

A LAND-USE ANALYSIS OF ISIALA MBANO LOCAL GOVERNMENT AREA, IMO STATE

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Abstract

This study was structured to investigate the various ways in which land uses are patterned in Isiala Mbanjo Local Government Area. The collection of primary data for the survey was through the use of a 20 - item interview schedule. The data collected were analyzed using simple descriptive statistical tools. The findings of the researchers' classification system include that land use are patterned into agricultural land, residential, commercial, industrial and social land use in the study area. These various land use types were determined by the following factors: ownership, site, fund, soil, topography, climate, rainfall and drainage. There are obvious irregularities in the land use pattern of the study area. We advocate and recommend some adjustments to distance mechanisms and the imposition of rural land use planning in the study area after rural land policies have been put in place by the government.

Introduction

Land is the gift of nature and it is put into different uses depending on its relative spatial location with respect to other places (situation); site (intrinsic attributes of the place); and variations in perception and evaluation of alternatives by residents. Land can be defined as the solid part of the earth's crust which comprises of soil, forest, areas occupied by water, hills and mountains. It also includes areas with natural resources as well as farmland. It is the major factor of all factors of production (Udo, 1982; Staatz and Eicher, 1984; and Areola, 1990).

Land renders a lot of services according to Abler et al. (1977), people use their environments according to their needs, their wants, and the know-how they absorb while growing up in the society that rears them. However, the problems presented by distances between places have grave consequences on economic development and planning, land use characteristics, relative advantages of locations and amount of circulation. The question to ask is what are the specific uses to which land is put in the study area? Rural land use patterns are different from urban land use patterns but they are not mutually exclusive.

Generally, land use patterns are beset with numerous problems as evidenced by Smith (1981); Soyode (1983); Salau (1993); and Adeyemo (1995). At times, government and political institution exert impact upon the ownership of land and its use to the detriment of the community. While often times rigid adherence to custom may lead to uneconomical use of land and loss of some valuable land to such hazards as erosion and fire (Enger and Smith, 2000).

Clearly various factors affect land-use in the world today, each perhaps representing a part of the social organization into which man is born which in turn directs and controls him in his activities. What are those factors responsible for differences in pattern of land use in the study area? Which factor exerts the greatest influence? Does location, distance with respect to market play a role in land utilization practices in the study area? This study sought to address the aforementioned research questions.

Methods

The choice of Isiala Mbanjo Local Government Area was informed by the fact that it is a major agricultural producing area in Imo State. This agricultural potential of the study Local Government Area results in the availability of fertile land which stretches across its total land area of 3.300 square kilometers, from Isiala Mbanjo Local Government Area, four autonomous communities were randomly selected. And from each of these autonomous communities were hundred and fifty (150) adults (above 20 and below 60 years) were selected using the simple random sampling technique. A sample size of 600 obtained from a total population of 909,415 (1991 Census). The main instrument for data collection was personal interview and field observation. The primary data

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obtained were analyzed using simple statistical techniques such as percentages and totals. The analysis was purely descriptive.

Findings of the Study Land Use Pattern

Rural surface are occupied by differing land uses at differing levels of intensity. The data on land use pattern are presented in the table below.

Table 1: The Land Use Pattern in Isiala Mbano Local Government Area

Category	Frequency	% Frequency
Agricultural Land	240	40.0
Residential Land	120	20.0
Industrial Land	80	13.3
Commercial Land	120	20.0
Social	40	6.7
Total	600	100.0

A land use classification system which agrees with Harvey (1973) and Northam (1975) was applied. And from the analyzed data in Table 1 it can be seen that 40% of the land in the study area are put to agricultural use. This could be as a result of the soil. The nature of the soil in the area, both the rocky and clayey areas make it easier for farming activities to take place in the different geographical location of the study area. In these agricultural areas marked differences in crops, animals, organization of agricultural inputs, marketing procedures, prices and land use intensity occur from place to place.

Also from the Table, about 20% of the land are used for residential houses. This could be as a result of increases in the population of people in various families. A total number of 23,395 households exist in the study area (1991 Census). This has led to the expansion of residential houses, as the newly married ones in the family endeavour to build their own houses to accommodate their wives and children. Table 1 went further to reveal that 20% of the land are used for commercial purposes, while 6.7% are for social purposes. There are parcels of land for commercial use because the study area has several periodic markets and there is at least one market in each community. Thus, some of the available land contains market stalls, stores and motor parks. And due to the fact that central and local government interfere increasingly with land use decisions, some rural lands are used for social purposes. In some parts of the study area, government has taken some portion of land from the owners to establish schools, hospital/clinics, offices and secretariats.

The concept of rural small-scale composite industries is fast gaining grounds in Nigeria (Adeyemo, 1995). 13.3 percent of the land is used for small-scale oil palm milling industry as a result of the presence of numerous palm trees and palm plantations in the area. Some of the people who have in abundance of palm trees in their land and many others who are oil dealers are establishing oil milling industry. Some other people who engage in kernel and soap making business help to increase the number of the milling industry, thereby affecting land use pattern.

From field observation, we deduced that, the intensity of agricultural activities diminish with increase in distance away from the market centers. And that land uses with higher market prices and higher movement costs per unit distance tend to be cultivable close to the market; at greater distances from the market, land uses with products that incur lower movement's costs come into their own. Lastly, the nearer the lands to a commercial center such as market places, the higher the price of that particular land. Agriculture is the principle use to which land is put in the study area, as such it has some similarities with Thunen's model of land use.

Factors That Affect Land Use

intensity and structure of land use depends on certain factors. The information in Table two below with respect to physical factors, indicates that 53.3% of the respondents consider that the nature of the soil determines the use to which land is put. Most parts of the study area have high soil fertility. Although there are few areas which have low soil fertility as a problem. Climate and rainfall accounting for 26.7% of the responses are also physical factors responsible for the land use pattern of the study area. The study area enjoys mean annual rainfall ranges from 2,000 - 2,500 millimetres/year and a mean annual temperature of about 27°C which favours agriculture.

The plain table land topography in the area affects land use to some extent, though it accounts for just 6.7% (See Table 2). Agricultural land, commercial land, residential land and other lands are situated on level land and this makes for easy farming, commercial and other human activities. Again, due to the presence of a good drainage pattern in the study area, farming activities are made easier, and the building of residential

houses and commercial centers has increased. Drainage alone accounts for 13.3% of all the physical factors affecting land use.

Table 2: The Physical Factors Affecting Land Use in Isiala Mbano Local Government Area

Category	Frequency	% Frequency
Soil	320	53.3
Climate/Rainfall	160	26.7
Topography	40	6.7
Drainage	80	13.3
Total	600	100.0

Other influencing factors are wants, needs, (measured in terms of population pressure), culture and so on. Table 4 is a table of those economic factors affecting land use in Isiala Mbano Local Government Area. It reveals that 66.7% of the respondents indicated land tenure system of the place as the major determinant of land use pattern. This is because most of families/households or land - owners decide the use to which their land can be put to. The land owner who has so many land holdings may like to put his land to commercial use, residential or agricultural use. While some others because of small land holding space use their land for only a particular purpose.

The site of the land as a factor accounts for 20.0%. Land nearer the market or highways are costlier and are used by their owners for commercial purposes. This is because of its potential for easy transport facilities. Government also makes use of land at proper site for establishment of projects like schools, hospitals/dispensaries. Those lands which are further off from the business center are mainly used for agricultural purposes in the study area.

Table 3: The Economic Factors Affecting Land Use in Isiala Mbano Local Government Area

Category	Frequency	% Frequency
Site	120	20.0
Fund	80	13.3
Land Tenure (Ownership)	400	66.7
Total	600	100.0

Table 3 above shows that 13.3 percent of the respondents indicated that, land use is determined/influenced by availability of fund. Bigger plots or parcels of land are often too expensive for most rural families with small income and small land space to afford, in the face of inadequate funds/poverty. This ultimately affects the use to which they may want to put their land to. This usually drags in the issue of priority/preference scale, since availability of funds to a large extent is a prerequisite for the acquisition of more land for more uses by their owners.

Recommendations

Since the findings of this study implies that there exists irregular zonation of land in some parts. It then calls for urgent measures such as:

- 1) Effective rural land use planning.
- 2) The introduction of adjustments to distance mechanisms.

Adjustment mechanisms which include:

- a) crop diversification;
- b) crop mixture;
- c) motorized operations; and
- d) the pitching of farmers tents/huts at the central of their plot as distance increases from the human settlement.

Conclusion

Land is a major factor of production. Almost all economic activities take place on land and most of the economic activities which bring development are established on land. This study having analyzed land use, has shown that the people of Isiala Mbano Local Government Area put their land mainly to agricultural use. Moreso, as favourable tropical climate and adequate rainfall are some of the many factors that encourage agricultural land use, amongst other factors such as undulating plain/level and topography, ownership/land tenure system, site, fertile soil and proper/good drainage. There is a relationship between land price for economic activity and

distance and between intensity of agricultural activities and distance away from the market.

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