

## URBAN GEOGRAPHY – 18MAG21C

**UNIT – IV: Central Place Theory: Christaller and Losch - Primate City - Rank Size Rule - Urban Hierarchy – City Region - Rural-urban fringe - Suburbs - Satellite town – Umland.**

### CENTRAL PLACE THEORY OF CHRISTALLER

- Walter Christaller (April 21, 1893 – March 9, 1969), was a German geographer.
- . Central place theory was given by Walter Christaller in 1933, CPT in urban geography is one of the most appreciated theories which tries to explain the spatial arrangements and distribution of human settlements and their number based on population and distance from another human settlement.
- This theory was first given by German geographer Walter Christaller in 1933, on the basis of his study of settlement patterns in southern Germany.
- This study included the analyzing the relationships between settlements of different sizes and related their economic activities (market) with the population.
- In the flat landscape of southern Germany Christaller noticed that towns of a certain size were roughly equidistant. By examining and defining the functions of the settlement structure and the size of the hinterland he found it possible to model the pattern of settlement locations using geometric shapes.

#### **Christaller made a number of assumptions such as:**

All areas have

- **an isotropic (all flat) surface.** A hilly and uneven terrain poses difficulty in development thus a flat area which promotes the growth of the town
- **an evenly distributed population.** Residents are not concentrated at one particular place and no preference exists for a particular town
- **evenly distributed resources** . No place has an advantage of resources, all places will compete under perfect market conditions
- **Similar purchasing power of all consumers and consumers will patronize nearest market.** along with the population and resources, wealth is also fairly distributed. Because of this people have similar purchasing power
- **Transportation costs equal in all directions and proportional to distance.** The cost incurred in transporting of goods is equal for all and is proportional to the distance
- **no excess profits** (Perfect competition). price is decided on basis of demand and supply. People will buy at the lowest price which market has to offer, no seller has an advantage over another seller.

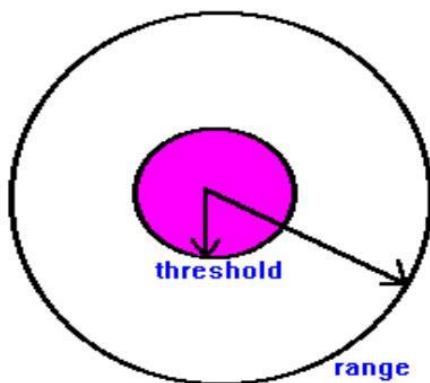
- **Preference for the nearest market** – people will buy products from the nearest market and avoid the long commute. This keeps price constant as per other assumption

## Central Place Theory

Walter Christaller developed the **Central Place theory** to explain the size and spacing of cities that specialize in selling goods and services.

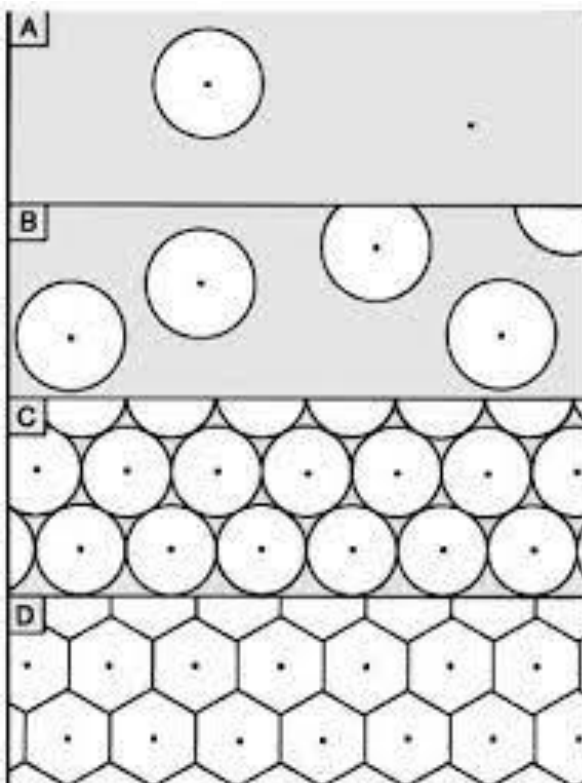
The theory consists of **two basic concepts**:

**1) threshold** -- the **minimum market** needed to bring a firm or city selling goods and services into existence and to keep it in business



**2) range** -- the average **maximum distance** people will travel to purchase goods and services. Normally, the threshold is found within the range, as the diagram shows.

As transport is equally easy in all direction, each central place will have a circular market area as shown in C in the following diagram:



However, circular shape of the market areas results in either un-served areas or over-served areas. To solve this problem, Christaller suggested the hexagonal shape of the markets as shown in D in the above diagram.

Within a given area there will be fewer high order cities and towns in relation to the lower order villages and hamlets.

For any given order, theoretically the settlements will be equidistance from each other. The higher order settlements will be further apart than the lower order ones.

Christaller's theory gives 3 principles which are the marketing principle, transport principle and administrative principle for orderly arrangements and the formation of hierarchy.

Settlements are regularly spaced – equidistant spacing between same order centers, with larger centers farther apart as compared to smaller centers. The market area is hexagonal shaped as it is free from overlapping, most efficient in both number and function.

The different layouts predicted by Christaller have K- values which show how much the Sphere of Influence of the central places takes in — the central place itself counts as 1 and each portion of a satellite counts as its portion:

- 1. The marketing principle (K=3 system);**
- 2. The transportation principle (K=4 system);**
- 3. The administrative principle (K=7 system).**

### **Marketing Principle (K=3):**

The optimum location for central places is an arrangement in which each similar center is equidistant from the next on the lattice point of a set of equilateral triangles.

Christaller stated that the marketing principle operates spatially according to a rule of threes (k=3 principle)

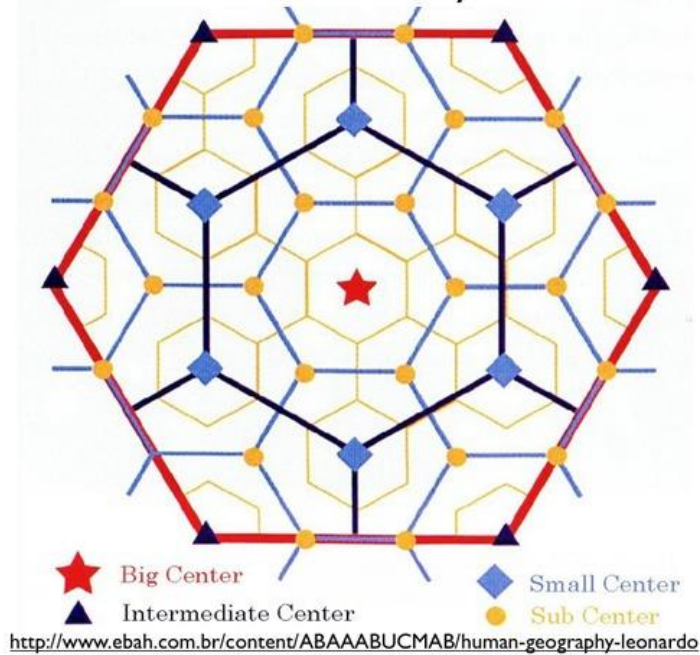
A central place is a center that serves an area larger than itself. The area served by a central place is its complementary region.

In the example , there is a hierarchy of one higher-order place, surrounded by six second-order places that are in turn surrounded by six more third-order places. The locations of these places conform to the K=3 principle in that one-third of a lower-order place is served by the next higher-order place and so on. Thus,  $1 + 6(1/3) = 1 + 2 = 3$ .

With K=3 the transport network is not efficient even when the distance travelled is reduced.

This is because of the absence of transport links (network) between the larger places (nodes).

## Central Place Theory Model

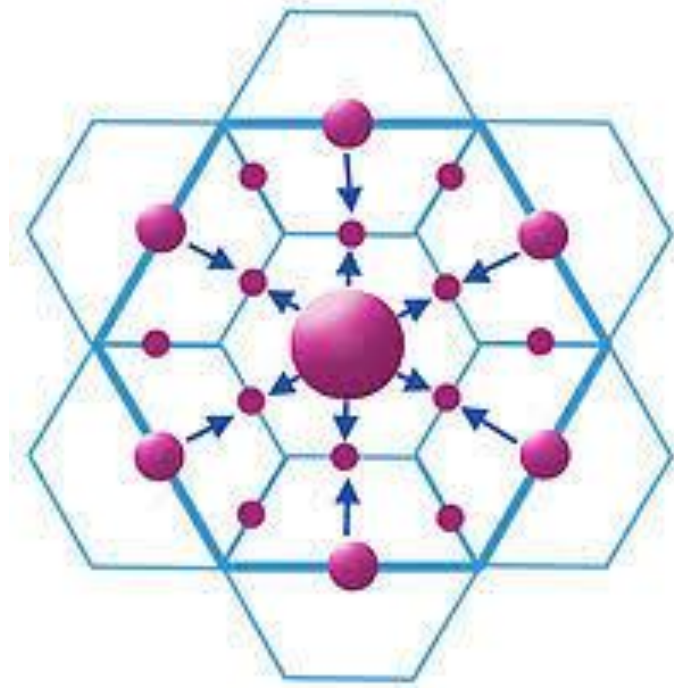


### Transport Principle (K=4):

When transportation strongly influences the location of central places, as many as possible will locate on one traffic route between two important towns.

The route will be as straight and inexpensive to use as possible.

Accordingly, central places lie on straight traffic routes, and the intervals between these



places are of equal length.

In this situation, if a low-order central place is to be established, it will lie halfway between the next two higher-order places.

Thus, the complementary region of the high-order places will be four ( $1+6(1/2) = 1+3 = 4$ ) times greater than that of the next level of lower-order places. This alignment of places along a road leads to minimization of road length.

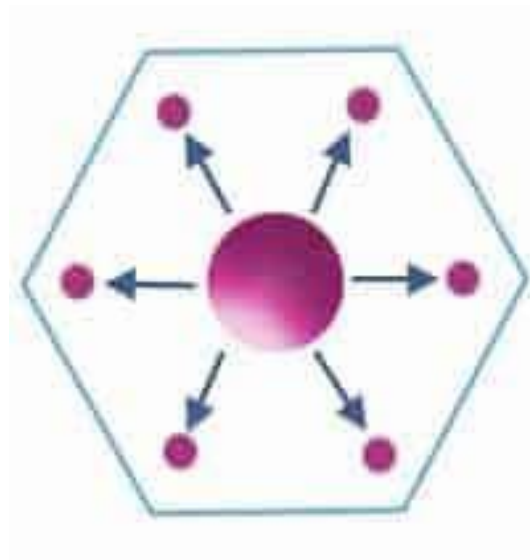
However, for each higher order center, there are now four centers of immediate lower order, as opposed to three centers under the marketing principle.

### **Administrative Principle (K=7):**

When administrative services are the primary organizing force on a landscape, Christaller assumed that individual complementary regions would not be subdivided.

Accordingly, the hierarchy is constructed by the addition of entire regions.

In this case, the high-order centers and their complementary regions of six surrounding central places are added together. This results in a K=7 system. In the K=7 system the size of the high-order complementary region is much larger than produced by the K=4 and K=3 systems.



### **Applicability and use**

1. It provides a rationale for selective location and efficient space and functions.
2. In terms of functional and behavioural dimensions it has drawn attention to country and inter-town interdependence.
3. It encourages order in the spacing and inter-relatedness of settlements where settlements are seen in wider contexts.
4. The central place theory seeks to analyse the functional and hierarchical orderliness in the settlement landscape.
5. Settlements vary in size, function and number but the centralistic function is sought in the location economies, social and administrative structure and their visible and not so visible forms and is evident in location of the structures like church, community hall or university.

6. The central place theory helps us to identify more clearly the role of settlements as places of trade exchange and the extent to which this has influenced the nature of emerging settlement pattern in region.

## LOSCH'S CENTRAL PLACE THEORY

### **Introduction**

- August Losch, a German economist, published his Theory of
- 'Profit Maximisation' in the year 1954. According to Losch, industry will not necessarily be located within the least cost (transport cost and labour cost) location; rather it would locate in areas where maximum profit will occur.
- The German economist August Lösch also expanded on
- Christaller's work in his book The Spatial Organization of the Economy (1940). Unlike Christaller, whose system of central places began with the highest-order, Lösch began with a system of lowest-order (self-sufficient) farms, which were regularly distributed in a triangular-hexagonal pattern

### **August Losch**

- In 1954 Losch based his argument on the fact that Christaller's model was too rigid.
- He instead focusing on maximizing consumer welfare and creating an ideal consumer landscape where the need to travel for any good is minimized and profits are held level.
- Losch began with a system of lowest order farms which were regularly distributed in a triangular-hexagonal pattern
- He thought that Christaller's model led to patterns where the distribution of goods and accumulation of profits were based entirely on location.
- From this smallest scale of economic activity, Lösch mathematically derived several central-place systems, including the three systems of Christaller. • Lösch's systems of central places allowed for
- specialized places. He also illustrated how some
- central places develop into richer areas than others.
- This theory belongs to the 'market area' or 'profit maximisation' approach and has focused on spatial variations in scales potential.
- He disregarded spatial variations in production costs by holding them constant, and instead depicted optimal location as occurring where the largest possible market area.
- Monopolized Losch then attempts to find the maximum profit location by comparing, for different locations, both the costs of production and the market area that can be controlled.
- Within the framework of this competitive situation, the location chosen may not be the least-cost location, as the Weberian school predicts.

- Instead, it will be the maximum profit location built on sales revenues rather than production and distribution costs.

### **Central Place Theory**

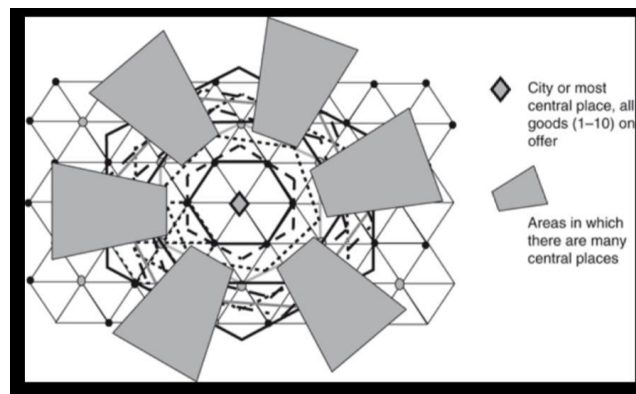
- Range is the maximum distance people are willing to travel to use a service
- Threshold is the minimum number of people required to support the service
- Higher-order/trade in goods and services
- -services that are more valuable and infrequently demanded -Because the goods and services are more valuable, people are willing to travel farther to shop.
- lower-order goods/trade in goods and services -less valuable and frequently demanded.
- -Because the goods and services are less valuable, people are willing to travel only short distances to shop.

### **Hierarchy of Settlements**

- Hamlet: fewest goods and services available
- Village: includes the region of the hamlet and some additional goods and services
- Town: includes the region of the village and hamlet and provides some additional goods and services
- City: includes the region of the village, hamlet and town and provides additional goods and services.
- 1. The marketing principle (K=3 system)
- 2. The transportation principle (K=4 system)
- 3. The administrative principle (K=7 system)

### **Losch's Modification of Christaller's Model of Central Place Location**

- Starting in the 1930s, German geographer August Lösch began to build upon and modify Christaller's model.
- He did this, in part, because he noticed that the variation in  $K$  is very important in shaping the organizations of centers and the numbers of centers at each level in a hierarchy.
- Because Christaller arbitrarily choose the  $K=3$ ,  $K=4$ , and  $K=7$  values, Lösch argued that, in such a model, no particular  $K$  value could be considered sacrosanct.
- From the point of view of Lösch, Christaller's three locational principles were simply interesting special cases. Lösch suggests that, in fact, a large number of  $k$  values can be used. The only restriction, according to Lösch, is that a hexagonal pattern must be maintained in the model. In contrast to Christaller  $K=7$  hierarchy of 1,6,42,294, Lösch put forth that a  $K=7$  hierarchy would be more efficient if it were arranged 7, 13, and 19 because, in these cases, places are not divided among several different centers.

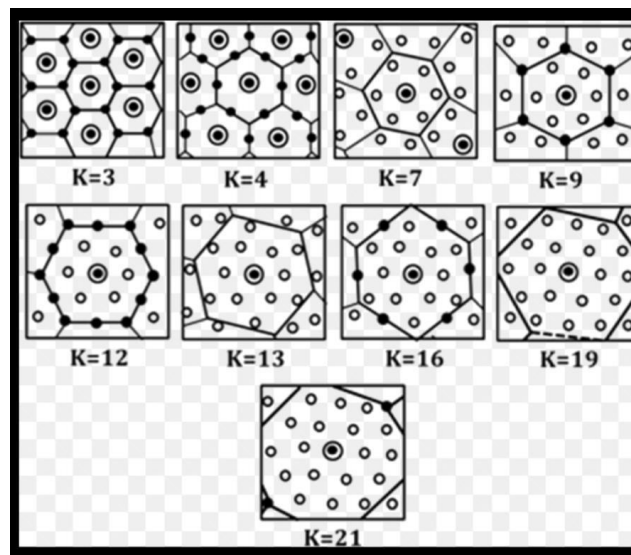


### **k-Value of Losch**

- But, in contrast, the Loschian hierarchy is far less rigid.
- It consists of a nearly continuous sequence of centres rather than distinct tiers, so that:
  - (1) Settlements of the same size need not have the same function, and
  - (ii) Larger places need not necessarily have all the functions of the same smaller central places.



- Total number of settlements served by each central place is termed as its 'k-value'.
- Christaller's k-value is three of each central place. His hierarchy consists of a number of definite steps of tiers in which
  - (i) all places in a particular tier are the same size and have the same function, and
  - (ii) all higher-order places contain all the functions of the smaller central places.
- He used K values of 3, 4, 7, 9, 12, 13, 19 and more for up to 150 different goods and superimposed a different sized hinterland around each settlement for each good
- And with the rotation of these hexagons we are able to achieve six sectors with central places that include many types of businesses.
- From this pattern emerged six settlement-rich sectors around a major central place and six settlement-poor sectors between them, where services were sparse.
- This arrangement is called the Lösschian economic landscape.



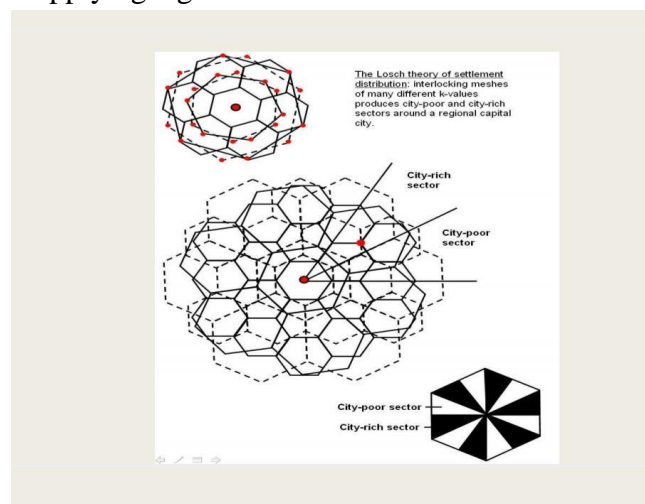
### Losch's Assumption

- August Losch also developed his model based on certain assumption as Christaller did. Important assumptions are given below

- An isotropic surface.
- Constant supply of goods or services
- Population is evenly distributed.
- Buyers are evenly dispersed over an area, and have identical demands.
- Demand decreases with increase in price, if the price increase in response to transport cost, the demand will decrease away from production point, the demand curve will be cone shaped and market area circular.
- Entrepreneurs act as economic men and their main aim is profit maximization.

## Market Area Development

- Development of market areas from circular to hexagonal Losch's Assumptions •
- Losch also opined the hexagon as the ideal market shape, and viewed the trading area of the various products as the nets of such hexagons.
- A net of hexagonal market forms will completely cover any area under consideration, whereas
- circular areas will either leave utilised area or will overlap. Why Hexagon? Of all the regular polygons (hexagon, square, triangle, etc.) that will cover an area, the hexagon deviates least from the circular form and in consequence minimises transportation expenditure in supplying a given demand.



## Why trade areas as hexagonal shape

- In the case of circular trade areas, two situations develop. First, circles are tangent, leaving unserved space among various centres. Second, if they overlap, common served area between centres. So hexagonal shape is considered as ideal trade.

## Method of Development of model

- . After discussion on nature, shape and size of trade areas in response to various production centres in plane and finally most suitable hexagonal shapes, he introduced about 150 market principles unlike Christaller selected only three.  $K=3$ ,  $k=4$  &  $k=7$
- All 150 services ( $k$ ) have different distinct hexagonal market areas. He selected a point which could be centre for each of 150. To identify he arbitrarily chose out one production centre from the entire set of production centres established on plane.
- He arranged all nets or hexagons in such way that the chosen centre was common to all. After this, he rotated them around the common point and brought them to rest where maximum hexagons coincided.
- 
- Consequently, 12 sectors thus emerged alternatively 6 sectors with maximum concentration of maximum economic activities of market demands and six others have relatively few.
- 
- I The rich sectors with maximum economic activities is most efficient economic landscapes for location of production units seeking maximization of benefit. A large number of service centres of varying sizes concentrated in the area.
- The poor sectors with few economic activities is least preferred by producers as well consumers owing to minimum level of benefit incurred.
- Three important derivations were made by Losch through this model given as below.
- A. There are certain areas in the landscape which contain dense concentration of centres and with relative sparse. B. Size and number relationship of different centres in the area does

- not follow step like hierarchy as postulated by Christaller, become
- blurred and centres form much more of size continuum.
- C. The functional structure of the centres are such that those of similar size, not necessarily offer the same type of goods and services as each other. Likewise, the larger centres will not necessarily provide the complete range of goods to be found collectively in smaller centres.

### **Criticism**

- 1. Losch's theory is abstract in nature.
- 2. It over stressed on demand.
- 3. It has failed to take into account, problems arising from locational interdependence of plane.
- 4. Markets often overlap and do not occur in isolation. Therefore, as pointed by Losch, location equilibrium rarely occurs between a unit/entrepreneur and its market. As more firms appear, profits are competed away.
- 5. Losch's notion of the market demand was too simple. In reality an entrepreneur will have to deal with several issues before he estimates demand as a basis for their locational decisions.
- 6. The empirical study might show no such pattern as that envisaged in the theory

### **A Comparison- Christaller and Losch;**

- Christaller's theory attempts to realise retail business and services better whereby,
- Loschian model sought to explain the spatial distribution of market based on manufacturing.
- For Christaller the hierarchy is composed of a series of discrete levels.
- Each centre in the same hierarchical level produces exactly the same array of goods.
- For Losch the centres present in the same hierarchy may produce completely different combination of goods. Also, Christaller began his hierarchy from the highest centres such as metropolis while, Losch did the reverse by beginning at the lowest level of hierarchy.
- Christaller did not take into account the presence of specialised production centres but, was not overlooked by Losch. He considered it. Christaller's pattern is best suited

for those cities which developed in sparse settlement regions but that of Losch's for densely populated regions.

- Though postulating unreal conditions, oversimplification and limiting various factors operative on town distribution, the theories nevertheless, gives insight into the nature of the town distribution and of the way in which the national territory is served by towns.
- It also attempts to search for unified principles rather than describe individual towns.

### **PRIMATE CITY- RANK SIZE RULE**

#### **INTRODUCTION**

Urban system is defined as any network of interdependent urban places. The nature of interdependent urban places. The nature of interdependence among urban place may be economic, political, social or cultural. In the system of cities, the changes taking place in one city such as population, economy, employment structure, etc. will have consequences on other cities in the system. The idea of urban hierarchy is central to the concept of urban system. The urban hierarchy concept considers that the urban places vary in population sizes and economic functions. The analysis of urban hierarchy mainly relates to the ranked order of cities based on different criteria, such as population size, economic power, retail sales and number of industrial workers .

**PRIMATE:** The word **primate** comes from the Latin *primas* which means “first rank”. This prefix is used in words like prime or primary in English. So the idea of calling somewhere a primate city is that it's referring to its status as the first, the primary, the largest.

#### **FACTORS AFFECTING PRIMACY: -**

1. Small territorial extent
2. Relatively high population density
3. Low per capita incomes
4. A high degree of dependence upon agricultural exports
5. High rate of population growth and
6. In many cases, a former colonial status

#### **INDEX OF PRIMACY**

It is the measure of relative importance of the largest town in a nation or a region.

Index of Primacy =  $P_1/P_2$

Where P1 = Population of the largest town and

P2 = population of the second largest town There are 2 sets of issues that have generally been debated with regard to primate city urban systems.



## PRIMATE CITY

- The largest city within a nation which dominates the country not solely in size – being more than twice as large as the second city – but also in terms of Influence

“The primate city is commonly at least twice as large as the next largest city and more than twice as significant.” - Mark Jefferson, 1939

## Characteristics of Primary Cities

They dominate the country in influence and are the national focal point. Their sheer size and activity become a strong pull factor, bringing additional residents to the city and causing the primate city to become even larger and more disproportional to smaller cities in the country.

However, not every country has a primate city, as you'll see from the list below.

Some scholars define a primate city as one that is larger than the combined populations of the second and third-ranked cities in a country.

This definition does not represent true primacy, however, as the size of the first ranked city is not disproportionate to the second.

The law can be applied to smaller regions as well. For example, California's primate city is Los Angeles, with a metropolitan area population of 16 million, which is more than double the San Francisco metropolitan area of 7 million.

Even counties can be examined with regard to the Law of the Primate City.

### **Examples of Primate Cities**

- Paris, at a population of 9.6 million is definitely the focus of France, while Marseilles has a population of 1.3 million.
- In the United Kingdom the area of London has a population of 7 million while the second largest city, Birmingham only has around one million people.
- Mexico City, Mexico has a population of 8.6 million while Guadalajara is only about 1/4th the size at 1.6 million.

.A huge dichotomy exists between Bangkok (7.5 million) and Thailand's second city, Nonthaburi (481,000).

### **Advantages and Disadvantages**

#### **Advantages**

- Magnetic attraction for businesses, services and people (cumulative effect)
- Can attract international trade and business
- Centralize transportation and communication
- Enhanced flow of ideas and information among larger populations
- Ability to offer high-end goods due to increased threshold

#### **Disadvantages**

- Urban-rural inequalities
- Imbalance in development
- Concentration of Power

- Has a parasitic effect, sucking wealth, natural and human resources into city.
- Become centers for unemployment, crime, pollution

### CLASSIC EXAMPLE:

Bangkok is an extreme example, possibly the most extreme, as its population of 8-14 million (estimates vary) where no other city in the country passes 300,000 people.

It's a curious phenomenon that plays out all over the world, and it seems like it's becoming a problem... More on that in a second.

### Why is Bangkok a primate city?

A primate city is one city in a country where we see a concentration of population, wealth, power and infrastructure, at the expense of other populated areas.

The simplest way to classify a primate city is by its population compared to the population of surrounding towns and cities. Let's look at the biggest cities in Thailand.

## Biggest Cities In Thailand

Rank	Biggest Cities in Thailand	Metro Population
1	Bangkok	14,565,547
2	Nonthaburi	270,609
3	Nakhon Ratchasima	174,332
4	Chiang Mai	174,235
5	Hat Yai	157,467
6	Udon Thani	155,339
7	Pak Kret	152,881
8	Khon Kaen	129,581
9	Chaophraya Surasak	109,983
10	Ubon Ratchathani	105,081

The estimate in this table for Bangkok is on the high end, the official figure is eight million, but the point is still clear. Bangkok is a primate city. There isn't a city or town in Thailand that comes remotely close to the capital in terms of population.

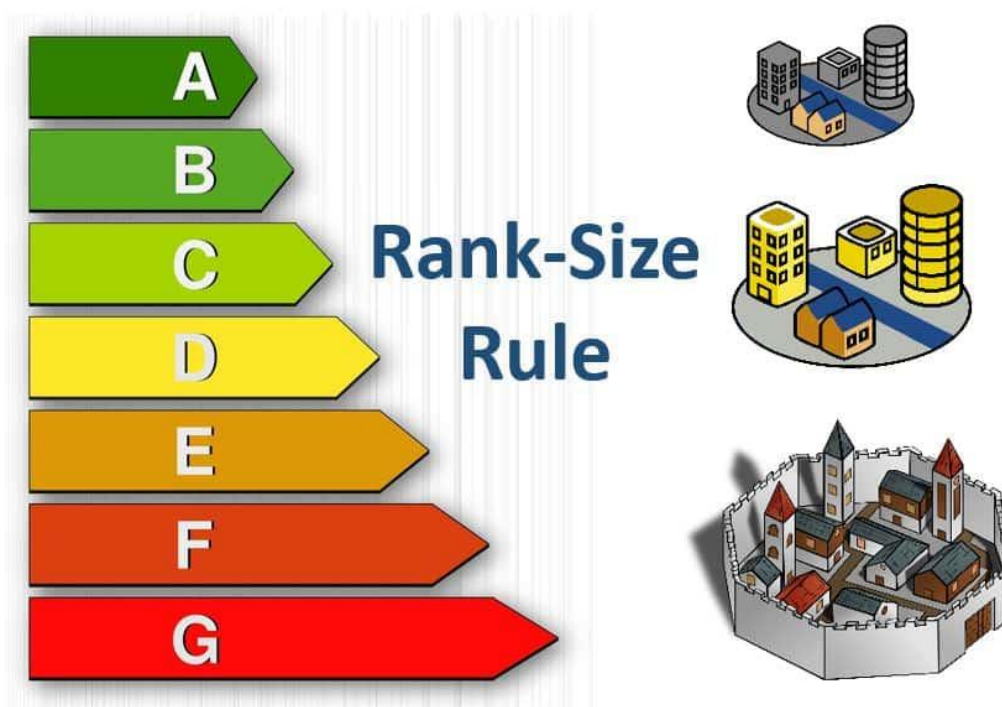


The original minimum limit for a city to be classed as a primate city was that the main city needed to be at least twice as large and more than twice as significant as the next largest place. Bangkok manages to be 40x as large, making it one of, if not the most extreme primate city in the world.

### PROBLEMS OF PRIMATE CITY

- Imbalance in development
- usually a progressive core, lagging periphery, on which primate city depends for labour and other resources.
- Increase in land value resulting in price rise .
- Concentration of power supplies.
- Urban rural inequalities.
- Pollution
- Crime.
- Traffic congestion.
- And House shortages.

### RANK SIZE RULE



## THE LAW OF RANK SIZE RULE

***“IF ALL THE SETTLEMENTS OF A COUNTRY ARE RANKED ACCORDING TO POPULATION SIZE, THE SIZES OF THE SETTLEMENTS WILL BE INVERSELY PROPORTIONAL TO THEIR RANK.” -ZIPF***

### RANK SIZE RULE:

- If all the cities in a country are placed in order from the largest to the smallest, each one will have a population half the size of the preceding city.
- The main aim of the rank size rule is to find regularities concerning the characteristics of settlements in various countries, and to fit a graphical description of size distribution of the cities.
- The town's population is derived by dividing the largest city's population by the towns' rank.
- The size of a particular town can be predicted by observing its rank and the size of the largest city in the area.
- The settlements within a defined area are ranked in descending order according to the size of their population.
- Zipf's observed the size and number of settlements in various countries. He noticed a common characteristic which has been called the rank size rule. Having observed this order in the real world, he then sought to explain it. The rank size rule is an empirical regularity.

### **Rank-Size Rule**

- Cities in a country are ranked according to their size in relation to the country's largest city

Rank 1 – Largest City

Rank 2 –  $\frac{1}{2}$  the number of people as Rank 1 city

Rank 3 –  $\frac{1}{3}$  the number of people as Rank 1 city

Rank 4 –  $\frac{1}{4}$  the number of people as Rank 1 city

Rank 5 –  $\frac{1}{5}$  the number of people as Rank 1 city

### **Problems with Rank-Size Rule**

- In some countries the differences between a First Ranked and a Second Ranked city was much less than expected

Ex. New York City is only 1.3times larger than Los Angeles

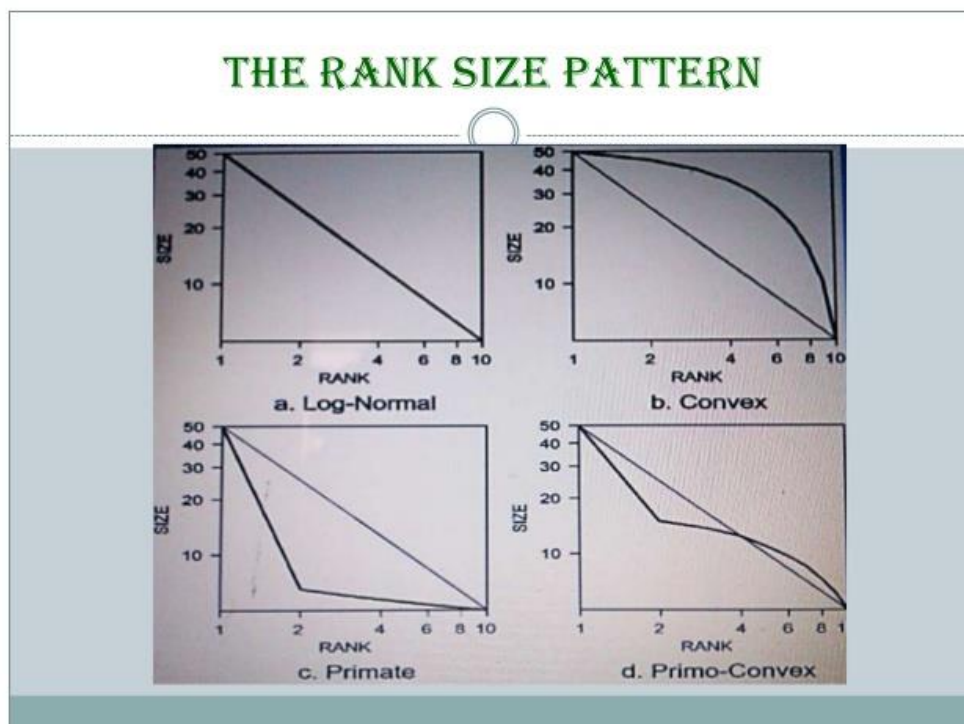
- Some countries are dominated by Primate cities so the changes are larger than expected – Ex. Kinshasa is 8times larger than the next largest city Lubumbashi

### Uses for Rank-Size Rule

- Sets a general classification for Ranking cities by population in a country
- Measures degree of primacy for a particular city in a country
- Helps distinguish countries with special characteristics – Area, Wealth, etc...

### RANK SIZE RULE PATTERN

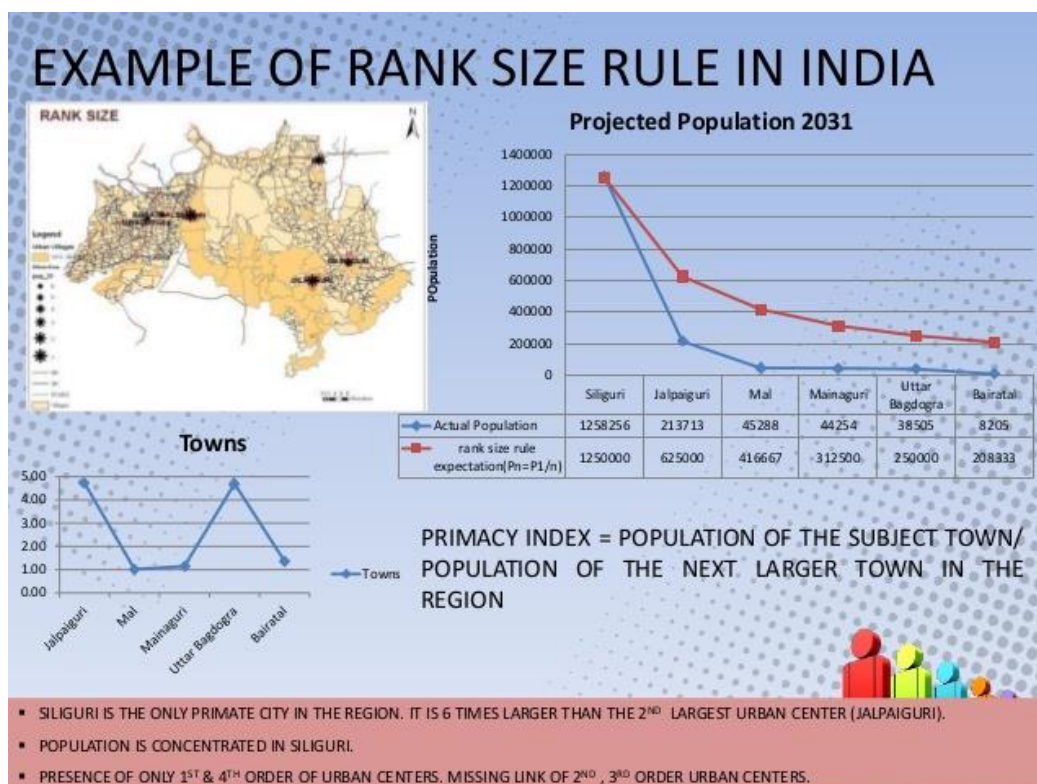
- In stepped order pattern there are series of levels and steps. (Conurbations, cities, towns etc.)
- In binary pattern two or more cities are larger than the predicted size.
- In urban primacy, a single city dominates and is much greater than the next large center. (Primary pattern)
- The theoretical rank size rule pattern is a straight line.
- The rank size pattern



## Case study- INDIA

the large rank size relationships in India are an exception rather than a rule and, Absence of rank size rule at the national level is because there is no integrated system of settlements.

- For example according to 2001 census Greater Mumbai has 16368, Kolkatta has 13216 and Delhi has 12791 thousand population.
- At the second level Chennai has 6424, Bangalore 5686 and Hyderabad 5533 and Ahemdabad 4519 thousand population.
- At upper hierarchy India is dominated by three cities all of which have a population very close to each other.
- At national level rank size rule is absent in India.

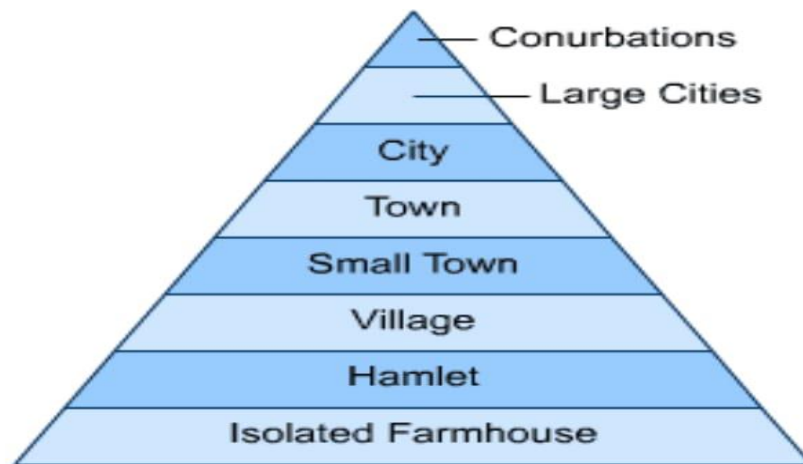


### *Urban hierarchy-city region*

#### Urban hierarchy:

- The urban hierarchy ranks each city.

- Based on the size of population residing within the nationally defined statistical urban area.
- Urban hierarchies tell us about the general organization of cities and yield some important insights.



The population of each type of settlement increases as the number of settlements of that type decreases.

What are urban settlement?

Definition of urban settlement varies from country to country however, the following are the main characteristics:

- More than 75% population are involved in secondary & tertiary sector.
- High population density.
- The urban settlement is notified by the government.

In India, for an urban area, one of the following characteristics are needed:

- As per 2011 census, the area should have more than 5000 population.
- At least 75% of the population is involved in the nonprimary sector.
- The area should have municipality, corporation, canton board or urban area should have notified try town area committee.
- Population density should have more than 400 per square kilometer.

Based on the population figure the following five types of the urban hierarchy are found:

1. Megalopolis: population more than 1 crore or 10 million, Tokyo & New Delhi are the examples.
2. Conurbation: population between 50 lakh to 1 crore or 5 million to 10 million.

3. The metropolis: population between 10 lakh to 50 lakh or 1 million to 5 million.
4. The city: population between 5 lakh to 10 lakh or 0.5 million to 1 million.
5. The town: population has less than 5 lakh.

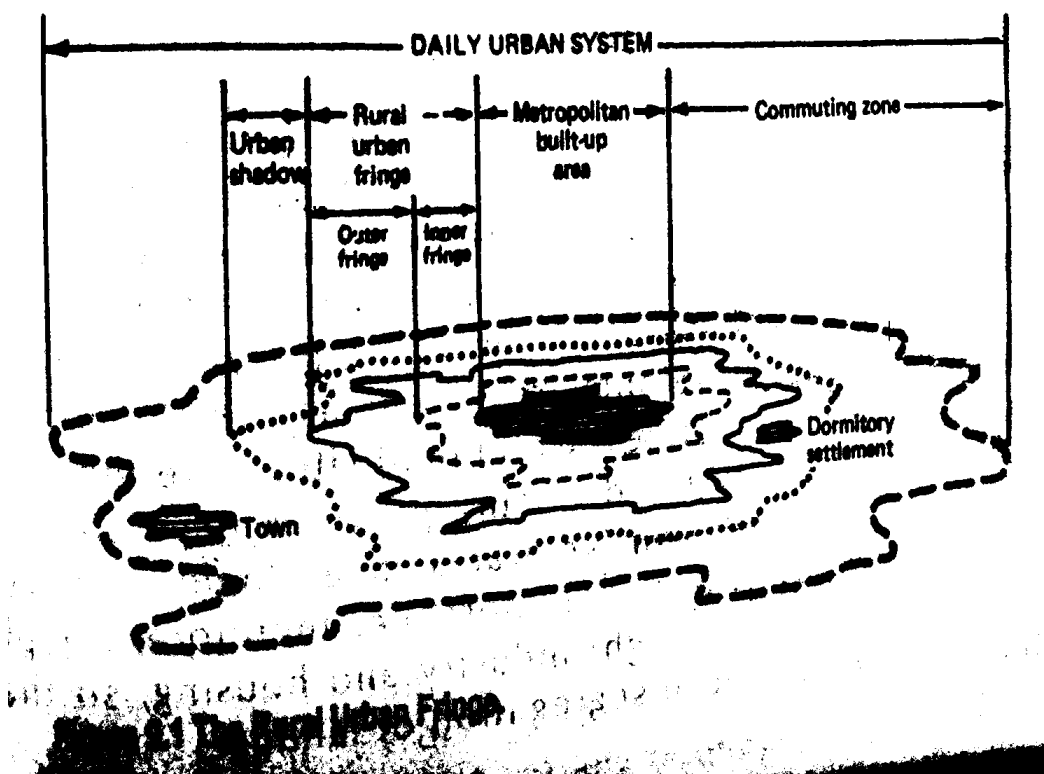
The town has further divided into the following hierarchy:

- Class 1: population between 1 lakh to 5 lakh.
- Class 2: population between 50,000 to 1 lakh.
- Class 3: population between 20,000 to 50,000.
- Class 4: population between 10,000 to 20,000.
- Class 5: population between 5,000 to 10,000.

### City region

- An area that surrounding an urban settlement which functions as the regional centre.
- This area tied to the regional centre for higher order functions although oriented to local towns for lower order ones.
- It is an area considerably larger than the urban settlement area.
- Also known as complementary region, hinterland, sphere of influence, umland, urban field and tributary area.

### Rural-Urban fringe



Rural-Urban fringe is a zone or frontier discontinuity between city and country in which rural and urban land use are intermixed.

**Characteristics:**

The urban-rural fringe contains a mixture of land use. this includes residential areas, recreational facilities such as golf courses and farming. These areas tend to contain areas of better quality housing. Gardens and houses are larger due to lower land values and more open space.

**Land Values:**

Low land values. Therefore larger houses with sizeable gardens are located here.

**Population Density:**

Low population densities exist in this area.

Recently there has been increasing demand for land because of:

- Land is cheaper – as the accessibility of the RUF is lower than that of the inner city areas and most of the people have to travel to the inner city for work, fewer people are willing to live in the RUF. Thus the land prices are lower.
- There is less traffic congestion and pollution – as the area is a new development in the outskirts, and the population living in the area is lesser than the inner city, the traffic congestion and pollution levels are lesser.
- There is easier access and a better road infrastructure – as it is a newer development with a lot of space available.
- There is a more pleasant environment with more open space – the amount of open space decreases with time as the extent of development increases, and so does the friendly environment.

Beneficial development in the rural-urban fringe area:

The rural-urban fringe is characterized by a mixture of land uses, most of which require large areas of land.

- Housing developments as urban sprawl continue
- Science and business parks
- Hypermarkets and superstores
- Retail parks and out of town shopping centers
- Office developments
- Hotels and conference centers
- Airport expansion

Housing developments

Housing demand is proliferating. Some of the reasons for this are:

- a growing population
- more elderly and retired people
- more divorced and single people

- increasing numbers of immigrants
- more people buying second (holiday) homes

Problems caused by developing the rural-urban fringe:

- Large areas of the countryside may be lost
- Buildings may be out of character with existing rural buildings. Thus the loss of aesthetic sense
- Villages may become sub-urbanized
- Traffic is likely to increase (both cars and lorries)
- there may be an increase in pollution (noise and air)

### **Sub-urbanization**

- A suburb is a mixed-use or residential area, existing either as part of a city or urban area or as a separate residential community within commuting distance of a city.
- An area or town located at the edge of an urban city. A suburb is contained either just within or just outside of the city boundaries.
- It is usually primarily a residential area, and is often dependent upon the nearby city for employment opportunities and other benefits.



The suburbs are an area where people live, which is away from the centre of a town or city, typically made up of private, semi-detached housing.

Characteristics of the suburbs:

The suburbs contain private houses built during the inter-war period (1930's). Many of the houses found in this zone are semi-detached. The houses are characterised by their front and back gardens, garages and bay windows. This area also contains some council housing.

Land Values:

Land values are typically medium. The land is cheaper than in the inner city, which is why the houses are larger and have bigger gardens.



Population Density:

Medium population density. At the time these houses were built on the edge of the city where land values are cheaper.

### **Suburbs:**

- Transportation: Freeways and transport corridors increased accessibility of the suburbs. Freeways opened up large areas of cheap land for development of low-cost housing by developers.
- Housing production: Financing easier to obtain - quick system, plus federal guarantees. Loan programs that favored new construction not repairs / upgrades.
- Landscape preference: Desire for large home size - ranch style design as indicative of expansionist mood. Suburbs as seen in popular culture.
- Social and demographic trends: High fertility of the baby boom era raised the demand for housing. Large families demanded large homes.

### **Satellite town**

- A satellite town or satellite city is a concept in urban planning that refers essentially to smaller metropolitan areas which are located somewhat near to, but are mostly independent of larger metropolitan areas.
- Satellite towns are found throughout the world. Wherever there is a large metropolis, a satellite town can be found nearby.
- Satellite cities are planned cities, adjacent to a major city. Such cities manage or contain the urban sprawl. They are designed to help a major city extend in all possible ways. Satellite cities could be completely standalone cities, developed outside metros. They are self-containing, independent cities, unlike a suburb or a subdivision.

### **Umland**

- ‘Umland’ of certain towns of England of which the immediate areas around these towns had been demarcated (Mandal, 2000).
- “the immediate rural land surrounding a metropolitan city and distinguished it from hinterland which denotes the entire accessible land beyond the Umland of a city within a country” (Rao, 1981).
- “the city as a living organism depends for its vitality not only on its internal resources but also on its capacity for its growth from a vast region surrounding it”.  
(R. L. Singh , 1955).

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