Thesis

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ACTIVITY PATTERNS AND URBAN RESIDENTIAL LOCATION DECISION IN IBADAN, OYO STATE

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ACTIVITY PATTERNS AND URBAN RESIDENTIAL LOCATION DECISION IN IBADAN, OYO STATE

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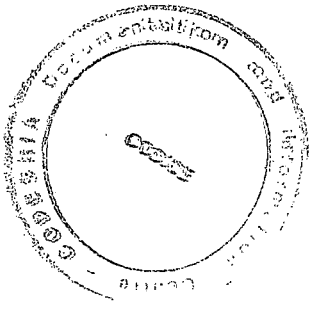

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DEDICATION

This work is dedicated to my parents Late Mr. Lawrence Olatubara and Mrs Comfort Olatubara.

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ABSTRACT

One of the problems confronting the urban residents relates to how to operate in the face of the complexities of the urban environment. The search for an optimum residential location has been a source of chronic problem to the urban dwellers. Transportation problems of workers and other residents in Ibadan including traffic congestion, reduction in the number of public transport vehicles and increasing commuting cost, further tend to increase the difficulty of getting easy access to activity nodes patronized by households. Sub-optimal residential locations of households in relation to the distribution of urban activity nodes tend to increase the cost and time budgets of households in addition to other socio-psychological problems. Some households, however, have constrained choice in which households simply occupy existing vacancies. The research approaches the issue from the standpoint of activity distribution of households and how such distributions affect their residential location decisions. Ibadan has been used as the study area for this work.

Seven hundred and thirty six (736) household heads provided the basic data for this study. A network of grids was superimposed on an updated map of Ibadan and a systematic sampling of a residential building in every other grid intersection was carried out across the city. Several simple and multivariate techniques were used to analyse the data.

The study revealed some departures from existing propositions of earlier research efforts. It was discovered that households did not necessarily choose their residential

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locations in relation to the city centre used in this study. Households appeared to show a tendency towards proximity to their activity centres. This is reflected across the urban space irrespective of such locations in relation to the city centre. Some households also showed a tendency to change residential locations when the activity centres patronized by such households appeared to be inconvenient. Others, however, failed to change their residential locations even when some factors should ordinarily make them change residences.

Based on these findings, it is recommended that household units and their activity patterns be adopted in a neighbourhood approach to facility planning and location. A modification is also proposed in the use of this concept for urban landuse planning.

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CHAPTER ONE

INTRODUCTION

1.1: The Problem of Study

One of the problems confronting the urban residents relates to how to operate in the face of the complexities of the urban environment. To participate in the several activities which are of importance to the individuals requires a residential location in such a way as to ensure optimum access to these activities. However, the search for this residential location has been a source of recurring problem to the urban dwellers and has often necessitated adjustments in their residential locations.

It has been identified that about a quarter of industrial workers in Ibadan, for instance, travel over 7 kilometres to work (Vagale and Adekoya, 1976; Fadare, 1989). Many traffic problems have also been identified in Nigerian urban centres which make transportation system largely inefficient (Olanrewaju, 1979; Ubogu, 1980; Adeniji, 1983, 1986; Ogunjumo and Akeredolu, 1987). These are traffic congestion, pollution, increasing cost of commuting and reduction in the number of public transport vehicles in Nigerian cities, especially since the introduction of the Structural Adjustment Programme. These transportation problems largely hinder the ability of the households to carry out their activities in the urban space because interaction in an urban area is generally highly conditioned by the efficiency of the urban transportation system.

There is the tendency for them to optimize their residential locations in relation to the vital urban activities they partake in because of the constraints imposed on households by the poor transportation system. Considerations for aggregate accessibility

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of a household to vital urban activities have implications on its ability to coordinate its different activities without incurring undue financial, time and psychological costs. A lot of time and money is often spent by households in an effort to make their members participate in activities such as shopping, schooling, recreation, work and other socio-economic activities which are not necessarily located at the city centre. Many household heads, especially in developing countries, face the problem of getting children to school, wife to shop, husband to work and ensuring that these members of the household get back home on time. The effect is not felt only on the household's financial and time budgets but also on the impact on traffic due to increasing number of trips which could have otherwise been reduced if a better residential location choice has been made. It is, therefore, necessary to understand how socio-psychological and economic considerations influence households as they respond to optimize their residential locations in relation to their urban activity nodes in the face of the constraints imposed on them by high travel costs, poor transportation system and other urban problems.

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1.2 Aim and Objectives of the Study

This study, therefore, aims at examining how the residential location of a household is influenced by its overt activity pattern.

The following are the objectives of the study:

(i) to understand households' activity patterns and the factors considered (by households) in their choices of residential locations;

(ii) to highlight how households' knowledge of the urban structure affects their actions within the activity space;

(iii) to identify the different behavioural groups involved in residential location decision in Ibadan metropolis

(iv) to suggest an alternative approach to residential location studies and propose policies that will aid urban landuse planning.

1.3 Justification of the Study

A knowledge of how households participate in urban activities and how such participation influences their residential locations is invaluable in landuse, housing and transportation planning and development. This is borne out of the fact that the home is crucial in urban spatial behaviour or travel pattern because, for many types of behaviour, it is the origin from which the spatial structure of the urban area is utilized (Horton and Reynolds, 1971). It is imperative and advantageous for research to view urban spatial structure in terms of the home of the individual whose behaviour is being studied. Essentially, a household is a part of an urban system and when it chooses a residential location it also selects a set of spatial relationships within this system (Jones, 1979).

The activity pattern of an individual might thus have effects on the choice of residential location and as such a comprehensive approach which attempts to consider the individuals in a decision-making process is important. Under this condition, the individual evaluates the structure and contents of the environment, as far as possible, to achieve a residential location choice which he/she considers satisfying. The location of workplaces, Central Business District (CBD), shopping opportunities and other activity sites for socialising and recreation, in addition to the already widely used socio-economic

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and site variables, is expected to play an important part in explaining variations in households' choices of residential location.

Thus, what determines how the households optimize their residential locations in relation to urban activity distribution and the constraints they face will provide valuable information on how to influence some of these factors, especially those that are controllable within planning programme, to effect an efficient use and management of urban facilities. It will also help to identify the planning programmes and policies that will promote the comfort and convenience of households as they operate within the urban environment.

1.4 Plan of Study

This research work is divided into eight compact chapters for coherence and ease of reading. Chapter One is the introduction to the study.

Chapter Two attempts a review of research works done in residential location and mobility studies as well as in urban activity systems and spatial behaviour. The conceptual framework which is developed from these research works and the research methodology are contained in Chapter Three.

Chapter Four highlights a general background of Ibadan while Chapter Five gives supportive socio-economic and residential characteristics of the residents of the city.

The spatial behaviour of residents of Ibadan in relation to some selected activities which cover a large number of activities that households are generally interested in is discussed in Chapter Six.

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In Chapter Seven, the factors which influence households' residential location are discussed. Earlier in the chapter the significance of the city centre's pivotal influence in household location and re-location behaviour is examined. At the latter part of the chapter the households are classified into behavioural groups based on some characteristics.

Chapter Eight contains a brief summary. A simple approach to residential location studies is proposed in addition to some useful policy options for facility location and landuse planning.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Urban Residential Location Models

Three prominent landuse theories that have included the description of the spatial distribution of households in the urban areas are the concentric ring theory of Burgess (1925), the sector theory of Hoyt (1939) and the multiple nuclei theory of Harris and Ullman (1945). These theories argue that the aggregate distributional pattern of land use in the city is a function of socio-economic forces of competition in the urban land market. In the concentric ring theory, the city's residential areas are arranged in concentric circles with the rich people progressively living farther out from the city centre. The theory infers that the city expands by the continuous tendency of each inner zone to extend its area by the invasion of the outer zone, in a process of "succession" and "invasion". In this theory, housing is provided for the poor by the process of "filtering" or "trickling down", in which case the well-to-do must have absorbed most of the initial construction costs before the house is passed on to the people of lower income.

The sector theory sees the city as growing in sector form with the richer people occupying advantageous sectors, usually on waterfronts, hill-tops and generally located away from traffic noise, while the poor live close to their workplaces. The multiple nuclei theory postulates that land-use patterns in most cities are not built around the single centre as postulated by the concentric ring theory, but rather they are developed

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around several centres within the urban area. Separate nuclei arise because of the differing access requirements of activities, the grouping of complementary activities, the mutually repellant nature of certain landuses and the fact that some uses cannot afford the most desirable sites (Goodall, 1972).

The economic equilibrium theory has also been developed to provide explanations for the observed urban residential locations (Alonso 1964; Kain 1968; and Muth 1969). In this theory, the household's residential location is a function of its income, space preference, transport cost to workplaces and price of residential space. The theory assumes that everybody works at a monocentric central place in the city (the CBD) and lives in circular areas around it. It also assumes that everyone can buy as much space as one wants, anywhere and whenever one wants it. Availability of good transport services everywhere is assumed and that lot size and location are determined on the basis of bids differing among households.

Evidences from accessibility to workplace studies have, however, shown conflicting results. Guest and Cluett (1976) suggested the clear interrelationship of residence and workplace among the Los Angeles suburbs, particularly for non blacks. The simulation of travel costs by Broughton and Tanner (1983) shows that it is better for households to locate near their workplaces. Quigley (1985) also discovered that housing choice might be more sensitive to variation in workplace accessibility than was indicated by a more restricted model of household choice. Desalvo (1985) found that housing consumption and location were negatively related to commuting time.

Some studies, however, have identified some shortcomings in the use of the type of work as a determining factor for residential location. Cooke (1978) and Steinnes

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(1977, 1982) both concluded that "jobs follow people". This result is opposed to the prevailing view of causality implicit in the traditional equilibrium model of residential location which attempts to explain them on the basis of journey-to-work.

It has been argued that in nearly all cities, other centres of relevant job opportunities exist apart from the CBD. Most alternative models assumed two-worker family working at different locations. When alternative workplaces to the CBD were introduced, White (1977) predicted that under certain restrictive conditions a two-worker family might locate close to the woman's job. Madden (1980) concluded that in location decisions, the two-worker family did not differ from one-worker household. Curran et al. (1982) found that under general conditions, the number of workers in a household and the employment locations of the workers did affect residential location decisions.

The Alonso-Muth model holds that the poor stay near the CBD while the rich people stay at the outskirts of cities. Stokes (1962) and Okpala (1978) on the other hand discovered that slums were often found at the fringes of cities rather than at the centres. To et al. (1983) also found the converse of Alonso-Muth's proposition in European cities and observed that the tendency for higher-income households to locate at the core of European cities could be attributed to a different preference ordering of land and travel costs of Europeans when compared with the North Americans.

Studies of residential location in Nigerian urban centres generally reveal the limitations of the economic equilibrium model and its assumptions. Findings by Mabogunje (1962; 1968), Sada (1972), Onibokun (1974), Okpala (1978), Yirenkyi-Boateng (1986) and Abiodun, (1990) show that some particular social or ethnic groups concentrate in certain parts of Nigerian cities. The rich and the poor also co-exist in

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many parts of Nigerian cities as against the clear dichotomy often indicated by the equilibrium model. It was also noted that the assumption of laissez-faire economic system in which people and business compete for land and the highest bidder wins might have to be revised in certain cultural contexts, because evidence in Lagos, for instance, suggested the stronger influence of public and traditional institutions on land market.

2.2 Residential Mobility Models

The general form of the models explaining residential mobility is similar to the spatial choice models in which the size of flow from location i to location j is a function of the number living at i and the attractiveness of j relative to all other competing destinations. Stouffer (1940) rejected the rationale of migration studies that focus on distance, claiming that the number of persons going a given distance was directly proportional to the number of intervening opportunities. Brown and Moore (1970), however, hypothesized that migration was a process of adjustments in which one residence was substituted for another in order to improve the household's experienced utility. The attributes of location and housing quality, information about existing vacancies, housing market characteristics and personal or individual socio-economic and demographic characteristics were factors affecting a search and selection process in residential mobility models (Barresi, 1968; Hempel, 1969; Barret, 1973; Palm, 1976; and Cadwallader, 1979). The migrant engaged in continual search and assessments of the area surrounding the last observed vacancy. The migrant might decide to continue looking in that area, to look elsewhere or to stop searching and to choose the best alternative seen thus far. This interaction between the migrant and the housing market

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is, therefore, a spatial process in which potential migrant is faced with a sequential choice process (Smith, et al., 1979).

During the search, the individual uncovers and evaluates alternatives, one at a time. It will only be towards the end of the process (if at all) that he or she is likely to make simultaneous comparison of the attributes of some alternatives with those of the present home or ideal home (Payne, 1976; Svenson, 1979). Concerning the level of knowledge about the alternatives, information is obviously accumulated and revised during the search (Burnett, 1974; Clark and Smith, 1979). Searchers also often embark on limited number of alternatives (Brown and Holmes, 1971; Barnet, 1973; Michelson, 1977). Lyon and Wood (1977) noted that as much as 15 out of 41 home-buyers looked solely at the home they bought while only 9 looked at 10 or more houses. Information for renters was gathered through their reliance on their own knowledge of an area, the newspaper, friends, through realtors and driving around before and as they undertook active search (Clark and Smith, 1982; Talarchek, 1982).

Phipps and Laverty (1983) simulated when a household would stop searching and take a renting decision. Their stopping model shows, within the context of computer simulated game, that the majority of the subjects made stopping and renting decisions during their rental search process as if they were attempting to maximize their expected utility. This has been the contention of some earlier researchers (Smith and Mertz, 1980; Clark and Smith, 1982) that the choice goal of individual mover is to maximize expected utility. The choice of a new residence, therefore, depends upon the comparative place utility associated with each vacancy.

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The decision to move has been associated with changes in socio-economic and demographic factors. While Rossi (1955) considered household's life cycle as a very important factor, Clark (1970) identified elements of the household and constraints imposed by economic factors as significant. McLeod and Ellis (1982) contended that there was no significant relationship between stage in family life cycle and residential location vis-a-vis workplace or CBD. They, however, noted that families with children in primary school age showed a significant reduction in distance moved and significantly increased distance for those with children in secondary school. Linneman and Graves (1983) observed that the likelihood of changing jobs but not residence increased with the number of children in school, although the probability of changing neither residence nor job also increased with this family trait.

Newton (1977) noted that foremost among factors which appeared to play a major role in directing locational choice was the socio-economic level of mover households, but that preference for access to workplace continued to emerge as a factor of some importance in residential location (Sjaastad, 1962; Lansing, 1968; Clark and Burt, 1980). However, some researchers hold the contrary view to the above and discovered that workplace was not a significant factor in intra-urban residential relocation decision (Goldstein and Mayer, 1964; Stegman, 1969; and Clark, 1970). Studies by Getis (1969) and Halverson (1975) indicated that workplace access was only important to those residents who had fairly lengthy work-trips since a large proportion of people moved from residences but the distance to work remained approximately the same.

Weinberg et al. (1981) indicated that large changes in economic variables, such as income and prices produced only small potential gains from moving and that a major

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factor in the moving decision is the magnitude of search and moving cost. A household moves only when the utility loss of staying in the current unit outweighs the costs of moving. For low income households, it was observed that the benefits of moving were small. This could be related to the theory of consumption function which holds that if housing was viewed as a necessity of life, then housing expenditure should be inelastic with respect to income. This has earlier on been confirmed in the study of housing consumption in 25 small cities in North Carolina, U.S.A., where the demand for housing is found to be highly inelastic with respect to income, particularly for large poor or black households (Stegman and Sumka, 1978). DeBoer (1985) provided further evidence to support the role of search cost in residential mobility. His findings show that the elderly paid higher housing prices due to higher search costs.

Intra-urban residential mobility has also been considered to be due to stress or dissatisfaction associated with the initially occupied unit (Wolpert, 1965; Brown and Moore, 1970). Onibokun (1973) noted that the bossy, paternalistic, snobbish and unresponsive attitudes of landlords might constitute the tenant's main source of dissatisfaction with the house which was physically sound and relatively satisfactory in all other respects. Jones (1979) considered the issue of dissatisfaction, especially with the house size, in the decision to move to be more important than locational factors of accessibility.

Another group of observations relates to the spatial and temporal interdependencies existing between the movement of households within the city and the distribution of vacancies within the housing stock. According to White (1971), each additional dwelling unit comprises a vacancy as soon as it is available for occupation.

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This unit forms the initial link in a series of moves which constitute a vacancy chain. Vacancy chain, on a wider view can be considered a variant of filtering process. The supply side of housing opportunities in decision to move is important because the chain of housing opportunities thus created is in part dependent upon the price, form and location of new additions to the housing stock (Maher, 1974). Vacancy chain approach to housing location studies deals with the sequence of moves generated by the addition of vacancies to the housing stock through construction, outmigration and conversion. While filtering process indicates a change of occupancy by households due to improved income or status, vacancy chain can help enhance such a filtering process as new housing stock is added to which higher income households might move (Miller and Romsa, 1982).

2.3 Models of Urban Activity Pattern

"Action space" is the collection of all urban locations about which the individual has information and the subjective utility or preference associated with these locations (Horton and Reynolds, 1971). The core of an individual's action space is termed the "activity space" which is defined as the subset of all locations or areas that an individual has ever visited or had direct contact with as a result of the day-to-day activities. In terms of activity system, persons and firms are regarded as behavioural units which perform some activities in some locales. The activity space is the most structured by individuals because it comprises locations which have actually been visited. A location will change from being part of the action space to being part of the activity space once a trip has been made.

The pattern displayed by individuals as they carry out their activities is the

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"activity pattern" of individuals. The activity pattern is determined by individual's propensity and opportunity to engage in particular activities (Chapin, 1974), based on "predisposition" factors (such as role obligations, traits, etc.) and the individual opportunity on the perception of the accessibility to the necessary facilities and to perceive the performance of these facilities (Michelson, 1977).

Intra-urban travel pattern is determined by the number of trip characteristics including measures of frequency, timing and purpose of travel as well as distance travelled to reach destinations, the amount of time spent at different activities and the means of travel used (Hanson, 1977). Chapman (1979) emphasised that the spatial patterns of behaviour are a product of many human decisions, yet these patterns are themselves influenced by existing patterns. He observed that the pattern of tortuous narrow streets in the core area of a city might be the "effect" of decisions concerning land ownership and use. However, over a much longer period extending to the present day, the street pattern might be viewed as a constraint or "cause" influencing the daily travel and shopping decisions of contemporary population by deterring the use of vehicles. The reciprocal relationships inherent in decision-making in a spatial context are emphasized by the fact that such decisions generate both movement in space and change through time, a combination of which makes it meaningful to speak of spatial processes.

Some studies have focused on the impacts of constraints imposed by culture, income, social status, old age, traditional sex role, auto availability and employment (Brail and Chapin, 1973; Hanson and Hanson, 1980). These studies have shown that personal characteristics are important to a variety of aspects of travel behaviour, such as

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mode, search behaviour, distance travelled, number of stops on a home-to-home trip, types of destination visited, frequency of travel and various aspects of shopping behaviour (Davies, 1969; Hanson and Hanson 1981). Constraints on behaviour are observed to be imposed by a person's social and economic status, household and societal relationship or one's location vis-a-vis the transport system and activity sites.

Aggregate regularities have been revealed by the application of trip generation and gravity-type models (Mansfield, 1969) and category analysis (Perry, 1973). Supply-induced demand has been recognized as an important phenomenon and preferences or needs of individuals or households and the nature of recreation travel space as behavioural explanations have come to the fore (Chappelle, 1973; Mercer, 1973). Most frequently, analyses of recreation trip behaviour attempt to relate the socio-economic characteristics of individuals to the characteristics of the trip made. Regularities found are, however, subject to a number of outside factors not normally controllable in social survey studies.

Efforts at explaining spatial pattern of shopping behaviour have been dominated by the theoretical approaches offered through the central place theory or the gravity-type models. Central place theory postulates distance minimizing consumer behaviour while gravity-type model offers an alternative to the postulate of distance-minimization in that consumer behaviour is considered to be the result of a trade-off between distance and attractiveness of the shopping centres in terms of floor space, place utility and a measure of distance decay.

Some studies have indicated that consumers' perceptions and evaluations of shopping centres' attributes are not linearly related to their physical counterparts

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(Louviere and Meyer, 1979; Timmermans, 1981), a finding which Timmermans, et al (1982) noted was at variance with some of the underlying assumptions of the gravity model. It appears that consumer behaviour is not guided mainly by the principles of economic man, but is rather the result of a subjective decision-making process on the basis of personal and environmental constraints as well as imperfect and incomplete knowledge of the retailing system (Timmermans, 1980; Timmermans, et al, 1982).

An obvious observation from the foregoing is that urban residents exist in an extremely complex spatial environment that includes a host of travel destinations. However, efforts at introducing activity patterns to residential location choices have not taken a comprehensive approach, and in fact, activity patterns have not been given a major focus in such studies (Hanson and Hanson, 1981; Herz, 1982; Meyer and Speare, 1985; Jud and Bennett, 1986; Salau, 1990).

2.4 Spatial Behavioural Models

Lloyd (1976) attempted an examination of the linkages among cognition, preferences and migration behaviour in different states in the United States of America and found a strong structural linkage among them. He concluded that based on the three components it was possible to predict the direction of movement, in that preferred locations of a cognitive space would receive larger percentages of migrants and vice-versa. Hanson (1977) revealed that when the spatial form and extent of information levels were compared with the travel patterns that emerged from the travel diary of the urban residents, it was evident that the set of locations actually contacted was but a small sub-set of the cognitive opportunity. Cadwallader (1978) used information and preference surfaces in explaining individuals' cognitive space. Preference surface reflects

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the varying attractiveness as a place to live in, which people attach to different locations. It was, however, discovered that the underlying structures of information and preference surfaces are more difficult to disentangle, especially, in the case of information surface, and there is no evidence that these structures are strongly related.

Information about the objective environment as stored subjectively in the individual's brain is called the cognitive constructs of the urban environment. Cognitive image is, however, different from locational schemata or mental map. The term "cognitive" is used to indicate the non-locational character of most images, and to suggest that thinking and verbal behaviour form a stronger component of cognitive images than concrete visual imagery (Wong, 1979). Cognitive affective maps are mental orderings of the environment that involve preference and choice. Preference ratings guide residential choice, but personal and financial considerations often preclude selection of the preferred location (Preston, 1982). Behavioural models provide psychological-oriented accounts of the destination choice process in repetitive urban spatial behaviour (Pipkin, 1981).

Behavioural approach is increasingly finding a place in urban and transportation planning in an attempt to improve the policy contents of plan proposals. The earlier approach of urban/transportation planners has leaned heavily towards the environmentalists' viewpoint, which, according to Herz (1982), maintains that spatial behaviour, including personal and social constraints, is essentially a function of the material environment. Thus, what appears to be close to environmental deterministic view of behaviour has been jettisoned and planners are currently adopting behavioural approach which sees the spatial structure, material environment and man as mutually

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interacting elements of the urban space. Man is considered as having the ability to evaluate, interprete and react to his environment as observed and perceived. However, Lundqvist (1978) observed that existing planning models were not capable of integrating structure and behaviour in a theoretically sound way and at a level of detail that was useful for planning purposes. He suggested that it might be necessary to work with less ambitious approaches built on iterative use of structural and behavioural models. This problem is still evident despite the fact that sophisticated techniques are being developed and employed in planning for the analysis of spatial behaviour (Burnett, 1977; Arad and Berechman, 1978; Smith, et al. 1982).

Timmermans and Veldhuisen (1981) observed that behavioural models offered a potentially more valuable approach to predict the likely effects of physical planning schemes as compared with the gravity-type approaches. They, however, noted that behavioural models shared with the gravity type models the problem of whether equations could be developed solely on the basis of policy-sensitive factors or whether other influential factors should be included. Residential preference measurement has also been attempted to incorporate district preference and indifference zones within a scaling preference (Longley and Wringley, 1984).

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2.5 Summary of Review

Several research efforts have been directed at explaining households' locations within the urban space. These efforts are directed at providing socio-economic, demographic and some spatial explanations to households' residential location choices. However, two observable characteristics of these research efforts are the over-whelming

attention given to the city centre as the pivot on which locational relationships were determined and the issue of economic rationality of man. Households were viewed as locating with accessibility consideration to the city centre, which provided all employment, commercial, social and administrative opportunities. In making a choice of residential location under this condition, a household was expected to be economically rational to choose the location which provided optimal utility (Blackley and Follain, 1987).

Research efforts have largely neglected the significance of the distribution of urban activities on households' residential choices especially in developing countries, including Nigeria. Most of the existing models were developed in the West where transportation, communication and information systems are highly developed and better organized (LeRoy and Sonstelie, 1983).

From the review of literature, it is evident that residential location and mobility studies have largely ignored the relevance of the general distribution of urban activities, although fragmentary evidences support such relevance. The major thrust of this research work is, therefore, to attempt to bridge this gap in the available literature on the effects of the distribution of urban activities on households' residential location decision.

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CHAPTER THREE

CONCEPTUAL FRAMEWORK

3.1 Conceptual Framework

This study adopts a behavioural point of view using a model developed by Downs (1970) and modified by Lloyd (1976) to explain linkages among cognitive information, environmental preference and behaviour in space. This study also integrates the concept of the learning process developed by Horton and Reynolds (1971) and the integrated framework for spatial choice behaviour of Desbarats (1983) (Fig. 3.1).

The following assumptions were made in the study:

(i) the household is free "floating" within the urban space and can therefore locate anywhere;

(ii) households tend to minimize accessibility between residence and activity areas;

(iii) households tend to optimize aggregate accessibility to activity areas to improve convenience;

(iv) households change residence when optimality in aggregate accessibility is disturbed and become unfavourable;

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(v) some households are constrained from moving even if assumption (iv) holds.

Two other broad assumptions are made. These are:

(a) A household has preference for a residential area, the reasons for which could be social, psychological etc. Such a household aspires to locate in such an area. The aspiration may, however, never be achieved due to economic, social, administrative, etc. reasons. A will to change is continually being induced.

(b) Since it is almost unlikely that a household will choose a residence due to multiple reasons, it is assumed that the household chooses a residence based on the most important reason (or a few number of reasons) and makes adjustments for other activities.

In this study, the individual household is conceptualized as seeking a residential location relative to the point pattern of urban opportunities and activity space which optimizes aggregate accessibility to these points. This emphasises the importance of accessibility constraints since sub-optimal location relative to these activity point patterns will reduce the range of activity points that can practically be reached within realistic time and cost limitations. The household is, thus, continually adjusting to the housing opportunities and constraints within the urban space to achieve this goal of optimal residential location.

Urban residential location behaviour, although overtly characterized by utility maximization and distance (or travel time or cost) minimization considerations, is usually sub-optimal as a result of previously learned expectations and preferences. It is also

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affected by locational biases (especially in case of new comers) in the receipt of environmental information induced by the location of home and workplaces and their location vis-a-vis one another.

The individual household is, therefore, a crucial part in the process which links the objective environment, through a sequence of events relating to man's use of information, and the behaviour which occurs in the environment. Individuals collect and subjectively store information about the urban environment. A broad knowledge of the urban environment is essential in residential location search process because an individual is hardly likely to choose an alternative which he does not know exists.

When an individual is choosing from among possible locations in his environment for a residence, he uses the information collected about the environment and which he subjectively stores mentally rather than the objective information about the real world. If the individual does not have enough information, he searches the objective environment until he mentally stores enough information so that decision-making criteria can be applied to residential choice, mediated by attitudinal, socio-demographic and economic variables. Preferences can then be determined. The individual often associates subjective utility preferences with locations and such subjective utility preferences are evaluated with regard to both potential and actual residential location. The preference for any particular place would not depend, therefore, on objective measures of that place but on filtered information which is the basis of an individual's mentally built environment.

The individual, therefore, performs an iterative assessment of each location in relation to the distribution of his potential and actual activity points distribution. A sort

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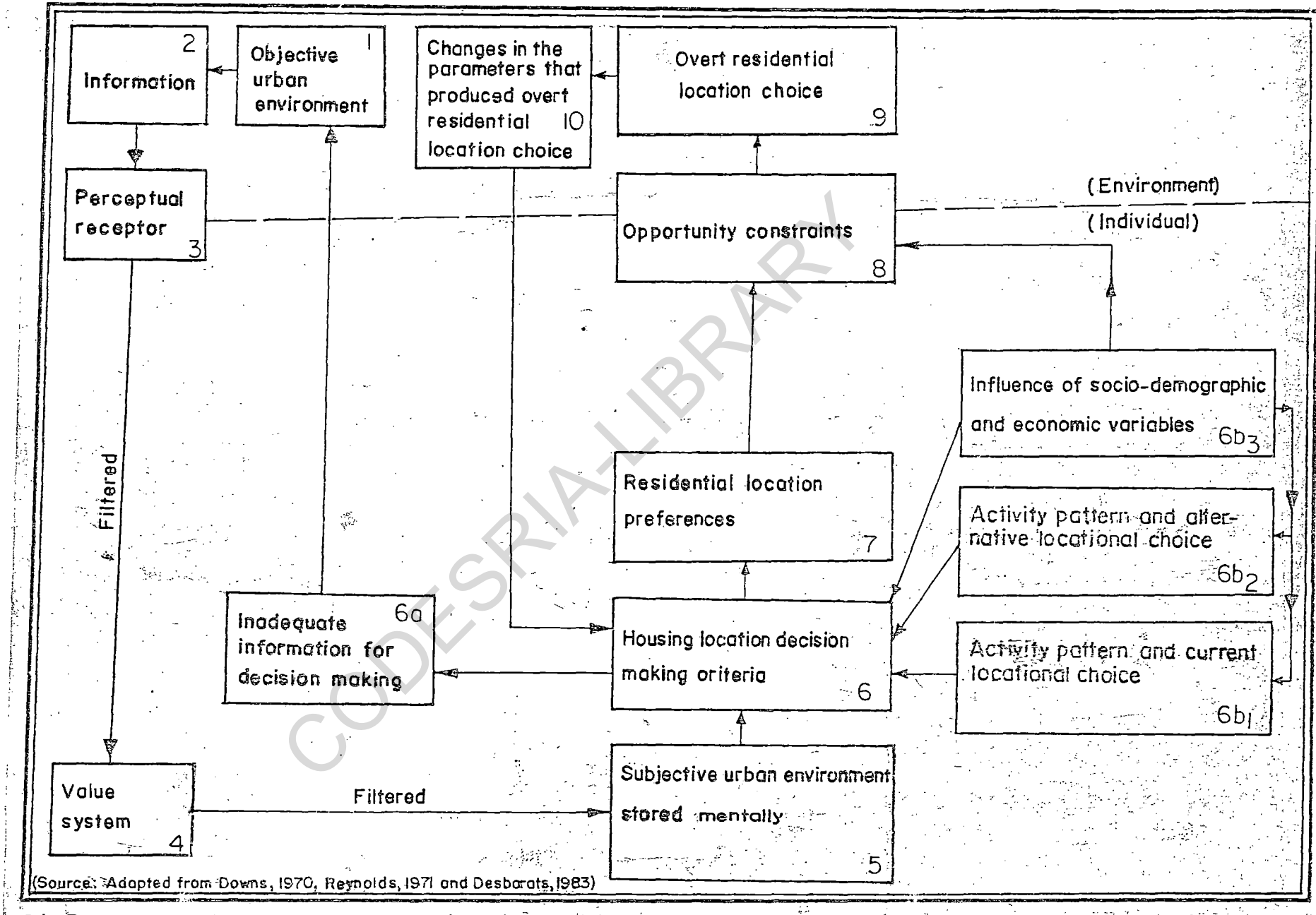

Fig 3-1: Conceptual model for residential location decision-making process.

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of spatial discounting process takes place and adjustments in residential location choice continues until an "equilibrium" or "optimal" location is reached, barring any major change in urban structure such as the relocation of major employment and shopping centres, etc. Any such major change will set in motion a new sequence of search and adjustment process.

However, preferences formed about particular locations may not be directly linked to actual behaviour. Actualization of intention formed from preference for a particular residential location may encounter some constraints which may occur at any point during the decision-making process and thus, create discrepancies between individual's preferences and actual residential choice. This is because in a majority of cases the individual actor has no direct control over the spatial organisation of his environment. Changes in residential location behaviour at the individual household's level are viewed as adjustments to changes in urban spatial structure, a structure which affects the activity patterns of households. Any major disturbance in locational equilibrium or changes in the attributes used in the residential location decision-making might alter the relative advantage or utility of the chosen location and might require a re-evaluation of the process all over again. This concept, thus, provides a cyclical process that accommodates structural changes in activity distribution and other decision-making attributes.

It should be realised that activity distribution of a household is not static, but dynamic. For instance, a household head or any member of the household might change workplace, school, places of worship or cut down on the range of activities he/she partakes in or discover new and better shopping opportunities and so on. It implies,

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therefore, that household optimal location is also dynamic and changes with changing activity distribution. There is, however, an elastic/endurance range within which household's convenience/satisfaction and, therefore, optimality in residential location of different households could be measured. Outside such range a household is normally expected to change residence because stress/dissatisfaction with such location will increase. Whether such household will eventually change residence or remain in current location is dependent on several other factors.

In Nigeria, for example, optimal location in relation to the activity pattern might be difficult or take a very long time to achieve. One of the major reasons is the inadequate housing stock which makes many house seekers occupy available vacancies at whatever location in such cities as Lagos, Ibadan, Port Harcourt and some new state capitals, irrespective of the considerations for optimality that this work is particularly concerned with. Another factor that is important in urban spatial structure is the Nigerian factor in the political decisions that locate facilities and social services with no regard for optimality considerations. Rent is also very high under such conditions. Other reasons that influence where a household ultimately occupies include the location of family house or own house for family house occupiers and owner occupier households. However, such households suffer serious transport cost disadvantages because of dispersed or constrained activity nodes. In several cases, adjustments of activity nodes are not easily accomplished because existing urban structure cannot be modified by individual households. However, the facts still remain that such locations are sub-optimal and a household in that condition will perpetually aspire for a better alternative or a better re-organisation of its activity nodes. Such a desire may take a long time to achieve or might however, never be

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achieved. These are the captive residents. Such households move at the next available opportunity to a better location. Household residential location and activity distribution are, therefore, inter-related.

3.2.0 Methodology

3.2.1 Sources and Organization of Data

Field survey provided much of the data required for this study. A grid system of one square centimetre cell (i.e. 200 metres by 200 metres on the ground) was superimposed on the 1:20,000 updated base map of Ibadan. This is estimated to be on the average of one building in every 20 buildings along the grid line. Each grid cell contains a cluster of houses out of which one was selected at each grid intersection. The total number of houses in Ibadan cannot,therefore, be simply estimated by using this ratio. Eight hundred and ten (810) houses falling at or near every other intersection of the grid lines were systematically selected and a questionnaire survey carried out on a household in each building. Household heads provided information on their socio-economic characteristics in addition to the location of their activity nodes. Seven hundred and thirty six (736) questionnaires (91 percent) were properly completed. Information was specifically collected on nine parameters viz, residence and socio-economic information; workplace; schools for children; shopping facilities; recreational facilities; religious centres; health facilities; and the knowledge of households about the structure of the city. Information on urban activity system includes frequency of visits to the activity nodes, commuting costs and factors influencing their choice of activity nodes. The city centre used in this study is Dugbe. Other traditional city centres, such

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as Mapo, exist and the multi-nucleated nature of Ibadan is recognised. This choice is for convenience and in particular because Dugbe is the modern CBD and easily identified by many residents in Ibadan.

Distances to the residential locations of each respondent's activity centres were computed from the map. The households have been instructed to indicate the landmarks near the activity centres mentioned (Appendix I). The direct distances linking the activity nodes and residential locations were used in the analysis. Other types of distance measures such as time and cost were also obtained from the questionnaire and used in the analysis. Efforts were made during the collection and collation stages of the data to minimize errors that might be introduced by such distance measurement. The resultant data are therefore reliable.

Secondary data were collected from local government offices, state government ministries, the Ibadan Metropolitan Planning Authority. Data from these sources include the proposed Ibadan Master Plan, data on social and economic facility centres such as schools, hospitals, markets, shopping centres, industrial estates etc.

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3.2.2 Methods of Analysis

The data were analysed using simple statistical methods such as ratios, percentages and correlation analysis. Multiple regression analysis was used to explain the variables that determined the residential location choices of households and distances to the selected city centre. Distance to the city centre was used as the dependent variable. The general multiple regression equation used is:

$$Y_i = a_i + b_1x_1 + b_2x_2 + \ldots + b_nx_n$$

where Y_i = dependent variable

a_i = base or multiple regression constant referred to as Y intercept.

b's = regression coefficients or unknown parameters which indicate the change in Y per unit change in the explanatory variables.

x's = independent variables.

(Koutsoyiannis, 1977; Flury and Riedwyl, 1988).

The households were classified into "behavioural groups" using the method of cluster analysis which uses variables as they relate to cases to determine which group a case belongs to. The goal of cluster analysis is to identify homogeneous groups or clusters. The cases are grouped on the basis of their proximity. The most commonly used distance is the squared *Euclidean distance*, which is the sum of the squared differences over all the variables. The difference between each group of two cases is computed iteratively for all the cases. For example, for case 1 and case 2,

Squared Euclidean Distance (D) = $(X_{11} - X_{12})^2 + (X_{21} - X_{22})^2 + \ldots + (X_{mi} - X_{mn})^2$.

where, X_{11} is variable 1 for case 1 and X_{12} is variable 1 for case 2, etc. A distance matrix, usually called Squared Euclidean Dissimilarity Coefficient matrix, is produced which forms the basis of allocating cases to clusters.

The cluster analysis was used to identify the group to which a case belonged so that further explanatory analysis could be carried out on the groups. It would be realized that the group characteristics are not known in cluster analysis and, therefore, such groups could not be easily named. The group membership number was entered into the active data file as a variable against each case and discriminant analysis was carried out

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to identify the distinguishing characteristics of each group so that the "behavioural groups" could be described and assigned names based on their characteristics.

Discriminant technique is most commonly used to identify the variables that are important for distinguishing between particular mutually exclusive groups. This technique has been extensively used in recent years in transportation planning to classify trip makers (Ogunjumo, 1987a, 1987b, 1989) and to classify states on the basis of expenditure on transport investment (Ogunjumo 1985). The equation is:

$$D = B_0 + B_1X_1 + B_2X_2 + \ldots + B_p X_p, \text{ where:}$$

D is the discriminant score, X_p are the independent variables and the B_p are coefficients estimated from the data. If a linear discriminant function is to distinguish between mutually exclusive groups, the groups must differ in their D values. The B_p are chosen so that the values of the discriminant functions differ as much as possible between the groups, or that for the discriminant scores the ratio

$$\frac{\text{between - groups sum of squares}}{\text{within - group sum of squares}}$$

is a maximum (Stopher and Meybury, 1979; Flurry and Reidwyl, 1988; Norusis / SPSS Inc., 1990).

The linear discriminant technique was used in explaining the mutually exclusive groups such as those households who considered their residential locations convenient and those who did not consider their locations convenient; those who hoped to change residences and those who did not; and those who changed residences within the past five years and those who did not.

3.3 Hypotheses

The null hypotheses to be tested include:

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(i) that there is no tendency for households to optimize their residential locations in relation to the spatial distribution of urban activities;

(ii) that households do not move only when their residential location equilibria are seriously disturbed.

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CHAPTER FOUR

HISTORICAL BACKGROUND

4.1 The Origin and Growth of Ibadan

Ibadan was founded in the 1830's as a camp for refugees seeking protection from the 19th Century Yoruba Wars (Akinola, 1966; Mabogunje, 1968; Onokerhoraye, 1977; Areola, 1982). Its location near the forest-grassland boundary made it an ideal place to provide the much needed protection for the refugee population during these wars.

Ibadan is located approximately on longitude 3°54′ East of the Greenwich Meridian and Latitude 7°23′ North of the Equator in the agriculturally productive region of the derived savanna belt of southwestern Nigeria. It lies generally at heights between 250 and 300 metres above the sea level and is drained by Rivers Ogunpa, Ona and Ogbere. According to Mabogunje (1968), the site of Ibadan is dominated by a range of lateritized quartzitic hills trending generally in a northwest - southeast direction. The highest of these hills (Eleyele Hill) rises over 35 metres above the surrounding region and gives a very wide view over the plains.

Ibadan is occupied predominantly by the Yoruba ethnic group which makes up about 95 percent of the population (Appendix III). The remaining 5 percent are from other ethnic groups such as Ibo, Hausa, Ibibio, Edo, etc. Yoruba culture,therefore, predominates in the city. This is very obvious in social interaction, kinship ties, compound housing system etc. (Mabogunje, 1968).

Since the early period, Ibadan has been witnessing rapid development and physical expansion. By 1935 the estimated urban landuse covered some 38.85 sq.kms (Okpala,

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1979). The urban land area increased to approximately 77.7 sq. kms by 1965, 152.8 sq kms by 1977 and 303.3 sq. kms by 1988 (Osunade and Salami, 1990) (Fig. 4.1).

The phenomenal expansion is largely due to the status of the city as an administrative capital with the accompanying infrastructural development resulting in increased number of commercial and industrial activities which subsequently attracted more people. The population of Ibadan as estimated by missionaries and as shown in census publications rose from 60,000 in 1851 to 150,000 in 1893, 175,000 in 1911 and 627,000 in 1963 (Fadare, 1986). At an estimated annual population growth rate of 6.0 per cent, Ayeni (1982) estimated the population of Ibadan for 1984 as 2.10 million. With this base estimate for 1984 and at 6.0 per cent annual growth rate the projected population for 1991 is 3.16 million. However,the National Population Census of 1991, recorded a total population of 3.48 million for the entire Oyo State. This figure (as is also the case in many cities in Nigeria) is still being contested in the law courts. However we are still awaiting the breakdown of the population on a settlement by settlement basis.

According to Mabogunje (1968), the growth of Ibadan has been by fission and fussion. He explained growth by fission as that of breaking up of single but large compounds into smaller individual units to meet the desire for individual ownership of dwelling units. Growth by fussion was said to be the outward shift in city boundary through the annexation of surrounding villages of Ibadan in order to accommodate more people. The establishment of institutions, commercial centres, industrial developments, road construction and governmental policies and programmes helped the growth of

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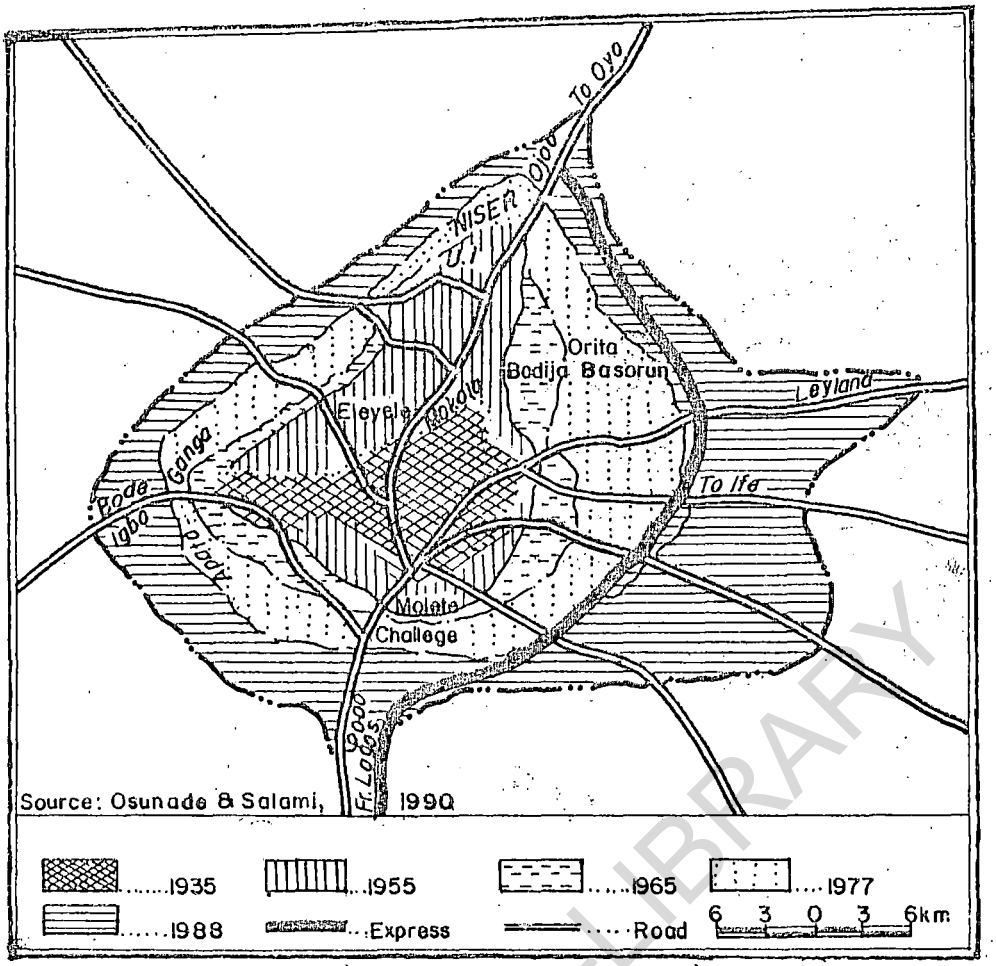

Fig. 4.1 The growth of Ibadan city between 1935 and 1990.

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Ibadan, hence the multiple nuclei setting of the city. One peculiar growth characteristic of Ibadan is the fact that growth has been accompanying the establishment of certain institutions, construction of roads and rail line. There was the establishment of a residency on Agodi Hill by the Colonial Administration in 1893 (Awoniyi 1989). The improvement of roads during this period significantly stretched the arm of development outside the initial core areas of Ojaba and Bere. The extension of rail line from Lagos to Ibadan marked the major upturn in the development of Ibadan. This extension, coupled with the convergence of Ijebu-Ode and Abeokuta routes on Ibadan further facilitated its growth and rapid physical expansion.

The establishment of Gbagi market in 1903 and the influx of many European firms which had established their branches in Ibadan by 1918 to take advantage of the rail line extension further increased the pace of physical development. The increase in the number of European immigrants further led to the establishment of Jericho Reservation. Adeniran (1984) noted that prior to 1935, direction of growth had been towards the eastern and western sides of the city including areas such as Agodi on the east and Moor Plantation on the western side (Fig. 4.2). The establishment of the University College in 1948 and its Teaching Hospital led to the influx of more clerical and executive workers. In 1959, Bodija Estate was established to relieve other European residential areas such as Agodi and Jericho Reservations of population pressure (Fig. 4.3). Northern shift in the expansion of Ibadan became more pronounced. The establishment of new industries and institutions also had noticeable effect to the expansion of Ibadan. Notable among these are the Airport, the Nigerian Breweries, the Ajoda New Town and the New Gbagi market all along the new Ife road. These industries and

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institutions have generated physical expansion of Ibadan in the north-eastern sector. Along Iwo road, the establishment of Leyland, Triplex, West African Batteries factories and the African Regional Centre for Engineering Design and Management (ARCEDEM) has led to the development of Monatan and the surrounding villages.

In the western sector, the development of Owode Housing Estate along Abeokuta road, the Military Command School, the Petroleum Oil Depot, the Nigerian Wire and Cable Industry and other private industries has attracted development to the area. The extent of development along this route, which is virtually linear has almost linked Omi-Adio with Ibadan. Developments towards the northern sector have been induced by the Army Barracks on Ojoo/Arulogun road which have caused Alegongo and Ashi villages to be encroached upon by the city. Ojoo has extended, therefore, on both sides of Oyo road to capture Sasa village and link up with International Institute of Tropical Agriculture (IITA), spreading towards Moniya.

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4.2 Landuse and Location of Activities

The growth of Ibadan was not structured by the use of any sophisticated master plan, hence the observed landuse management problems encountered in many parts of the city. Landuse seems haphazard.

As obtained in many Nigerian towns, private ownership of urban land is the most common. Approval of private layouts which helped to control urban development, to some extent, in order, to ensure proper alignment of road network and the provision of some landuse elements, was abrogated by the 1978 Land-Use Decree which does not vest

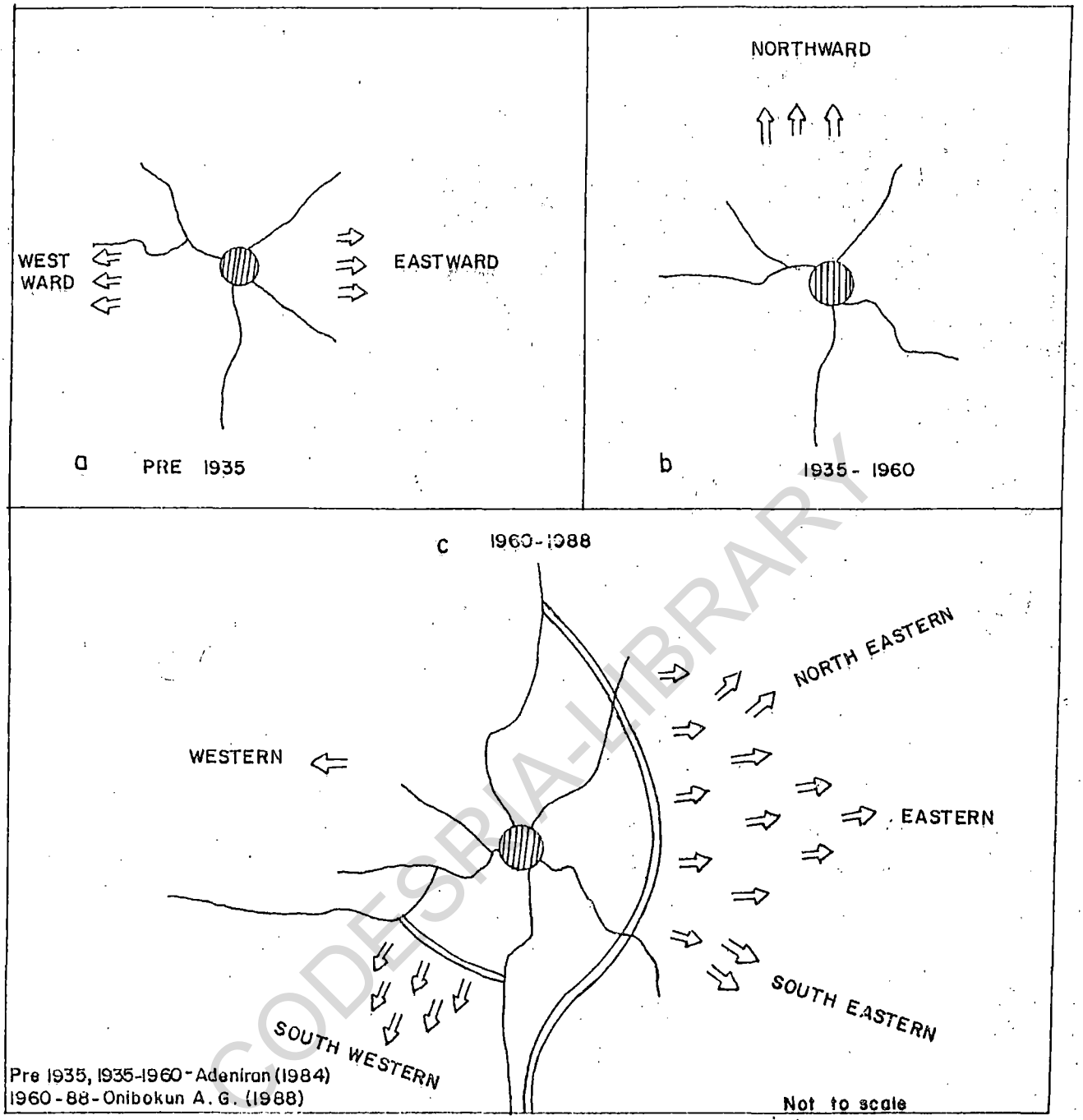

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Fig. 4.2 Direction of physical growth of Ibadan.

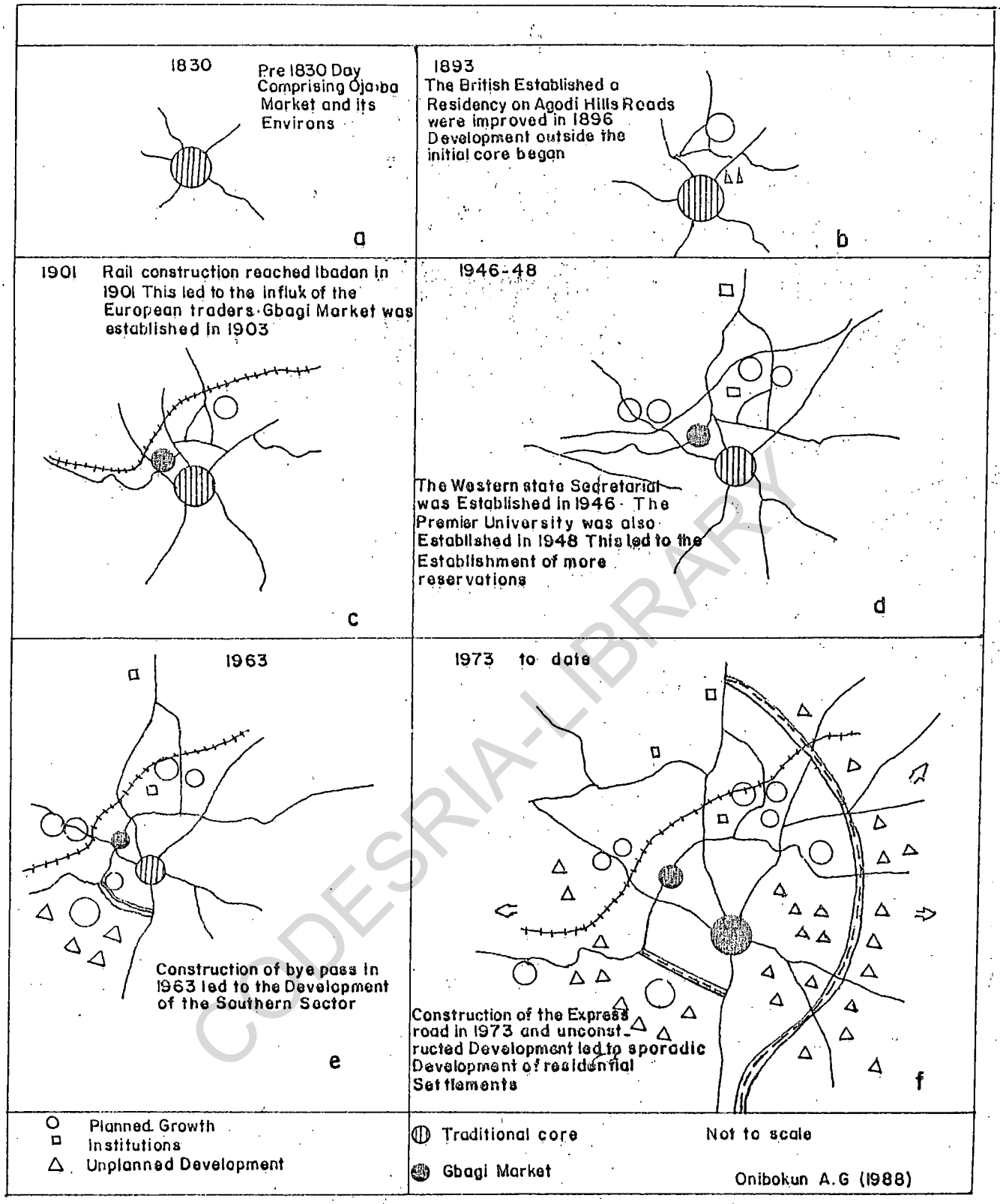

Fig. 4·3 Important phases in the growth of Ibadan.

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more than about ten high density plots to an individual in an urban centre in a state. Developments have, therefore, sprung up indiscriminately in all directions with little regard to accessibility and other basic environmental considerations. Awoniyi (1989) noted that inadequate land-use control has been seriously compounded at various times in the past by political interference. The pronouncement that development control should be restricted to the formal city limits is such an interference. Thus, areas which fall outside the city proper are left out of any land-use control. This is especially observable in the modern slum along the Ibadan - Lagos expressway.

A large proportion (57 percent) of the urban land area as contained in the proposed Master Plan of Ibadan is occupied by residential elements (IMPA, 1984). However, a sizeable area of the residential districts, especially the core area of the city, falls within the slum areas where vehicular access is low, infrastructural facilities are poorly supplied and the structural quality of the residential buildings is generally poor. All these combine to increase the health hazards of these areas. However, Yirenkyi - Boateng (1986) identified five residential groupings which he called Housing estates including Bodija, Agodi, Jericho and Link Reservations, Oluyole estates etc. Other high class residential areas include areas bordering Bodija and Agodi through Bashorun to the expressway, areas around the new airport and areas around Challenge.The medium class residential areas occupy a large proportion of residential land especially in such areas as Ring road, Apata, Sango, Eleyele, Oke-Ado, Oke Bola, Monatan, Ojoo etc.The New unplanned suburb extends away from the Lagos - Ibadan expressway to the east; and the traditional core areas (Fig. 4.4).

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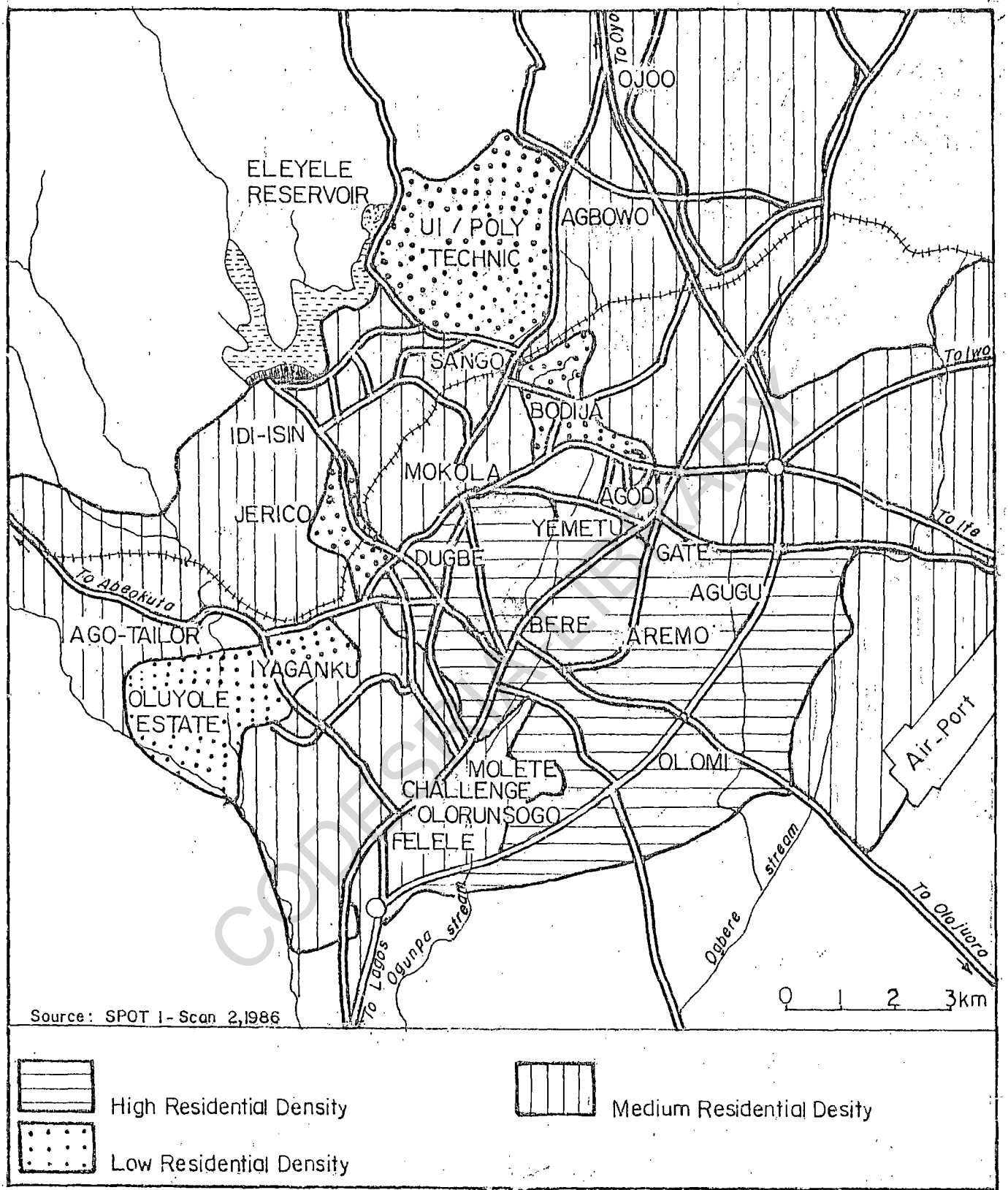

Fig. 4·4 Residential Landuse of Ibadan..

Industrial activities rank next to residential landuse in Ibadan, taking 16.55 per cent of the land area while military, commercial, institutional, open space and agricultural uses within the city account for the balance (IMPA, 1984). Ibadan Metropolitan Planning Authority (IMPA) has intensified efforts at providing land for industrial use. Examples are those in Oluyole Estate and along Ibadan - Lagos expressway and Ibadan - Akanran road. On these estates are some large scale industrial developments such as soft drinks bottling, steel works, plastics and food processing, amongst others. Commercial facilities have also been very significant in the growth and expansion of Ibadan. For example, up till the late 1960s, social and economic activities were relatively concentrated at two major nodal centres, the Gbagi Business District and Ojaba Market areas (Filani and Osayimwese, 1979). The city now has several large markets such as New Gbagi, Dugbe, Bodija, Sasa, Ojoo, Oje, Alesinloye, Sango and Olomi, which have regional catchment areas, and others such as Gege, Ayeye, Bode, Oke-Ado, Oja-Oba, Oranyan, Mokola etc. which serve the needs of the local people.

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4.3 Regional Setting

In its regional setting, Ibadan is the capital of Oyo State. The nodality of the city at a vantage point along the major routes which connect the north, east and southern states of Nigeria has enhanced its importance as an administrative and commercial headquarters. It served as the capital of the then Western Region from 1946 to 1962; Western Nigeria from 1963 to 1967; Western State from 1967 to 1976; Oyo State (including Osun Division) from 1976 to 1991; and exclusively of Oyo State from 1991 to date (Fig. 4.5). The city is also the headquarters of the Western District of the

Nigerian Railway Corporation. The development of the rail transport system and the airport facilities coupled with locational advantage along major highways provide adequate linkages to major towns and cities throughout the country. This has contributed immensely to the growth of commerce and industry in the city.

4.4 Transport and Movement Pattern in Ibadan

Transportation system in Ibadan has been greatly influenced by the rapid expansion in the city. The present areal extent coupled with the fast rate of growth of the city imply a continual expansion in urban activity distribution and increasing distance between homes and activity nodes patronized by urban residents. The city is fast expanding and encroaching on nearby agricultural lands. The area of agricultural land encroached upon by urban development rose from 0.38 sq km in 1935, 3.13 sq km in 1955, 6.26 sq km in 1977 to 13.68 sq km in 1988 (Osunade and Salami, 1990).

Movements within the urban centre involve trekking and the use of private automobiles, motorcycles and bikes; publicly owned and privately owned public transport including taxis, mini-buses and buses; and, recently, mass - rail transit. Adeniji (1983) noted that between 1964 and 1976 Ibadan city had a skeletal intra-urban bus system (publicly owned), originally plying 12 routes. This bus system eventually collapsed due to inadequate mass transport planning and regulation; lack of inter-governmental cooperation; poor maintenance; inadequate financial subsidy; dearth of qualified personnel and operational devices. However, the military regime in Nigeria has encouraged and financially assisted public mass transportation in virtually all the states

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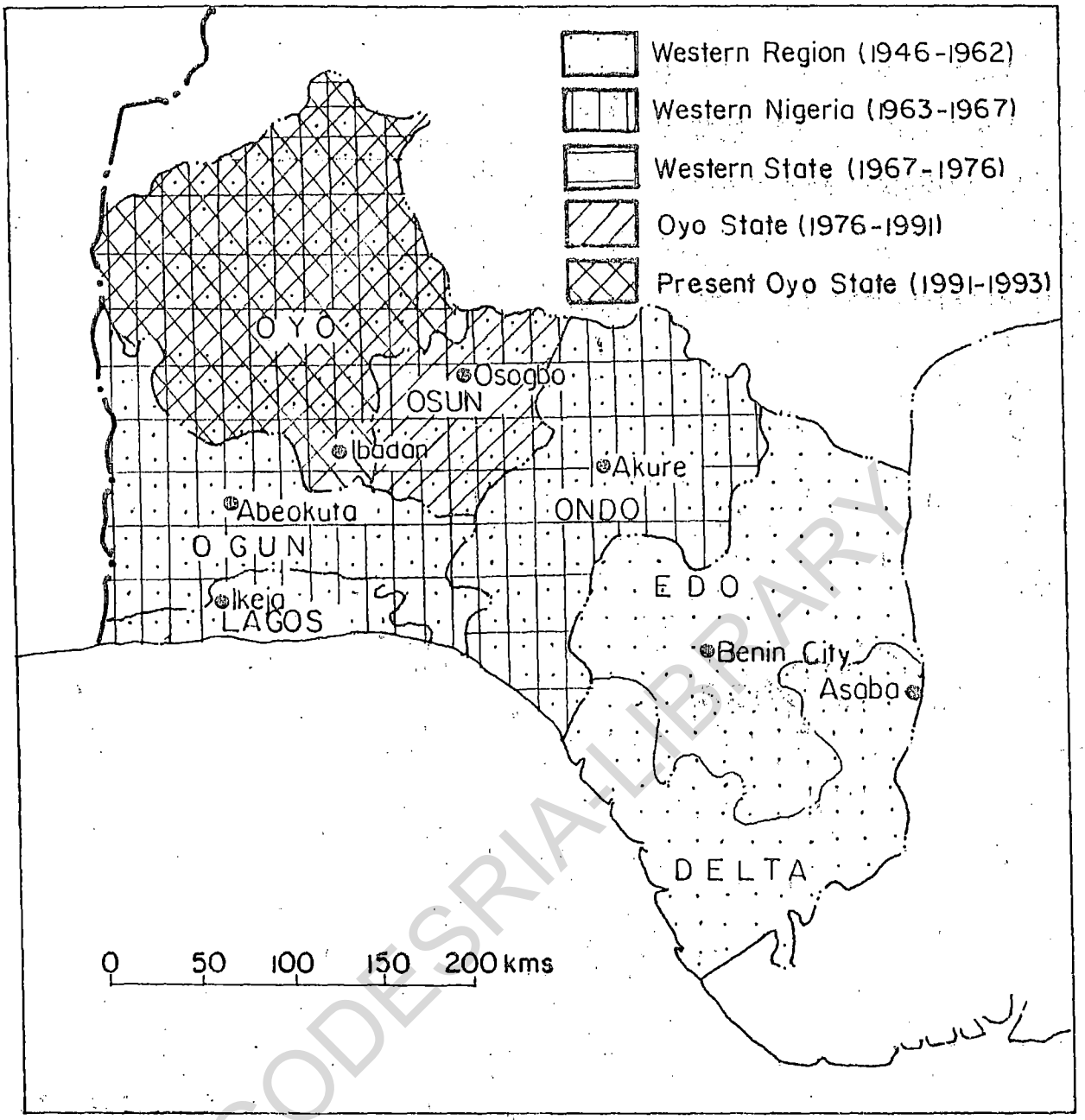

Fig. 4·5: Territories administered from Ibadan 1946-1993

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of the federation. Ibadan is benefiting from the services of Oyo State mass transit (Trans-City Transport Company).

Perhaps the most common modes of public transport are the taxis and mini-buses which are usually privately operated. Fadare (1986) noted that the most important trips in Ibadan are the essential trips, particularly to work and school in the low, medium and high density residential areas accounting for 50 percent of all trips in medium density areas and 64 percent in the low density areas. Discretionary trips, including social, shopping etc., account for 29 percent, 42 percent and 23 percent in high, medium and low density residential areas respectively. Trips for personal businesses account for the balance, which is dominated by a large proportion of petty traders who are mostly women.

The city has for a long time been referred to as the largest indigenous city in Africa, south of the Sahara. It has, thus, been an important urban centre in Nigeria. The choice of Ibadan for this study is predicated on the city's importance among Nigerian cities and the seemingly largely indigenous traits that are still found in the city. It affords a setting for a study within different indigenous socio-cultural backgrounds different from the cities of the Western nations which often form the basis of most residential location models that are currently used in planning and geographic studies.

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CHAPTER FIVE

CHARACTERISTICS OF HOUSEHOLDS IN IBADAN

5.1 Social Characteristics:

A large proportion of the heads of household is made up of males (93.6%). This is not unexpected since the husband is culturally the head of the household. However, in single-member households, either sex could be the head. In a household occupied by a widow or a divorced or separated female, such female becomes the head of the household.

Only a small fraction (0.3%) claim no religion. Christians constitute 67 percent while 32 percent are Muslims (Table 5.1). No respondent claims to be a traditional religionist. This is, perhaps, due to the domineering influence of Christianity and Islam.

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Table 5.1: Religion of Head of Household in Ibadan

Religion	No	%	Cumulative percentage
No religion	2	0.3	0.3
Christianity	493	67.0	67.3
Islamic Religion	241	32.7	100.0
Traditional Religion	0	0.0	100.0
Total	736	100.0	

(Source: Fieldwork, 1993).

The modal class of the age of the heads of household in Ibadan is between 25 and 29 years (Table 5.2), accounting for about 22 percent of the sample. A considerable proportion of the people is in active group between the ages of 20 and 59 years, constituting about 92 percent. This indicates a buoyant pool of workforce for the city. The aged and those at or near the retiring age (if they are in the public service) are only about 8 percent. It is also observed (Table 5.3) that married households constitute 67 percent of all households while those who have not married account for 29 percent. These two groups account for 96 percent of all households in the sample with the remaining 4 percent being widowed, divorced or separated households. The large proportion of married people indicates that household residential location decision, involving the consideration for other members of the household, is expected to affect many.

About two-thirds of the households in the sample are in the active family stage, that is, they are still raising children (490 households accounting for 66.58 percent). Two hundred and ten (210) households (28.53 percent) are in the pre-marriage or pre-child-bearing stage, that is, they are not yet raising children. Only about 5 percent (36 households) are in the post-family stage, that is, those who, perhaps, have largely completed raising children and, in particular, households where their children have left their parents and are on their own. Such households comprise aged people, pensioners, etc.

Four classes of educational groupings are identified. The dominant group has the highest educational level of post secondary (56.9 percent). This is followed in a descending order by those with secondary school education (28.0 percent) and primary

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school education (10.3 percent). Only about 5 percent of the household heads have no formal education.

Table 5.2

Age Distribution of Heads of Household in Ibadan

Age groups (Yrs)	No. of households	Percentage	Cumulative Percentage
20 - 24	31	4.21	4.21
25 - 29	165	22.42	26.63
30 - 34	135	18.34	44.97
35 - 39	119	16.17	61.14
40 - 44	76	10.33	71.47
45 - 49	81	11.00	82.47
50 - 54	38	5.16	87.63
55 - 59	32	4.35	91.98
60 - 64	22	2.99	94.97
65 - 69	25	3.40	98.37
70 - 74	7	0.95	99.32
75 and above	5	0.68	100.00
Total	736	100.00	

(Source: Fieldwork, 1993).

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Table 5.3

Marital Status of Head of Household

	No. of Households	Percentage	Cumulative percentage
Single	216	29.3	29.3
Married	496	67.4	96.7
Seperated	11	1.5	98.2
Divorced	3	0.4	98.6
Widow	10	1.4	100.00
Total	736	100.0	

(Source: Fieldwork, 1993).

5.2 Economic Characteristics

The dominant type of occupation of the heads of household in Ibadan is made up of the self-employed artisans who constitute about 36 percent (Table 5.4). Teaching is another important occupation, constituting about 20.92 percent. Trailing behind these groups are the traders (about 17 per cent) and the company workers (about 7 percent). Farmers constitute a small proportion of the workforce, since some people in other occupational groups, even though they have farms, may not regard themselves as farmers.

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Table 5.4

Occupational Groups of Heads of Household

Type of Occupation	No. of Households	Percentage
Not in workforce	10	1.35
Farming	2	0.27
Trading	125	16.98
Teaching/Lecturing	154	20.92
State Ministries/Local Goverment workers	89	12.10
Medical/Paramedical personnels	35	4.76
Military/Police	6	0.82
Self-Employed Artisans	264	35.87
Company workers	51	6.93
Total	736	100.00

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(Source: Field work, 1993)

In Table 5.5, over one-half of the heads of household earn between N500 and N1,000 per month (58.69 percent). This is followed by those earning about N500 and below (19.57 percent). These two classes account for over three-quarters of the total number of the heads of household. Considering the current economic situation in Nigeria, this large proportion indicates a general level of poverty not only in Ibadan, but also in the country. About 19 percent who earn up to N500 per month mostly earn just

about the National minimum wage. Only 14 percent earn between N1000 and N2000, while about 8 percent earn above N2000 per month.

The income of the working spouses is not significantly different from the picture above except that those earning above N1,500 per month constitute only about 2 percent (Table 5.6). A considerable number of spouses falls within the class earning about N500 and below per month (63.22 percent). Only about 5 percent earn more than N1000 per month. This obviously indicates a weak support group for the heads of household.

Table 5.5

Income of Head of Household

Income per month (N)	No. of Households	Percentage	Cumulative percentage
0 - 500	144	19.57	19.57
501 - 1000	432	58.69	78.26
1001 - 1500	65	8.83	87.09
1501 - 2000	39	5.30	92.39
2001 - 2500	16	2.17	94.59
2501 - 3000	19	2.58	97.14
3001 - 3500	5	0.68	97.82
3501 - 4000	12	1.63	99.45
4001 - 4500	1	0.14	99.59
4501 and above	3	0.41	100.00
Total	736	100.00	

(Source: Field work, 1993)

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Table 5.6

Income of Spouse

Income per month (N)	No. of Households	Percentage	Cumulative percentage
0 - 500	306	63.22	63.22
501 - 1000	156	32.23	95.45
1001 - 1500	13	2.69	98.14
1501 - 2000	6	1.24	99.38
2001 - 2500	1	0.21	99.59
2501 and above	2	0.41	100.00
Total	484	100.00	

(Source: Fieldwork, 1993)

5.3 Residential Characteristics:

Three types of house ownership are identified. These are rentals, occupants of family houses and house owners. About 78 percent of the respondents are tenants, 8 percent are occupiers of family houses while about 14 percent are house owners. When we consider the most preferred residential districts of respondents, 176 out of 573 tenants (30.72 percent), 30 out of 61 of those occupying family houses (49.18 per cent) and 14 out of 102 house owners (13.72 percent) locate in residential districts which are not their most preferred districts. While, technically, it may not be likely that the 13.72 percent house owners may change their residences (except they build new houses), the 206 tenants and family house occupiers who live in areas which are not their most preferred residential districts may move as soon as the opportunity occurs.

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Table 5.7

House Occupancy of Head of Household

Ownership type	No. of Households	Percentage
Tenants	573	77.85
Family House Occupiers	61	8.29
House owners	102	13.86
Total	736	100.00

(Source: Fieldwork, 1993)

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The most important means of information about residential space in Ibadan is through friends and co-workers who account for 66 percent of respondents (Table 5.8). Another related medium is through relations who account for about 20 percent. These two sources, account for about 86 percent of the sources of information about residential space. Households who get their residential space through real estate agents are only 9 percent. This shows that this method is not very popular in Ibadan. A small proportion of households (3.53 percent) gets its residential space by moving around and contacting people in areas of interest to know whether there are any existing ones. Less than one percent of households gets its residential space by other methods such as companies and institutions allocating such houses to them. The least used method is information through newspapers and other mass media.

Table 5.8

Source of Information about Residential Space

Source	No of Households	Percentage
Real Estate Agents	67	9.11
Friends/Co-workers	486	66.03
Relatives	152	20.65
Driving around/personal contact	26	3.53
Newspapers, etc.	0	0.00
Others	5	0.68
Total	736	100.00

(Source: Fieldwork, 1993)

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The dominant housing quality in Ibadan is the medium housing quality accounting for 75.68 percent (557). This is followed by the low quality houses, representing 15.35 percent (113) of all the houses in the survey. The high quality houses account for only 8.97 percent (66). The rent pattern is not significantly different from the above. From Table 5.9, those who pay less than N50 per month constitute about 19 percent of the total rent-paying households. This percentage is close to that of the proportion of households living in low quality houses. Those who pay between N50 and N250 per month account for about 72 percent of rent-paying households. Only about 9 percent of

rent-paying households pay more than N250 as rent per month. Some households who are house owners or those occupying family houses do not pay rent. A total of 163 households is in this category (that is, 102 houseowners and 61 households who occupy family houses). This group constitutes about 22 percent of the total number of households.

Table 5.9

Pre-Mid 1993 Rent Distribution (N per month)

Rent (N)	No. of Households	Percentage	Cumulative Percentage
Below N50	112	19.55	19.55
50 - 99	194	33.86	53.41
100 - 149	76	13.26	66.67
150 - 199	92	16.05	82.72
200 - 249	48	8.38	91.10
250 - 299	23	4.01	95.11
300 - 349	9	1.57	96.68
350 - 399	9	1.57	98.25
400 - 449	6	1.05	99.30
450 and above	4	0.70	100.00
Total	573	100.00	
Non-rent paying households	163	% of Total = 22.1	
Total	736		

(Source: Fieldwork, 1993).

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The one-person households account for only 19 percent of the total households in the sample. Households with at least 2 members account for about 81 percent (Table 5.10). However, 56 percent of all households have up to 4 members. The remaining 44 percent have at least 5 members. About 10 percent of households in the sample exceed the 'expected size' of 6-member family, in fact some households have up to 12 members.

Table 5.10

Size of Household

No. of people in household	No. of Households	Percentage	Cumulative Percentage
1	142	19.3	19.3
2	75	10.2	29.5
3	81	11.0	40.5
4	116	15.8	56.3
5	112	15.2	71.5
6	83	11.3	82.7
7	52	7.1	89.8
8	37	5.0	94.8
9	17	2.3	97.1
10	16	2.2	99.3
11	2	0.3	99.6
12	3	0.4	100.0
Total	736	100.0	

(Source: Fieldwork, 1993).

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The number of rooms occupied by these households varied from 1 to 9 rooms (Table 5.11). About 20 percent of the households, perhaps largely dominated by single-member households, occupy single rooms. This category of households is followed by households who occupy two rooms (29 percent). The modal class of the number of rooms occupied by households is 3 rooms, accounting for about 38 percent. Only about 9 percent of households occupy 4 rooms while about 3 percent occupy more than 4 rooms.

Table 5.11

Number of Rooms occupied by Household

No. of Rooms	No. of Households	Percentage	Cumulative Percentage
1	151	20.52	20.52
2	215	29.21	49.73
3	285	38.72	88.45
4	64	8.70	97.15
5	11	1.49	98.64
6	5	0.68	99.32
7	3	0.41	99.73
8	0	0.00	99.73
9	2	0.27	100.00
Total	736	100.00	

(Source: Fieldwork, 1993).

About 32 percent of the households have on the average, one person per room (Table 5.12). Even, about three-quarters (77 percent) of households still meet the national standard of a maximum of 2 persons per room. Although the proportion of

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households exceeding this standard is large (about 23 percent), those that may be considered to have serious accommodation problems, that is living at a rate above 3 persons per room, are only about 4 percent. On the average, the occupancy ratio for the sample is 1.52 persons per room (with standard deviation of 0.78) which is low when compared with some cities in Nigeria such as Lagos (Onibokun, 1985).

Table 5.12

Room Occupancy Rate

No. of people per room	No. of Households	Percentage	Cumulative Percentage
1	238	32.34	32.34
2	329	44.70	77.04
3	145	19.70	96.74
4	22	2.99	99.73
More than 4	2	0.27	100.00
Total	736	100	

(Source: Fieldwork, 1993).

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knowing where other job opportunities exist since many of them are possibly already engaged in a job.

Table 5.13

Length of Stay in Ibadan

No. of Years	No.of Households	Percentage	Cumulative Percentage
1 - 5	114	15.62	15.62
6 - 10	128	17.38	33.00
11 - 15	97	13.18	46.18
16 - 20	63	8.55	54.73
21 - 25	66	8.96	63.69
26 - 30	78	10.59	74.28
31 - 35	51	6.92	81.20
36 - 40	40	5.43	86.63
41 - 45	29	3.93	90.56
46 - 50	21	2.85	93.41
51 - 55	15	2.03	95.44
56 - 60	7	0.95	96.39
61 - 65	15	2.03	98.42
66 - 70	8	1.08	99.50
71 - 75	4	0.50	100.00
Total	736	100.00	

(Source: Fieldwork, 1993).

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Table 5.14

Knowledge about Activity Distribution in Ibadan

Type of Activity	Level of Knowledge				Total (%)
	none	little	well	very well	
Residential	5 (0.7)	108 (14.7)	316 (42.9)	307 (41.7	736 (100.0)
Workplaces	13 (1.8)	210 (27.3)	369 (50.1)	153 (20.8)	736 (100.0)
Schools	10 (1.4)	209 (28.4)	359 (48.8)	158 (21.5)	736 (100.0)
Shops/Markets	0 (0.0)	31 (4.2)	247 (33.6)	458 (62.2)	736 (100.0)
Recreation	39 (5.3)	325 (44.2)	325 (44.2)	47 (6.4)	736 (100.0)
Religious Places	2 (0.3)	127 (17.3)	494 (67.1)	113 (15.4)	736 (100.0)
Health Facilities	4 (0.5)	185 (25.1)	479 (65.1)	68 (9.2)	736 (100.0)
Average percentage	(1.42)	(23.02)	(50.25)	(25.31)	(100.0)

(Note: Figures in brackets are row percentages).

(Source: Fieldwork, 1993).

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The proportion of those who are aware of school facilities in other areas is similar to that of workplaces. About 70 percent claim to know educational facilities in other areas of the city, at least, well. The large proportion (30 percent) of those who have little or no knowledge of other existing educational facilities in other parts of the city may be due to the fact that schools are usually easily accessible to most households. Only few households who are concerned about the quality of a particular school or those who have children in secondary schools may need to know what obtains in other parts of the city.

Over 95 percent of households claim that they have knowledge of shopping and market facilities in other parts of Ibadan well. This may not be unconnected with possible information flow between households as to where foodstuffs and other materials could be cheaply purchased. Recreation facilities appear to be the least recognized in Ibadan. About one-half of the households has little or no knowledge about recreation facilities in other areas. In fact, it records the highest proportion (5.3 percent) of those who have no knowledge of some activities in other parts of the city. This shows that recreational activities are not very significant among the activities many households partake in.

Knowledge about religious facilities also appears to be high since about 83 percent know, at least well, where their other places of worship exist in other parts of the city. This is expected since there is possibly information flow and other interactions between people of similar religious beliefs. This would enable them to be aware of the existence of new or old ones in certain parts of Ibadan. About a quarter of the households has little or no knowledge about health facilities. This might be connected with the fact that,

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except for large public health institutions which have become well known, several private health institutions are not known in areas far away from their locations. This could be due to the fact that several private clinics and other health care facilities exist at the neighbourhood level.

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CHAPTER SIX

HOUSEHOLDS' ACTIVITY PATTERNS

6.1 Workplaces:

Some workers travel up to 18kms to their workplaces in Ibadan . Although only 3 percent of workers travel more than 10kms, up to 12 percent travel more than 7kms to their workplaces (Table 6.1). However, most households (55 percent) live within 3 kms of their workplaces. Households tend to locate near their places of work as confirmed by the correlation coefficient between distance to workplaces and number of households. The value of -0.82 indicates a distance decay phenomenon where-in households tend to locate near their workplaces. About 34 percent of the households (252 households) do not spend money on transport to work (Table 6.2). These possibly trek or get a ride to their places of work. About 62 percent spend between N1.00 and N4.00 to work per day while the remaining 4 percent spend more than N4.00.

The situation of the secondary worker (spouse) is not very different from that of the heads of household (Table 6.3). However, secondary workers travel less distances than the heads of household. The maximum distance travelled is about 10kms while, in general, only about 5 percent travel farther than 7kms. About 70 percent travel only up to 3 kms to their places of work. The correlation coefficient between distance to workplaces of secondary workers and number of workers is -0.76 which shows the tendency of secondary workers to be near their places of work. This tendency is however lower than that of the heads of household. About 41 percent of secondary workers virtually trek to their places of work while 45 percent spend between N1.00 and N2.00

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to work and only about 14 percent spend more than N2.00 to places of work per day (Table 6.4).

Table 6.1
Distance to Workplace of Head of Household

Distance (kms)	No. of Households	Percentage	Cumulative percentage
0.00 - 1.00	189	25.68	25.68
1.01 - 2.00	111	15.08	40.76
2.01 - 3.00	107	14.54	55.30
3.01 - 4.00	98	13.32	68.62
4.01 - 5.00	77	10.46	79.08
5.01 - 6.00	38	5.16	84.24
6.01 - 7.00	30	4.07	88.31
7.01 - 8.00	31	4.21	92.52
8.01 - 9.00	24	3.26	95.78
9.01 - 10.00	10	1.36	97.14
10.01 - 11.00	9	1.22	98.36
11.01 - 12.00	3	0.41	98.77
12.01 - 13.00	1	0.14	98.91
13.01 - 14.00	4	0.54	99.45
14.01 - 15.00	2	0.27	99.72
15.01 - 16.00	0	0.00	99.72
16.01 - 17.00	1	0.14	99.86
17.01 - 18.00	1	0.14	100.00
Total	736	100.00	

Correlation Coefficient (r) = -0.82029 (Source: Fieldwork, 1993).

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Table 6.2

Pre-Mid 1993 Commuting Cost to Place of Work of Head of Household

Cost (N)/day	No. of Households	Percentage	Cumulative percentage
0.00	252	34.2	34.2
1.00	60	8.2	42.4
2.00	263	35.7	78.1
3.00	72	9.8	87.9
4.00	59	8.0	95.9
5.00	14	1.9	97.8
6.00	10	1.4	99.2
7.00	1	0.1	99.3
8.00 and above	5	0.7	100.0
Total	736	100.0	

(Source: Fieldwork, 1993)
(Note: cost before the increase in the prices of petroleum products in the second half of 1993)

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Table 6.3

Distance to Workplace of Spouse

Distance (kms)	No. of Households	Percentage	Cumulative Percentage
0.00 - 1.00	188	38.84	38.84
1.01 - 2.00	97	20.07	58.91
2.01 - 3.00	53	10.95	69.86
3.01 - 4.00	48	9.91	79.77
4.01 - 5.00	45	9.30	89.07
5.01 - 6.00	22	4.54	93.61
6.01 - 7.00	10	2.06	95.67
7.01 - 8.00	9	1.86	97.53
8.01 - 9.00	5	1.03	98.56
9.01 - 10.00	7	1.44	100.00
Total	484	100.00	

Correlation Coefficient (r) = -0.75937

(Source: Fieldwork, 1993).

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Table 6.4

Pre-Mid 1993 Commuting Cost to Spouse's Workplace

Cost (N)	No. of Households	Percentage	Comulative Percentage
0.00	198	40.91	40.91
1.00	53	10.95	51.86
2.00	164	33.88	85.74
3.00	30	6.20	91.94
4.00	30	6.20	98.14
5.00	3	0.62	98.76
6.00	6	1.24	100.00
Total	484	100.00	

(Souce: Fieldwork, 1993).

6.2 Educational Institutions:

A large proportion of children (69 percent) attends nursery schools which are within 1km (Table 6.5). This is expected because of the ages of the children which are usually less than 6 years and would, therefore, need to be taken to school by parents or by some other arrangements. In fact, only about 9 percent travel more than 3 kms. The correlation coefficient between distance travelled and number of children is -0.61. The negative value indicates that households patronize nursery schools which are close to them. Some households who, however, travel longer distances may be attracted by the quality of the school which may sometimes offer school bus services as an option if the households possess no vehicle or are unable to bring their children to such a distance.

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Table 6.5

Distance to Nursery School

Distance (km)	No. of children	Percentage	Cumulative Percentage
0.00 - 1.00	152	68.92	68.92
1.01 - 2.00	35	15.77	84.69
2.01 - 3.00	15	6.76	91.45
3.01 - 4.00	5	2.25	93.70
4.01 - 5.00	6	2.70	96.40
5.01 - 6.00	2	0.90	97.30
6.01 - 7.00	2	0.90	98.20
7.01 - 8.00	4	1.80	100.00
Total	222	100.00	

(Correlation Coefficient (r) = -0.61439

(Source: Fieldwork, 1993)

The pattern of patronage of primary schools is not significantly different from that of the nursery schools. Two thirds of the children attend schools which are within 1 km (Table 6.6). Only 6 percent travel farther than 3kms. The nearness of schools to residences of households is connected with the education policy of Oyo State Government to allocate children to primary schools within walking distances to their homes. The correlation coefficient between distance and number of children is -0.65. This negative value indicates that households tend to patronize schools which are close to their residences.

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Table 6.6

Distance to Primary School

Distance (km)	No. of children	Percentage	Cumulative Percentage
0.00 - 1.00	217	66.36	66.36
1.01 - 2.00	77	23.55	89.91
2.01 - 3.00	14	4.28	94.19
3.01 - 4.00	7	2.14	96.33
4.01 - 5.00	6	1.83	98.16
5.01 - 6.00	2	0.61	98.77
6.01 - 7.00	3	0.92	99.69
7.01 - 8.00	1	0.31	100.00
Total	327	100.00	

Correlation Coefficient (r) = -0.64715

(Source: Fieldwork, 1993)

Patronage of secondary schools presents a slightly different pattern. While the modal class in nursery and primary schools is in 0 - 1.00km range, only about 18 percent of children in secondary schools fall within this distance range. About 60 percent travel between 1 and 3 kms to their schools. This is not unconnected with the fact that secondary schools are more widely dispersed and are fewer in number than both nursery and primary schools. However, only about 10 percent travel longer than 4kms to their schools (Table 6.7). The distance decay factor is also obvious in secondary school patronage. The correlation coefficient between distance and number of children in

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secondary schools is -0.74096, indicating that households tend to patronize nearby secondary schools.

Table 6.7

Distance to Secondary School

Distance (km)	No. of children	Percentage	Cumulative Percentage
0.00 - 1.00	37	17.96	17.96
1.01 - 2.00	75	36.41	54.37
2.01 - 3.00	50	24.27	78.64
3.01 - 4.00	24	11.65	90.29
4.01 - 5.00	11	5.34	95.63
5.01 - 6.00	3	1.45	97.08
6.01 - 7.00	1	0.49	97.57
7.01 - 8.00	4	1.94	99.51
8.01 - 9.00	0	0.00	99.51
9.01 - 10.00	1	0.49	100.00
Total	206	100.00	

Correlation Coefficient (r) = -0.74096

(Source: Fieldwork, 1993)

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Four modes of transport are observed in how children get to their schools (Table 6.8). These are trekking, public transport, school bus and private vehicle. More than one-half of the children in nursery schools trek to their schools. This is expected because, as earlier identified, about 69 percent of these children attend schools which are

within 1km from their homes. This is also the case with primary schools where about three-quarters of the children trek to their schools which are usually within walking distances. Only 27 percent of the children in secondary schools trek to their schools.

Table 6.8

Mode of Transport to School

School / Mode of Transport	Nursery		Primary		Secondary	
	No	%	No	%	No	%
Trekking	127	57.21	245	74.92	56	27.19
Public Transport	48	21.62	50	15.30	144	69.90
School Bus	25	11.26	11	3.36	2	0.97
Private Vehicle	22	9.91	21	6.42	4	1.94
Total	222	100.00	327	100.00	206	100.00

(Source: Fieldwork, 1993)

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Public transport accounts for only 21 percent and 15 percent of trips to nursery and primary schools respectively, while it accounts for about 70 percent of trips to secondary schools. The high proportion of secondary school students using this mode is due to the longer distances they travel to get to their schools and their being older with a reduced need for care in transit relative to the younger nursery and primary school children.

The use of school buses is most important in nursery schools, accounting for 11 percent. This is because many nursery schools provide school bus services to ease the movements of kids to and from schools and relieve parents of the task of transportation

of their children. Some primary schools, perhaps those with nursery and primary schools, also provide this facility, although only about 3 percent of children make use of it.

The use of private vehicles for conveying children to school is also most important in nursery schools. This is, perhaps, because of the ages of the children and the need to take some extra care of them by their parents. This facility is, however, most likely to be available to the rich in the society and some households who get assistance from their car-owning neighbours, friends or relations. Primary school children also benefit from this mode of transport especially when up to 6 percent, which is higher than the proportion of those who use school buses, use this mode. Only a few secondary school students, about 2 percent, use this mode.

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6.3 Health Facilities:

Two main types of health facilities are patronized by households in Ibadan. These are publicly owned and privately owned health facilities. Households' locational relationships to these two types of health facilities differ. For public health facilities, households travel longer distances. In Table 6.9, 20 percent of households travel longer than 4kms to public health institutions. The corresponding percentage of households for private health institutions is 7 percent. While more than one-half of the households that patronize private health institutions travel only up to 1km, only 18 percent of households travel less than 1km to public health institutions.

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Table 6.9

Distance of Health Facility

Distance in kilometre	PUBLIC HEALTH FACILITIES			PRIVATE HEALTH INSTITUTIONS		
	No. of House-holds	%	Cumula-lative	No. of House-holds	%	Cumula-tive
0.00-1.00	62	17.87	17.87	196	57.82	57.82
1.01-2.00	74	21.32	39.19	79	23.30	81.12
2.01-3.00	80	23.06	62.25	26	7.67	88.79
3.01-4.00	63	18.16	80.41	16	4.72	93.51
4.01-5.00	34	9.80	90.21	11	3.25	96.76
5.01-6.00	23	6.63	96.84	5	1.47	98.23
6.01-7.00	8	2.30	99.14	5	1.47	99.70
7.01-8.00	3	0.86	100.00	1	0.30	100.00
Total	347	100.00		339	100.00	
Correla-tion Co-efficient	r = -0.79601			r = -0.68693		

(Source: Fieldwork, 1993)

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One possible explanation for this patronage pattern is the locational characteristics and number of private health institutions. There are more private health institutions than public health institutions at Ibadan. Private health institutions also tend to locate within easy access to households and because they generally have less space requirements, they can easily secure such locations within residential and commercial neighbourhoods. On the other hand public health institutions are fewer in number and they generally require larger spaces for their activities.

It is, however, pertinent to observe that almost equal numbers of households patronize the two types of institution. Fifty (50) households (6.79 percent) do not attend any of these types of institutions, perhaps engaging in self-medication, faith clinic, herbal curation, etc. It is also worth noting the distance decay effects of households' location in relation to health institutions they patronize. The correlation coefficients between the number of households and the distance to the health institutions they patronize are -0.79601 and -0.68693 respectively for public and private health institutions. These indicate that households tend to patronize the health institutions which are relatively close to their residences.

6.4 Shopping/Market Centres for Foodstuffs:

The centres which households patronize for their foodstuffs constitute another activity of interest to them. Table 6.10 shows that some households travel up to 14kms to purchase foodstuffs. However, nearly one-half of the households in Ibadan travels only 2 kms to the shopping/market centres they patronize. About 17 percent travel more than 5kms to their shopping centres. With regard to the frequency of visits to shopping/market centres per week, 525 households (71.3 percent) patronize shopping centres only once per week. One hundred and ninety-nine (199) households (27.0 percent) patronize centres for foodstuff two times in a week while only 11 households (1.5 percent) patronize foodstuff centres three times in a week. The correlation coefficient between distance to shopping centres and number of households that patronize the centres is -0.81935. This high inverse relationship indicates that more households patronize shopping centres which are near them.

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Table 6.10

Distance to shopping/market centre for Foodstuffs

Distance (km)	No. of Households	Percentage	Cumulative Percentage
0.00 - 1.00	197	26.77	26.77
1.01 - 2.00	163	22.15	48.92
2.01 - 3.00	118	16.03	64.95
3.01 - 4.00	82	11.14	76.09
4.01 - 5.00	53	7.20	83.29
5.01 - 6.00	38	5.16	88.45
6.01 - 7.00	16	2.17	90.62
7.01 - 8.00	36	4.89	95.51
8.01 - 9.00	11	1.50	97.01
9.01 - 10.00	9	1.22	98.23
10.00 - 11.00	3	0.41	98.64
11.01 - 12.00	8	1.09	99.73
12.01 - 13.00	0	0.00	99.73
13.01 - 14.00	2	0.27	100.00
Total	736	100.00	

Correlation Coefficient (r) = -0.81935
(Source: Fieldwork, 1993)

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6.5 Religious Centres:

The two dominant religious groups identified in Ibadan are the Christians and Muslims. The residential location in relation to their religious centres and their patronage of such centres differ significantly. More Christians travel longer distances to their places of worship than the muslims. Table 6.11 reveals that 12 percent of Christians travel more than 4kms to their places of worship. At such a corresponding distance for muslims, only 6 percent travel. About 75 percent of muslims travel up to 1km to their places of worship while only 37 percent of Christians travel within this distance range.

This travel behaviour may be connected with the frequency of visits of each religious group to its place of worship. From Table 6.12, while only 15 percent of Christians attend their places of worship more than once in a week, 59 percent of muslims attend more than once. About 41 percent and 40 percent of muslims attend their religious centres once and 7 times respectively per week. This result indicates why the muslims should be near their places of worship because they need to visit such centres more frequently. More neighbourhood mosques than churches exist because muslims encourage the building of mosques in their backyards as part of their houses whereas such individually owned churches are not generally encouraged. The tenets of islam which make prayers mandatory five times a day encourage nearness to mosques. Christians on the other hand travel longer distances to attend the denomination of their choice even if that attendance is just once a week.

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Table 6.11

Distance to Religious Centre

Distance (kms)	CHRISTIANS			MUSLIMS		
	No. of House-holds	%	Cummu-lative %	No. of House-holds	%	Cumula-tive %
0.00 - 1.00	182	36.92	36.92	183	75.93	75.93
1.01 - 2.00	123	24.95	61.87	27	11.20	87.13
2.01 - 3.00	87	17.65	79.52	12	4.98	92.11
3.01 - 4.00	45	9.13	88.65	5	2.08	94.19
4.01 - 5.00	21	4.26	92.91	7	2.91	97.10
5.01 - 6.00	20	4.06	96.97	5	2.08	99.18
6.01 - 7.00	10	2.02	98.99	1	0.41	99.59
7.01 - 8.00	3	0.61	99.60	0	0.00	99.59
8.01 - 9.00	2	0.40	100.00	0	0.00	99.59
9.01 - 10.00	0	0.00	100.00	1	0.41	100.00
Total	493	100.00		241	100.00	
Correlation Coefficients	r = -0.80317			r = -0.55637		

(Source: Fieldwork, 1993)

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Table 6.12
Visits to Religious Centre

Frequency per week	CHRISTIANS			MUSLIMS		
	No. of House holds	%	Cumula-tive %	No. of House-holds	%	Cumula-tive %
0	19	3.85	3.85	12	4.98	4.98
1	403	81.75	85.60	87	36.10	41.08
2	29	5.88	91.48	8	3.32	44.08
3	27	5.48	96.96	5	2.07	46.47
4	6	1.22	98.18	2	0.83	47.30
5	5	1.01	99.19	26	10.79	58.09
6	0	0.00	99.19	4	1.66	59.75
7	4	0.81	100.00	97	40.25	100.00
Total	493	100.00		241	100.00	

(Note: 2 households claim no religion)
(Source: Fieldwork, 1993).

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6.6 Recreation Facilities:

Recreational activity is obviously not an important activity in Ibadan since only 201 households (27 percent) participate in any recreational activity within a week. The participation varies with the occupations of respondents. Table 6.13 shows the contribution of each occupational group to the 27 percent of respondents that take part in recreational activities. Public/Civil servants have the largest contribution of about 11 percent followed by self-employed artisans. Those who are not in the workforce, the civil servants and company workers contribute more than their expected participation rate in recreational activities that is, location quotients of 2.61, 1.06 and 2.22 respectively, indicate concentrations of the activities in these occupational groups. The other

occupational groups, that is, farmers, traders and self-employed artisans contribute less than their expected proportions.

The number of households prepared to travel to regular recreation facilities tend to fall off, the farther the distance. From Table 6.14, about 65 percent travel up to 4kms to their recreation centres. However, up to 20 percent of households are willing to travel over 6kms. The correlation coefficient between distance to recreation facilities and number of households is -0.82, which shows a strong inverse relationship implying that more households tend to patronize recreation facilities near them.

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Table 6.13

Occupational Group's

Participation Rate in Recreation Activities

Occupation	No. of Households	Actual Percentage Contribution	Expected % Contribution	L. Q.
Unemployed	7	0.94	0.36	2.61
Farming	0	0.00	0.07	0.00
Trading	16	2.15	4.59	0.47
Public/ Civil Service	82	11.02	10.42	1.06
Self-Employed Artisans	65	8.73	9.69	0.90
Company workers	31	4.16	1.87	2.22
Total	201	27.00	27.00	-

(Note: Expected % contribution is:

$$\frac{\text{Number in occupational Group}}{\text{Total No. of Respondents}} \times \frac{27}{1},$$

Location Quotient (L.Q) = $\frac{\text{Actual \% Contribution}}{\text{Expected \% Contribution}}$

(See Table 5.4)

(Source: Fieldwork, 1993)

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Table 6.14

Distance to Recreation Facilities

Distance (kms)	No. of Households	Percentage	Cumulative percentage
0.00 - 1.00	46	22.88	22.88
1.01 - 2.00	30	14.92	37.80
2.01 - 3.00	27	13.43	51.23
3.01 - 4.00	29	14.43	65.66
4.01 - 5.00	17	8.46	74.12
5.01 - 6.00	12	5.97	80.09
6.01 - 7.00	19	9.45	89.54
7.01 - 8.00	5	2.50	92.04
8.01 - 9.00	9	4.48	96.52
9.01 - 10.00	7	3.48	100.00
Total	201	100.00	

Correlation Coefficient (r) = -0.82393.

(Source: Fieldwork, 1993).

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From the foregoing discussion in this chapter, it is evident that households generally tend to locate in close proximity to their activity centres, including workplaces, schools, health, shopping, religious and recreation facilities. The distance decay factor is expectedly demonstrated by the residents of Ibadan. Thus, our first hypothesis that there is no tendency for households to optimize their residential locations in relation to the spatial distribution of relevant urban activities is not supported by these results. In view of the evidence of households' tendency to locate near their activity nodes, an

alternative hypothesis that households tend to optimize their residential locations in relation to relevant urban activity distribution is, therefore, accepted.

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CHAPTER SEVEN

HOUSEHOLD RESIDENTIAL LOCATION AND MOBILITY FACTORS

7.1 City Centre Factors

The dominant purpose for which households visit the city centre is for shopping (Table 7.1). This accounts for about 47 percent of the total number of households that visit the city centre in a month. Another 24 percent visit the city centre for other reasons such as re-stocking, banking, etc. These two purposes are significant in view of the role of the CBD as the main centre of commercial/business activities. Those who visit the city centre for recreation/relaxation constitute the least proportion of less than one-half percent. Up to about 6 percent rarely visit the city centre in a month. The proportion of those who work in the city centre or merely pass by the city centre on their way to their places of work is only 10 percent. This ranks fourth in the order of purposes for which households visit the city centre. This does not support the city centre selected for this study as a major factor considered by households in choosing their residential locations, especially when most western classical models consider the city centre as the pivot on which other residential locational variables hinge.

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Table 7.1

Purpose of Household's visit to the city centre

Purpose	No. of Households	%	Rank
Rarely go	45	6.1	5
Shopping	345	46.9	1
Work/passing to workplaces	75	10.2	4
Recreation/Relaxation	3	0.4	6
Visit friends/relations	86	11.7	3
Others	182	24.7	2
Total	736	100.0	

(Source: Fieldwork, 1993)

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The pivotal influence of the city centre in households' residential location decision is further examined in this analysis. Stepwise multiple regression analysis was carried out with distance of household's residence to the city centre of this study as the dependent variable while average distance to activity areas of households, income, average transport cost to activity areas, rent per room and some socio-economic variables were used as independent variables. Eight variables were entered into the model as significant at 0.05 alpha level (Table 7.2). All the 8 variables explain only 13.56 percent of the interaction between the city centre and these households while 86.44 percent of the relationship are unexplained. This indicates a poor relationship and, therefore, does not support the claim that households tend to locate in relation to the city centre.

Table 7.2

Residential Location in Relation to the City Centre

Steps	Name of variables entered	R^2 x 100% (Cumulative)
1	Average distance to Activity Areas	4.11
2	Frequency of visit to city centre	7.66
3	Change of residence in recent times?	9.29
4	Average transport cost to Activity Areas	10.43
5	Stage in family life cycle	11.45
6	Rent per room	12.25
7	Length of stay in Ibadan	12.90
8	Aggregate convenience of household's location	13.56

(Source: Fieldwork, 1993)

When the correlation analysis between distance and some selected household variables was carried out, no variable has a strong relationship with distance (Table 7.3). This clearly shows that distance to the CBD is not a very important factor considered by households in making their residential location choices.

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Table 7.3

Distance from City Centre And Household Activities

Activities	Correlation Coefficients		
	Distance to Activity	Commuting cost to Activities per day	Commuting time to Activities per day
Workplaces of Respondents	0.292	0.085	0.159
Workplaces of Spouse	0.147	0.132	0.122
Nursery Schools	-0.033	0.039	0.035
Primary Schools	0.048	0.106	0.026
Secondary Schools	0.105	0.101	0.075
Shopping Facilities	0.226	0.186	0.035
Recreation Facilities	0.007	-0.005	0.024
Health Facilities	0.113	0.202	0.205
Religious Centres	0.052	0.027	0.104

(Source: Fieldwork, 1993).

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This result presents a basis to further examine how households choose their residences in the urban space. It is necessary to initially identify the factors which households claim for locating in particular places (Table 7.4).

The most important factor which many households consider in their choices of residential location deals with the quality of the area. This constitutes about 24 percent of the total number of households. Such reasons as well-planned area with necessary infrastructural facilities such as good roads, water supply etc. that make a place conducive for living are highly regarded. Other factors such as quietness and peaceful environment in addition to adequate security are part of this consideration. Information

about an area with respect to the quality factors may not be available to new in-migrants. Such information is available to those who have a fair knowledge of Ibadan and can assess the quality of each residential district adequately.

Table 7.4

Household's Residential Location Factors

No	Location Factors	No. of Households	Percentage
1	Well planned area/available facilities/peaceful and secured area	175	23.78
2	Close to workplace	163	22.15
3	Available space/vacant rooms	122	16.58
4	Family House	54	7.34
5	Close to family quarters/close to friends/grew up or familiar with area	47	6.38
6	Personal House	41	5.57
7	Close to children schools	22	3.00
8	Lower/Affordable rent	17	2.31
9	Cheap land	14	1.90
10	Near the City Centre	9	1.22
11	Company/Government Quarters	5	0.68
12	Need to be far from family	3	0.40
13	Close to Stadium	2	0.27
14	No reason	62	8.42
Total		736	100.00

(Source: Fieldwork, 1993).

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The second most important factor deals with nearness to the workplace of head of household. It would be observed, however, that in Table 7.3 the correlation coefficient between distance of household's residence to the city centre and distance of household's residence to the place of work of the head of household is 0.292. This is very low, indicating that there is no strong relationship between these two variables. This means that households near the city centre could travel similar distances to their places of work as households who are far from the city centre. However, when the household's residential location in relation to the activity distribution around it is considered, the correlation coefficient is -0.82 (Table 6.1), which confirms that 22.15 percent households tend to locate near their places of work. Other activities which are mentioned by households as important factors are nearness to children's schools (3.0 percent) and nearness to recreation centres (0.27 percent).

The third major factor considered by households is, in reality, not a free factor. About 16 percent of households simply occupy where a vacancy exists. This constrained locational factor is especially significant where the choice of residence is limited as is currently the case in Ibadan, Lagos, Port Harcourt and a few other state capitals. It is, however, very unlikely that households would be content with such residences which are transitional. This implies that households would move at the next available opportunity.

Apart from those who dwell in family and personal houses, some households choose their residential locations in order to show affinity to some traditional quarters or the need to be near some relations/friends. Some in this group choose their residences because they are acquainted with an area and have created some level of familiarity with such areas over the years.

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There are also economic reasons such as lower rent and cheap land prices. Other factors include nearness to the city centre, need to be far from family areas and the factor of those who are simply allocated quarters by their companies or institutions. As much as 8 percent of households have no reason for locating where they are. This group could be classified with those that simply occupy available vacancies.

7.2 Household's Convenience Factors

It is, however, important to further examine household's residential location factors beyond what they claim are their location factors. One important factor considered in household residential location choice could be identified as the convenience of the household in relation to other factors, especially the activity distribution.

Two groups of households are identified in this analysis, viz, those who consider their residential locations as convenient and those who do not. Discriminant analysis with stepwise variable selection method was carried out on these two groups. Eight variables were entered as significant predictors of differences between the two groups. The distance of a household's residence to the city centre, was entered at step 6 but later removed at step 10 as not significantly contributing to explaining the difference between the two groups. In fact, the correlation between convenience of a residence and distance to the city centre is 0.06, which is very low.

Only one discriminant function was used (Table 7.5) with a Wilks' Lambda of 0.5440 and Chi square of 441.35 which is higher than the critical Chi-square value of 26.12 at 0.001 level of significance. 92.53 percent of the cases were correctly classified into their predicted groups.

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Table 7.5

Classification of Households' Convenience of Residential Location

Actual Group	No. of Households	Predicted Group Membership	
		Not Convenient	Convenient
Not Convenient	58	54(93.1%)	4(6.9%)
Convenient	678	51(7.5%)	627(92.5%)
Percentage of cases correctly classified		92.53%	

(Source: Fieldwork,1993).

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Table 7.6

Discriminant Function Derived for the Analysis

Discriminant Function	Eigen value	Percentage of variance	Canonical correlation	Wilks' Lambda	Chi-square	Degrees of freedom	Significance Level
1	0.838	100.00	0.6753	0.5440	441.35	8	0.001

(Source: Fieldwork, 1993).

The level of each variable's absolute contribution to the discriminant score is indicated by the value of the discriminant function coefficients. The variable that contributed most, using unstandardized discriminant function coefficients, is the intention of households to change residence (Table 7.7). Intention of households to change

residence contributed more than nine times the second important variable which is the intention of household head to change workplace.

The classification function coefficients indicate the levels of association of each variable with the groups Table 7.8. For example intention to change residence has higher level of association with group 1, that is, households whose residences are not convenient. This group which occupies residences which are not convenient has a higher tendency to change residence.

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Table 7.7

Discriminant Function Coefficients for Convenience of Household

S/No	Predictor Variables	Unstandardized Discriminant Function Coefficients	Standardized Discriminant Function Coefficients
1	Hope to change residence	3.78445	0.99121
2	Knowledge of the urban structure	-0.03864	-0.11418
3	Hope to change workplace	0.32732	0.11812
4	Rent per room	0.00427	0.12480
5	Changed patronage in recent times (religion)	2.10656	0.10982
6	Sex	0.33740	0.08278
7	Change of residence in recent times	-0.21999	-0.08118
8	Frequency of visit to shopping centre	0.14277	0.08098

(Source: Fieldwork, 1993).

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Table 7.8

Classification Function Coefficients for Convenience of Households

S/No	Variables	Group 1 Residence not Convenient	Group 2 Residence Convenient
1	Hope to change residence	14.62705	1.825494
2	Knowledge of urban structure	1.74332	1.874193
3	Hope to change workplace	0.76527	-0.341935
4	Rent per room	0.06186	0.047426
5	Changed patronage in recent times(religion)	6.78774	-0.338069
6	Sex	22.75731	21.615980
7	Change of residence in recent times	-1.30339	-0.559160
8	Frequency of visit to shopping centre	5.13688	4.653912
	Constant	-36.35926	-29.229870

(Source: Fieldwork, 1993).

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The group mean values of the variables entered into the discriminant equation are used to explain the differences between the two groups (Table 7.9). The group of

households which feels inconvenient has higher hope to change residence; to change workplace; have changed patronage of religious centres in recent times; are more of male; and have higher incomes of spouse.

Those who feel inconvenient would have a higher tendency to change residence in order to optimize access to activity nodes patronized. The lower knowledge of the urban space might have contributed to the choice of a residence which is not convenient. It is expected that as the household has more knowledge of the urban space it can make necessary residential locational change.

Table 7.9

Group Means of Variables Explaining Convenience of a Residential Location

No	Variables	Group Means	
		Not Convenient	Convenient
1	Hope to change residence	0.93103*	0.07429
2	Aggregate knowledge of urban area	13.39655	14.00594*
3	Hope to change workplace?	0.17241*	0.02229
4	Rent per room	37.04023	37.23068*
5	Changed patronage in recent times (Religion)	0.01724*	0.00149
6	Sex	1.10345*	1.06092
7	Changed residence in recent time	0.08621	0.16939*
8	Frequency of visit to shopping centre	1.32759*	1.30906

(Note: Asterisks indicate the higher group means).
(Source: Fieldwork, 1993).

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Those who hope to change residence might be commuting over long distances to work. This might be a major factor which makes their residences inconvenient and could, therefore, support the claim that households tend to locate near their workplaces. Furthermore, many of those who are not convenient have not changed residence in the recent past. This might be a reason they hope to change their residences.

On the other hand, those who feel convenient in their residences have more knowledge of the urban space, pay higher rents, many have changed residence in recent times and spent more time commuting. They, therefore, have less tendency to change their residences and workplaces at the time of this survey. They visit shopping centres less frequently. It is evident that households who have more knowledge of the urban centre would be able to choose residential locations, other things being equal, which they feel would be convenient for them. This group also occupies higher quality residences and might, therefore, not need to change residence. Many households with large members and those who are at post-child rearing family cycle might have less willingness to change residence because of the inconvenience.

The above explanations show that households would optimize their residential locations to ensure convenience to activity areas patronized, all other things being the same. The intention to change residence and workplace and the actual change in the recent past tend to add credence to this argument. The fact that distance to city centre was removed as not being significant in the discriminating variables shows that households feel convenient in relation to some factors which they consider essential to their comfort and not necessarily nearness to the city centre.

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7.3.0 Residential Mobility Factors

7.3.1 Hope to change residence:

Households might wish to change residence due to a variety of reasons. Although the desire to change residence is not yet executed, some factors which might make a household wish to move could be invaluable in planning residential development programmes. In this section, two groups are identified. Those who hope to change residence and those who do not wish to change. Discriminant analysis, using stepwise variable selection method, was carried out on these groups to identify the significant discriminating variables. Fifteen(15) discriminating variables were entered as significant.

The discriminant function used in the analysis has Wilks' Lambda value of 0.67 and Chi-square of 280.52 (Table 7.10). This value is higher than the critical Chi-square value of 37.70 at 0.001 level of significance. The variables in the analysis correctly classified 86.96 percent of the cases.

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Table 7.10

Discriminant Function Derived for Households Willingness to Change Residence

Discriminant Function	Eigen value	Percentage of variance	Canonical correlation	Wilks' Lambda	Chi-square	Degrees of Freedom	Significance level
1	0.4752	100.00	0.5676	0.6779	280.52	15	0.001

(Source: Fieldwork, 1993)

Table 7.11 shows the level of each variable's absolute contribution to the discriminant function scores as indicated by the value of the discriminant function coefficients. The variable that contributed most, using the unstandardized discriminant function coefficients, is the aggregate convenience of each residential location. Aggregate preference is another variable with a relatively high score. Both variables are important in that an inconvenient and less preferred location might induce a desire to change residence. The standardized canonical discriminant function coefficients which indicate the relative importance of each variable's contribution to the analysis shows that aggregate convenience still stands out as the most important variable with 0.83854. It contributed more than twice the contribution of age of respondent (0.40662) and the third variable, aggregate preference (0.31885).

The classification function coefficients are shown in Table 7.11, indicating the level of association of each variable with each group. For example, aggregate convenience has higher level of association with group 1, that is, households who do not hope to change residence.

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Table 7.12

Classification Function Coefficients for Households' Willingness to Change Residence

S/No	Variables	Group 1 No Hope to Move	Group 2 Hope to Move
1	Aggregate convenience	42.06311	37.83273
2	Aggregate preference	12.43304	11.38786
3	Monthly income of spouse	0.00462	0.00556
4	Housing quality	7.00400	6.11621
5	Age of respondent	0.35897	0.29018
6	House ownership	-1.69251	-0.98293
7	Proportion of income spent on commuting	8.10384	7.60144
8	Number of children in schools	0.09574	0.07258
9	Sex	24.53383	23.47512
10	Length of stay in Ibadan	-0.13197	-0.11224
11	Aggregate commuting time	0.01048	0.01640
12	Aggregate number of times changed vehicles	0.77121	0.52840
13	Spouse changed workplace in recent past	4.26095	3.32748
14	Rent per room	-0.02460	-0.01452
15	Frequency of visit to city centre	0.26542	0.23730
Constant		-182.61640	-150.38500

(Source: Fieldwork,1993).

A deduction could be made from Table 7.13. Since this is a desire, thirty one households (29.5 percent) of those who hope to move should, based on the discriminant

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variables, not move. Their willingness to move is weak and might be conditioned by other superficial socio-psychological and economic factors. This group could be referred to as "captive residents" experiencing bandwagon effects. This means that even when apparent conditions indicate that a household should move or change residence, it does not. The other group of residents is made up of those who ordinarily do not hope to move but who should hope to change residence. Sixty-five households (10.3 percent) are in this category. This group could be called the potentially "fluid" or "mobile" group of urban residents.

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Table 7.13

Classification of Households' Willingness to Change Residence

Actual Group	No. of Households	Predicted Group Membership	
		No hope to Move	Hope to Move
No hope to move	631	566 (89.7%)	65 (10.3%)
Hope to Move	105	31 (29.5%)	74 (70.5%)
Percentage of cases correctly classified		86.96 percent	

(Source: Fieldwork, 1993)

Table 7.14 shows those who do not want to change residence higher group means on all the variables except monthly income of spouse and sex.

Table 7.14

Group Means of Variables Explaining Intention of Households to Change Residence

S/N	Variables	Group Means	
		No hope to move	Hope to move
1	Aggregate Convenience of residence	5.92026*	5.33654
2	Aggregate preference for activity nodes	4.61404*	4.17308
3	Monthly income of spouse	306.83748	563.50692*
4	Housing quality	1.96651*	1.74038
5	Age of respondent	39.58373*	32.12500
6	House ownership	0.36045*	0.33654
7	Proportion of income spent on commuting	0.4223*	0.26736
8	Number of children in schools	3.20415*	1.63462
9	Sex	1.06380	1.06731*
10	Length of stay in Ibadan	22.45614*	19.27885
11	Aggregate Commuting time to activity nodes	84.20734*	79.43269
12	Aggregate No. of times changed vehicles	0.47209*	0.43269
13	Spouse changed workplace in recent times	0.04306*	0.00962
14	Rent per room	38.04825*	32/10551
15	Frequency of visit to city centre	4.95215*	4.45192

(Note: Asterisks indicate the higher group means)

(Source: Fieldwork, 1993)

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The households that do not hope to change their residences are more convenient and, therefore, less likely to change. They also have higher aggregate preferences for activity areas patronized. They pay higher rents because they live in higher quality residences. The heads of household are generally older and at higher levels in the family life cycle. Their longer stays in Ibadan might have contributed to their choosing the most preferred locations of activity centres and, therefore, more convenient residences in relation to their activity nodes. Many of them are house-owners or family house occupiers and might ordinarily not need to change residence. The fact that they change vehicles enroute their activity centres more frequently implies that they would have higher commuting time and cost, especially with the recent increase in the prices of petroleum products and transport fares. These two variables are expected to make a household move, but this group does not hope to move. House ownership is a major factor for "residential inertia" where housing units are scarce and expensive, and housing market is virtually undeveloped. Furthermore, the fact that they spend more of their income on transport implies that this group might also be composed of low to middle income households which might be discouraged by the search and movement costs and, therefore, less willing to change residence. Households that do not move have more children in schools. This factor makes it difficult for a household to change residence without incurring additional cost of longer distances to children's schools, or having to look for new schools.

Households that hope to move are less convenient with respect to their activity distribution; have less tendency to choose the most preferred activity areas; occupy lower quality houses; are younger in age and therefore more mobile; are mainly tenants and

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also have a small number of children in schools. They have, generally, not stayed as long as the other group; spend less on rent and are in earlier stage in family cycle. They, however, spend less time on commuting; change vehicles enroute their activity areas less frequently; and spend less of their income on commuting.

7.3.2 Changed Residence

A group of urban residents has actually changed residence within the past 5 years. Discriminant analysis was carried out on this group and another that has not changed residence. Eight(8) variables were entered as significant, using the stepwise variable selection method.

The discriminant function used in the analysis (Table 7.15) has Wilks' Lambda value of 0.9132 and Chi-square of 63.668 which, though significant (critical Chi-square value is 26.12 at 0.001 level of significance), has a relatively low explanatory power because of the high Wilks' Lambda value. Seventy percent of the cases are correctly classified.

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Table 7.15

Discriminant Function Derived for Households Change of Residence

Discriminant Function	Eigen value	Percentage of Variance	Canonical Correlation	Wilks' Lambda	Chi-square	Degrees of Freedome	Significance Level
1	0.0918	100.00	0.2900	0.9159	63.668	8	0.001

(Source: Fieldwork, 1993).

The level of each variable's absolute contribution to the discriminant scores is indicated by the value of the discriminant function coefficients. Variables such as distance to the city centre, aggregate preference, aggregate commuting cost and change of workplace in recent past have fairly high coefficients in the standardized discriminant function. The classification function coefficients are shown in Table 7.17.

Those who have changed their residences are the ones that are relevant to us in this section. Members of this group experience higher commuting time, perhaps, because they have not made adjustments in their other activity areas visited except for change in workplace for the heads of household (Table 7.18). It could be inferred that it is the change of workplace that initiated change of residence because the respondents now have less tendency to change residence. However, this group has more knowledge of the urban space which is an asset in knowing where to move to. Members of the group also pay more rent, implying that they might have moved to higher quality residences. Many of them are tenants and, therefore, more mobile. They also have lower aggregate preference for activity areas they patronize. This lower aggregate preference value could be part of the adjustments that a household should make until it stabilizes in relation to activity nodes patronized. Since this group has actually changed residence, an important lesson that could be learnt is that a household that changes residence requires time to make other necessary adjustments to achieve the goal of a convenient location in relation to activity centres patronized.

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Table 7.16

Discriminant Function Coefficients for Households' Change of Residence

S/No	Predictor Variables	Unstandardized Discriminant Funtion Coefficients	Standardized Discriminant Function Coefficients
1	Aggregate commuting time	0.00688	0.35132
2	Distance to city centre	0.16335	0.46722
3	House ownership	-0.43889	-0.24663
4	Aggregate preference	-0.72348	-0.44682
5	Changed of workplace in recent past	1.57240	0.35103
6	Knowledge of urban structure	0.09118	0.26792
7	Hope to change residence	-0.59746	-0.20889
8	Rent per room	-0.00790	0.22968

(Source: Fieldwork, 1993).

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Table 7.17

Classification Function Coefficients for Households Change of Residence

S/No	Variables	Group 1 Have Not Changed Residence	Group 2 Have Changed Residence
1	Aggregate commuting time	-0.00560	0.00005
2	Distance to city centre	0.61314	0.74701
3	House ownership	0.59588	0.30995
4	Aggregate preference	1.55696	1.63169
5	Change of workplace in recent past	1.27770	2.56632
6	Knowledge of urban structure	1.55696	1.63169
7	Hope to change residence	6.97474	6.48510
8	Rent per room	0.01352	0.02000
Constant		-43.31968	-43.32066

(Source: Fieldwork, 1993).

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Table 7.18

Group Means of Variables Explaining those Households

that have changed residences

S/N	Variables	Group Means	
		Have not changed Residence	Have changed Residence
1	Aggregate commuting time to activity nodes	80.05229	101.40336*
2	Distance to city centre	5.94703	7.08403*
3	House ownership	0.39542*	0.15966
4	Aggregate preference for activity areas	4.57843*	4.41176
5	Change of workplace in recent past?	0.04085	0.11765*
6	Knowledge of urban area	13.81536	14.68908*
7	Hope to change residence?	0.14706*	0.11765
8	Rent per room	35.85512	44.21218*

(Note: Asterisks indicate the higher group means)

(Source: Fieldwork, 1993).

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Fig. 7.1 shows the areal distribution of the relationship between convenience of the households and their intention to change residence in Ibadan based on the results of discriminant analysis. Such areas around Olomi across the Ibadan-Lagos expressway to Eleta, Aremo, Agugu and some areas around Mokola and Sango have a higher proportion of households which both feel inconvenient with their residences and, therefore, hope to

change residence. Areas around Monatan, new and old Ife roads, Iwo road, etc. have higher proportions of households which feel inconvenient with their residences but lower proportion of households that hope to change residence. This might not be unconnected with the fact that these areas have formed thriving roadside shopping belts and also encompass the new Gbagi Market. Households might, therefore, have a trade-off between inconvenience and willingness to change residence. Other areas such as Ekotedo, Agbeni, etc., which are near the CBD and are occupied mainly by low income households, have people who feel comfortable with their residences and do not hope to change residence, possibly because they are near their major job areas. In addition such areas as Bodija, Iyaganku, New GRA, Eleyele, Jericho, Oluyole Layout and other high quality residential areas have higher proportions of households which feel convenient with their residences and do not hope to change. This might be due to the fact that these areas are well planned, have better facilities and are occupied by higher income households.

Fig. 7.2 shows the areal distribution of households which changed residence in Ibadan. Areas such as Ekotedo, Agbeni, Oke Bola, etc., which are near the CBD, have higher net in-migration. Proportionately higher number of households changed residence to these areas perhaps because of their nearness to business and other job centres in the centre of the city. However, other new areas at the outskirts of the city also received high proportions of in-migrants, that is people who moved to these areas. The possibility of more vacancies resulting from new residential buildings might largely contribute to this.

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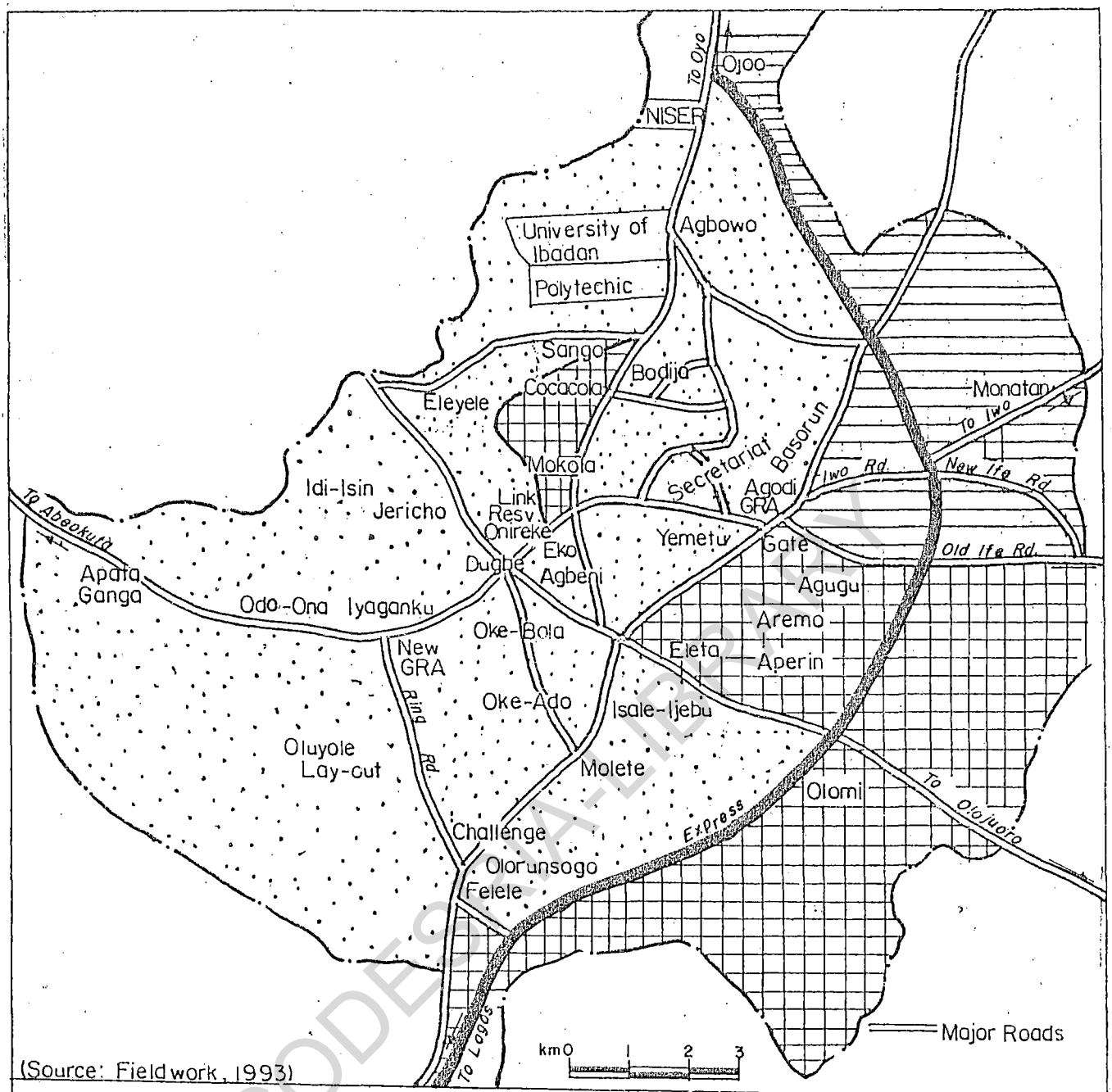

(Source: Fieldwork, 1993)

Convenient residence / no hope to change residence

Not convenient residence / no hope to change residence

Not convenient residence / hope to change residence

Fig. 7·1: Map showing Convenience of House and Households' Intention to change Residence.

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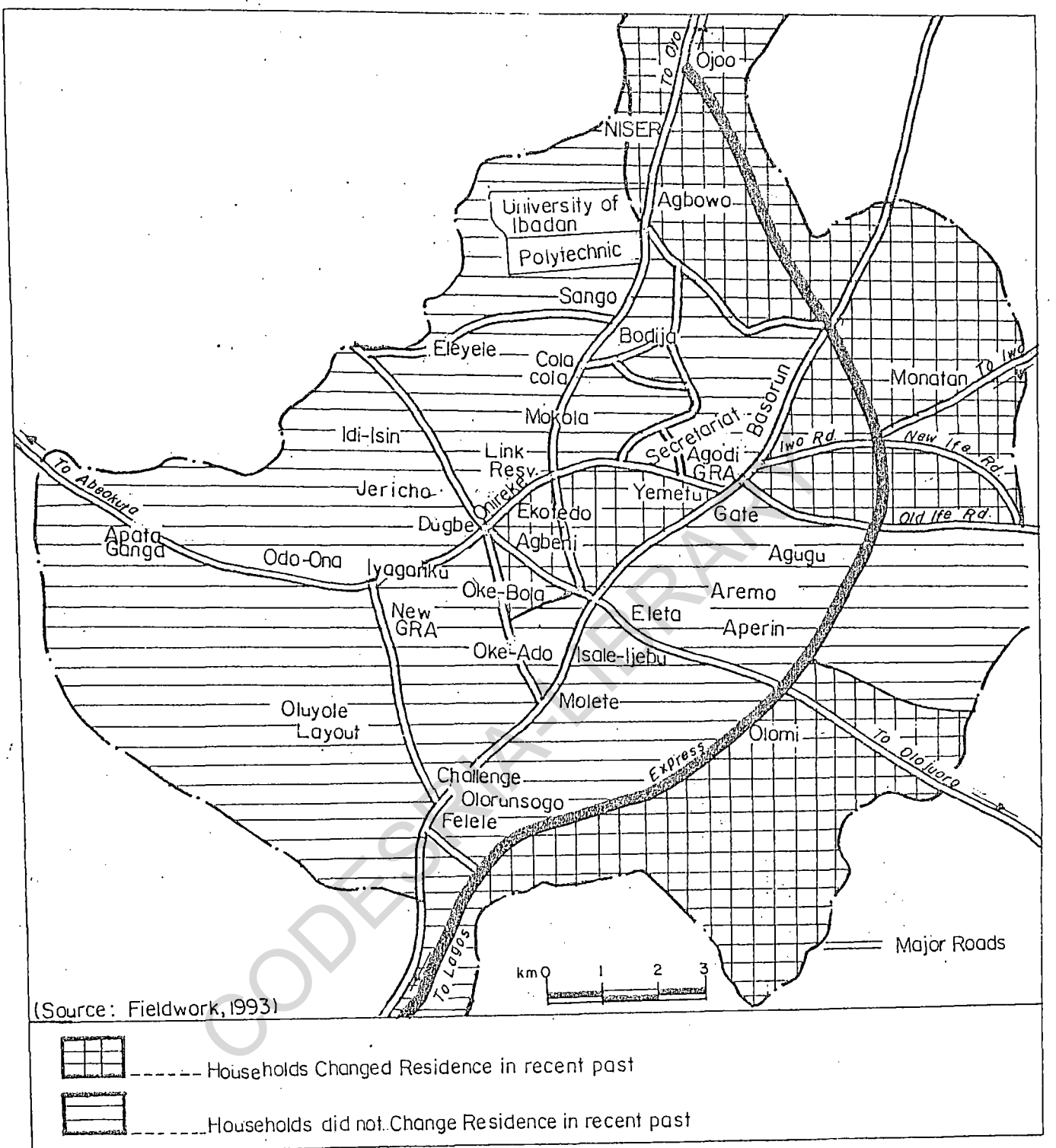

Fig. 7·2: The areas showing Households change of Residence in Ibadan.

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Section 7.3 is relevant to our second hypothesis which states that households do not move only when their residential location equilibrium is seriously disturbed. It is evident from this section that among those who hoped to change residence and those who have changed residence, convenience of location in relation to activity nodes is an important factor. Inconvenience ranks highest among those who hoped to change residence and it is reflected in higher aggregate commuting time for those who have moved. These evidences, therefore, support an alternative hypothesis that households move when their residential location equilibrium is disturbed. The second null hypothesis is, therefore, rejected.

7.4 Household Residential Location Behaviour

The third objective of this study is to identify the different behavioural groups involved in residential location decision in Ibadan. The cluster analysis classified the households into four main behavioural groups. This classification was further analysed using the discriminant analysis to uncover the identity of each group.

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Table 7.19

Discriminant Functions Derived from Household Residential Location Behavioural Groups

Function	Eigen Value	% of Variance	Cum %	Canonical Correlation	After Function	Wilks' Lambda	Chi-square	D.F.	Sig.
					0	0.8681	101.520	39	0.0000
1	0.0648	44.61	44.61	0.2467	1	0.9243	56.472	24	0.0002
2	0.0543	37.36	81.97	0.2269	2	0.9745	18.549	11	0.0697
3	0.0262	18.03	100.00	0.1598					

(Source: Fieldwork, 1993)

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Three discriminant functions were derived for this analysis (Table 7.19). Wilks' Lambda of 0.8681 was obtained when no function was derived. The Chi-square statistic associated with this value is 101.520 with 39 degrees of freedom. The level of significance of this Chi-square value is higher than the critical Chi-square value of 66.77 at 0.05 level of significance. The first function is dominant with 44.61 percent variance associated with it. These results show a high level of separating power in the predictor variables in the analysis when no function was removed.

The second function had a Wilks' Lambda value of 0.9243 after the first function was removed. This shows that the discriminating power has been reduced, but it is still significant, considering the Chi-square value of 56.472 associated with this value which is higher than the critical value of 45.56 at 0.05 level of significance. This function contributed 36.80 percent to the variance.

The third function has a high Wilks' Lambda value of 0.9745 after the second function was removed, which, considering the Chi-square value of 18.549, is not significant at the critical value of Chi-square of 26.76 at 0.05 level of significance. Therefore, only two functions significantly contributed to the discriminant analysis. This implies that about 82 percent of the variance are explained by these two functions. The reason for this could be appreciated when it is observed that in households' residential location characteristics, clear-cut separations both in socio-economic and spatial characteristics have been difficult to achieve. Most residential location research works have shown this (Sada, 1972; Okpala, 1978). As will be observed in the nomenclature of the groups below there is usually an overlap. No group is mutually exclusive without some characteristics of one or two other groups.

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The level of each variable's absolute contribution to the discriminant scores is indicated by the value of its coefficient on the discrimant function. The standardized discriminant function coefficients which indicate the relative importance of each variable's contribution to the analysis was further rotated orthogonally using varimax rotation and the results are shown in Table 7.20. The variables are sorted out and ordered by size of coefficient within function. Variables such as commuting cost to place of work, proportion of income spent on commuting, house ownership and housing quality have higher coefficients on Function 1 which could be called commuting cost/house indicator function. On Function 2, variables such as occupancy ratio and distance to regular religious centre contribute move to this function which could be called occupancy rate/religion function. Aggregate distance to activity nodes, distance to recreation centres and primary schools and aggregate number of times changed vehicles en-route activity nodes contribute more to Function 3 which could be called the distance function. The classification function coefficients are shown in Table 7.21, while the discriminant territorial map is shown in Fig.7.3.

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Table 20

Rotated Standardized Discriminant Function Coefficients for Household Behavioural Groups in Ibadan

S/No	Variables	Function 1	Function 2	Function 3
1	Commuting cost to workplace	0.4989*	0.1479	0.0126
2	House ownership	0.4504*	-0.1574	-0.1383
3	Distance to city centre	-0.4401*	-0.1526	-0.0877
4	Housing quality	0.4097*	0.3700	0.0973
5	Proportion of income spent on commuting	0.3651*	-0.2175	0.2685
6	Frequency of visit to recreation centre	0.2826*	-0.2275	0.1154
7	Occupancy ratio	-0.0054	0.6337*	-0.0019
8	Distance to regular religious centre	-0.2087	0.5642*	0.4464
9	The most preferred religious centre	-0.1006	-0.3934*	-0.0898
10	Aggregate distance to activity nodes	0.2374	-0.3179	-1.2717*
11	Aggregate change of vehicles en-route	-0.5908	-0.1708	0.5991*
12	Distance to regular recreation centre	0.2195	0.0422	0.5922*
13	Average distance to primary schools	-0.4043	0.1564	0.5425*

(Source: Fieldwork, 1993).

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Table 7.21

Classification Function Coefficients for Household Behavioural Groups in Ibadan

	Variables	Group 1	Group 2	Group 3	Group 4
1	Occupancy ratio	0.307	0.138	0.139	0.137
2	Distance to city centre	0.511	0.591	0.575	0.494
3	Housing quality	8.301	7.405	7.487	7.937
4	Proportion of income spent on commuting	0.516	0.813	0.746	1.194
5	House ownership	1.650	1.730	1.914	2.158
6	Frequency of visit to recreation centre	-0.033	0.237	0.244	0.496
7	Aggregate no. of times changed vehicle en-route	-0.849	-0.463	-0.847	-0.968
8	Commuting cost to workplace	0.744	0.609	0.656	0.790
9	Distance to regular religious centre	0.038	-0.051	-0.088	-0.083
10	Most preferred religious centre	41.160	43.902	43.983	43.496
11	average distance to primary schools	-0.084	-0.113	--0.369	-0.401
12	Aggregate distance to activity nodes	-0.022	-0.009	-0.028	-0.009
13	Distance to regular recreation centre	0.024	0.016	-0.027	0.038
Constant		-33.180	-32.333	-32.713	-33.258

(Source: Fieldwork, 1993).

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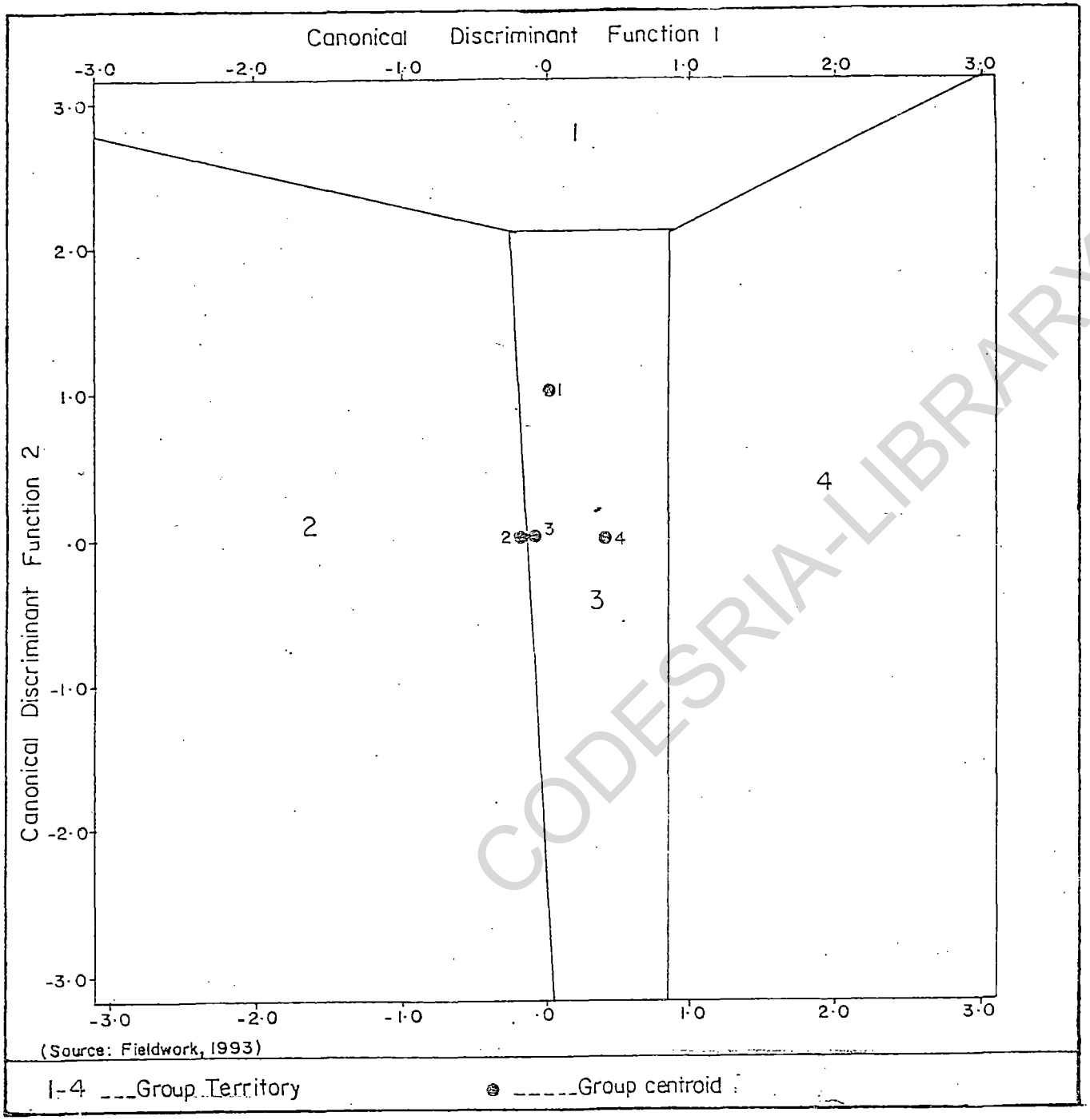

Fig. 7·3: Discriminant Territorial Map of Behavioural Groups in Ibadan.

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Only 37 percent of the cases of earlier cluster classification were correctly classified by discriminant analysis (Table 7.22). This shows a low level of comparative classification results. However, our concern here in using the discriminant analysis is to find out the identity of each household or group of households. Other methods such as factor analysis could be used to initially identify the group membership but possibly, and oftentimes, with the same result as the cluster analysis (Norusis/SPSS Inc, 1990). However, as has been observed in the methodology, discriminant analysis could handle the classification but it requires group membership to work. The discrepancy in the two classifications is in no way a hindrance to the discriminant analysis since it simply uses the group membership as a foundation for a comparison with its own classification, that indicates an acceptable statistical level of significance.

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Table 7.22

Classification of Households to Groups

Actual Group	No of Households	Predicted Group Membership			
		1	2	3	4
1	43	13 (30.2%)	8 (18.6%)	13 (30.2%)	9 (20.9%)
2	247	32 (13.0%)	95 (38.5%)	69 (27.9%)	51 (20.6%)
3	256	27 (10.5%)	59 (23.0%)	93 (36.3%)	77 (30.1%)
4	186	23 (12.4%)	52 (28.0%)	41 (22.0%)	70 (37.6%)
Ungroup cases	4	3(75.0%)	0(0.0%)	0(0.0%)	1(25.0%)
No of Households	736	98	214	216	208
% of cases correctly classified - 37.02%					

(Source: Fieldwork, 1993)

The group identity was made possible using the mean values of the discriminating variables to know the rank of each group on these variables (Table 7.23). The identity of the groups was largely determined by examining which discriminating variables cluster on particular ranks and how they interlink to give a broad impression of the groups.

In general all the activities identified as nodes where households make contact in their day to day activities have a variable or more in explaining the difference between the groups, except health facilities. This implies that activity centres are useful in explaining the residential location decisions of households in Ibadan.

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Table 7.23

Group Means of Variables Explaining Households' Group Membership

Variable	Group Means			
	Group 1	Group 2	Group 3	Group 4
Occupancy ratio	3.963(1)	1.736(2)	1.721(3)	1.659(4)
House ownership	0.255(4)	0.283(3)	0.384(2)	0.448(1)
Frequency of visit to recreation centre	0.255(4)	0.352(2)	0.329(3)	0.470(1)
Proportion of income spent on commuting	0.286(4)	0.401(2)	0.366(2)	0.472(1)
Distance to primary school	0.779(1)	0.748(2)	0.617(3)	0.581(4)
Distance to religious centres	3.918(1)	2.105(3)	2.480(2)	1.851(4)
Aggregate distance to activity nodes	16.697(2)	16.032(4)	17.611(1)	16.519(3)
Aggregate no. of times changed vehicles enroute	0.348(4)	0./574(1)	0.404(3)	0.432(2)
Commuting cost to workplace	1.558(4)	1.672(2)	1.595(3)	1.848(1)
Distance to recreation centre	0.744(4)	1.107(2)	0.878(3)	1.819(1)
Most preferred religious centre	0.930(4)	0.983(2)	0.984(1)	0.972(3)
Distance to city centre	5.571(4)	6.297(2)	6.376(1)	5.662(3)
Housing quality	2.069(1)	1.894(4)	1.908(3)	1.989(2)

(Source: Fieldwork, 1993)

(Note: numbers in parentheses are row ranks).

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Group I

The first group identified could be classified as the mixed group of high, medium and low income groups near the city centre. From Table 7.23 this group ranks least in several discriminating variables. For example, it ranks least in house ownership indicating that most households in this group are renters. Furthermore the group records the lowest mean in the frequency and distance to recreation centres. This indicates that interest in recreation is low. Low income earners, artisans and petty traders are more likely to be in this group. Another significant characteristic of this group is the accessibility issue. The group ranks least in the aggregate number of times the households change vehicle enroute activity areas. This possibly indicates that the households are mostly near their activity nodes. To buttress this, the group ranks least in commuting cost to workplaces indicating that the households mostly trek to their workplaces. This explains the least proportion of their income spent on commuting. This group, however, has the highest occupancy ratio which is characteristic of low income people crowding in few rooms.This group is on the average the closest to the city centre. From all indications, this group could be classified as low income/status group.

However, a further study of the discriminating variables shows a picture which does not make this name entirely appropriate. The fact that this group ranks highest in distance to primary school could be attributed to the general observation that there are not many schools near the city centre because of space problem and competition of other uses for the expensive land near the city centre. The ranking of this group highest in rent per room and housing quality introduces another element into this group. It implies

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that even among this group high income/status groups live. This is explainable by the fact that some high income/housing quality areas such as Iyaganku, Jericho, Link Reservation are as near the Central Business District (Dugbe) as some low/medium income areas as Agbeni, Ekotedo, Oke Aremo etc. This may explain this group's second rank in the aggregate distance to activity nodes because the rich and high status members among this group might be able to travel longer distances to their activity nodes. The discriminating variables contribute to the various income/status groups and, therefore, difficult to allocate to a particular income/status group.

Group 2

The second group is, on the average,farther from the CBD than the first. Its second ranking highest in a number of variables makes its classification largely similar to the first group. This group appears to be a transitional group. It ranks second in occupancy ratio indicating that crowdiness is not as high as in the first group. Distance to primary school on which it ranks second, implies that the location of schools is on the average nearer this group than Group 1. Cost of travel to workplace implies that this group travels fairly longer distances to their activity nodes. This is further confirmed by the fact that it ranks highest in the number of times the households in this group change vehicles enroute their activity nodes. Its rank as third in rent per room shows that many low/middle income people live here. This is further confirmed by the housing quality of this group which is the lowest. This group might, therefore, be classified as middle/low income/status group, perhaps dominantly middle income group.

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Group 3

The third group is, on the average, farthest from the city centre. This group is composed of high income people who live possibly near the outskirts of the city and because of their location, they record the highest aggregate distance to activity nodes which possibly makes their accessibility to activity nodes low. Distance adds to the stress and inconveniences of commuting to an activity centre. The lower commuting cost might be due to the possibility of many households in this group having access to private vehicles which make them undervalue their total transport costs as opposed to operational and maintainance costs.

A few members of this group might be house owners or residents in family houses. However its ranking second in rent indicates that a large number of the households is made up of renters. Occupancy ratio declines to the third position in this group, indicating that crowdiness is reduced.

This group could, therefore, be classified as dominantly high income/status group with a few middle income group members.

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Group 4

The last group is mainly house owners and affluent people. The occupancy ratio is least, reducing crowdiness to the minimum. Rent is also lowest because many households do not pay rent since they are house owners. The households in this group record the highest frequency and distance to recreation areas, indicating that participation in recreational activities is high. Households in this group might, therefore, be mainly civil servants, company workers etc. Commuting to workplace is highest

because of the peculiar nature of this group. This is because most home owners build their houses where land is available and might not necessarily consider accessibility to activity centres as a principal factor. Consequently they might have dispersed activity nodes which might be expensive to reach. Number of times households change vehicles enroute activity nodes is high and this might contribute to the commuting cost. Despite these factors, hope to change residence on which this group ranks third might be low because of possible unwillingness to vacate their own residences or because of good quality residence especially when this group ranks second in housing quality.

Discriminant analysis shows the areal distribution of the different household's behavioural groups involved in residential location decision making in Ibadan (Fig. 7.4). Group 1 is found dominantly near the city centre, including Iyaganku, New GRA, Agbeni, and Ekotedo. Group 2 is dominant in such areas as Oke Ado, Oke Bola, Yemetu, Gate, Agugu, Aperin up to areas around the Lagos-Ibadan Expressway. Group 3 is dominant in Eleyele, Jericho up to U.I. and in such areas as Agbowo across the Expressway to Monatan, Old and New Ife roads. Group 4 is dominant in Bodija, Agodi GRA, Oluyole Layout, Isale Ijebu, Challenge, Olorunsogo, Felele and spanning the Expressway.

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CHAPTER EIGHT

CONCLUSION AND RECOMMENDATIONS

This study takes a different view from the general attempt to build models by adopting methods which usually have cause-effect implications. Such models, while attempting to maintain a balance between overt spatial behaviour and theoretical propositions, tend to embark on more rigorous mathematical and statistical modelling to justify their efforts. Unfortunately, many facts are lost in the mainstream of the models and this makes interpretation of results difficult and therefore of little help to planners because such models are not capable of integrating structure and behaviour in theoretically sound and practical ways to planners.

Furthermore, the city centre is usually the pivot on which residential location decisions are made. Most estimates of variables such as land cost, transport cost, rent, housing quality, family size, population density and income are assumed to vary consistently away from the city centre. One might disagree with this view because the rigorous quantifications used to derive the utility function that is central to the analysis sometimes has varied and confusing interpretations.

It has to be acknowledged, however, that some research efforts have been directed at identifying the limitations of this economic approach to residential location decision. Even where such studies started with economic equilibrium approach, they get disturbed when some of their findings are incongruous with their expectations. Such findings include household's choice of residence in relation to workplace in the city centre; poor

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people inhabiting areas near the city centre or the circular arrangement of income groups about the city centre; the monocentric city where all activities take place in the city centre.

This current research attempted to look at the significance of some of the claims of the economic equilibrium model and also expanded the variables used in behavioural models to search for an improved way of studying household residential location decision. It should be pointed out at this juncture that this work attempted to redirect research efforts so as to give a better understanding of the complexities involved in man's use of space.

The study has the following objectives

(i) to understand households' activity patterns and the factors considered (by households) in their choices of residential location;

(ii) to highlight how households' knowledge of the urban structure affects their actions within the activity space;

(iii) to identify the different behavioural groups involved in residential location decision in Ibadan metropolis

(iv) to formulate a behavioural model and suggest policies that will aid urban landuse planning.

A cross-sectional survey was carried out on 736 household heads who provided information on their socio-economic and other household characteristics including their activity pattern. Percentages and ratios and other analytical techniques such as multiple regression, cluster analysis and discriminant analysis were used to analyse the data.

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Some of the major findings in this work which will form the basis of an attempt to improve approaches to the study of residential location decision are highlighted below.

1. The dominant source of information about existing housing vacancies is through inter-personal contacts with friends/co-workers and relatives. About 86 percent of households get information through these sources.

2. On the aggregate, knowledge of households about residential facilities in Ibadan is high. About 84 per cent of households know the residential facilities in other parts of Ibadan, apart from their current residential districts, at least well. This may be related to the fact that about 84 percent of households have stayed in Ibadan for at least 6 years. This ordinarily, may enhance the knowledge of households about Ibadan urban structure.

3. The general distances travelled by households to their activity nodes indicate that about 50 percent of households travelled up to 3 kms to any activity node while a total of 90 percent travelled up to 8 kms. The maximum distance travelled by households to any activity node is 18kms to workplaces.

4. Households do not necessarily locate in relation to the city centre. The generally used assumption that households work in the city centre does not hold in Ibadan since only about 10 percent of households work in the city centre or pass by the city centre to work. The most important factor considered by households is the general condition of a residential district including such things as well laid-out streets, available facilities and security. Another factor of importance is nearness to workplaces which are not necessarily in the city centre. A considerable number of households simply occupies available vacancies.

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5. Some households failed to change their residences even when conditions should make them move. These are the "captive residents". They are contented with the existing situation mainly because of the problem of engaging in a fresh search for residence or because of some affinity with some areas which are their family quarters or their own piece of land on which they build their houses.

Planning Implications of the Findings

The information system on housing market in Ibadan is not adequate. This lapse in housing market makes information about existing vacancies scanty, slow and tedious to acquire. Fast methods of disseminating information such as electronic and print media are almost virtually absent. Information through realtors is still considerably low. Several vacancies are known only or mainly by residents of neighbourhoods in which such vacancies exist and who transfer information about them through inter-personal method to home seekers who care to enquire from them. It implies, therefore, that until effective housing market information system is properly developed, housing market will still be largely chaotic and ineffective in Ibadan.

Households, as highlighted in this study, do not necessarily locate in relation to the selected city centre (Dugbe). The implication of this is that decentralization of some major functions performed by the city centre to compact neighbourhoods may be desirable. This is further confirmed by households' general tendency to patronize activity centres close to their residences. This is because longer distances have higher cost and time implications. This households' characteristic is significant in that housing programmes of public institutions and government agencies, especially the location of housing estates, if located far from major workplaces of residents might not be desirable.

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This is because existing facilities and activity nodes patronized by houesholds are almost virtually fixed in location and households have little control over such locations.

Households also consider the convenience of their residential neighbourhoods especially in relation to street and facility planning. Safety and security are also highly cherished by many households in Ibadan. The implication of this is that planning agencies, policy makers and policy implementing agencies should put high premium on the planning and control of development of neighbourhoods to ensure that neighbourhood deterioration is averted.

Some households do not change residence, especially those who reside in family quarters and personal residences. The implication of this, especially on planning in Ibadan, is that progammes in areas that might need re-development and planning , in particular the traditional core area of Ibadan, might be difficult to implement because of possible resistance from the people who have a strong attachment to such areas.

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Policy Options for Facility Location and Landuse Planning

Households' activity system in the city is complex as demonstrated in this study. However, out of this complexity the underlying factors guiding households' residential location in Ibadan could be classified into two: accessibility and convenience. Since not all activity centres could be equally accessible, a trade-off is often necessary. This might contribute to the convenience of a particular location, but convenience might be an independent factor. A particular area could be preferred and chosen because of some characteristics such as well planned streets, adequate social and infrastructural facilities.

Since each household is assumed to behave virtually independent of other households, this raises the question of how to make spatial plans for all households. It should be realized, however, that the independence of a household is not an absolute one since there is usually a trait of group behaviour as noted in this work. Influencing spatial behaviour is an important aspect of planning if orderliness is to be enhanced to ensure a better and functional environment. The assumed spatial freedom of households as they operate within the urban space is usually constrained by existing urban structure. For example, households patronize facilities where such facilities are located. They have little control over such facilies' location. However, ease of patronage could be enhanced if the characteristics of households or group of households are considered in facility location.

The ideal approach to facility location is to locate them at focal points to make them accessible to households. This is, however, not the case in Ibadan, and generally Nigeria where political decisions on the location of social services are taken arbitrarily without any regard to technical spatial optimality of the locations. The household characteristics in this research work appear to favour neighbourhood location of facilities. The general distances travelled by households to their activity nodes indicate that about 50 percent of households travelled up to 3kms to any activity while a total of 90 percent travelled up to 8kms. The maximum distance travelled by households to any activity node is 18 kms. These distances could conveniently fit into compact neighbourhoods where facilities located could be easily reached by households in such neighbourhoods in Ibadan. This does not necessarily preclude crossing of neighbourhood boundaries for facility patronage. It should be noted, however, that these observed distances do not

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necessarily indicate the existence of planned neighbourhoods but more the location of activities which have largely developed without concerted municipal physical plans. Some development schemes which have been developed to ensure proper planning are largely residential and industrial schemes which lack many ingredients of a planned neighbourhood. A large proportion of Ibadan still remains virtually unplanned and is, therefore, developing organically. Adequate effort should be made to arrest this situation. A comprehensive master plan that will focus on redeveloping the hitherto unplanned and decayed areas which will include the neigbourhood concept is necessary. There could be socio-cultural hinderances to the replanning and creation of planned neighbourhood centres. This may be a major reason successive governments in Oyo State have avoided such moves. It is, however, expedient that a government should take a bold step to start off this plan. It is observable that such high density residential landuse along road corridors in Nigerian cities has encouraged the development of road-side shopping belts. These have emerged largely because of poor enforcement of planning standards. Change of use is common in these areas.

While the planning problem here is not strictly that of density of location per se, there are self enforcing methods that could be adopted to reduce this problem. Since it is highlighted in this work that households are largely free in their locational characteristics, although constrained by the urban structure, it may be helpful to reduce the areas allocated to high density residential landuse along road corridors and around neighbourhood centres. This will create occasional breaks in the shopping belts that might develop. This does not necessarily mean that the poor who need to be near their workplaces are taken unnecessarily farther away since the distance involved should not

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be much. The success of this proposal is predicated on the assumption that other density groups will not engage in flagrant change of use.

The following specific recommendations are therefore made:

1. The households are identified in this study as having their own "fields" and are the pivots of their activity nodes. It is, therefore, recommended that households as units of analysis be adopted in residential location studies and planning, within a neighbourhood framework.
2. The households should be viewed as the nuclei of micro-activity systems which collectively build-up to form the complex urban spatial pattern. In this case, it is suggested that the various activities households partake in and their spatial distribution about each household be identified and used in urban spatial analysis.
3. The households have a way of judging the convenience of a residential location. It is, therefore, expedient to expressly identify the convenience of each activity node in relation to the residence and the relative convenience of each residential location based on aggregate activity distribution. Such factors as distance, travel cost and time, in addition to house and neighbourhood characteristics, may also be used to exhume this underlying factor of convenience in residential location planning.
4. In view of the fact that households in Ibadan tend to patronize, as much as possible, the activity nodes near them, it is recommended that a neighbourhood approach be adopted in facility location.

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REFERENCES

Abiodun J. O. (1990): "Spatial Differentiation in the Level of Living Within a Metropolis: The Case of Ibadan, Nigeria", in Ogunjumo A., Aloba O., Adesina, A. (eds) Contemporary Research in Geography at Ife. Ile-Ife: Ife Research Publications in Geography.

Adeniji, Kunle (1983): "Public Transportation and Urban Development in Nigeria", Nigerian Institute of Town Planners Journal, Vol. III, No. 1, pp. 21 - 32.

Adeniji, Kunle (1986): "Public Transportation in Nigeria: Where Do We Go From Here?" Paper presented at the NISER Seminar Series.

Adeniran P. K. (1984): "Ibadan Urban Sprawl Problems: A Challenge to Urban and Regional Planning", Unpublished Master's Thesis submitted to the Centre for Urban and Regional Planning, University of Ibadan, Ibadan.

Akinola, R. A. (1966): "The Growth and Development of Ibadan", Bulletin of the Ghana Geographical Association, Vol. 11, No. 1, 48 - 63.

Alonso, William (1964): Location and Landuse. Cambridge: Harvard University Press.

Areola (1982): "The Spatial Growth of Ibadan and It's Impacts in the Rural Hinterland", in Filani M. O. and Akintola F. O. (eds), Ibadan Region, Ibadan: Department of Geography, University of Ibadan.

Arad, R. W. and Berechman, J. (1978): "A Design Model for Allocating Interrelated Land-Use Activities in Discrete Space", Environmental and Planning A. Vol. 10, pp. 1319 - 1332.

Awoniyi, P. B. (1989): "Management Problems of Public Lands in Ibadan", An Unpublished Dissertation Submitted to the National Council of NITP.

Ayeni, M. A. O. (1982): "The Growth and Structure of the Ibadan Metropolis". Ibadan Region. Ibadan: Department of Geography, University of Ibadan, pp. 79 - 96.

Barresi, C. (1968): "The Role of the Real Estate Agent in Residential Location", Sociological Focus, Vol. 1, pp. 57 - 71.

Barrett, F. (1973): Residential Search Behaviour. Toronto: York University Research Monographs.

Blackley, D. M. and Follain, J. R. (1987): "Tests of Locational Equilibrium in the standard Urban Model", Land Economics, Vol. 63, No. 1, pp. 46 - 61.

CODESRIA-LIBRARY

Broughton, J. and Tanner, J. C. (1983): "Distributional Models for the Journey to Work", Environment and Planning A Vol. 15, pp. 37 - 53.

Brail, R. K. and Chapin, F. S. (1973): "Activity Patterns of Urban Residents", Environment and Behaviour, Vol. 5, pp. 163 - 190.

Brown, L. A. and Moore, E. G. (1970): "The Intra-Urban Migration Process: A Perspective", Geografiska Annaler, B. Vol. 2, pp. 1 - 13.

Burgess, E. W. (1925): "The Growth of City" in Park, R. B., Burgess, E. W. and McKenzie, R. D. (eds.) The City Chicago: University of Chicago Press.

Burnett, P. (1977): "Perceived Environmental Utility under the Influence of Alternative Transportation Systems: A framework for Analysis", Environment and Planning A. Vol. 9, pp. 609 - 624.

Cadwallader, M. (1979): "Neighbourhood Evaluation in Residential Mobility", Environment and Planning A, Vol. 11, pp. 393 - 401.

Chapin, E. S. (1974): Human Activity Pattern in the City, New York: John Wiley and Sons.

Chapman, K. (1979): People, Pattern and Process: An Introduction to Human Geography. New York: John Wiley and Sons.

Chappelle, D. E. (1973): "The Need for Outdoor Recreation: An Economic Conundrum", Journal of Leisure Research. Vol. 5, No. 4, pp. 47 - 53.

Clark, W. A. V. (1970): "Measurement and Explanation in Intraurban Residential location", TESG, Vol. 61, No. 1 pp. 49 - 58.

Clark, W. A. V. and Burt, J. E. (1980): "The Impact of Workplace on Residential Relocation", AAAG, Vol. 70, No. 1, pp. 59 - 67.

Clark, W. A. V. and Smith, T. R. (1982): "Housing Market Search Behaviour and Expected Utility Theory: 2 The Process of Search", Environment and Planning A, Vol. 14, pp. 717 - 737.

Cooke, T. (1978): "Causality Reconsidered: A Note", Journal of Urban Economics, October pp. 538 - 547.

Curran, C., Carlson, L. A. and Ford, D. A. (1982): "A Theory of Residential Location Decisions of Two-Worker Households". Journal of Urban Economics, Vol. 12, pp. 102 - 114.

CODESRIA-LIBRARY

Davies, R. L. (1969): "Effects of Consumer Income Differences on Shopping Movement Behaviour", TESG, Vol. 60, pp. 111 - 121.

DeBoer, L. (1985): "Residential Age and Housing Search: Evidence from Hedonic Residuals", Urban Studies, Vol. 22 pp. 445 - 451.

Desalvo, J. S. (1985): "A Model of Urban Household Behaviour with Leisure Choice". Journal of Regional Science, Vol. 25, No. 2, pp. 159 - 174.

Downs, R. M. (1970): "Geographic Space Perception: Past Approaches and Future Prospects", Progress in Geography. Vol. 2, pp. 65 - 108.

Desbarats, J. (1983): "Spatial Choice and Constraints on Behaviour" AAAG , Vol. 73, No. 3, pp. 340 - 357.

Fadare, S. O. (1986): "Intra-Urban Travel Characteristics: A Study of Socio-Economic Attributes in Ibadan", Ph.D. Thesis submitted to the Department of Town and Regional Planning, University of Sheffield.

Fadare, S. O. (1989): "Analysis of Factors Affecting Household Trip Generation in the Residential Areas of Ibadan", Ife Research Publications in Geography, Vol. 3, pp. 34 - 48.

Filani M. O. and Osayimwese I. (1979): "Intra-City Traffic Flow Problems in Nigeria: The Case of Ibadan Metropolitan Area", The Nigerian Geographical Journal, Vol. 22, pp. 17 - 32.

Federal Capital Development Authority (1979): The Master Plan for Abuja, The New Federal Capital of Nigeria, Lagos: FCDA.

Flury B. and Merybury H. (1988): Multivariate Statistics: A Practical Approach. London: Chapman and Hall.

Getis, A. (1969): "Residential Location and Journey to Work", Proceedings, Association of American Geographers. Vol. 1, pp. 55 - 59.

Goldstein, S. and Mayer, K. (1964): "Migration and Journey to Work", Social Forces, Vol. 42, pp. 471 - 481.

Goodall, B. (1972): The Economies of Urban Areas. Oxford: Pergamon Press.

Guest, A. M. and Cluett, C. (1976): "Workplace and Residential Location: A Push-Pull Model", Journal of Regional Science, Vol. 16, pp. 399 - 410.

Halverson, P. L. (1975): "The Critical Isochrones: An Alternative Definition", Proceedings, Association of American Geographers, Vol. 5, pp. 84 - 87.

CODESRIA-LIBRARY

Hanson, S. (1977): "Measuring the Cognitive Levels of Urban Residents" , Geografiska Annaler, Vol. 59B, No. 2, pp. 57 - 81.

Hanson, S. and Hanson, P. (1980): "Gender and Urban Activity Patterns in Uppsala, Sweden", Geographical Review, Vol. 70, pp. 291 - 299.

Hanson, S. and Hanson, P. (1981): "The Travel Activity Patterns of Urban Residents: Dimensions and Relationships to Socio-Demographic Characteristics", Economic Geography, Vol. 57, No. 4, pp. 332 - 347.

Harris, C. O. and Ullman, E. L. (1957): "The Nature of Cities", In Hatt. P. K. and Reiss, A. J. (eds.), Cities and Society: The Revised Reader in Urban Sociology. New York: Free Press, pp. 237 - 247.

Hempel, D. M. (1969): "Search Behaviour and Information Utilization in the Home Buying Process", Proceedings of the American Marketing Association, Vol. 30, pp. 241 - 249.

Herz, R. (1982): "The Influence of Environmental Factors on Daily Behaviour", Environment and Planning A, Vol. 14 pp. 1175 - 1193.

Hortons, F. E. and Reynolds, D. R. (1971): "Effects of Urban Spatial Structure on Individuals Behaviour" Economic Geography, Vol. 47, pp. 36 - 48.

Hoyt, Homer (1939): The Structure and Growth of Residential Neighborhoods in American Cities, U. S. Federal Housing Administration, Washington D. C.: U.S. Government Printing Office.

Jud, G. D. and Bennett D. G. (1986): "Public Schools and the Pattern of Intraurban Residential Mobility", Land Economics, Vol. 62, pp. 362 - 370.

Ibadan Metropolitan Planning Authority (1984): The Master Plan of Ibadan. Ibadan: IMPA.

Jones, O. (1979): "Housing: The Element of Choice" Urban Studies, Vol. 16, pp. 197 - 204.

Kain, J. (1968): "Housing Segregation Negro Employment and Metropolitan Decentralisation", Quarterly Journal of Economics. Vol. LXXXII, No. 2.

Keeble L. (1969): Principles and Practice of Town and Country Planning. London: The Estate Gazettes Ltd.

Koutsoyiannis A. (1977): Theory of Econometrics: An Introductory Exposition of Econometric Methods. London: Macmillan Education Ltd.

CODESRIA - LIBRARY

Lansing, J. B., (1968): "How People Perceive the Cost of the Journey to Work", Highway Research Record, No. 197 pp. 44 - 55.

Linneman, P. and Graves, P. E. (1983): "Migration and Job Change: A Multinominial Logit Approach" Journal of Urban Economics, Vol. 14, pp. 263 - 279.

Lloyd, R. E. (1976): "Cognition, Preference and Behaviour in Space: An Examination of the Structural Linkages" Economic Geography, Vol. 52, pp. 241 - 253.

Longley, P. A. and Wrigley, N. (1984): "Scaling Residential Preferences: A Methodological Note", TESG, Vol. 75, No. 4, pp. 293 - 299.

Louviere, J. J. and Meyer, R. J. (1979): Behavioural Analysis of Destination Choice. Technical Report 112, Institute of Urban and Regional Research, University of Iowa, Iowa City, Iowa.

Lundqvist, L. (1978): "Urban Planning of Locational Structures with due regard to User Behaviour", Environment and Planning A. Vol. 10, pp. 1413 - 1429.

Mabogunje, A. L. (1962): "The Growth of Residential Districts in Ibadan", Geographical Review, Vol. 52, No. 1, 56 - 77.

Mabogunje, A. L. (1968): Urbanization in Nigeria. London: University of London Press Ltd.

Madden, J. F. (1980): "Urban Land Use and the Growth in Two-Earner Households", American Economic Review, May, pp. 191 - 97.

Maher, C. A. (1974): "Spatial Patterns in Urban Housing Markets: Filtering in Toronto, 1953 - 1971", Canadian Geographer, Vol. 18, pp. 108 - 124.

Mansfield, N. W. (1969): "Recreation Trip Generation: A Cross-Section Analysis of Weekend Pleasure Trips to the Lake District", Journal of Transport Economics and Policy, Vol. 3, No. 2, pp. 152 - 164.

McLeod, P. B. and Ellis, J. R. (1982): "Housing Consumption Over the Family Life Cycle: An Empirical Analysis" Urban Studies, Vol. 19, pp. 177 - 185.

Mercer, D. (1973): "The Concept of Recreation Need", Journal of Leisure Research, Vol. 5, No. 1, pp. 37 - 50.

Meyer, J. W. and Speare, A. (Jr.) (1985): "Distinctively Elderly Mobility: Types and Determinants", Economic Geography, Vol. 61, No. 1, pp. 79 - 88.

Michelson, W. (1977): Environmental Choice, Human Behaviour and Residential Satisfaction, New York: Oxford University Press.

CODESRIA-LIBRARY

Miller, F. and Romsa, G. (1982): "Residential Mobility, Vacancy Chains and Perceived Benefits Arising from New Detached Housing in Quito, Ecuador", TESG, Vol. 73, No. 3, pp. 162 - 172.

Muth, R. F. (1969): Cities and Housing. Chicago: University of Chicago Press.

Newton, P. W. (1977): "Choice of Residential Location in an Urban Environment", Australian Geographical Studies, Vol. 15, pp. 3 - 21.

Norusis M. J./SPSS Inc. (1990): SPSS/PC + Advanced Statistics. Chicago: SPSS Inc.

Ogunjumo A. (1985): "Towards an Appraisal of Differential Spatial Formations: An Example of Public Road Networks' Investments in Nigeria (1970 - 80)", Malaysian Journal of Tropical Geography, Vol. 11, pp. 44 - 53.

Ogunjumo, A. (1987a): "A Cooperative Paratransit Alternative for Nigerian Cities: A Case Study of Akure", Third World Planning Review, Vol. 9, pp. 381 - 390.

Ogunjumo, A. (1987b): "Captive Ridership Estimation Technique for Urban Areas in Nigeria: An Example of Ile-Ife", Transport Planning and Technology, Vol. 11, pp. 247 - 256.

Ogunjumo, A. (1989): "A Three-Way Mode-Split Discriminant Analysis of Urban Trip Makers at Ile-Ife", Ife Journal of Technology, Vol. 1, pp. 31 - 40.

Okpala, D. C. I. (1978): "Urban Ecology and Residential Location Theories: Application in Nigeria's Socio-cultural Milieu", Socio-Economic Planning Science, Vol. 12, pp. 177 - 183.

Olanrewaju, S. A. (1979): "Traffic Congestions in an Urban Setting: The Case of Lagos Metropolitan Area", Ife Social Science Review, Vol. 2, pp. 51 - 67.

Onibokun, A. G. (1973): "A System of Evaluating the Relative Habitability of Housing", Ekistics, Vol. 36, No. 216, pp. 313 - 317.

Onibokun, A. G. (1974): "Forces shaping the physical Environment of Cities in LDCs: The Ibadan Case", Land Economics, Vol. XLIX, No. 4.

Onibokun, A. G. (1985): Urban Housing in Nigeria. Ibadan: NISER.

Onibokun A. G. (1988): Report of a Socio-economic and Housing Survey in Ibadan, commissioned by the IMPA.

Onakerhoraye, A. G. (1977): "The Spatial Pattern of Residential Districts in Benin, Nigeria", Urban Studies, Vol. 14, pp. 291 - 302.

CODESRIA-LIBRARY

Onyemelukwe (1978): "Structural and Spatial Dynamics of Industrial Activity in a Traditional City - Ibadan, Nigeria" The Nigerian Geographical Journal, Vol. 21, No. 2.

Osunade, M. A. A. and Salami, A. T. (1990): "Urban Encroachment on Agricultural Lands in Ibadan Region, Nigeria", in Ogunjumo A., Aloba O., and Adesina A. (eds) Contemporary Research in Geography at Ife. Ile-Ife: Ife Research Publications in Geography.

Palm, R. (1976): "The Role of Real Estate Agents as Information Mediators in Two American Cities", Geographical Annaler, Vol. 58B pp. 28 - 41.

Payne, J. W. (1976): "Task Complexity and Contingent Processing in Decision Making: An Information Search and Protocol Analysis", Organizational Behaviour and Human Performance, Vol. 16, pp. 366 - 387.

Perry, N. H. (1973): "Models in Recreational Planning, Recreation News Supplement, No. 8, pp. 2 - 10.

Phipps, A. G. and Laverty, W. H. (1983): "Optimal Stopping and Residential Search Behaviour", Geographical Analysis, Vol. 15, No. 3, pp. 187 - 204.

Pipkin, J. S. (1981): "The concept of Choice and Cognitive Explanations of Spatial Behaviour", Economic Geography, Vol. 57, No. 4, pp. 315 - 361.

Quigley, J. M. (1985): "Consumer Choice of Dwelling, Neighbourhood and Public Services" Regional Science and Urban Economics, Vol. 15, No. 1, pp. 41 - 63.

Rossi, P., (1955): Why Families Move. Glencoe, III: The Free Press.

Sada, P. O. (1972): "Residential Land Use in Lagos: The Relevance of Traditional Models", African Urban Notes, Vol. VII, No. 11, pp. 3 - 25.

Salau A. T. (1990): "The Environmental Context of Urban Housing: Public Services and Infrastructural Facilities in Nigerian Urban Areas", in Onibokun, A. G. (ed.) Urban Housing in Nigeria. Ibadan: NISER.

Sjaasta, L. A. (1962): "The Costs and Returns of Human Migration", Journal of Political Economics, Vol. 70, pp. 80 - 93.

Smith, T. R. Clark, W. A. V., Huff, J. O. and P. Shapiro (1979): "A Decision-Making and Search Model for Intra-Urban Migration, Geographical Analysis Vol. 11, No. 1, pp. 1 - 22.

CODESRIA-LIBRARY

Smith, T. R. and Mertz, F. (1980): "An Analysis of the Effects of Information Revision on the Outcome of Housing-Market Search, With Special Reference to the Influence of Realty Agents", Environment and Planning A Vol. 12, pp. 155 - 174.

Smith, T. R. Pellegrino, J. W. and Golledge, R. G. (1982): "Computational Process Modeling of Spatial Cognition and Behaviour", Geographical Analysis, Vol. 4, No. 4, pp. 305 - 325.

Stegman, M. A. (1969): "Accessibility Models and Residential Location", Journal of American Institute of Planners, Vol. 35, pp. 22 - 29.

Stegman, M. A. and Sumka, H. J. (1978): "Income Elasticities of Demand for Rental Housing in Small Cities", Urban Studies, Vol. 15, pp. 51 - 61.

Steinnes, D. (1977): "Causality and Intra-Urban Location" Journal of Urban Economics, January pp. 69 - 79.

Steinnes, D. (1982): "Do 'People Follow Jobs' or Do 'Jobs Follow People'? A Causality Issue in Urban Economics" Urban Studies, Vol. 19 No. 2, pp. 187 - 192.

Stokes, C. J. (1962): "A Theory of Slums", Land Economics, Vol. 38, pp. 187 - 197.

Stopher P. R. and Meybury A. H. (1979): Survey Sampling and Multivariate Analysis for Social Scientists and Engineers. Toronto: Lexington Books.

Stouffer, S. A. (1940): "Intervening Opportunities: A Theory Relating Mobility to Distance", American Sociological Review, Vol. 5, pp. 845 - 867.

Svenson, O. (1979): "Process Description of Decision Making" Organizational Behaviour and Human Performance, Vol. 23, pp. 86 - 112.

Talarchek, G. M. (1982): "Sequential Aspect of Residential Search and Selection", Urban Geography, Vol. 3, pp. 34 - 57.

Timmersmans, H. J. P. (1980): "Consumer Spatial Choice Strategies: A Comparative Study of Some Alternative Behavioural Shopping Models", Geoforum, Vol. 11, pp. 123-131.

Timmermans, H. J. P. and Veldhuisen, K. J. (1981): "Behavioural Models and Spatial Planning: Some Methodological Considerations and Empirical Tests", Environment and Planning A , Vol. 14, pp 338-354.

CODESRIA-LIBRARY

To, M. C. Lapointe, A. and Kryzanowski, L. (1983): "Externalities, Preferences, and Urban Residential Location: Some Empirical Evidence", Journal of Urban Economics.

Ubogu, R. E. (1980): "Optimal Work Staggering and Traffic Congestion: A Theoretical Analysis", The Journal of Business and Social Studies, Vol. 4, No. 1, pp. 33 - 45.

Vagale, L. R. and Adekoya, O. C. (1976): "The Industrial Environment of Ibadan, Nigeria", Ekistics Vol. 42, No. 249 pp. 99 - 102.

Weinberg, D. H. Friedmann, J. and Mayo, S. K. (1981): "Intra-Urban Residential Mobility; The Role of Transactions Costs, Market Imperfections, and Household Disequilibrium" Journal of Urban Economics, Vol. 9, pp. 332 - 348.

White, H. C. (1971): "Multipliers, Vacancy Chains, and Filtering in Housing", Journal of American Institute of Planners, Vol. 37, pp. 88 - 94.

White, M. J. (1977): "A Model of Residential Location Choice and Commuting by Men and Workers", Journal of Regional Science, Vol. 17, pp. 41 - 52.

Wolpert, J. (1965): "Behavioural Aspects of the Decision to Migrate", Paper of the Regional Science Association, Vol. 15, pp. 159 - 169.

Wong, K. Y. (1979): "Maps in Minds: An Empirical Study", Environment and Planning A, Vol. 11, pp. 1289 - 1304.

Yirenkyi-Boateng, S. (1986): "Spatial Analysis of Variations in Level of Living within the Ibadan Metropolitan Region", An unpublished Ph.D. Thesis, Department of Geography, Obafemi Awolowo University, Ile-Ife.

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APPENDIX I

DEPARTMENT OF GEOGRAPHY
OBAFEMI AWOLOWO UNIVERSITY
ILE - IFE

HOUSEHOLD QUESTIONNAIRE

HOUSEHOLD ACTIVITY PATTERNS AND URBAN RESIDENTIAL LOCATION DECISION IN IBADAN, OYO STATE

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A. LOCATION INFORMATION

1. Map reference no of house: .....
2. House location code no: .....
3. Location of House: No..... Street .....
   ..... Ward .....

B. SOCIO-ECONOMIC CHARACTERISTICS

4. Sex Male ..... Female .....
5. Religion ..... 6. Ethnic Group .....
7. Home Town ..... Local Government Area:.....
   .....
8. Marital Status: Single.....
   Married ..... Separated .....
   Divorced ..... Widow .....
9. Age .....
10. Highest educational level .....

11. Occupation:..... Monthly income (N.....)

Grade Level (if any) .....

12. Occupation of Spouse .....

(Monthly Income (N.....) Grade Level (if any).....

13. No. of vehicles in the household: Bicycle .....

Motorcycles ..... Pick-up Vans .....

Cars ..... Lorries .....

Other (specify) ..... None .....

14. Size of household: .....

C. RESIDENTIAL LOCATION INFORMATION

15. How long have you stayed in Ibadan? .....

16. Do you own this house? Yes ..... No (family house

..... Tenant .....)

17. Give reason(s) for the choice of locating in this ward .....

18. No. of rooms occupied .....

19. Rent per month (N.....)

20. Have you changed your residence in recent times?

Yes..... No .....

21. If Yes, (i) When? ..... Why? .....

(ii) Location of previous residence .....

(iii) Rent paid per month in previous resident (N.....)

(iv) No of rooms occupied in previous residence .....

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22.(i) Do you consider your present residence more convenience for you than the previous one?

Yes..... No .....

(ii) Do you hope to change (or move from) this residence soon?

Yes..... No .....

(iii) If you hope to move soon, where are you moving to?

.....

What efforts are you making towards this ? .....

.....

(iv)Give other reason(s) for wishing to move .....

.....

23. What made you choose your present house?

.....

24. Do you know about this house through any of the following?

(i) Through Real Estate Agent .....

(ii) Through friends .....

(iii) Relatives .....

(iv) Driving around/personal contacts .....

(v) Newspapers, etc. .....

(vi) Others (specify) .....

25. Name the residential district you prefer most to live in this city?

.....

Why? .....

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26. If your most preferred residential district is not your current location, give reasons you have not chosen the most preferred district.

.....

D. ACTIVITY PATTERN INFORMATION

I. WORKPLACE:

27. Location of workplace .....

near (identify a landmark around the place)
.....

28. No of workdays per week .....

29. Cost of commuting to work per day (N.....) .....

30. Average duration of trip to work (.... hrs ... mins)

31. How many times do you have to change vehicles in a trip to work?
.....

32. Do you use a staff-bus? Yes..... No .....

33. Have you changed your workplace within the past 5 years?

Yes..... No .....

34. If Yes,
(i) When .....

(ii) Location of previous work place .....

(iii) Is this location of your present workplace more convenient with respect to your present house?
Yes..... No .....

(iv) If No, How do you hope to adjust

.....

35.(i)Location of workplace of spouse .....

(ii) Cost of commuting to work (N...) Time .....

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(iii) Has your spouse changed workplace in recent past?

Yes ..... No .....

(iv) If Yes, when .....

(v) Is this location convenient with respect to your home?

36. Location(s) of workplace(s) of other member(s) of the household (if any) .....

II. SCHOOL

37. How many children do you have in

Nursery Schools..... Primary School.....

Secondary Schools..... in this town?

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38. State the following:

School	Age of Child	Name of School	Location of School	Commuting Cost (N)	Commuting Time
Nursery					
"					
"					
Primary					
"					
"					
Secondary					
"					
"					

39. Mode of transportation of children to school?

Nursery: Public transport..... Private vehicle .....

Trek..... School Bus .....

Primary: Public transport ..... Private care .....

Trek ..... School bus.....

Secondary: Public transport ..... Private Care.....

Trek ..... School bus .....

40. If they go by public transport, how many times do they change vehicles in a single trip?

Nursery..... Primary..... Secondary.....

41. Do they go alone ..... or are they taken there by you?

..... spouse.....household.....

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or friend .....?

42. (i) Is the location of the school(s) convenient from your own point of view?

Nursery: Yes..... No .....

Primary: Yes..... No .....

Secondary: Yes..... No .....

(ii) If No. why?

Nursery school .....

Primary School .....

Secondary school .....

(iii) Do you hope to change the schools?

Nursery school: No .... Yes .... (To where...)

Primary school: No .... Yes ..... (To where ...)

Secondary school: No ... Yes .... (To where.....)

(iv) If Yes, give reasons.....

Nursery .....

Primary .....

Secondary .....

II. SHOPPING

43. Name and location of regular shopping centre (or market) for foodstuffs .....

44. Why the choice of the centre? .....

45. Commuting cost per trip N .....

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46. Commuting time per trip .....hrs.....mins.

47. How many times do you change vehicles on a single trip?

48. Frequency of visit to the shopping centre/market per week?

.....

49. (i) Would you have preferred other shopping centres/markets?

Yes.....No.....

(ii) If Yes, why do you still patronize this centre?

.....

(iii) Which other centres would you have preferred to patronize on a regular basis?

.....

(iv) What are your constraints in patronizing this (these) preferred centre(s)?

.....

IV. RECREATION

50. Location of regular recreation centre? .....

51. Why have you chosen the centre? .....

52. Commuting time....., Cost N..... per trip? .....

53. How many times do you change vehicles per trip? ...

54. Frequency of visit per week .....

55.(i) Would you have preferred other recreation centres?

Yes..... No.....

(ii) If Yes, Where? .....

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Why? .....

56. Other recreation centres visited occasionally .....

.....

V. RELIGIOUS CENTRE

57. Name and location of religious centre visited regularly

.....

58. Why the choice of the centre? .....

59. Commuting time..... Cost (N.....) per trip.

60. How many times do you change vehicles per trip? ....

61. Frequency of visit per week .....

62. Your role in the centre .....

63. Your spouse's role in the centre .....

64. (i) Have you changed your patronage in recent time?

Yes ..... No .....

(ii) If Yes, Why? .....

65.(i) Which other religious centre would you have preferred to patronize on a regular basis?

.....

(ii) What are the things constraining you from attending the preferred one?

.....

VI. Health Facilities

66. Name and location of a health facility visited on a regular basis

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.....

67. Public ..... Private .....

68. Why the choice of the centre?.....

69. Commuting time ..... Cost (N.....) per trip.

70. How many times do youy change vehicles per trip?

.....

71. (i) Would you have preferred other choices?

Yes ..... No .....

(ii) If Yes, why do you still patronize this facility on a regular basis?

.....

(iii) List other health facilities patronized occasionally

.....

VII. LOCATION OF FRIENDS/RELATIONS

72.(i) Do you like to have your residence close to friends?

Yes ..... No .....

(ii) If Yes, Why? .....

(iii) If No, Why? .....

73. (i) Do you like to have your residence close to relations?

Yes..... No .....

(ii) If Yes, Why?.....

(iii) If No, Why?.....

74. (a) Has the choice of your current residence anything to do with willingness to be nearer friends?

.....

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(b) Any other reason .....

E. The City Centre (Dugbe Area)

75.(i) How often do you visit the city centre per month?

.....

(ii) State your purpose of visit .....

(iii) Cost of commuting to city centre .....

Commuting time.....

(iv) How many times do you change vehicles per trip ...?

F. Knowledge of the City

76. Indicate your level of familiarity with and knowledge of the following in all other parts of the city (apart from your neighbourhood).

(i) Residential facilities: Very well.....

Well..... Little .....

Not at all.....

(ii) Workplace opportunities: Very well.....

Well ..... Little.....

Not at all .....

(iii) Schools for children: Very well.....

Well..... Little.....

Not at all .....

(iv) Shopping centres: Very well..... Well .....

Little..... Not at all .....

(v) Recreation Centres: Very well..... Well .....

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Little..... Not at all .....

(vi) Religious centres: Very well..... Well .....

Little ..... Not at all .....

(vii) Health facilities: Very well..... Well .....

Little ..... Not at all .....

G. CHARACTERISTICS OF HOUSE

77. Type of House

(i) Traditional compound house/mud house .....

(ii) Multiple dwelling/Rooming house.....

(iii) Multiflat ..... (iv) Duplex .....

(v) Single dwelling unit (modern type) .....

78.Size of plot ..... No of buildings in compound ...

79.No of habitable rooms..... or flats.....

80. Space about building:

Distance of house to the building on the right.....

(metres) left..... (metres), rear..... (metres),

distance to the road..... metres.

81. Parking space enough for 1..... 2..... 3..... 4..... and above..... cars, none.....

82. Which of the following are in the compound? .....

(i) Shade trees ..... no .....

(ii) Flower pots/beds .....

(iii) Palm ..... (specify type) .....

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(iv) Shed for relaxation..... or other large covered space .....

(v) Sculptured features..... (specify type)

(vi) Security wall..... Security post.....

(vii) Green Lawn ... (specify size in square metres) .....

(viii) Swimming pool .....

(ix) Others specify .....

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APPENDIX II

Variables used in the Study

1. Sex (Male = 1; Female = 2)
2. Religion
3. Ethnic group
4. Marital status
5. Age of respondent (yrs)
6. Highest education of respondent
7. Occupation of respondent
8. Monthly income of respondent
9. Occupation of spouse
10. Monthly income of spouse
11. Number of vehicles in household
12. Length of stay in Ibadan (yrs)
13. House ownership
14. Number of rooms occupied
15. Rent per month (N)
16. Change of resident in recent times? (Yes =1, No =0)
17. Convenience of present house in relation to activity distribution.
18. Do you hope to change residence?
19. How you came to know about this house
20. Is the residential district your most preferred?

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21. Distance to workplace of respondent (km)
22. Number of work days per week of respondent
23. Commuting cost per day to workplace of respondent
24. Commuting time to workplace of respondent (Min.)
25. Number of times you change vehicles per trip to work.
26. Change of workplace in recent past.
27. Convenience of present workplace.
28. Do you hope to change workplace?
29. Use staff bus.
30. Distance to workplace of spouse
31. Commuting cost to workplace of spouse
32. Commuting time to workplace of spouse
33. Spouse change workplace in recent past?
34. Convenience of spouse's workplace
35. Number of children in schools
36. Average distance to nursery school
37. Average age of children in nursery school
38. Average commuting cost to nursery school
39. Average commuting time to nursery school
40. Average distance to primary school
41. Average age of children in primary school
42. Average commuting cost to primary school
43. Average commuting time to primary school

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44. Average distance to secondary school
45. Average age of children in secondary school
46. Average commuting cost to secondary school
47. Average commuting time to secondary school
48. Mode of transport to nursery school
49. Mode of transport to primary school
50. Mode of transport to secondary school
51. Availability of assistance to get children to school
52. Convenience of nursery school
53. Convenience of primary school
54. Convenience of secondary school
55. Wishing to change nursery school
56. Wishing to change primary school
57. Wishing to change secondary school
58. Distance to shopping centre for foodstuffs
59. Commuting cost to shopping centre for foodstuffs
60. Commuting time to shopping centre for foodstuffs
61. Number of times you change vehicles enroute (shopping)
62. Frequency of visit to the shopping centre per week
63. Is this the most preferred shopping centre?
64. Distance to regular recreation centre
65. Commuting cost to regular recreation centre
66. Commuting time to regular recreation centre

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67. Number of times you change vehicles enroute (recreation)
68. Frequency of visit to recreation centre
69. Is this the most preferred recreation centre?
70. Distance to regular religious centre
71. Commuting cost to regular religious centre
72. Commuting time to regular religious centre
73. Number of times you change vehicles enroute (religion)
74. Frequency of visit to regular religious centre
75. Change patronage in recent times (religion)?
76. Is this the most preferred religious centre
77. Distance to regular Health Facility
78. Ownership of Health Facility (Public\Private)
79. Commuting cost to Health Facility
80. Commuting time to Health Facility
81. Number of times you change vehicles enroute (health)
82. Is this the most preferred health facility?
83. Choice of residence influenced by location near friends?
84. Choice of residence influenced by location near relations?
85. Distance to the city centre
86. Number of times you change vehicles enroute (city centre)
87. Purpose of visit to city centre
88. Commuting cost to city centre
89. Commuting time to city centre

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90. Knowledge of urban residential facilities

91. Knowledge of urban workplace opportunities

92. Knowledge of urban schools for children

93. Knowledge of urban shopping centres for foodstuff

94. Knowledge of urban recreation centres

95. Knowledge of urban religious centres

96. Knowledge of urban health faicilities

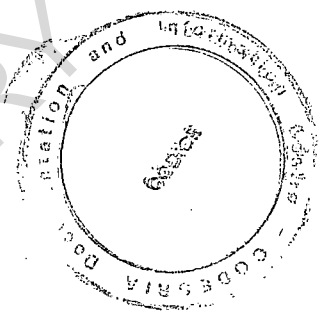
97. Housing quality

98. Stage in family life cycle

99. Size of household

100. Frequency of visit to city centre

101. "Behavioural Group" membership number.



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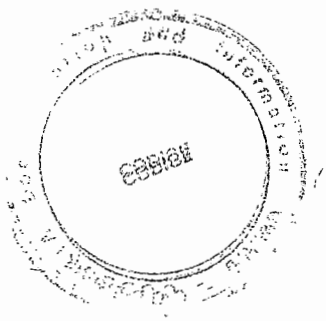

Appendix III

Ethnic Groups in Ibadan

	No	%	Cumulative percentage
Yoruba	701	95.3	95.2
Ibo	20	2.7	98.0
Hausa	3	0.4	98.4
Others	12	1.6	100.0
Total	736	100.0	

(Source: Fieldwork, 1993).

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