Explain the theory of the location of Industries enunciated by Alfred weber.

Alfred weber formulated a least cost theory of industrial location used to account the location of industry in which it can minimise its input costs & maximize profit

Weber model is based on certain Assumptions -

- Region is homogenous in terms of culture, climate, technical skill & political system
- Transport cost is function of weight & distance
- There is uneven distribution of natural resources.
- ~~Thegeans~~ There are fixed location of labour where wage rates are fixed & labour is immobile & unlimited.
- The entrepreneurs seeks to minimise total cost of production
- Condition of perfect competition exists in market

According to weber location of industries depends on three factors -

- Transportation cost
- Labour cost
- Agglomeration

(1) Transportation cost - In absence of any spatial difference in basic production cost, weber observed that industry must be located where transportation cost is minimum.

Transportation cost is determined by -

- weight of Raw material & final goods
- distance to be traveled

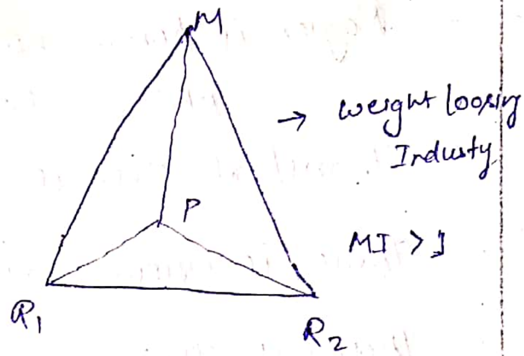
To find the least transportation cost location, weber used simplified locational triangles, assuming two points where raw material is found (R_1 & R_2) & the third point is Market (M)

To Find ~~whether~~ whether Industry is market oriented or raw material oriented, the derived the simple concept of Material Index (MI)

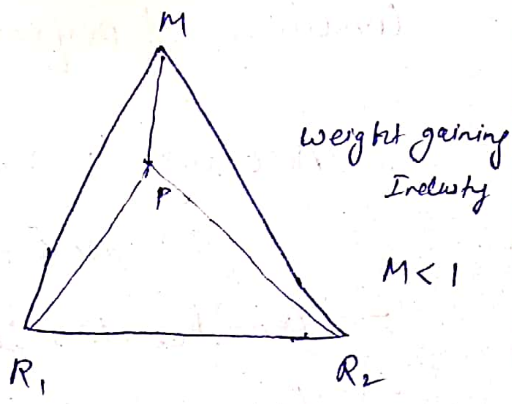
$$\text{Material Index (MI)} = \frac{\text{weight of Raw material}}{\text{weight of product}}$$

If, $MI \geq 1$, Industry is Raw material oriented

If $MM \leq 1$; ~~Ma~~ Industry is market oriented



Location triangle For weight loosing industry



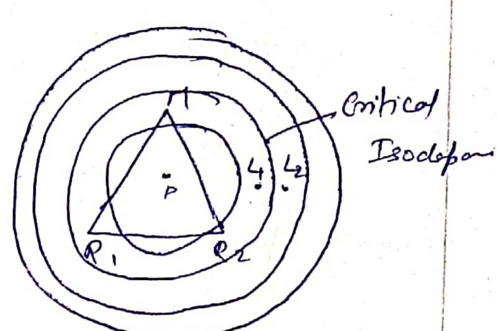
Locational tragle For weight gaining Industry

(ii) Labour Cost - Labour cost is a regional factor like Transportation cost. Labour cost ~~is~~ will vary from one location to other location

Labour cost may vary due to 2 reasons—

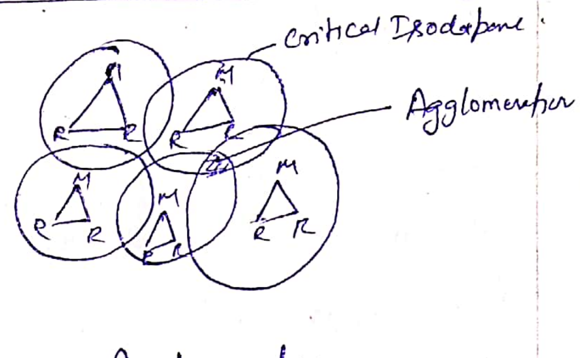
- Difference in wage rates
- Difference in level of efficieny.

Weber created the concept of critical Isodapane, which is a set of point that equates the rise in the transportat. cost to smaller wage cost.



- Change in Industrial location happen if point of cheap labour cost is within critical Isodapane.

(III) Agglomeration - It refers to the clustering of industries to cut in production cost. due to large scale labour & specialization.



Agglomeration

Criticism

- Assumption were unrealistic
- Transport cost does not rise proportionly with distance & weight
- perfect compection rarely exists.
- Concentrated too much on minimising transportation cost
- Historical factor did not considered

However this theory is important, because it was the first effort to locate any industry. Various industries such as Steel industry, power industry, Aluminium Industry are located according to weber industrial location theory of least cost.