

Rank Size Rule : By G.K. Zipf (1949)

This rule is first noticed by F. Auerbach in 1913 but developed by G.K. Zipf in 1949 in his book "Human Behaviour and the Principle of Least Effort". This theory states that if all the urban settlements in an area are ranked in descending order of population, the population of n th town will be $\frac{1}{n}$ th that of the largest. In other words, the second most important town would have half of the population of the largest, the third most important town would have one-third the population of the largest and so on downwards.

This regularity can also be expressed by the formula:

$$P_n = \frac{P_i}{n}$$

where,

P_n = population of the n th rank City

P_i = population of the largest City

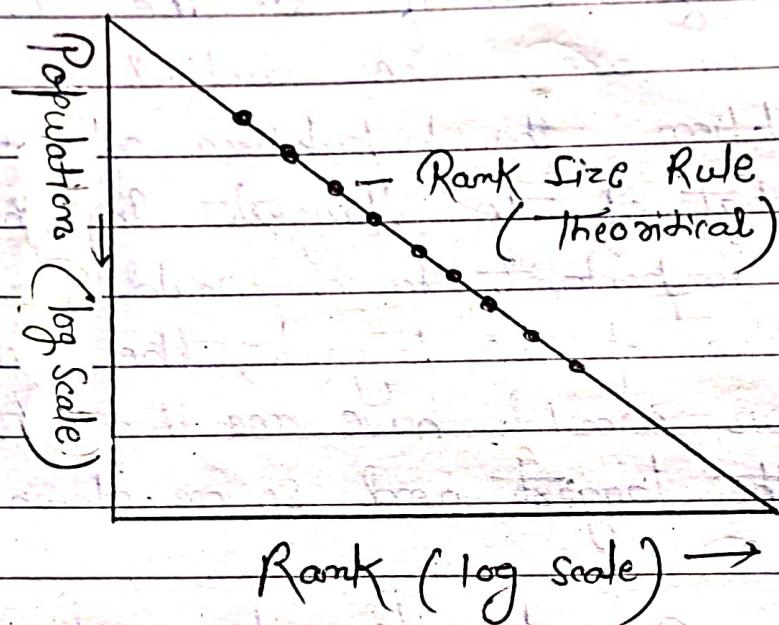
n = rank of the City

It follows, that if the population of the largest town is 40,000 (P_i) then, the second town in rank would have a population of

$$\frac{40,000}{2} = 20,000$$

This relationship can also be described by graphical representation. If the relationship is plotted using linear scales for the axes, a curve results.

If the logarithms of population and rank are plotted, a straight line will be produced.



Theoretically it is very difficult to exactly coincide the graph as given by G.K. Zipf but there are some states or countries where this theory is near to the reality.

e.g. → Rio-De-Jenerio (Brazil)
West Bengal.

Classifications of Ashok Midra

- There are mainly 5 types of activity occur
 - (1) Primary Activity → forest, agriculture, fishing
 - (2) Secondary Activity → Industry, mining, Construction
 - (3) Tertiary Activity → Trade, transport, Service
 - (4) Quaternary Activity → It basically related to Consultancy (सलाह)
 - (5) Pentenary Activity → It related to knowledge and research.

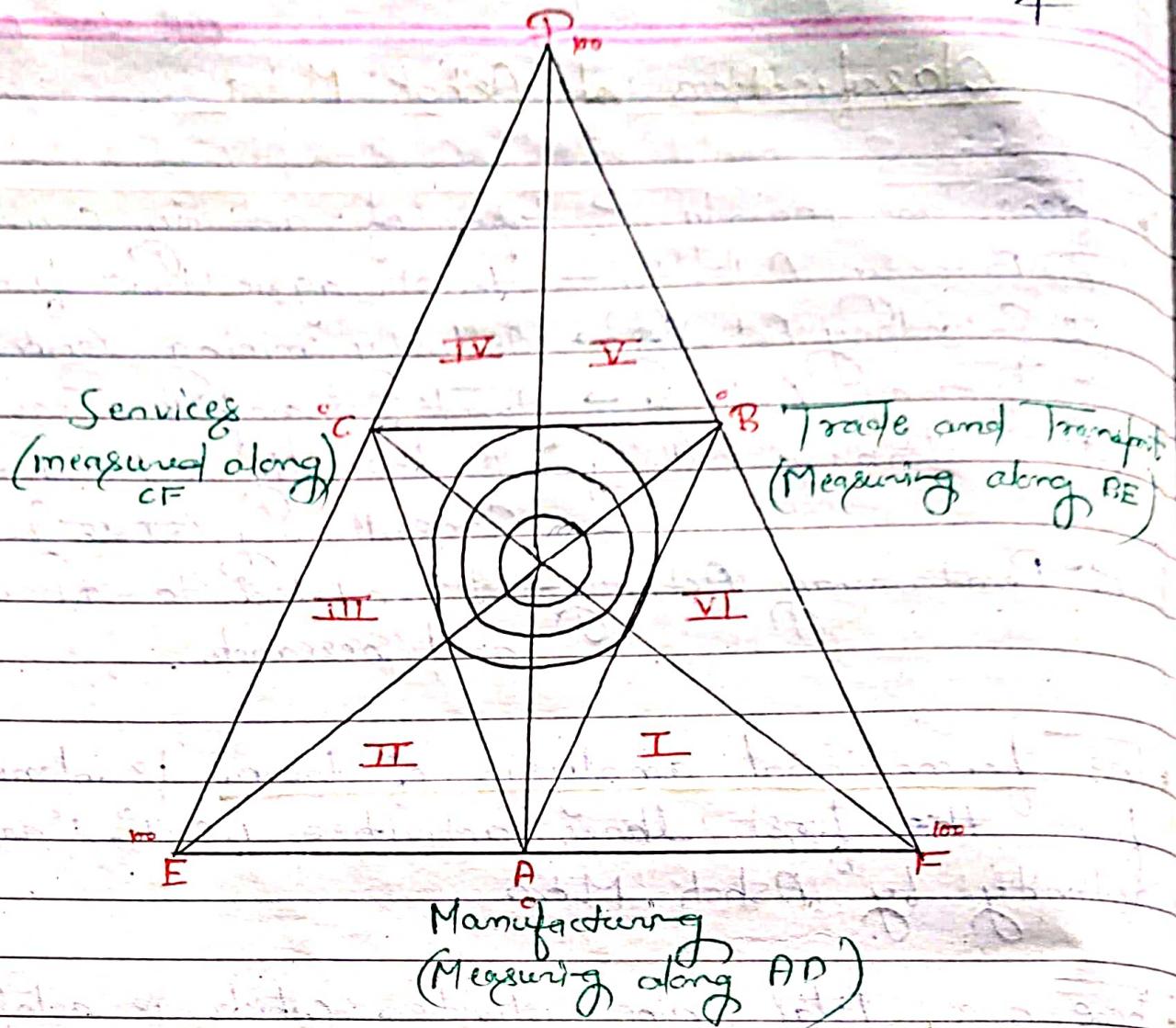
- The functional analysis of town is done from the first three activities i.e 1^o, 2^o and 3^o activity by Ashok Midra.

- There are total nine activities which is related with primary, Secondary and tertiary activity.

Industrial classification according to 1971 Census.

- (1) Cultivators
- (2) Agricultural Labourers
- (3) Forestry, Fishing and Plantation
- (4) Mining and Quarrying (खनन शेत्र)
- (5) (a) Household industry (b) Manufacturing other than household industry
- (6) Construction
- (7) Trade and Commerce
- (8) Transport, storage and communication
- (9) Services.

{ 1st three → Primary Activity
 4 to 6 → Secondary Activity
 7 to 9 → Tertiary Activity

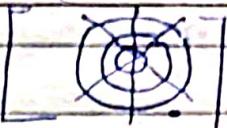


According to Ashok Midra if 3 circles are drawn at a distance of $6\frac{2}{3}$, $11\frac{2}{3}$ and $16\frac{2}{3}$, they show different levels of specialization.

Hence all six triangles show predominant activities.

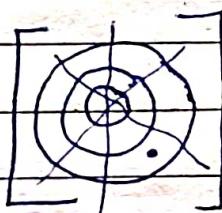
* If we say about Ashok Midra study, then their study is on the basis of industrial towns (4, 5(a), 6, 6)

(1) The most predominant function is represented if the point is outside the outer circle.



इसका मतलब हुआ, 60% से ऊपर लोग इन तिनों means Services, Trade and Transport or Manufacturing में से किसी एक में 60% population involve है। इसलिए वस्को इनमें most predominant function कहें।

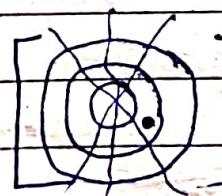
(2) If point lies between 2nd and 3rd circle, then predominant function is these.



इसका मतलब हुआ कि वह के 40 से 45% लोग दिये गए तिन activity में से किसी एक में involve है। जैसे → Services (45%), Trade and Transport (35%) Manufacturing (20%)

So, we called it only predominant functions.

(3) If there is a point which is in between 1st and 2nd circle then the function is moderately diversified.



It means that, anyone of these three is done by 40% people i.e. Manufacturing 40%, Trade and Transport 33% and Services 27%.

(4) If the point is inside the ring or circle then functions are highly diversified.



It means that, all three activities are done by the people approximately equally i.e. Service 34%, Trade and Transport 35%, Manufacturing 31%.

(5) If the point is at the centre, it means that all three activities are done equally by the people of that area.



Conclusion

According to 1971 Census, what is the functional classification of Indian cities and what are their specialities?