ISSN-0795-073X

IFE
RESEARCH PUBLICATIONS
IN GEOGRAPHY
Volume 10, Number 1, June 2011

Movement Patterns of Consumers to Service Centres in a Part of South-western Nigeria

A. M. Olayiwola (Ph.D)
Department of Geography,
Obafemi Awolowo University, Ile-Ife, Nigeria.

Abstract

This study was set against the background of the systems and patronage patterns of service centres in Ijesaland, Osun State, Nigeria. The study aimed at identifying the service centres; find out and examine the range of the spatial influence of the service centres; and examine the factors responsible for the observed movement pattern(s) in the study area. Twenty-seven 'Central Place Functions' were identified which were used to determine the sample size and also to organise the area into hierarchical order of service centres.Results revealed that, based on communality values, there were three classes of services in the study area. These are: Class I with values greater than 1; Class II values between 0.1 and 0.99; and those with communality values of less than 0.1 were were regarded as Class III. In addition, there were six hierarchies of service centres in the study area: the main centre, sub-centres, higher-order centres, lower-order centres, rural - urban fringe and the remote rural areas. Also, the study revealed that there were high levels of cross - movements among settlements in Ijesaland and cases of 'outward - movements' to service centres outside the region.The study has provided policy-relevant information about diversities of Ijesa settlements through the hierarchy of service centres in the area.

Keywords
service centres, movement patterns, Ijesaland, Central Place Functions, range of good

Introduction

The consumer movement is an important society force engaging increasingly in issues of trade (regional, national or international). The field of consumer behaviour is very broad. Each consumer is unique with different needs and wants and is influenced by habit and choice that are in turn tempered by psychological and social drives that affect purchase decision processes. A result of these consumer preferences is that a system of centres of various sizes will emerge over space.

Attempt at discovering orderliness in the spatial distribution of various phenomena and in the spatial behaviour of individuals is of fundamental concern in regional geographic studies. The decision and spatial behaviour of individual consumer overtime gives rise to a particular arrangement of activities at specific locations, which therefore make it necessary to determine if such behaviour patterns are spatially lawful. From the fundamental viewpoint, it is evident that just as the consumer's budget is allocated between different commodities, so must it be apportioned between different destinations in space. Scholars on spatial interaction have concentrated to the uncovering of spatial orderliness in the

Corresponding author:
A. M. Olayiwola, Department of Geography,
Obafemi Awolowo University, Ile-Ife, Nigeria
Email: olaadewale@yahoo.com; amolayiwola@oauife.edu.ng

commercial-retail environment directed towards aspects of the geometrical structure of the physical elements themselves. This paper focused on empirical patterns of spatial interaction displayed by consumers based on two behavioural premises: that consumers abide by the principle of least effort or nearest centre postulate, and that consumers exhibit the notion of spatial indifference. With these two initial assumptions, this study was aimed at identifying the service centres in the study area; find out and examine the range of the spatial influence of the service centres; and examine the factors responsible for the observed movement pattern(s) in the study area.

Review of Literature and Theoretical Framework

Service centres are usually provided for the benefit and wellbeing of people, community or any type of region in which they are located. Thus, none of such services is established for its own sake since they cannot exist on their own. Service centres are established by individuals, communities, administrative units and quasi government agencies. These service centres are established to improve upon the living standard of the community in which they are supposed to serve and not for profit making. Berry and Garrison (1958) used the concept of threshold and range to identify and classify centres in Snohomish County, Washington. Thomas (1960) made some findings on the economic base of some small centres and on the relationship between population and functional complexity. Johnston (1966) in his study of central places in Melbourne found that age, purchasing power, and density affect the spacing of centres and hierarchical arrangements. Sufficient density will allow for example a grocery store, a lower order function, to survive in an isolated location. Consumers of high economic status tend to be more mobile and therefore bypass centres providing only lower order goods. Berry (1968) identified three tiers of hierarchical order of service centres; they are neighbourhood, community, and regional centres. While neighbourhood centre is a local business zone providing services to people within one and half mile of the centre, community centre is a business zone designed to accommodate larger shopping developments serving groups of neighbourhoods within one and a half miles from the centre; and regional centre is a central business districts, commercial and industrial zones available for all types of businesses.

Abiodun (1971) conducted a study on service centres and consumer behaviour within the cocoa producing area of Nigeria. She found that service centres and consumer behaviour within Nigeria's cocoa region reveals the applicability of the concepts of central place theory in studying the spatial expression of consumer preference, particularly the idea of range in determining the market area for goods and services examined in the study area is not realized. Abiodun (1971) hoped that no matter the distance of a particular service centre to the residence of the patrons, and except there are other complimentary centres, the centre will enjoy the patronage of the consumers so far it satisfies their wants.

Andrew (1971) observed that while the spatial behaviour of individuals has spatial implication for the location of activities, it is also recognized that a dynamic interdependence exists between spatial behaviour on one hand, and spatial structure on the other. Henderson and Quandt (1971) expatiated on this symbiotic relationship as been analogous to the economist simple mechanism for equilibrium price determination; the supply and demand model. Both supply (retail outlet) and demand (consumer movement) must mutually adapt each other through time and over space. If such a process follows the self-regulating mechanisms found in say a convergent cobweb model, the outcome within a geographical context will be represented by a new spatial equilibrium situation.

Ewing (1972) considered the degree of effort involved in consumer spatial interaction among alternative retail choices which are relative to each consumer. One possible approach to the solution of this problem would be to design measures of spatial behaviour which focus upon topological rather than Euclidean relationships. Such measures seem to be all the more appealing since individual consumer may exhibit tendencies to perceptually distort the actual physical distances confronting them in the real world. Days (1973), in his study of Crawley New Town, United Kingdom, specified that in the construction of New Towns a principal objective should be to provide convenient retail location for the purchase of frequently required items, thus reserving the town centre for outlets whose thresholds were greater than those available within neighbourhoods. However, this remark can only serve to reinforce the need to offer an alternative behavioural

hypothesis to the nearest centre postulate. Openshaw (1973) noted that the effect of distance factor and the spatial distribution of service centres are key elements of spatial interest to the consumer. Therefore, it is important to incorporate both the distance the consumers are willing to travel to reach a retail outlet and the geographic variance or dispersion of retail locations in the analysis of spatial consumer behaviour.

On the whole, the difference between time studies and time spatial counterpart is that the former measures the friction of distance with a direct estimate of the time involved in the shopping journey, whereas the latter utilize measures of objective geographic distance. The advantages of time estimate vis-à-vis distance data constitute a powerful justification for their inclusion in the modelling of spatial consumer behaviour. However, if the consumer's bundle of goods was associated with a time input reflecting the amount of time necessary to procure the item, the more time the consumer devotes to shopping activities, the greater the amount of income he 'losses'. The problem facing the consumer under these circumstances is to maximize its utility function subject to both a budget and a time constraint. Therefore, while the introduction of a time constraint into the consumer's utility function possesses considerable heuristic value, the applicability of such approaches in practical situations requires additional demonstration.

This study, like the others mentioned, is rooted in the "Central Place Theory" created by Walter Christaller (1933). The theory was built on the assumptions that there was unbounded flat land so that transport was equally easy and cheap in all directions; population was evenly distributed across the plain; goods and services were always obtained from the central place to minimize distance travelled; and that some central places offered only low order goods, for which people were not prepared to travel far, and so had a small sphere of influence. Based on these sets of assumptions, Christaller suggested that the hypothetical plain must be completely sub-divided into separate complimentary regions so that no area can be under served and none can equal services from two competing centres. Therefore, complimentary regions were a series of hexagonal market areas that covered the entire plain. The hexagonal pattern produced the ideal shape for super-imposing the trading areas of central places with different levels of function – the village, town and cities. The two principles underlying Christaller's theory were the range and threshold of goods and services. Range for a service is the maximum distance people are willing to travel in order to purchase a particular good while the threshold population for a service refers to the minimum market needed to bring it into existence and keep it going. This movement would be to get goods and services. Goods are classified on relative scale from lower order to higher order goods. Lower order goods are those goods which consumers need frequently and are therefore willing to travel only short distances for them while higher order goods are needed less frequently so consumers are willing to travel farther for them. These longer trips are usually undertaken for not only purchasing purposes but other activities as well.

However, Christaller gave no detailed consideration to the behaviour of retailers and consumers either overtime or space and also it does not incorporate the temporal aspect in the development of central places. Furthermore, the theory holds up well when it comes to agricultural areas but not industrial or post-industrial areas due to their varied distribution of natural resources.

The concept of movement-minimization was of critical importance in Christaller's Central Place Theory. While his major intention was to ascertain whether any lawful order existed in the number, size, and spacing of urban settlements, he also provided a fundamental, albeit simplistic, axiom relating to the closest centre offering the required good or service. Christaller was of course cognisant of other factors affecting the distances that consumers will be willing to travel, other than the simple distance-cost element. These are the size and importance of the central place, population distribution, and the willingness to pay the price.

The Study Area

Ijesaland is an ethnographic region occupying about 200 Km^2 in Osun State, Southwest Nigeria. The aborigines of the place are called 'Ijesas', a sub-set of the Yoruba ethnic group. Ijesaland lies between Latitudes $7^0 17^{'}$ N and $7^0 50^{'}$ N; and Longitudes $4^0 33^{'}$ E and $5^0 10^{'}$ E, a position which enables it to enjoy maximum characteristics of the humid tropical climate. Presently, Ijesaland is divided into six Local Government Areas: Atakunmosa East, Atakunmosa West, Ilesa East, Ilesa West, Obokun and Oriade (see Fig. 1).

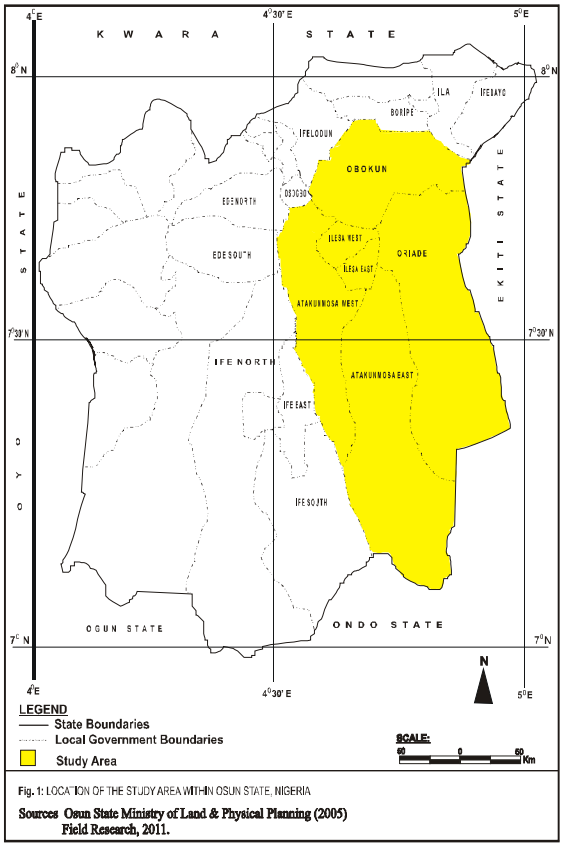

Fig. 1: LOCATION OF THE STUDY AREA WITHIN OSUN STATE, NIGERIA

Sources Osun State Ministry of Land & Physical Planning (2005)
Field Research, 2011.

The topographic, climatic and edaphic conditions in the region encourage the Ijesas to be great farmers in both food and cash crops. Consequently, they are great farmers especially in tree crops such as cocoa, kolanut, palm produce, plantain and fruits. Asides farming, little local crafts like pottery and weaving (mat and clothing materials) were also practiced. However, in modern times, the economic activities of Ijesa people have advanced beyond farming and little indigenous industries to manufacturing, commercial and tertiary activities.

Materials and Methods

Twenty-seven 'Central Place Functions' were identified which were used to determine the sample size and also to organise the area into hierarchical order of service centres (Appendix I). One hundred and ninety-nine settlements in Ijesaland had at least one of these functions and were selected for the study. Data required for the study were obtained from both primary and secondary sources. While primary sources involved two sets of questionnaire (household and management questionnaires), in-depth interviews and field observation, the secondary sources of data were road map of Osun State, official and unofficial documents on public utilities prepared by the appropriate quarters in the State and Local Government Areas.

The household questionnaire was administered on 6,238 heads of households representing five percent of the total in the sampled settlements. The samples were selected through stratified sampling procedure on settlement basis. However, owning to the manner in which the respondents patronize the service centres and because of the complex nature of individual wants as well as pattern of movements, the data had to be aggregated on Local Government Area basis. Management questionnaire was administered on opinion leaders, heads of public and private establishments.

Principal component analysis (PCA) was used to classify service centres in the study area. In addition, Gravity Model was employed in this study to ascertain the level of interaction among service centres. All analyses are based on the twenty-seven variables (Central Functions), demographic capacities of the sampled settlements and the responses to the household questionnaires. In some sections, number of settlements analyzed was used instead of the entire population. The sampled settlements, 199 in number, were selected having satisfied the basic criterion of possessing at least one of the twenty-seven (27) variables.

Classification of Service Centres

Principal Component Analysis of the twenty-seven central functions showed that only three components have eigenvalues exceeding 1.0. The first three principal components: supermarket, small-scale industry and secondary schools have a total eigenvalue of 22.59 contributing 83.68% of the total variance. The first component, supermarket, has an eigenvalue of 18.75 and 69.4% of the total variance. It has high correlations of above 0.5 with twenty-one components and a communality value of 98.9%. Small-scale industry follows with communality value of 98.5% and minimum of 0.5 correlation coefficients with twenty-two components. The third component, secondary schools, also has a communality value of 98.5% but 0.5 and above correlations with twenty-one components. It is interesting to note that there is none of the twenty-seven primary variables with a communality value of less than 50% and twelve of them extracted 90% and above communality value each.

The analysis revealed that there were three distinctive classes of services in the study area: class I are the functions with eigenvalues of greater than or equal to 1.00; class II services have between 0.10 and 0.99 eigenvalues; and all others with less than 0.10 are regarded as class III. On the whole, class I contains three central functions, class II has eleven and class III is characterized by thirteen functions. By this grouping of services, six orders of centres were identified in Ijesaland (Table 1).

Table 1: Classification of Service centres in Ijesaland

Order of Centres	No of Centres	Number of Central Functions			
		Class I	Class II	Class III	Total
1st	1	202	277	27	506
2nd	3	15 – 19	29 - 37	8 – 14	52 - 70
3rd	6	10 – 15	14 - 27	6 – 9	30 - 51
4th	17	1 – 8	Oct-18	3 – 10	17 - 36
5th	44	1 – 4	01-Jul	0 – 6	2 – 17
6th	128	-	01-Jul	0 – 4	1 – 11
Total	199				

Source: Field Research, 2011

Table 1 showed that there was only one first order centre (Main Centre) in Ijesaland which is Ilesa with a total of 506 central functions and a population of 212,220. The 506 central functions in Ilesa were made up of 202 higher-order services (class I), 277 class II services and 27 lower-order services. Ilesa had at least one of each of the 27 central functions under consideration (Appendix I).

There were three second-order centres (Sub-centres): Ijebujesa with 70 central functions (19 of class I, 37 of class II and 14 of class III services), Ibokun had 62 central functions shared in the ratio 19:29:14 between class I, class II and class III functions, in that order, and Ipetu Ijesa with 59 central functions consisting of 18 of class I, 33 of class II and 8 of class III services. While both Ijebujesa and Ipetu Ijesa are in Oriade Local Government Area, Ibokun is in Obokun Local Government Area. Ijebujesa and Ibokun were headquarters of Oriade and Obokun Local Government Areas, respectively. They can therefore be said to have enjoyed growth pole advantage, which has semblance with the propositions of K=7 principles of the central place theory. However, Ipetu Ijesa was more peopled than either Ijebujesa or Ibokun. Reasons available for this were linked with the gently undulating nature of the terrain that accommodated human settlement, fertility of the soil that encouraged agricultural activities, availability of surface water for both human consumption and farming activities, and location on a major route between the western and eastern part of the country. The location is strategically between Ile-Ife / Ilesa and Akure (Peel, 1983).

There were six third-order centres (higher-order centres) in Ijesaland. These are Esa Oke and Imesi Ile (both in Obokun Local Government Area), Erin Ijesa, Erinmo Ijesa and Erin Oke (all in Oriade Local Government Area) and Osu in Atakunmosa west Local Government Area. Among these, only Osu was a Local Government Area headquarters. These centres have central functions ranging from 30 to 50 with more of class II variables than either class I or III. Also, populations of the higher-order centres range between 5,511 (Erinmo Ijesa) to 13,816 (Esa Oke). Erin Ijesa, Erin Oke and Erinmo Ijesa are subjected to the same factors of growth as Ipetu Ijesa. Erinmo, particularly, is at the junction of Ibadan through Ile-Ife to Akure and to Ado Ekiti roads. In effect of this, the growth of the three settlements can be likened to Christaller's K=4 network principles. In addition, Esa Oke, has a tertiary institution containing more than 25,000 people (both staff and students). The institution is an attracting factor to other socio-economic facilities.

In addition, there were 17 fourth-order centres in Ijesaland and they are settlements having between 1 - 8 of class I, 10 - 18 of class II and 3 - 10 of class III central functions. Ijesaland had 44 fifth-order centres and 128 sixth-order centres. In sum, only traditional markets (both daily and periodic), electricity, piped-water and Comprehensive Health Centres are found in the sixth-order centres. Spatial distribution of service centres in the study area is contained in Fig. 2.

It is striking that Iperindo, the administrative headquarters of Atakunmosa East Local Government Area, was a lower-order centre. It had a total number of 32 structures comprising of seven of class I, eighteen of class II and seven of class III variables. The town was the only Local Government Area headquarters in Ijesaland that was neither a sub-centre nor a higher-order centre. This finding opposes the assumptions of growth pole / centre theory that the propulsive firm (hereby interpreted as settlement) is bond to expand.

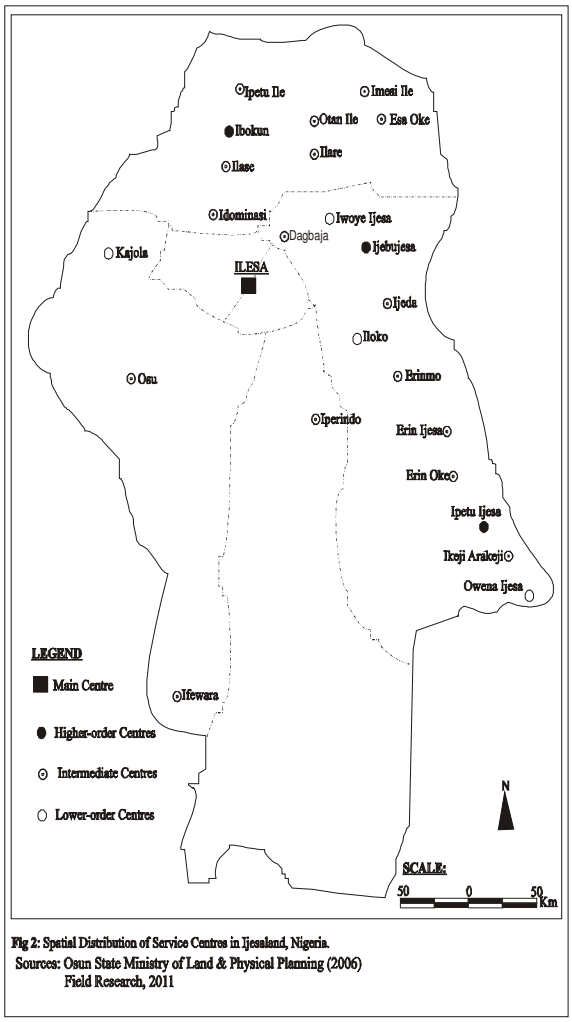

Fig 2: Spatial Distribution of Service Centres in Ijesaland, Nigeria.
Sources: Osun State Ministry of Land & Physical Planning (2006)
Field Research, 2011

Movement Patterns of Consumers to Service Centres

In his Central Place postulate, Christaller (1933) explained the concept of 'range of good' in which he referred to the 'upper limit' as the maximum distance consumers are willing to travel in order to obtain a good or service offered in a particular central place. In essence, his contention was pertinent to the idea of least-cost movement, which tends to motivate the rational consumer towards multipurpose trips.

Table 2 shows the percentage of respondents originating from different Local Government Areas of the region to various directions within and outside the study area. All distance ranges were covered in Atakunmosa West Local Government Area; 41 - 50km and 71 - 80km ranges were not covered in Atakunmosa East and Oriade Local Government Areas, in that order. Also, the Table reveals that some respondents did not observe some of the services.

In Atakunmosa East Local Government Area, for example, 9% of the respondents did not use any bank, 11% did not go to any hospital, 1% was neither attending nor had any children / wards in any school and 7% had either stopped or never attended any traditional market. It is also revealed that, in Atakunmosa East Local Government Area,

Table 2: Average Distance Travelled by Consumers in Ijesaland (in %)

Distance (in km)	Atakunmosa East	Atakunmosa West	Ilesa East / West	Obokun	Oriade	Average
0 – 10	40.6	40.1	81.9	61.1	69.4	58.6
11 – 20	41	34.4	5	18.7	11.1	22.1
21 – 30	7.9	11.3	4.4	8.9	5	7.5
31 – 40	1.1	1.4	1.9	3.6	5.4	2.7
41 – 50	-	2.4	-	-	1.9	0.9
51 – 60	0.7	1	-	-	1.1	0.6
61 – 70	0.4	0.1	0.1	-	0.3	0.2
71 – 80	1.3	0.1	-	-	-	0.3
81 – 90	0.7	2.4	1.9	0.6	0.1	1.2
91 – 100	1	1.4	1.4	0.6	0.4	1
>100	1.3	2.1	1	3.4	1.6	1.7
Nil	4	3	2.4	3.1	3.6	3.2
TOTAL	100	100	100	100	100	100

Source: Field Research, 2011.

Table 3: Aggregate Movement Patterns of Consumers to Service Centres in Ijesaland (in %).

Distance (in km)	Banking	Hospital	Schooling	Shopping	Place of Work	Visitation	Usual Market	Average
0 – 10	72.4	67.8	55.6	53.4	40	61.2	60	58.6
11 – 20	10.6	18.6	13.4	21.8	42.6	22	25.4	22.1
21 – 30	7.8	3	9.6	8	10.8	6.8	6.4	7.5
31 – 40	0.4	5.6	4.6	2.4	2.8	2	1	2.7
41 – 50	0.6	-	1.4	2.6	0.4	1	-	0.9
51 – 60	1.4	-	1	1	-	0.6	-	0.6
61 – 70	-	-	0.6	-	-	0.8	-	0.2
71 – 80	-	-	0.6	1.2	-	0.2	-	0.3
81 – 90	-	-	2.4	3.8	0.8	1	-	1.2
91 – 100	-	-	3.6	1.2	-	2	-	1
>100	1.4	-	5.6	4.6	-	1.6	-	1.7
Nil	5.4	5	1.6	-	2.6	0.8	7.2	3.2
Total	100	100	100	100	100	100	100	100

Source: Field Research, 2011.

none of the respondents observed any of the services within the range of 41 - 50km.

Atakunmosa West was the only Local Government Area where all the distance ranges were covered. In Ilesa East / West Local Government Areas, 81.9% observed most of the services within 0 - 10km range. This implied that consumers do not usually travel much out of the Local Government Areas. All the respondents in Ilesa East / west Local Government Areas indicated that they patronized health institutions within Local Government Areas.

In Table 3 , 58.6% of the respondents were not willing to travel beyond 10kms for any service. Also, 3.2% did not travel to observe or did not observe any of the services at all. The greatest attractive pull was within 10kms of consumers' origin while the least was between 61 - 70kms at 0.2% of the total respondents. The 1.7% of respondents that attested to travelling beyond 100kms away from their homes includes students in tertiary institutions of learning, large-scale full-time traders and a couple of others who, occasionally, go on visitation to friends and relatives at great distances.

Analyses of movement patterns of respondents to observe the services on individual service basis were presented in Table 3. In banking service, an average of 5.4% of the total respondents did not use any bank distributed unequally among the Local Government Areas. Atakunmosa East Local Government Area has the highest percentage of non-bank users at 9% as Ilesa East / West recorded the least in the sector at 2%.

From Table 3 it is evident that banking service attracts the shortest movement as 72.4% of the total respondents did not have to travel for more than 10 kms. Schooling and shopping were the services that attracted the greatest distance travelled by respondents at 5.6% and 4.6% respectively. In respect of schooling, children and wards of respondents and some of the respondents were attending higher institutions of learning at great distances like Abeokuta, Ado Ekiti, Akure, Benin City, Ibadan, Ilorin, Lagos, Port Harcourt and Zaria among others. Thus the quest for further studies makes people to travel out from their homes to anywhere the service is available. In like manner, 4.6% of respondents travel as far as Aba, Lagos and Onitsha for shopping. This particularly affects full-time traders (largely, wholesalers) who usually travel to sources of the products or major marketing area to buy their wares.

A comparison of cumulative averages in Tables 2 and 3 gives the same result. It is important to note that shopping is the only service observed by all respondents because there is no one who does not buy one or more of the listed shopping components. It is equally revealed that traditional markets have the greatest percentage of non-patronage as 7.2% of the total respondents did not attend any traditional market within or outside Ijesaland. Fig. 3 shows the aggregate movement

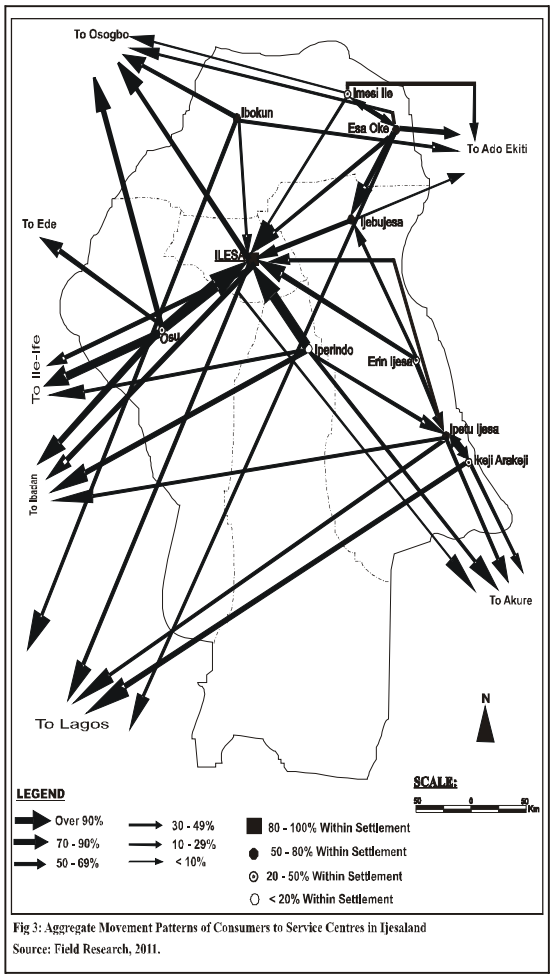

Fig 3: Aggregate Movement Patterns of Consumers to Service Centres in Ijesaland
Source: Field Research, 2011.

patterns of respondents to various service centres in Ijesaland.

Conclusion

This study has revealed diverse patterns of movements to service centres in Ijesaland The lower-order centres did not record substantial attractions and 'step-by-step' nature of the movement up the centre hierarchy, which implied that they were losing their most skilled, entrepreneurial oriented and educated population to the main centre. Since an area's economic and social characteristics have significant effects on its development, there is need to strengthen the craft and industrial activities in the lower-order centres to diminish the primacy of Ilesa and also to gain a balanced socio-economic development of all sub-centres in Ijesaland.

Findings revealed that impact of an urban centre is strongly constrained by the size of the spatial system it serves. This is most relevant with respect to the performance of Iperindo and Osu. Despite the fact that these two settlements are Local Government Area headquarters, their impacts as service centres are not felt much in their respective Local Government Areas. However, availability of intermediate centres like sub-centres and higher-order centres have been of great help to cushion the sharp socio-economic distance between the few urban centres and the vast rural areas in Ijesaland.

Granting that population and number of central functions are the major determinants of development, therefore, services should be related to the number of people as well as the spatial system served. For instance, although Ijebujesa and Ibokun have more of the central functions than Ipetu Ijesa, the latter scored more favourably than the former two when the variables were related to population. Similarly, Osunjela with only 369 people had eight of the listed central functions while Sokoto containing 2,641 inhabitants had only six. Atakunmosa East Local Government Area had the least population and the lowest number of central functions among the six Local Government Areas in Ijesaland.

References

Abiodun, J. O. (1971) "Service Centres and Consumer Behaviours within the Nigerian Cocoa Area", *Geografiska Annaler*, 53 B (2), pp. 78 – 93.

Aguda, A. S. (1994) "Urban Growth and Problems in Nigerian Cities: The Case of Ilesa", *Ife Research Publications in Geography*, 4, pp. 1 – 11.

Ayeni, M. A. O. (1980) "Central Place Theory, Rank – Size Relationships and Urban Systems in Nigeria", *Nigerian Geographical Journal*, 23 (1 & 2), pp. 127-145.

Berry, B. and Garrison, W. L. (1958) "The functional bases of the central place hierarchy". *Economic Geography,* 34, 145 – 54.

Eaton, B. C. and Lipsey, R. G. (1982) "An Economic Theory of Central Places", *The Economic Journal*, 92, (365), March, pp. 56-72.

Esparza, A. X. and Andrew J. K. (1997) "The Spatial Markets of Cities Organized in a Hierarchical System", *Professional Geographer*, 48, (4), Nov., pp. 367-378.

Kosso, P. and Kosso, C. (1995) "Central Place Theory and the Reciprocity between Theory and Evidence", *Philosophy of Science*, 62 (4), December, pp. 581-598.

National Population Commission of Nigeria (2006) *2006 National Population Census Results*.

Olayiwola, A. M. and Aguda, A. S (2009) "Hierarchy of Service Centres in Ijeshaland, Nigeria". *Journal of Geography and Regional Planning*. Vol. 2 (5), pp. 131–143.

Peel, J. D. Y. (1983) *Ijeshas and Nigerians: The Incorporation of a Yoruba Kingdom* 1850s - 1870s. Cambridge-London: Cambridge University Press.

Preston, R. E. (1985) "Christaller's Neglected Contribution to the Study of the Evolution of Central Places", *Progress in Human Geography*, 9, pp. 177 – 193

Taylor, D. R. F. (1979) "The Role of Lower-order Centres in Rural Development", *UNCRD, Working Paper 79 - 87*, Nagoya.

United Nations (1993) "Urban Structure and Hierarchy", *Population Newsletter,* New York

United Nations (1999) "World Population Monitoring", *1999: Population Growth, Structure and Distribution*. E. 00. xiii. 4.