CHAPTER 8: A REVISIT OF LOCATION AS A PHILOSOPHY

OBJECTIVES OF THE UNIT

1. At the end of this unit, the reader must be able to:
2. Define Location;
3. Understand location as a philosophy;
4. Analyse different location theories;
5. Critique the applicability location theory

RATIONALE FOR THE UNIT

The rationale of this unit is to enhance the learners' knowledge and competencies on various location theories that inform location of different establishments in physical planning and real estate. Each student should appreciate and comprehend different location theories. Also, students will critique the applicability of different theories and understand that despite the existence of these theories, they might not be applied as they are in different countries.

ASPECTS AND ISSUES

There are many locational theories that are used in developing the value of a particular property, and during the zoning process in physical planning. From ancient Greek philosophers to contemporary thinkers, the concept of location has been examined from various angles, including its impact on identity, knowledge, and perception. Some of the theories have lost relevance in the contemporary world and therefore, there is need to revisit this philosophy of location and critique its relevance and applicability.

WHAT IS LOCATION?

A location is the place where a particular point or object exists. Location is an important term in geography and is usually considered more precise than "place."(https://education.nationalgeographic.org/resource/location/ (accessed 16.01.2024). Location as an aspect of public planning and management aims at improving spatial planning of public services to ensure ease of access to public facilities e.g. schools, clinics etc. The whole purpose would be looking at ease to which services may be reached from a given location. Figure 56 shows some examples of locations of facilities.

Figure 55: Illustration of different Locations (*[online] Available from: https://education.nationalgeographic.org/resource/location/ [accessed: 01/03/2023]*

A Location can be absolute or relative. A place's absolute location refers to the exact place on earth, which is often given in terms longitude or latitude.

For example, the National University of Science and Technology (NUST) is located on a latitude of – 20.1612 and longitude of 28.6355. It is located at the corner of Cecil Avenue and Gwanda road, in Bulawayo, Zimbabwe. This is NUST's absolute location. Absolute location assists in establishing the exact location of a particular place.

Location can also be expressed in relative terms. Relative location is a description of how the place is related to other places. For example, NUST is located 433 km from Harare, opposite Harry Allen golf club. It is about 10km from the main post office. These are the relative locations of NUST to other locations. Relative location can assist to analyse how two places are connected. Directions such as north, south, east and west help describe the location of one place in relation to another.

Longitudinal and latitudinal coordinates help pinpoint the exact location of a place. Knowing that a location is 0 degrees west (longitude) and 30 degrees north (latitude) informs one that the place is near the City of Bulawayo. Being advised that the location is 0 degrees south and 41 degrees, 10 minutes and 10 seconds north informs one that the location is Zonkizizwe, a shopping complex in Bulawayo. To get to the shopping complex, directions like left, right, proceed for 1km then turn right give people a more precise location.

LOCATION AS A PHILOSOPHY

The physical location in which an individual is situated can shape his or her experiences, values, and worldview. For example, someone growing up in a rural area may have a different perspective on life compared to someone raised in an urban environment. The cultural, social, and environmental factors associated with a particular location can influence an individual's sense of self and their place in the world. Different locations offer unique opportunities for learning and understanding, and our knowledge is influenced by the particularities of the places we inhabit.

Moreover, location is intimately connected to perception and our understanding of reality. The philosophical concept of phenomenology explores how our experiences are shaped by our situatedness in the geo-political world. Pursuant to the philosophical conception of phenomenology (a philosophy of experience), our perception of the world is always mediated by our bodily presence and the context in which we find ourselves. Our location influences how we perceive and interpret the world around us, highlighting the subjectivity and contextuality of human experience.

In contemporary discussions, the concept of location has taken on new dimensions. With the advent of globalization and digital technologies, our understanding of location has expanded beyond the physical realm. Virtual spaces and online communities have challenged traditional notions of location and have created new opportunities for connection and engagement. The emergence of social media platforms and digital communication tools has enabled individuals to interact across vast distances, transcending the limitations of physical location.

Furthermore, debates around environmental philosophy and ethics have emphasized the importance of our location within the natural world. The impact of human activities on the environment has highlighted the interconnectedness of all locations on Earth. Our actions in one location can have far-reaching consequences for other places and ecosystems, emphasizing the need for a more holistic and environmentally conscious approach to location and our relationship with the Earth.

LOCATION THEORIES

Location theories explain in a consistent and logical way the distribution and location of economic activities in space in a manner in which various facets of economic activity are interrelated. The theories are derived from David Ricardo; the Ricardian rent theory which suggests that productivity of land determines rent and given that rent diminishes in unison with productivity as distance from the optimum location increases, rent diminishes (Capello, 2011). A rent gradient would emerge consisting of a series of 'bid rents' which would compensate for falling revenue and higher operating costs. Different land uses would have different rent gradients.

THE VON THUNEN THEORY

Von Thunen (1783-1850) was a German scholar and farmer who got interested in the relationship of land use and rent in villages surrounding a central market place (Shaffer, Deller and Marcouiller, 2004). In his study he explored the economic forces that affect agricultural prices, land rent and the relationship of these forces to the pattern of land use. Von Thunen observed that rents tended to be higher in the centre of the village and constantly declined as one moves away from the village centre (Glatte, 2015).

a. ASSUMPTIONS OF THE THEORY

- Von Thunen based his land use model on a number of assumptions. These were adapted from Dube, Brunelle and Legros (2016):
- Economic activities are distributed around a single market centre
- Prices of products are identical for each product in the market.
- Rent is homogenous within the same economic establishments
- The sum of the individual establishments' location decisions will give concentric spatial distribution of economic activity around a centre.
- Differences in transport routes and topography are ignored.

Von Thunen's analysis was based on the assumption that the geographical pattern of agricultural production was directly related to the competition among alternative uses (timber, crops, and livestock) for a single plot of land and the use that earned the highest "rent" determined land use at that location. He assumed that a single, central city located on a homogeneous plane purchased all agricultural produce and that labour and capital were not mobile. Distance from the central market place was the prime determinant of land use. Land near the city would be used for the most intensive agricultural production such as dairying and horticulture. As distance increased from the centre, transportation costs increased and land prices declined because only less intensive uses could be supported.

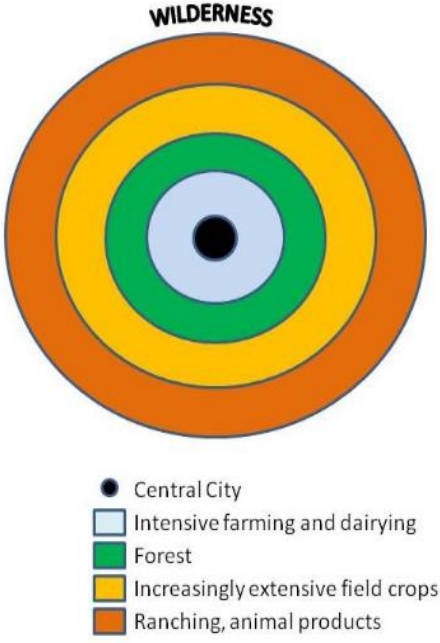
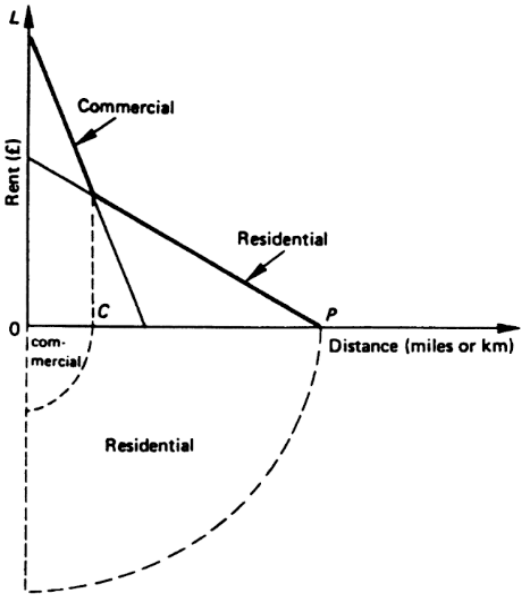


Figure 56: Von Thunen Land-use concentric rings (Adapted from Henry *et al.*, 1997:490)

APPLICATION OF THE VON THUNEN THEORY

The von Thunen theory of location is based on transport cost from the central market producing a pattern of concentric zones, each zone specialising in a

particular type of agricultural produce. By substituting general accessibility with transport cost, we can apply the von Thunen model to urban areas.



- The outcome will be a commercial zone of radius OC surrounded by residential zone.
- Similarly, land values will fall from the city centre to the periphery by the thick line LP which shows the highest bid at any point.

Figure 57: Application of the von Thunen model to urban areas (Shaffer *et al*, 2004)

Allowing for its simplified assumptions, therefore von Thünen model explains: The pattern of land use of the urban area;

- The fall in land values from the centre towards the periphery;
- How the urban area grows, since each zone tends to expand into the next as population and economic growth; and

The basic pattern eventually results – a separation between workplace and residence. The broad pattern of land uses which depict in a highly simplified form, certain broad, but irregular concentric zones as follows.

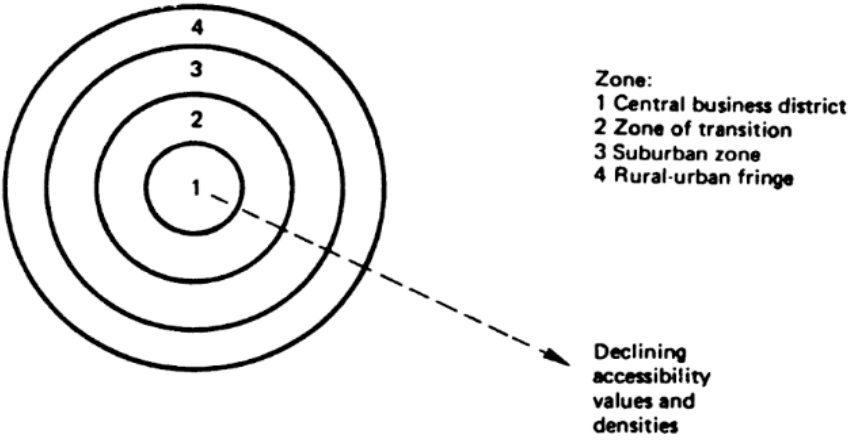


Figure 58: Application of the von Thunen model to urban areas (Henry *et al.*, 1997:491)

CRITICISM OF VON THUNEN LAND USE MODEL

The theory has been criticised for oversimplifying land-use and economic activities location in space.

It is not always true that land-uses are located in an isolated geographical plane. Some areas have rugged terrain hence the impact on how land is utilised an economic value emanating thereof.

Today's settlements reveal multiple centres where people can access goods and services. In this regard the theory is ancient and outdated because it was developed when villages relied on single market centres for trade (Dube et al, 2016).

The theory suffers from inadequate coverage on the impact of labour, entrepreneurship and capital on location decision. Its main emphasis is on land and transport cost of produce to the market. Modern locational decisions are no longer based on transport but several factors including technology, proximity to supplies of raw materials for manufacturing firms.

Von Thunen's theoretical underpinnings have been overtaken by developments in technology such as automobile invention where people can commute from far-away places with relative easiness. The advent of information communication technology has altered location decisions to a greater extent. Merchants, firms and their clients are able to trade online while deliveries can be made through contracting third parties.

BID RENT THEORY

The bid rent theory was conceived by William Alonso in the 1960s. It attempted to explain the variations in urban land values. The theory was inspired by Von Thunen land use model and it is based on the principle that rents tend to diminish outward from the city centre (Jordaan *et al*, 2004). The theory is based on micro-economic theory and was mainly developed in the context of urban land uses and urban land values. In this theory, patterns of land use are determined by land values that are, in turn, related to transportation costs. Each type of urban activity will have its own bid rent function & the combination of several bid rent function will define the rent gradient

a. ***ASSUMPTIONS OF THE BID RENT THEORY***

- Cities exist on a featureless plain, without rivers, hills or other geographical obstacles that might affect commutes & prices
- Transportation costs are a linear function of distance from the city centre
- CBD contains the vast majority of employment, and all other employment is distributed evenly throughout the metropolitan area
- The city's population is evenly distributed and households have uniform taste of housing
- All land is privately owned
- The market place for all goods and services is located in the CBD – so all goods have to be transported to CBD for sale

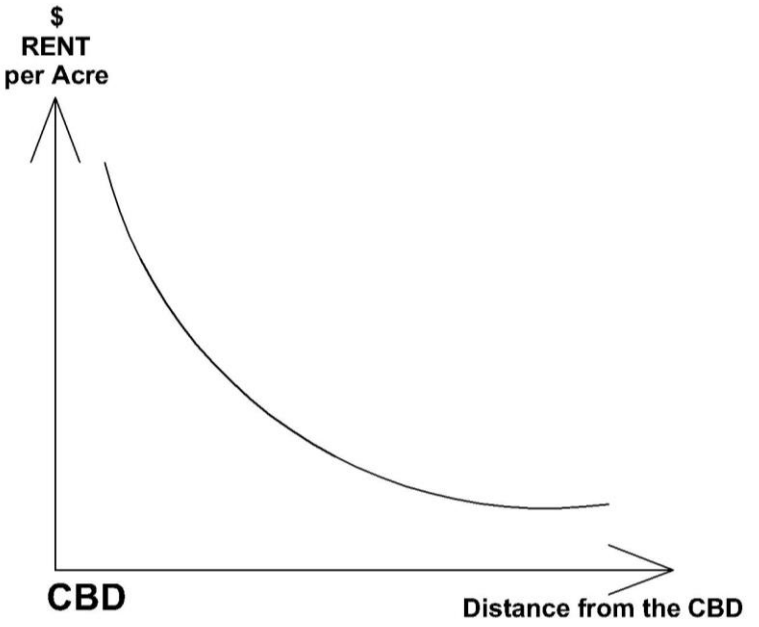


Figure 59: Bid rent curve showing relationship between rent and distance from CBD (Adapted from Capello, 2004)

The bid rent function in the theory explains the relation between land uses and urban land values.

In a very simplified way, households and firms make trade-offs between the land price, transportation costs and the amount of land they use (Alonso, 1960). This results in a convex land price curve with the highest land values near the city centre

The bid rent theory states that rents increase upwards close to the city centre as households seek to minimize transportation costs (Balchin et al, 1995). Rents are a negative function of distance from the city. Conversely rents are lower away from the city centre because transport costs are higher. Transportation costs are low near CBD, firms locating near the CBD are willing to pay more for centrally located parcels of land in order minimise their transportation costs. According to Blair (1995), this feature of the bid rent theory causes land values to fall with increasing distance from the city centre. Transportation costs on the rent gradient are not limited to bus fares or fuel

consumption but also include the opportunity cost of commuting for example time spent on commuting could be spent on leisure or work. The intensity use of land in the CBD results in the development of high rise buildings to accommodate a hype of activities.

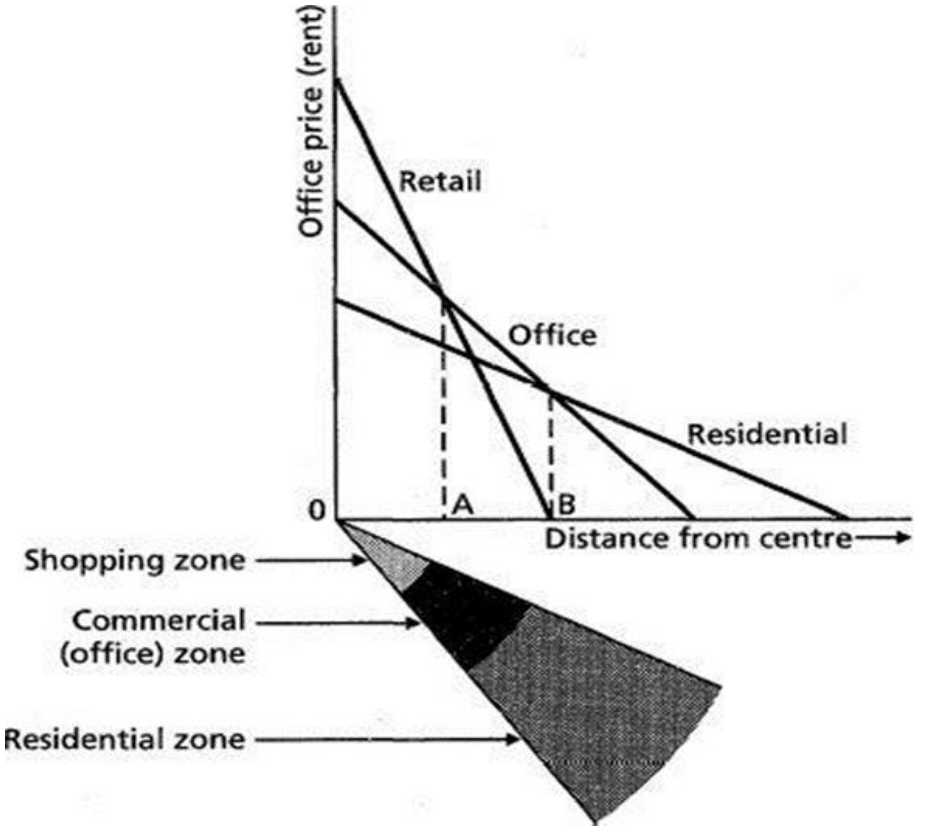


Figure 60: Land uses according to the bid rent theory (Blair, 1995)

The intersection of two bid-rent functions (point A) defines the point at which land use changes from retail activities to Office activities. Retailers would occupy land from CBD to A – up to this point the retail bid-rent line is above the bid rent line for office. While households would value access to CBD to minimize transport costs, many households also value open space and low density lifestyles (Alonso, 1960). As a result households would have a bid rent function for land that is flatter than that for manufacturing.

b. Bid rent functions

This section summarizes the functions and factors affecting land uses of different land use zones in a city.

The location of shops in the CBD depends on the flow and character of pedestrian traffic, nature of adjacent development and availability of vacant sites.

Manufacturing sector location is determined by factors such as nature of the product, stage of development of a firm (Balchin et al, 1995).

Heavy industry location tend to favor the outer urban zones closers to major roads for transportation of materials and larger spaces to promote flow method of production (Assink and Groenedijk, 2009).

c. Applicability of the Bid Rent Theory

Despite being an ancient theory, the bid rent remains relevant in modern day location and land use planning practices in cities across the world. The traditional function of the CBD as a commercial zone remains prevalent for example upmarket supermarkets and fashion boutiques are found in city centers such Harare. Retail companies take advantage of increased flow of pedestrian traffic and hence thrive in city centers. Rentals are high given the obtained high level of economic returns from sale of products. The high level of competition amongst companies promotes decentralization of some activities that were traditionally found in the CBD. Industries and manufacturing companies locate in zones outside the CBD to access main transport corridors for instance the Southerton and Workington industrial zones in the city of Harare. The residential land use especially low income are located far from the CBD as people trade-off transport cost with low rent. However the high income seek low density residential zones where they enjoy open spaces and luxurious accommodation.

d. Criticism of Bid Rent Theory

The bid rent theory has many limitation in reality. This unit presents some of the main criticisms outlined by Dube and Legros (2015).

The theory is based on the operations of the market in terms of prices and rent bids. It heavily ignores the operations of the 'visible hand' that characterize land use planning in public planning spheres.

Just like the Von Thunen land use model, the bid rent model assumes a single city centre where all commercial activities are carried out. In today's cities there are more than suburban centres that compete with the main city centres in terms of retail functions.

The theory is outdated and has been overtaken by advances in technology because some firms have traded off the comparative advantage of CBD with suburban locations. Development in online and web based commercial transactions has promoted the location of firms in outlying zones.

WEBER'S NEOCLASSICAL LOCATION THEORY

It was propounded by a German economist Alfred Weber who argued that the economy was characterized by and constant returns to scale. The theory is an attempt to explain why firm locate in a particular place.

a. ASSUMPTIONS

1. The theory is based on a number of assumptions. This unit presents some of the assumptions outlined by Glatte (2015).
2. The economy is characterized by perfect competition
3. Firms in the economy seek to maximize profit
4. Firms maximize profits by minimizing the transportation costs of shipping input supplies to the firm and maximizing the potential market demand for their good or service.
5. There exist a featureless surface that is not complicated by natural or institutional barriers such as mountains, rivers and valleys that create transportation bottlenecks and political boundaries.

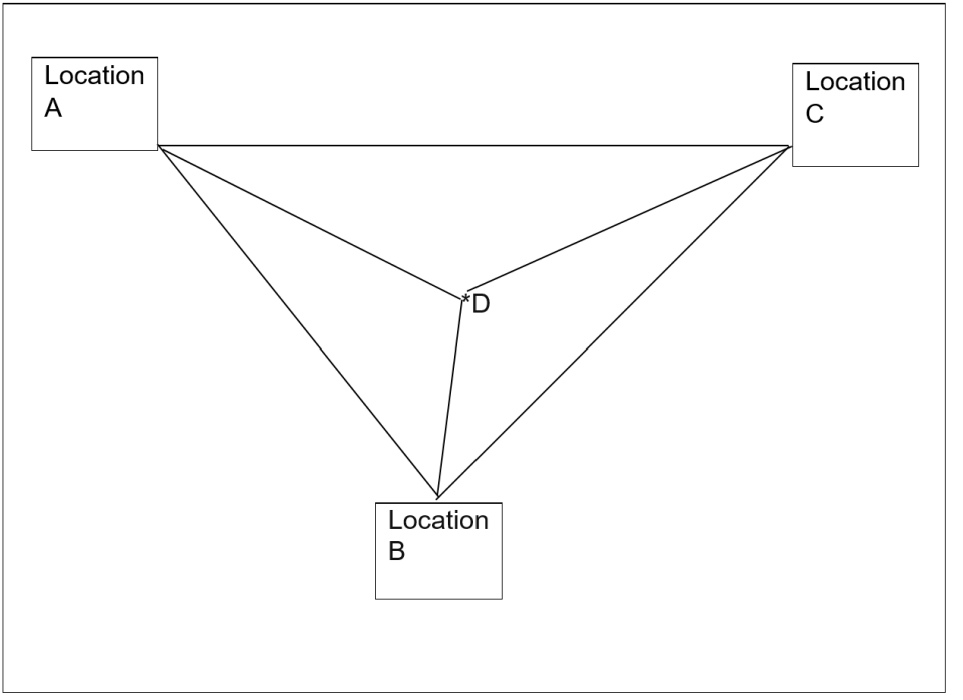


Figure 61: Weber's Location theory in diagrammatic presentation (Adapted from Shaffer et al., 2004)

The firm is purchasing its inputs from three markets A, B and C and selling its output in all three markets. As way to minimize transport costs and maximize demand in all the three markets. The optimum location would at point D which is equidistant from all the three markets. Transport costs would be minimized on distances AD, BD and CD. At the same time, the firm should aim to maximize the demand for its products in the three markets. This model assumes that location decisions are primarily based transport cost of ferrying input and products to the market. According to Shaffer et al (2004), the diagram in figure 52 is known as the Weber problem.

b. Applicability of Weber's Neoclassical Location Theory

- This unit focuses on the applicability of the theory in reality by looking at Zimbabwean examples.
- Industrial locations in Harare indicate the influence of transport factors costs included.

- Location of firms within an economic region is linked to the supply of raw materials which are shipped through either road or rail transport, for example ZimGold Cooking Oil processing industries along Lytton Road in Harare's Workington industrial area ship soya beans and sunflower from farms around Harare and other areas

c. CRITICISM OF WEBER'S NEOCLASSICAL LOCATION THEORY

- A number of criticisms have been levelled against Weber's Neoclassical Location Theory. This unit presents criticisms outlined by Glatte (2015).
- The existence of an economic plane is an oversimplification because in reality the earth's surface is characterized by various topographical and geomorphological features which affect transport routes and hence costs.
- The assumption of perfect market conditions is an abstract from reality because in some circumstances markets are characterized by monopoly and oligopolies that band together to control market operations.
- Location decisions are sometimes based on local authority and central government policies and regulations as opposed to market operations as assumed in the Weber Theory.

ACTIVITIES FOR THE READER

i) Write short notes on location as a philosophy
ii) Briefly explain three location theories outlined in this unit
iii) With the aid of diagrams explain the applicability of location theories in practice
iv) Outline the limitations of each of the theories explained in (ii).

CONCLUSION

We have not come to the end of this unit, and now, therefre, it is expected that the reader must be able to explain location as a philosophy. Further students are expected to understand location theories, their underlying assumptions, and diagrammatic presentation while appreciation how these apply in real world situations. On the other hand, students should be able to critique location theories.

SUGGESTIONS FOR FURTHER READING