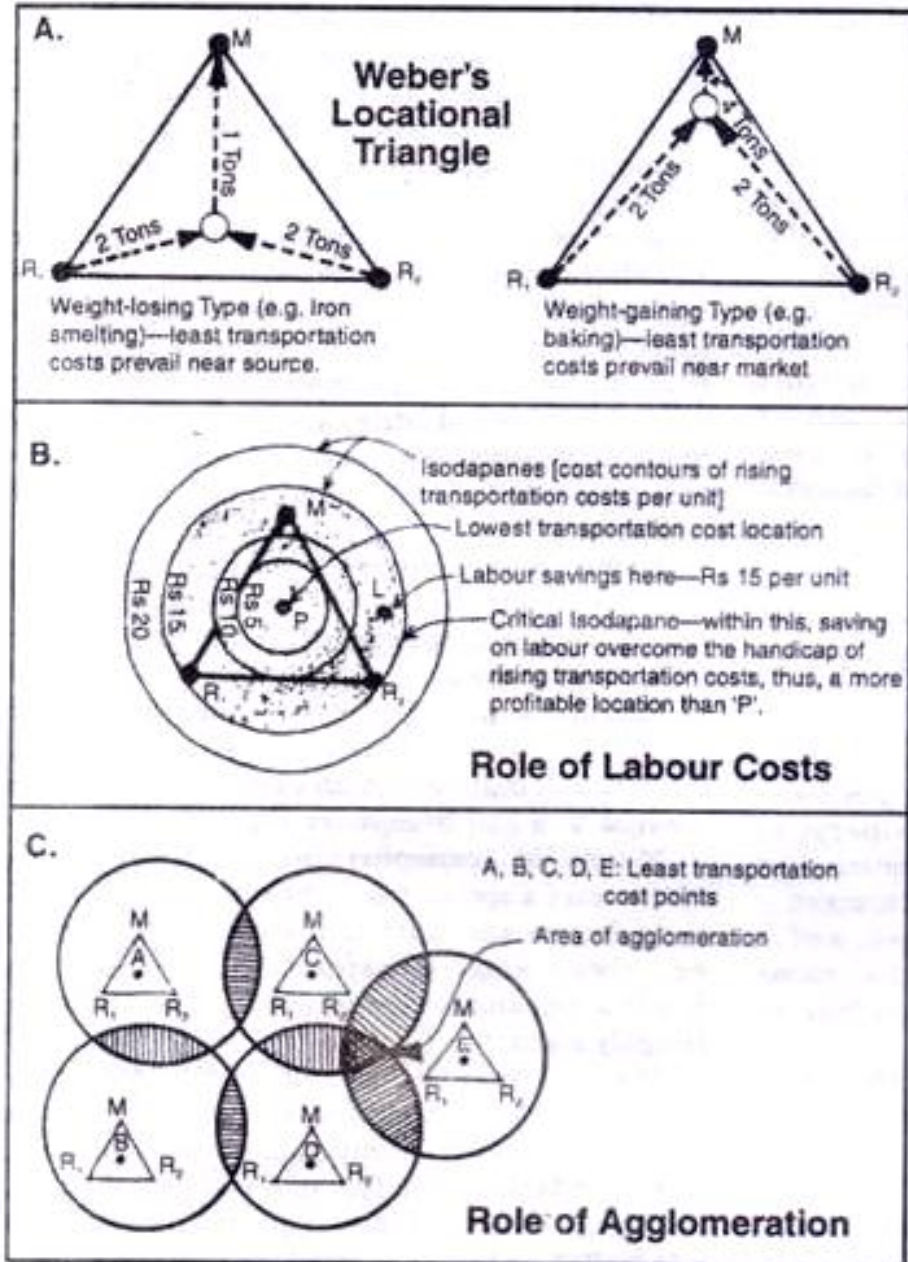


Fig. 10.25 Graphical presentation of Weber's Theory of Industrial Location.

Criticism:

Criticise the assumptions.

Thank You