

Industrial location model by phunziro mphwina



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Geography despite being defined as a science it has a vast area of concern, whereby some of these areas touch the economic grounds a field which others identify not as a science. In geography Spatial science is the field that holds some of the economic aspects this is so as it looks at the economic functions of space. Krugman (1991: p6) defines spatial science as a geographical science that is concerned with the organization of things according to space.

This is to say that the arrangement and distribution of things in line with space has a lot of effect on the efficiency of other economic processes. This led to the development of Alfred Weber's "Industrial location model" in 1901 (McCann & Shaffer, 2004: p8). Where by Weber argued that the location of an industrial plant is determined the factors of transport costs, labor costs and agglomeration (Barnes, 1984: p1).

This is the model which this essay intends to make a review on. | Adopting some of Weber's factors as basis of their arguments Christaller and Losch thus the Central place theory and Von Thunen's land use theory these theorists argued in similar vain as Weber. Weber assumed that there is an uneven distribution of natural resources. Thus raw materials are in not equal existence elsewhere, (Bradford & Kent, 1977: p43).

Lokman (2003: p1) justifies Weber's factor of resource distribution by relating it to one of Christaller's assumptions that there is a homogeneous disperse of resources where he says one would choose to place his industry at location A which is 3 kilometers away from the market or location B which lies 5 kilometers away from the markets. Since there is an even existence of

resources people would not be limited by resource availability an assumption which is very unreal.

Weber disagrees to such a presupposition by bringing in reality where he says there is an uneven distribution of material thus raw materials, fuel, and water needed for industrial production may be found only in particular locations. Consequently people would prefer to locate to the areas close both to the market and resources in order to minimize transport costs. Thereby distribution of raw material determining the location of an industry. Weber also continued to assume that the size and location of centers of consumption of the industrial products are given.

This means that producers cover different sizes of land for their Industrial activities. This determines the location of the industry in that land as we enclose the market place tends to be costly this is so as it is more expensive because the producer would have low transport costs but pay high rent compared to other's who located away from the market place but cover huge land that would let them cover up for the transport costs. (Barnes, 1984: p16) This assumption differs from that of Christaller and Von Thunen which assumes that there is an isotropic (all flat) surface. Therefore difference in land size determining location of an industry.

In terms of labor Weber assumed that there are several fixed locations of labor where given rates operate, this is to say labor is immobile and unlimited at these locations (Bradford & Kent, 1977: p43). This is to say that since there area differences in distribution of raw materials which is one of the determining factors in the location of the industry. This means some locations could have increased access to labor and this means there would

be low labor costs at such places other than in location that have low labor experiences whereby those employed would have to work extra hours which would result into extra labor costs.

Therefore access to labor determining industry location. Despite the fact that most of Weber's assumptions deviate from the Christaller and Thunen's, he agrees with both of the, on the idea that all entrepreneurs work on minimizing the cost of production and maximize their profits. (Calvert, 2010: p 45) describes some of the ways that these entrepreneurs adopt in order to elevate their profits. One of the ways is by investing in fields that are not faces with harsh government policies that lead to losses, the other solution to these losses is by going by transport systems that are cheap and efficient.

In contrast Weber identified the three general regional factors that affect the costs of production namely, cost of raw materials, cost of transporting the raw materials and the cost of labor. These have been advanced by the assumptions. In terms of raw material cost Weber argues that raw material value determines their cost thus there are other material which are hard to get (Bradford & Kent, 1977: p43) give an example of mines where cost of mining some of the minerals outwits the cost of selling the minerals themselves, they also say these variations in mining difficulties prompts the reflection based on the transport and labor costs.

Weber on the other hand identified agglomeration which is the effect produced when two different firms operate in the same area and tend to pull losses against each other. This is an economic situation where individual firms would suffer great losses for similar services. Weber suggests that these two firms can work hand in hand and access the desired services at a

lower cost. This determines the location of an industry in that, one would choose a location where he will be able to link with other firms in order to access services at a more reasonable cost other than working individually (McCann & Shaffer, 2004: p10).

Revisiting the cost of transporting the raw materials Weber differentiated two different types of raw material. He specifically explained that there are other materials that are used to the fullest thus upon extraction and processing there is a reasonable mass that is lost other than that which remains for full use. This means that the unneeded mass that is transported along with the end product just added extra costs other than the cost for transporting the real raw material. For example a company transports 5 kilos of iron ore for K2000.

The ore from which 2 kilos is going to be extracted from, this is to say 3 kilos will be taken as wastes thus cost approximately K1000 which is a loss. This can be modified by adopting a different transporting system or changing the investment field. All in all Weber's model though it was developed in the old days when technology had not fully sprouted it serves a great deal to the economic world, under the factors that have been discussed above.