FINANCING URBAN INFRASTRUCTURE DEVELOPMENT PROJECTS : AN ANALYSIS OF THE STRATEGIES USED IN KADUNA.

M.SC. (U. R. P.) THESIS

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1993

DEDICATION

To all practicing and Academic planners in Nigeria.

DECLARATION

I thereby declare that this thesis has been composed by myself and that it is the outcome of my research work. It has not been accepted in any previous application for a higher degree. I should add that I am solely responsible for the views expressed and for any defects and error of judgement in this research and all sources of information are specifically acknowledged by means of references.

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CERTIFICATION

This thesis entitled "FINANCING URBAN INFRASTRUCTURE DEVELOPMENT PROJECTS: ANALYSIS OF THE STRATEGIES USED IN KADUNA" by SAMBO, Suleiman, meets the regulations governing the award of the degree of Master of science, Urban and Regional planning of Ahmadu Bello University, Zaria; and is approved for its contribution to knowledge and literary presentation.

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ACKNOWLEDGEMENT

This thesis owes its completion to immense and invaluable contributions made by many people to whom I am greatly indebted. In particular, I am profoundly grateful to my supervisor Dr. James B. Kaltho for his guidance, crisp and constructive criticisms through out the study. To Malam I.D. Suleiman the Head of Department, whom honestly I have no words to thank him enough for all he has done to and for me - academically, materially and morally throughout the period of my study.

A special gratitude also goes to the respondents who not only gave me their co-operation but also went through the ordeal of answering the long interview schedule.

Also the understanding, encouragement and moral support shown to me by my colleagues can not go unacknowledged.

Finally, I wish to express my profound appreciation to all who have contributed, whose names I can not mention, I am indeed grateful.

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ABSTRACT

FINANCING URBAN INFRASTRUCTURE DEVELOPMENT PROJECTS: AN ANALYSIS OF THE STRATEGIES USED IN KADUNA.

The study set out to appraise the existing strategies for financing infrastructure development projects in Kadunu Metropolis. This covers the choice of sources of fiance, methods of deployment of finances, and the terminal aspects such as recovery, repayment e.t.c.

The study begins with a general review of the various strategies for financing urban infrastructure development projects. The existing strategics in use in the study area wore also examined in order to assess their effectiveness in infrastructure development projects financing in Kaduna Metropolis.

Findings from the empirical study reveal that, government financial commitments towards the provision of infrastructure on planned sites has declined over the years. This is because the demand for the maintenance of existing urban infrastructure and provision of new ones far outweighs the financial resources at the disposal of the government.

The analysis of the existing policies and strategies for financing urban infrastructure development projects reveals that, tin; strategies are not based on comprehensive subject plans and cost estimates. Therefore, they have; proved to be ineffective. This resulted in increased cost of infrastructure provision which has led to the abandonment of many infrastructure development projects.

This study also established that, plot deneficiaries show willingness to contribute towards financing the provision of infrastructure, particularly pipe-borne water, roads and drains, electricity etc.

The analysis further reveals the need for the evolution of alternative approach for financing" urban infrastructure development projects, considering the resources available and the socio-economic characteristics of the area.

CHAPTER ONE

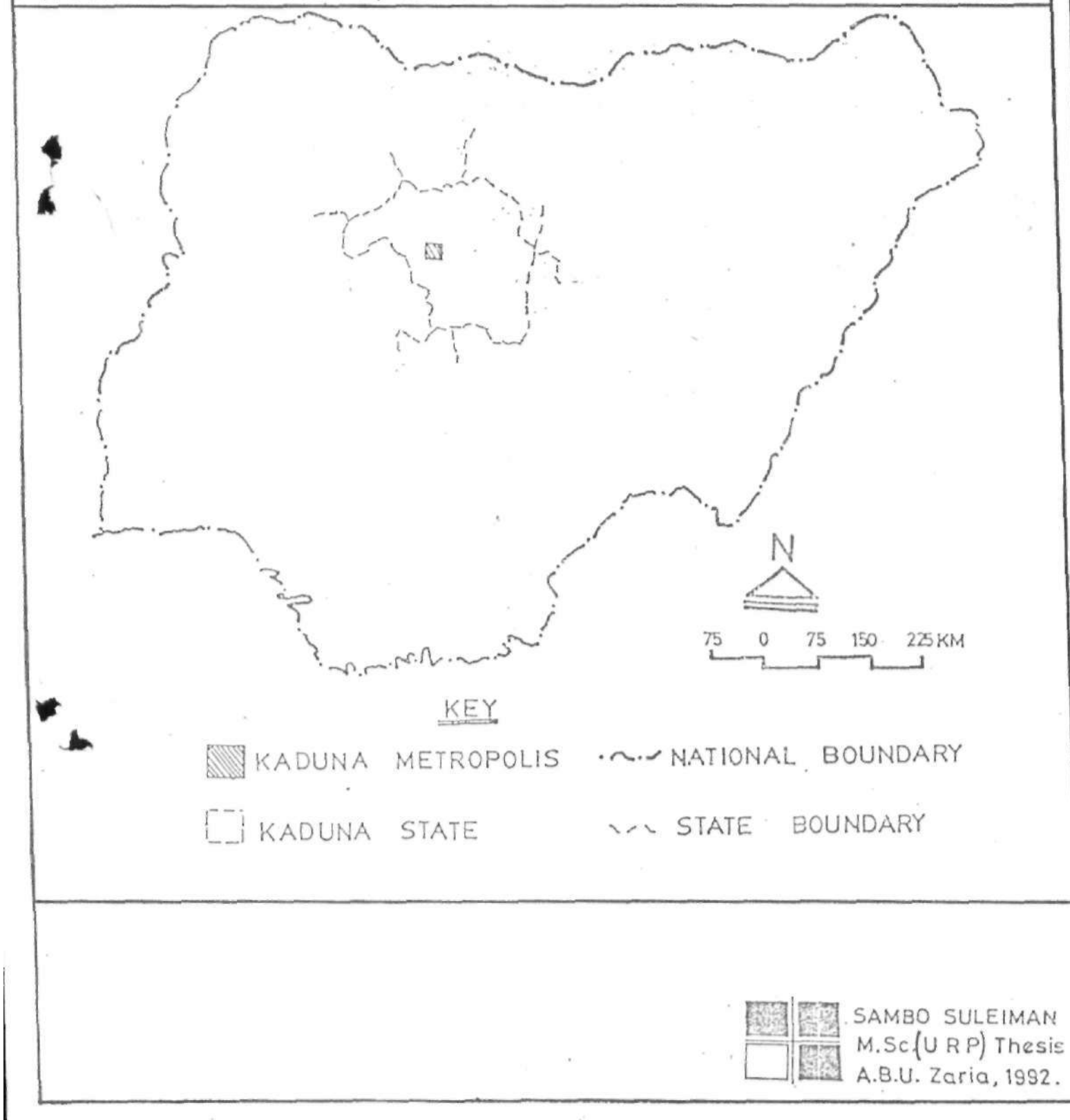
1.00 INTRODUCTION

1.10 STATEMENT OF RESEARCH PROBLEM

In many developing countries of the world, cities and towns suffer the problems of expanding population and the associated problem of lack of basic amenities. This is particularly prominent in the fringe areas that absorb the urban Sprawl. Regardless of whether the infrastructure needed is costly or is relatively simple and inexpensive, much of the infrastructure is missing (Jagannathan, 1988).

In Nigeria, rapid urban development is a recent phenomena witnessed all over the country in the second half of the 20th century and the rate has been proceeding at a dramatic pace in the last two decades (Adedeji, A.,1972). As in other cities of the developing countries, this rapid rate of urbanization has been associated with numerous problems,one of which is the inadequacy and poor state of urban infrastructure.Numerous physical development plans have over the years been prepared for many towns in Nigeria, including kaduna, in order to tackle these and other landuse problems. Nonetheless, it has been established that only few of them have been successfully implemented. Accordingly, the haphazard developments and inadequate provision of the needed infrastructure have remained a major planning problem.

FIGURE 1.01 LOCATION OF KADUNA IN KADUNA STATE OF NIGERIA



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In kaduna state, as in other parts of the country, up to the 1960's government was able to meet most urban requirements as evidenced in the physical conditions and characteristics of infrastructure in the older parts of townships (i.e in precolonial cities) and that of other colonial and post colonial towns\cities.

However, government lost the ability to provide these infrastructure and services since after the civil war. Today in many parts of our cities we have multitude numbers of undeveloped plots and substantial parts of the built-up environ-ment manifest the need for urgent rehabilitation (see plate 1.01 1.02). Thus, the government of kaduna state just like all other states, is finding it difficult to finance the ever increasing demands for urban utilities and services. This is because the demands far out weighs the financial resources at the disposal of the government (Sada, 1972). Besides the obvi-ous shortage of funds, there is the added problem that, in general, the process through which capital investments are made leads to less -than-optimal realization of plans and projects. Evidences could be seen in many parts of kaduna metropolis, where many of the sprawling neighbour hoods poss-ess traits of a typical rural setting with no good roads, water supply, electricity supply or storm-water drains thereby developing in an un-coordinated and un-planned pattern due to the poor attention accorded to these areas (see plates 1.03\1.04).



Plate 1.01: A street scene at Malali G.R.A. Showing undeveloped plots at the foreground owing to lack of infrastructure/services.



Plate 1.02: A street scene at Malali Village, Kaduna, Manifesting the need for urgent rehabilitation.

Although a lot of research have been carried out on the problems of limited implementation and maintenance of urban infrastructure development projects many identify finance as one of the factors, focussing on the sources of finance available at the government disposal. Thus, they pay little attention to the methods of deployment of these finances and other associated problems, contribution of the urban communities and the private sector as important actors in financing urban infrastructure development projects.

Therefore, these problems could be tackled by reviewing the existing financing strategy(ies) in use in the study area with a view to ascertaining its/their effectiveness or other wise. If found lacking, then an alternative course of action could be identified. It is these pressing issues that the study seeks to address.

1.20 AIMS AND OBJECTIVES

1.21 AIM

The aim of this research is to appraise the existing strategies for financing infrastructure development projects in selected parts of kaduna metropolis with a view to making recommendations for improvement.



Plate 1.03: A typical scene at Narayi Kaduna, with no good roads, storm water drains and water supply



Plate 1.04: A typical scene at U/Rimi village Kaduna, developing in an un-coordinated and un-planned pattern possessing trait of a rural setting

1.22 Objectives:

The above aim shall be achieved through the following objectives;

(1) To review the various strategies for financing urban infrastructure development projects.

(2) To identify the existing strategies for financing urban infrastructure development projects in kaduna.

(3) To appraise the financing strategies used in selected infrastructure development projects in some parts of kaduna and identify the associated problems.

(4) To investigate the reasons for the problems and the prospects for their improvement.

(5) To make recommendations for effective financing of infrastructure development projects in kaduna metropolis.

1.30 SIGNIFICANCE OF THE STUDY

In kaduna state, the issue of financing urban infrastructure development projects has over the years not been receiving the attention it rightly deserves. This might be attributed to the present financial situation of the state within the framework of the national and global economic recession and the lack of an effective strategy for financing such projects in the study area.

Thus, this thesis is hoped to serve as a useful tool for the people and government of kaduna state as a means of evolving an effective strategy and or strategies for financing such services taking advantage of the individual peculiarities of the various services. This will go a long way in relieving the citizens of their frustrations due to the inadequacy of urban infrastructure such as water supply, electricity supply, roads and storm-water drains which have considerably deteriorated. Thereby leading to serious social and economic problems resulting from the lower standards and the widespread dissatisfaction.

1.40 SCOPE AND LIMITATIONS

1.41 SCOPE

The study will review the various strategies for financing urban infrastructure development projects. Also an appraisal of the strategies adopted in the study area will be conducted in order to see their success and failures. So that where short comings are noted, some modifications could be suggested with regards to their practical applicability.

1.42 Limitation

The scope of the study is limited to three selected layouts, one each of Residential, commercial and Industrial. This is to enable indept research and arrival at useful conclusions for effective and lasting planning solutions.

1.50 RESEARCH METHODOLOGY

1.51 Research Questions

(i) Why is there poor or lack of provision of urban infrastructure in kaduna ?

(ii) How can the financing of urban infrastructure development projects be made more effective?

1.52 Research Approach

The approach to be adopted throughout this study shall be analytical. This will begin with identification and assessment of financing strategies universally accepted. Next the existing financing strategy(ies) used in the study area shall be appraised and associated problems identified. This will enable the most appropriate course of action to be proposed.

1.53 Data Required

The data required for this research include:

Layout plans of the selected areas, year of preparation and extent of implementation of the layout, by whom and the kind of financing strategy used.

Number of people who have been allocated plots on these layouts, and whether they have develop the plots or not. If not developed, why?

The annual budgetary allocation for urban infrastructure development in kaduna as from 1981-90.

used in the selected project areas were apraised and the associated problems identified. Finally, chapter five contains recommendations and conclusions, with solutions that will possibly solve the identified problems.

1.70. DEFINITION OF TERMS

The following are definitions of some terms frequently used in this thesis:

1.71. Development programme/projects:

Development programme refers to any construction programme that changes the quality, use, intensity of use and value of land (Kulshrestha, 1983).

1.72 Financing:

The term refers to the means or system of securing and deployment of funds for any human activity, that is development programmes.

1.73. Infrastructure:

Infrastructure are generally understood as the physical developments that are used as a device or avenue for the provision of some service or utility. For example, highways, buildings and spaces for community activities and delivery media for utilities (pipes, cables et cetera) may be described as infrastructure.

1.74. Strategy:

As defined in chambers 20th C. dictionary, "It is the art of conducting, manoeuvering or carrying out an action". In other words, it is a schematic blue-print designed towards attacking a particular problem.

CHAPTER TWO

2.00 REVIEW OF STRATEGIES FOR FINANCING INFRASTRUCTURE DEVELOPMENT PROJECTS

2.10 THE FINANCING STRATEGIES

Several strategies for financing urban infrastructure develop-ment projects have been identified and their applicability tested in many countries. Although their effectiveness for financing urban infrastructure development projects has been analysed and assessed, the degree of their applicability universally is quest-ionable. For each have some characteristic peculiarities that determine their applicability or otherwise in any one project situation or place. Thus, the adoption of any one of these strategies in any one situation will depend on the social, economic and political peculiarities of the area.

The applicability and acceptability of any one of these strategies differs from one socio-economic setting to another.

The following are some of the strategies:

2.11 Cost Recovery

Under this strategy, the government shoulders the full costs of the project(s), either from its capital funds or by securing a loan facility from a commercial or development Bank. Thereafter, the costs incurred therefrom will be recovered from the direct beneficiaries of the programme either through user charges, mortgages or toll taxes. Thus,

before adopting this strategy the decision-makers must consider before hand the ability and willingness of the beneficiaries of the project(s) to pay (Grossmam, 1985).

Many of the services provided in the city are, by their nature, for the benefit of the generality of the public at large. Example of these are water supply, electricity supply, sewerage, roads, public toilets and so on. Such public services are refereed to as "Public goods" (Margaret, 1986).

However, most of these public services closely resemble private market activities, where all (or most) of the benefits can be traced directly to some individuals, households or businesses. Examples of this type of service are electricity and piped water supply. Often, such public services can be refereed to "private goods" (Grossman, 1985). In practice, it is sometimes difficult to draw clear distinctions between the two, especially when a particular "private good" is also a basic necessity. For instance, water supply, which access to at least a minimum supply should be assured to all, even when they are so poor as not to be able to pay for its full cost. Thus, it is commonly accepted that public services should be paid for by the public at large through some kind of levy. On the other hand, it seems equally appropriate that services of the private goods type should be paid for by the beneficiaries of the services.

Therefore, the concept of cost-recovery tends to be more amenable to those public services of the private goods nature

for which charges can be made to cover at least a substantial part or full costs of the service. They include: water supply, electricity supply, sewerage system, roads, market stalls, public toilets et cetera.

The positive arguments that favour the use of this strategy for financing urban infrastructure projects are:

- Since full capital costs could be recovered, it enables the public authority to execute other projects elsewhere or even pay back any debt it may have incurred to implement the project and thus be in a sound position to borrow again for future extension of the infrastructure system.

- It can increase efficiency because knowledge that the beneficiaries must pay for a scarce public service will normally induce them to make more cautions use of it.

- It makes certain that the direct beneficiaries of a service are the ones to pay for it rather than those who do not benefit.

Despite this general positive record of the strategy about its appropriateness in terms of recovering service costs from the beneficiaries, one principal problem is the persistent public pressure to maintain 'free' public service. Nevertheless, this strategy is now popular in both developed and developing countries and its results have been encouraging. For example, the strategy has been used to finance urban infrastructure development projects in Indian Cities such as Ahmedabad and Bombey (Margaret,1986).

In Nigeria, the strategy has been adopted and used for financing quite a number of urban projects. Example is the Bauchi Site and service/residential up-grading. Under this scheme, the cost of sites and services, plots, construction and improvement will be recovered from participating households through mortgages with the Federal mortgage Bank of Nigeria at 6% interest over 15 years (Dar Al-Handasah,1978). Another example is the Kaduna - Zaria - Kano dual carriageway. The capital cost of constructing this highway will be recovered from toll taxes imposed on the motorists plying the highway.

2.12 Cost Sharing

As the name connotes, this strategy involves the sharing of the costs liabilities incurred in providing a particular service among the beneficiaries of the programme, even though not on equal basis. Under this strategy, the major source of finance is the 'betterment levy'. And the strategy has proved to be a truly operational and effective project financing instrument in countries of the developing world including Latin America (Macon, J. et.al, 1977).

The betterment levy is a public revenue raising measure compulsorily imposed for the deferential benefits received, with the purpose of recovering part of the value of the deferential benefits that are generated through the construction of public works in the form of increase in the

value of the properties (Doebele, W.A., et.al. 1979). Thus, the tax base of this levy is the increase in property value, even though the levy is not a tax because it is linked to a specific benefit received.

Nevertheless, the notion of 'cost of urban development' is very elusive. As Prud' Homme (1972) put it, "when a city grows, because an additional inhabitant, or an additional firm chose to locate in that city, a number of costs have to be borne". There-fore, the percentage increase in city size goes together with a greater percentage increase in urban development costs. For instance, a 10% increase in city size is accompanied by a 11.7% increase in investment on infrastructure in France (Prud' Homme, 1972). Although some investments like Highways and roads are more sensitive to city size than others. This justifies why project financing using betterment levies can be effective in Nigerian urban centers.

However, this strategy as a project financing instrument has not been used in Nigeria, but has been used in a number of Latin American countries with a high degree of success. In Argentina, for instance, it has been used at both provincial and municipal levels, as in the case of Buenos Aires province where the system was used to finance rural road works in 1969; in la-paz municipality of Bolivia, in 1973, the system was used to finance the renewal of main sewer net work (Macon, J.et.al., 1977).

2.13 Service - Oriented Strategy

Under this strategy, the government provides both the technical, administrative and legal tools and actually gets the project implemented, while the finances are provided by the prospective beneficiaries of the project. In addition, other services that will further enhance the functionality of the project are also provided by the government (Doebele, W.A., et.al. 1979).

The strategy had been used in both developed and developing countries with encouraging results. Many urban projects are found to be amenable to treatment under the service - oriented strategy which include" roads, public housing, market stall, et cetera.

The strategy was adopted upon the observation that savings of individuals is a good source of investment in the implementation of those programmes that interest and benefit them (Ikpo, 1985). Therefore, the strategy appears to be efficient for financing urban infrastructure projects in the event of scarcity of finances at the government disposal.

2.14 Valorization

The evolution of the Valorization strategy is traced to Columbia - South America - as early as 1599 (Doebele W.A., et al 1979). The strategy has principally been used to carry out/finance improvements of the physical infrastructure in already built-up urban areas.

The basic principle underlying the

system is to recoup the cost of urban infrastructure investments, especially urban roads construction and improvements, water and electricity supply extension, by levying one time lumpsum charges on the owners of land surrounding the project (Grossman, 1985). To encourage popular acceptance of the system in most Latin American countries where the strategy is most widely used, the cost to be recovered for projects located in sectors inhabited by low-income earners is in most cases reduced. Thereby excluding a major share of the project cost, making up the difference from general tax revenues. Another alternative used is, in determining the method of assessing the valorization charges, a formula may be used which though led to the recovery of full project cost, places lower burden on low-income areas.

The strategy basically consists of the following steps: First, the infrastructure project is designed and costed out. To this direct cost, a margin is added to allow for indirect cost of administration, thus yielding a total cost budget for the project. Second, an area surrounding the project is defined as the "Zone of influence." This is the area to which the major portion of the benefits of the project are thought to be limited to, and over which the cost of the project are to be distributed. Third, total project cost is divided among the properties included in the zone of influence.

Generally, one of the most important technical problem of this strategy is how to apportion the total costs of the

project among its beneficiaries (Bird,1976). Thus, the system of allocating cost to individual properties varies widely from country to country, but the following basic methods may be distinguished: allocation according to (i) Length of frontage, (ii) Size of land area, (iii) Property value. Each of these methods exhibits some advantages and disadvantages. As regards the efficiency of resources allocation, the strategy has the advantage of imposing the cost of urban infrastructure on the principal beneficiaries and thus tends to result in increased cost consciousness of the beneficiaries. Likewise location decisions by individuals and investment decisions by government are likely to be more efficient than where infrastructure investments are financed from public sector funds. However, before adopting this strategy, there must be the need for the project by the benefiting house-holds. The absence of this means that they will not co-operate to pay.

2.15 Land Re-adjustment

This strategy is mostly adopted in the development of new areas within an urban setting. Often it has proved to be a reliable financing instrument for the provision of urban infrastructure in both developed and developing countries (William,1974).

Under this strategy, numerous small parcels of un-urbanized land are assembled by the public authority without

paying monetary compensation to the owners. The land is first sub-divided into urban-sized building plots, then serviced with full urban infrastructure like water, electricity, street lighting, storm water drains, sewerage ecetra, using finances form the public authority. Then part of the land will be returned to the original owners in proportion to the value of their individual land contributions, as nearly a possible at the same location as his/her original holding. Thereafter, the remaining is retained by the public authority and sold at market prices to permit the recovery of the development costs. Though under this system it seems the private owner loses a substantial portion of his original holding, it should be noted that, a smaller serviced lot almost always has a value several times higher than a larger un-serviced one (Bird, 1976).

Despite the fact that the system is more amenable to usage by public agencies, especially at the local level, it has in some countries also been used by private developers, usually subject to public regulations and supervision (Bahl, R.W., et.al 1985).

The land re- adjustment system was introduced in Japan in 1899. The Japanese in turn introduced it in Korea during their occupation of that country. In Japan until 1976, 6395 land re-adjustment projects were carried out covering 261,785 Ha (William, 1974). Other countries where this system is used for the provision of urban services are: Australia, Taiwan

and some countries of Latin America. The korean use of the system has been quite impressive, for in 1976, a almost seven times as much urban land was developed through land re-adjustment than was developed through the private market (Bahl, R.W.., et.al. 1985). In terms of efficiency it will appear that land re-adjustment schemes have contributed effectively to the expansion of new urban land at the urban fringe. One basic advantage of the scheme is that, it is largely self-financing, thus not contributing in draining other sources of local finance (Williams, 1974).

However, it has been observed that, land re-adjustment schemes are often quite limited in the coverage of urban services which they explicitly provide and finance and generally not covering the cost of off-site infrastructure investments required by urban development. Such cost of off-site infrastructure investment are recouped through other taxes and charges.

Therefore, after series of evaluations and analysis, the scheme was generally accepted as benefiting both the city and the land owners (Margaret, 1986). Its applicability has not been tested in Nigeria yet.

2.16 Public Sector Financing

This strategy could be tagged as the traditional approach to funding through which the provision of urban services were financed all over the world since the period of early city

development (Doan, 1970). With advancement in the level of economic development of countries all over the world, each of these countries adopted a particular political ideology that act as a spring board guiding its economic system. Two different economic systems became established, that is capitalism and socialism. Hence, it is worthy to note that, in countries that operate the capitalist system, various forms of infrastructure are in private hands, although government participation is paramount in the provision of very important ones. On the other hand in socialist economies and in most development countries, urban infrastructure are provided by government (Achunine, 1885).

In Nigeria, for example, urban infrastructure are mainly provided by government. Not only because the cost of establishing them are high due to their capital intensiveness and their cost of maintenance but they are hardly profit-oriented and so not attractive for private financing (Don, 1985). Under this strategy, the government provides both the technical, administrative, legal and financial tools and actually gets the projects(s) implemented. In addition, other services that will further enhance the functionality of the projects(s) are also provided by the government (Doebele, W.A., et al. 1979). The government provides these financial resources either from its capital funds or by securing a loan facility from a commercial or Development Bank. Most urban projects are found to be amenable to treatment under this strategy,

once the economy of the public sector is buoyant enough to shoulder the burden (Harold, 1984).

However, the financing of urban projects by the public sector is carried out through two different means. The nature, scope and cost of the project(s) are the factors that determine which of two operational Techniques is to be used. They are: (i) Direct Labour and (ii) Contract.

Through Direct Labour the needed urban project(s) is financed and implemented by the government statutory agency (ies) concerned with the provision and maintenance of the infrastructure or service. Such agencies get the needed financial resources from the tier of government they are responsible to, in the form of grants for the execution of capital works. The personnel under such agencies provide the needed skilled and unskilled labour. Through the contract system, the needed urban project(s) is financed and implemented by the government through the award of contract to private firms of its choice. There is always continuous monitoring of the work by government officials to ensure that specifications and standards are maintained.

For quite a long time the public sector Financing strategy has proved to be an effective project financing instrument. Nevertheless its effectiveness has witnessed set-backs all over the world since the beginning of the global economic recession.

2.17 Self-Help Strategy

The term self-help may be defined "as a regional resource mobilization system in which most of the initiative and the executorial responsibility for executing the projects rest with the inhabitants of the region concerned (Igbozurike, U.M., 1977). The concept and practice of self-help have a great variety of structural facets as well as operational scales, ranging from: a small local area project carried out by local cooperative unions to gigantic multi-year and multi-million naira ventures.

The strategy is in most cases not a result of any scientific or analytical basis and therefore often not well planned and thought out. It emanates under a situation of highly raised aspiration for improved living standard by the communities. Under the strategy, the members of the community(ies) organise themselves and define their common and individual needs and problems. Thereafter, they make individual/group contributions to meet these needs and solve their problems.

The strategy is carried out at <u>two</u> levels:

(i) the individual level; (ii) the community level.

Therefore, the strategy is in most cases adopted in a situation where the public sector has not been able to efficiently develop or manage urban infrastructure. In such situations the community / groups, such as associations, cooperatives that are capable and appreciate the need provide

for the total or partial financing of essential infrastructure in their localities. Projects more amenable to execution using this strategy include: roads, drains, water supply, electricity supply, sewage and even Health, Sanitation and recreational facilities.

CHAPTER THREE

3.00 EXISTING STRATEGIES FOR FINANCING URBAN INFRASTRUCTURE DEVELOPMENT PROJECTS IN KADUNA.

Of all the strategies for financing urban infrastructure development projects discussed in Chapter Two only two were identified as being in use in Kaduna. They are: (i) Public Sector financing Strategy (ii) Self-help strategy.

3.10 PUBLIC SECTOR FINANCING STRATEGY

This strategy involves the direct government intervention towards the provision and maintenance of Urban infrastructure. In Kaduna, this strategy is the traditional source of funding infrastructure development programmes. The capital intensive nature of providing urban infrastructure, and the general conception that provision and maintenance of urban infrastructure is the exclusive prerogative of the government made this strategy to be officially accepted and adopted in the study area.

To provide infrastructure in the built-up areas or new layouts using this strategy, the government provides both the technical, administrative, legal and financial tools and actually gets the project(s) implemented. The finances come from either the government's budgeted capital funds for such project(s) or through a loan facility negotiated by the state government from either a commercial or development Bank.

There exists two modes through which the public sector (ie. government) finance the provision of urban infrastructure in Kaduna. These are discussed below:

3.11 Direct Labour System.

Under this system the needed financial resources are provided by the State government in the form of capital grants to the Statutory agency(ies) responsible for the provision and maintenance of the particular infrastructure. While both the skilled and unskilled man-power needed to implement the projects are provided by the staff of the agency. Such organisations include: the State ministry of works and Transport; Kaduna State Water Board; Kaduna State Urban planning and Development Authority and so on.

However, this system has proved to be least effective in the study area in terms of both:

(i) Quality of work, which in most cases is not satisfactory.

(ii) Period of completion unnecessary prolonged and in some cases projects are abandoned.

These negative aspects of the system could be attributed to the general attitude to work by most civil servants in the state as elsewhere in the country, which is less than satisfactory.

Example of an infrastructure development project financed through this system within Kaduna metropolis is the Barnawa Link road Project. The project which was for the construction of laterite surfaced road and side drains covering a distance of 2.2 Kms. The project was assigned to the State Urban planning and Development Authority sometimes in early 1987. It took the authority well over 6 months, instead of a maximum of four weeks to execute the

work and the quality of work was grossly unsatisfactory. At the end of it all, the concluding part of the work was abandoned (see Plates: 3.01 & 3.02).

3.12 Contract System.

Under this system the provision of the needed infrastructure is financed by the government through the award of contract to private construction firm(s).

To finance any infrastructure development project using this system, the following stages could be identified:

-First, a tender is requested from interested and reputable contacting firms.

-Thereafter, the tenders received are scrutinized by the ministerial tenders board.

-Then, the successful contractor is given a letter of commissioning.

-After signing the contract agreement, mobilization fees from the government capital funds are released to the contractor to enable materials, plants and men to be mobilized to the site to commence work.

-From then onwards, at intervals, interim valuation is carried out to determine the level of work executed, based on which interim payment is made. This continues up to the job completion.



Plate 3.01: Showing one of the laterite surfaced roads constructed through direct labour on Barnawa Link Road Layout, Kaduna.

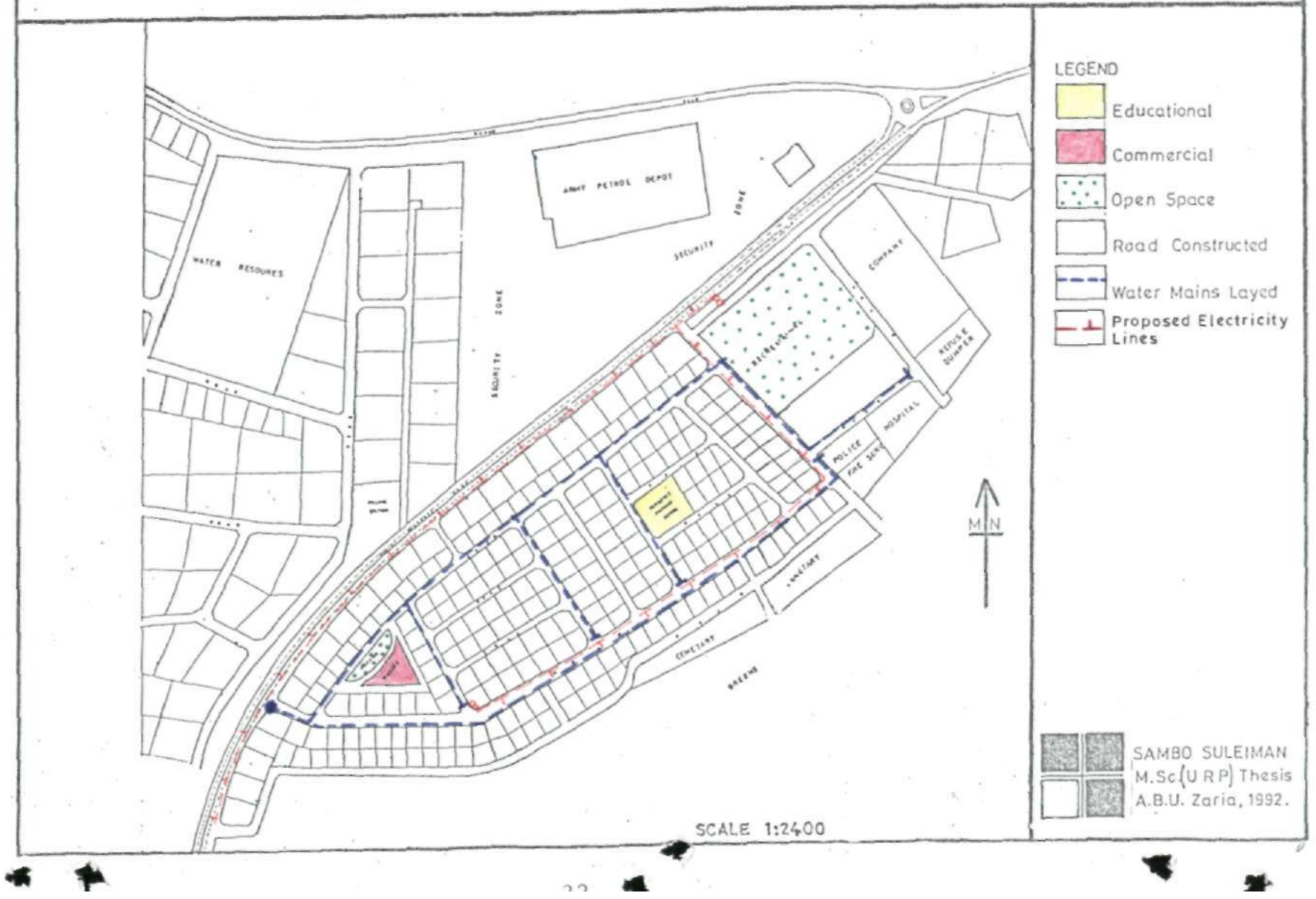


Plate 3.02: Showing poor work quality and abandonment on the Barnawa Link Roads/side drains project, Kaduna.

However, right from commencement to the completion of the job, professionals from government continue to monitor the work to ensure that specifications and standards were maintained.

Example of a successful infrastructure development project financed through this system within Kaduna metropolis is the Mando bye-pass (mixed Landuse) layout development scheme. The project covers the construction of laterite surfaced roads and side drains, laying of 150mm A.C. pipes water mains and the running of 11KVA high tension electricity cables over the layout (see Fig. 3.01). The job was awarded to a private construction firm. On completion of the programme, 7.05kms of laterite surfaced roads and side drains were constructed at a total cost of N895,350.00, 150mm A.C. pipes water mains were layed over a distance of 4.08kms at a total cost of N721,930.00 (see plates: 3.03 & 3.04). As for electricity lines, it was estimated to cost N1,734,386.00. However, the National Electric Power Authority (N.E.P.A.), the agency to carry out the job has a policy of not running energised cables where there are no population, to avoid theft. For this reason, electricity was not extended to the area.

FIG: 3·01 MANDO BYE-PASS MIXED LANDUSE LAYOUT INDICATING ROADS CONSTRUCTED AND WATER MAINS LAYED.



3.13 Operational Frame-work of Public Sector Financing Strategy

The strategy has a single operational frame-work within the study area, whether it is carried out through direct labour or by contract. Thus, whenever an infrastructure development project is to be executed through the public sector financing strategy in either the older built-up areas or new layouts, the strategy go through the following stages:

-First, there must be a decision by government to carry out a particular infrastructure development programme.

-Then the government's policy decision is conveyed to a committee called the 'State planning Consultative Committee'. This committee is an organisational arrangement and its membership comprises of all state and Federal agencies in Kaduna State that are responsible for the planning and provision of infrastructure. The committee meets monthly during which member organisations will be made conversant with proposals and activities of one another. Thus, the government's decision is discussed by the committee and each organisation then gives its input in the form of: Design proposals, bill of quantities and work schedule.



Plate 3.03: Showing one of the laterite surfaced roads/ drains constructed through contract on Mando mixed land-use layout, Kaduna.



Plate 3.04: The arrow at the foreground shows a man hole of the water mains layed through contract on the Mando mixed landuse layout, Kaduna.

-Thereafter, the committee's out-put will be passed to the State government for consideration.

-The government then decides on the modalities to be adopted in carrying out the project(s). It also provides the financial, administrative and legal tools for the programme implementation.

The decision to carry out the work either through direct labour or by contracting out to private firm(s) is purely political, and in some cases the nature and scope of work involved could be a determining factor (see Fig: 3.02).

The public sector has for quite sometime been the traditional source of funding urban infrastructure development projects in Kaduna. Be it for the extension of such infrastructure to the new layouts at the city's periphery or for its provision/maintenance in the older built-up areas within the city. However, since the commencement of the global economic recession in the early parts of the last decade which resulted to the economic down turn in Nigeria, the level of commitment by the state government towards financing urban infrastructure development projects has witness a great setback. For as at now, government considers financing urban infrastructure development projects as social overheads, with the new layouts witnessing the greatest neglect in terms of infrastructure provision.

Hence, between 1981 - 1990 only 16.35% of the estimated expenditure for the provision of infrastructure on new layouts was made available by the state government (see Table 3.1).

TYPE OF INFRASTRUCTURE		1981	1982	1983	1984	1985	1986	1878	1988	1989	1990	10 YRS TOTAL (MILLIONS) EST. EXP	ACTUAL DISBURSE:
Lateriate Surfaced roads/drains	Estimated Expenduture (Million N)	5.01	6.9	7.5	3.2	3.35	2.0	4.9	4.2	5.15	3.42	45.62	-
	Actual Disburse-ment.	1.17	0.943	0.46	0.10	0.364	0.348	1.965	2.28	0.72	0.116	-	8.46
Pipe-borne Water	Estimated Expenditure (million N)	-	-	-	-	1.605	2.327	0.721	4.206	1.753	0.559	11.175	-
	Actual Disburse-ment. (million N)	-	-	-	-	-	1.3	0.721	-	-	-	-	2.021
Electricity Supply	Estimated Expenditure (Million B)	-	-	-	-	2.203	9.719	1.734	5.299	1.036	0.372	26.366	-
	Actual Disburse-ment. (Million N).	-	-	-	-	-	3.115	-	-	-	-	-	3.115
TOTALS												83.161	13.99
%													

TABLE 3.1: BUDGETARY ALLOCATION FOR THE PROVISION OF INFRASTRUCTURE ON APPROVED LAYOUTS BETWEEN 1981 - 90 IN KADUNA STATE.

SOURCE: Field Survey, 1991.

Thus, out of the thirty-five (35) layout plans of various uses prepared by the state's planning authority and allocated by the government between 1981 - 1990, only Eight (8) were provided with laterite surfaced roads/drains with only one (1) supplied with pipe-borne water and none with electricity. This represent 8.57% level of achievement interms of infrastructure provision (See Table 3.2).

	YES	NO
Laterite Surfaced road/Drains	8	27
Pipe-borne water	1	34
Electricity Supply	0	35
TOTAL	9	96
%	8.57	91.43

TABLE: 3.2: LEVEL OF ACHIEVEMENT INTER MS OF INFRASTRUCTURE PROVISION ON ALL APPROVED LAYOUTS BETWEEN 1981 - 90 IN KADUNA STATE.

Source: Field Survey, 1991.

3.20 Self-Help Strategy

This strategy has only become widely used in the study area for the provision and maintenance of infrastructure in the early parts of the last decade. That was when the economy of the traditional source of funding such projects (i.e. government) started witnessing serious set backs. Thereafter, the government considers the financing of urban infrastructure as social overhead.

Thus, when the communities started to realize that the government effort alone can not spread development to all areas, they simultaneously embarked on financial and labour contributions to improve their living standards and

environment. The method used to raise finances for these projects is mainly through contributions. And these contributions are however not compulsory. Labour forms a major contribution to self-help projects and therefore an important resource for development. Labour for such self-help projects take the form of voluntary communal labour or hired labour. Although in most cases the labour contributed is unskilled and therefore have adverse effects on the projects, it lacks appropriate and effective tools and equipment.

Example of infrastructure development project executed through self-help in the study area is the extension of pipe-borne water and laterite surfacedroad/drains to Sabon Tasha Medium density layout in Kaduna.

First, to extend pipe-borne water to the area, the few plot beneficiaries who develop their plots make individual contributions to cover the local costs of connecting water from the nearest supply main. Also labour was hired using funds from that contribution. Meanwhile, the on-plot costs were borne by the participating households.

However, due to the sizes of the pipes used (i.e. 1½" lead pipes), the supply of water to the area is erratic.

Also, for the laterite surfacedroads and drains, the participating households make individual contributions to cover the costs of materials and employ hired unskilled labour. The road and drains were constructed using inappropriate and ineffective tools and equipments. Even though the roads and drains constructed were sub-standard,

it has significantly improved the flooding and accessibility problems facing the area (see plates: 3.05 & 3.06).

Therefore, even though the strategy is not a well planned and thought out one, it has to a certain extent led to the implementation of some projects.

In the study area, the strategy is found to be carried out at two levels (i) individual level, where an individual single handedly contributes money and materials, using hired or family labour, executes a particular infrastructure development project for his benefit and that of the community, (ii) community level, where the community members come together and identify their needs. Thereafter they make contributions to meet these needs and solve their problems.

However, there are problems in applying the strategy. These include:

1. The lack of co-ordination between the community groups and the planning agencies in the study area resulted in most plans been distorted. In most cases, the communities do not inform the planning agencies of their plans before going ahead with their activities.
   Thus, a lot of management problems facing infrastructure provision agencies might be attributedto this.
2. The infrastructure provided using this strategy are in most cases substandard.



Plate 3.05: Showing one of the laterite surfaced roads/ drains constructed using hand implements on the S/Tasha medium density layout through self-help.



Plate 3.06: Showing one of the laterite surface road with no side drains constructed on S/Tasha medium density layout through self-help. One can notice the substandard nature of the road.

CHAPTER FOUR

4.00 APPRAISAL OF THE STRATEGIES USED IN SELECTED ACTIVITY AREAS AND THE PROBLEMS AND PROSPECTS.

As discussed in chapter three, Infrastructure development projects are financed traditionally using capital funds from the public sector. This chapter presents, analysis and interprets data relating to three categories of infrastructure, that is, roads, pipe borne water and electricity. And within the limits of available data, the analysis focuses on the financing of these categories of infrastructure in three selected areas of Kaduna. Inferences are drawn and related problems identified as well as the prospects for solving them.

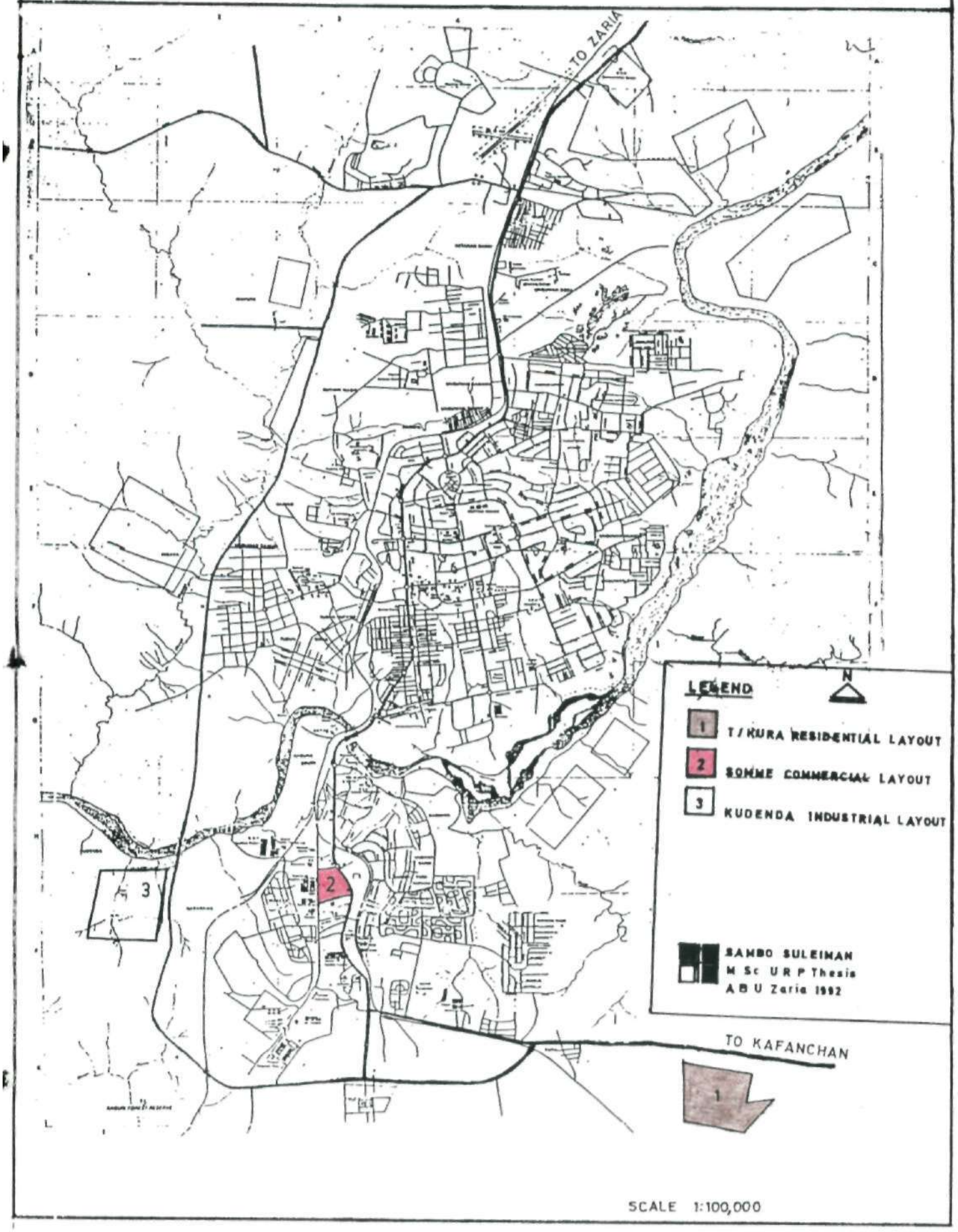
4.10 LOCATION OF SELECTED ACTIVITY AREAS.

Figure 4.01 illustrates the location of the three selected areas studied within Kaduna metropolis. The selection of varying uses is to enable more factual inferences to be drawn.

4.11 PROCESS OF LAYOUT PLAN PREPARATION IN KADUNA.

Layouts are short term physical plans designed to achieve a specific purpose over an area. It could contain provisions for other related uses, e.g. residential layout, incorporating provisions for schools, open spaces, places of worship et cetera. Layouts are designed for all uses, residential,

FIGURE : 4.01 LOCATION OF SELECTED ACTIVITY AREAS WITHIN KADUNA



commercial, industrial institutional et cetera and of various densities: low, medium and high density residential and commercial and full scale modern industrial estates.

In Kaduna, the precess of designing and provision of layout, its approval and implementation involves some functional relationships between Kaduna state urban planning and Development authority (KASUPDA) and the department of Lands and surveys (see Fig.402). The decision to prepare a layout, may be at the instance of the state Governor, through the Director General of the Department of Lands and surveys, or on the request of the Director General himself.

When the decision to prepare a layout is made by the Governor or Director General, it is usually communicated to the General Manager of the planning Authority. The survey section of the authority conducts survey briefs. This covers preliminary site reconnaissance survey, study of base map(s) to determine all cadastral details and other physical characteristics, and study of topographic map(s) to determine all topographic details. The survey section then pass this briefs to the Town planning section, where the draft plan(s) with statement of problems and alternatives are prepared. These plans are then sent to the Land-use and Allocation committee through the General Manager of the authority for their comments and suggestions. The plans with the committees

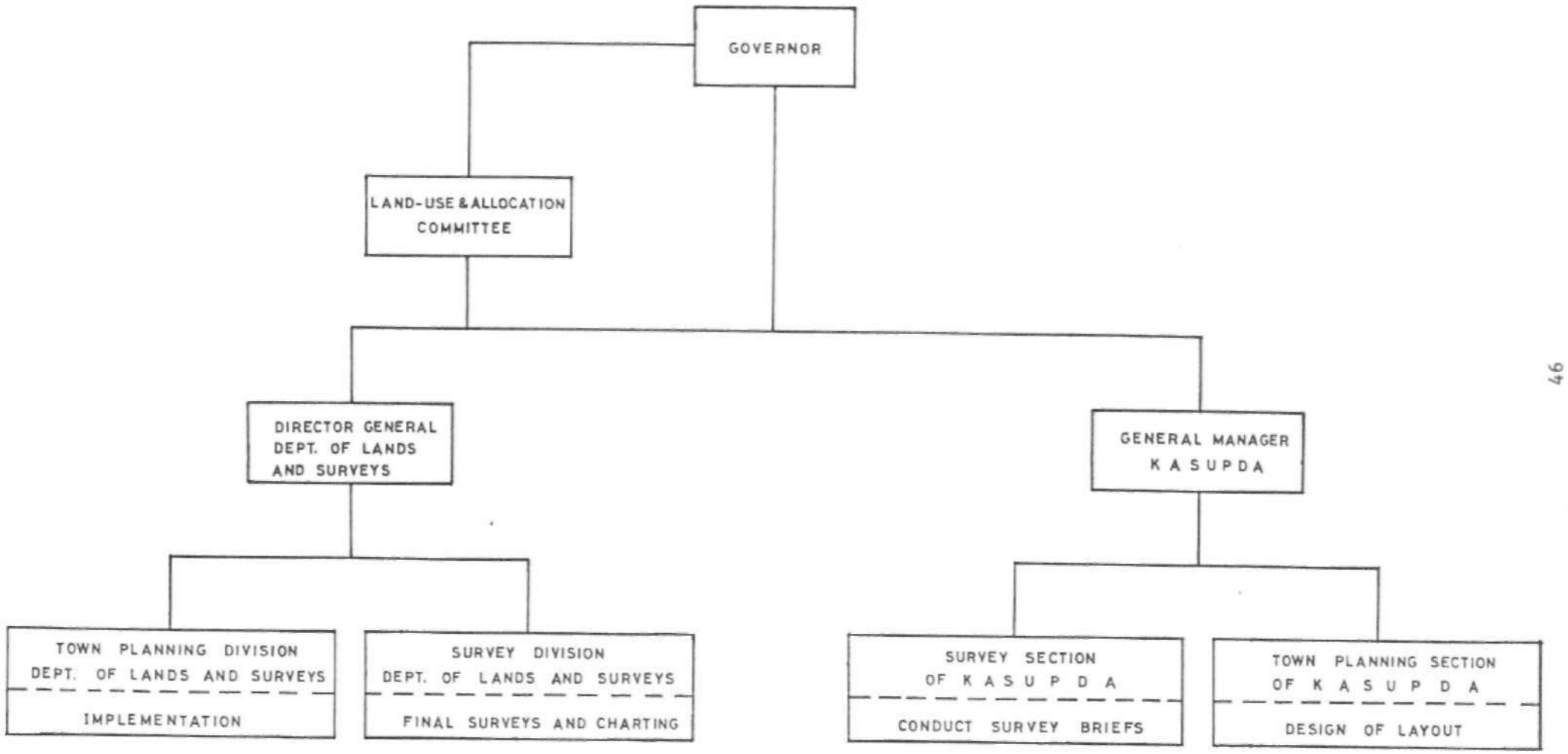


FIG: 4.02: PROCESS OF LAYOUT PLAN PREPARATION AND APPROVAL IN KADUNA STATE.

Source: Dept. of Lands & Surveys Kaduna 1991

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comments/suggestions are then sent back to the planning Authority. Then a final plan containing details of plots sub-division, land-uses and circulation networks will be prepared and sent to the Governor's office through the Director General, Department of lands and surveys for approval.

When the plan is finally approved, it is then sent to the Town planning Division of . the Department of Lands and surveys for implementation.

It should be noted that, plans so prepared do not contain detailed subject plans and cost estimates.

Also, at the local government level the decision to prepare a layout at the instance of the chairman is passed to the state's planning authority and the plan goes through the same process.

4.20 ANALYTICAL METHODOLOGY.

Within the limits of available data, the analysis focuses on the financing of roads/drains, pipe born water and electricity in three areas, that is, Tsaunin-kura residential, Somme commercial and Kudenda Industrial layout (see Figures: 4.03, 4.04 and 4.05). Inferences are drawn from the analytical results and related problems identified. The main issues of focus and analysis are:

1. Assessment of levels of government financial commitment and achievement towards provision of infrastructure in the selected areas.

FIG: 4·04 SOMME COMMERCIAL LAYOUT SHOWING PROPOSED ROAD NETWORKS, WATER MAINS AND ELECTRICITY LINES.

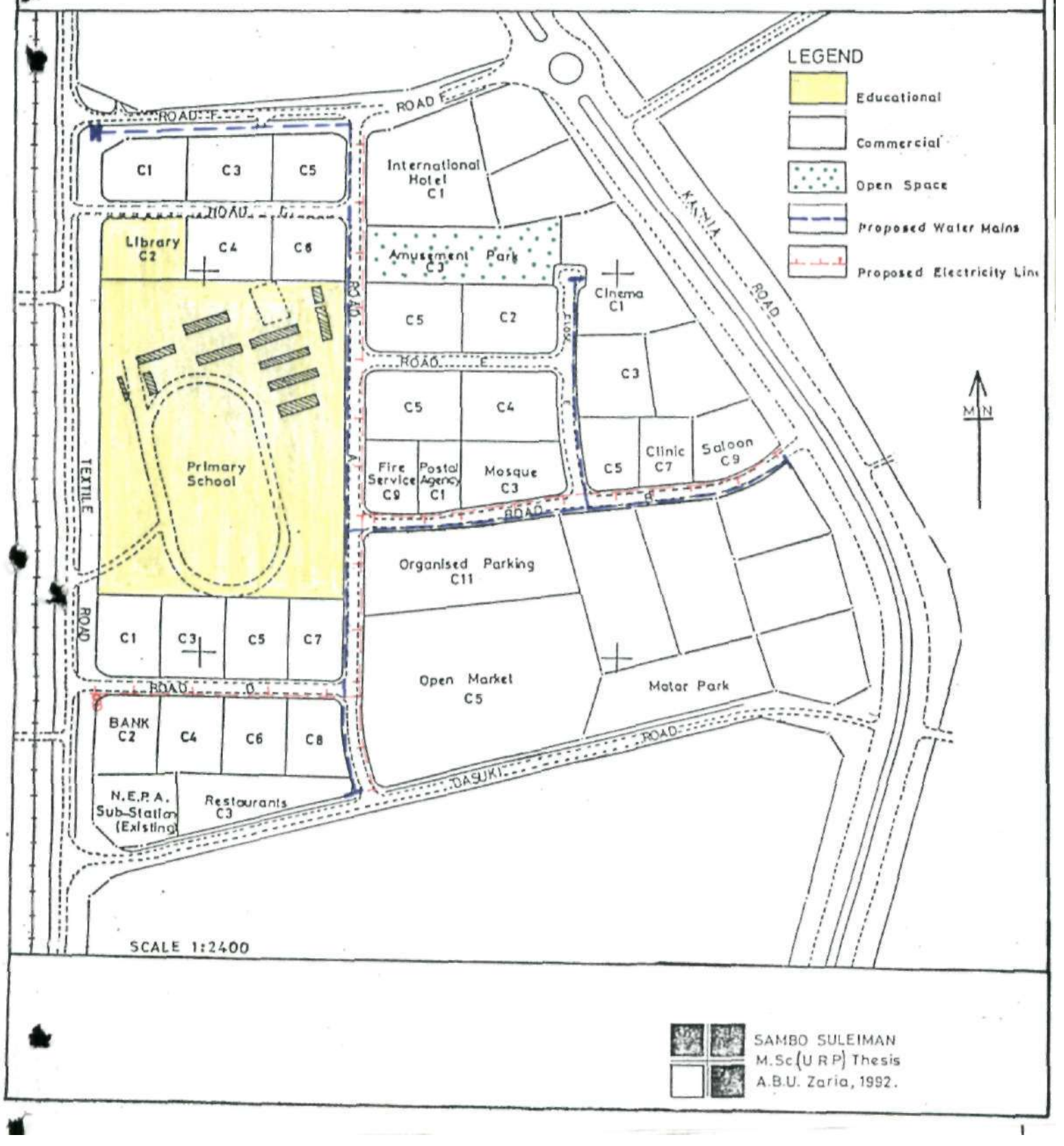


FIG: 4.05 KUDENDA INDUSTRIAL LAYOUT SHOWING PROPOSED ROAD NETWORKS WATER MAINS AND ELECTRICITY LINES.



2. Comparison between revenue accrued and costs of infrastructure provision incurred on the different activity areas.
3. Performance of plot beneficiaries towards developing their plots.
4. Reasons for failure of plot beneficiaries to develop their plots within the time limit on their letters of grant.
5. Willingness of plot beneficiaries to develop their plots if infrastructure were provided.
6. Whether government should continue to be solely responsible for financing the provision of infrastructure on approved layouts.
7. Percentage financial commitment plot beneficiaries were ready to contribute for financing infrastructure provision on approved layouts.

4.21. Government financial commitment and achievement towards provision of infrastructure on the selected areas.

Table 4.1 below gives a summary of the level of government financial commitment and achievement towards the provision of roads and drains on the three activity areas.

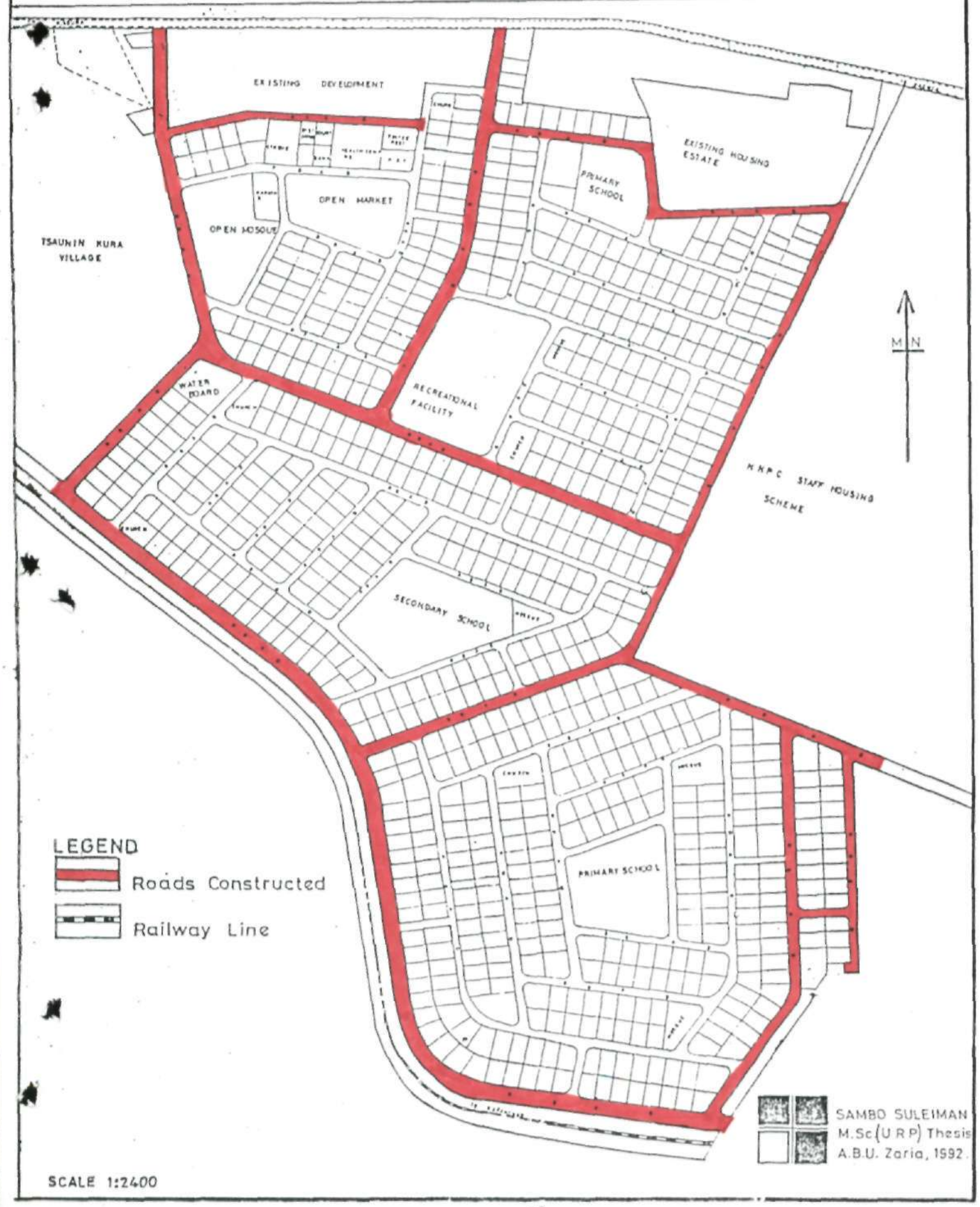
(Table 4.1:- Finances expended and achievements in terms of roads/drains in the three areas.

	Total Road Length	Length Const:	Estimated Amount	Amount Disbursed
		(36.9%)		(30%)
T/Kura (Residential)	22.2kms	8.2km	N2.819m	N0.845m
Somme (Commercial)	2.02kms	Nil	N0.306m	Nil
Kudenda (Industrial)	16.74kms	Nil	N1.556m	Nil

Source: Dept.of Lands and Surveys Kad.,1991.

Analysis of information contained in the above table has shown that out of 22.2km of total road length on the residential layout estimated to cost N2.819 million only N0.845 million was disbursed representing 30%. Thus only 8.2km representing 36.9% of the road length was constructed (see Fig.4.06). On the commercial layout, out of 2.02km of total road length estimated to cost N0.306 million not a single kobo was disbursed. Thus the level of achievement in terms of road construction on the layout is 0%. As for the Industrial layout, out of 16.74km of total road length estimated to cost N1.556 million not a single kobo was disbursed. Thus, level of achievement in terms of road construction on the layout is 0%.

FIG: 4·06 TSAUNIN KURA LOW DENSITY RESIDENTIAL LAYOUT INDICATING ROADS CONSTRUCTED.



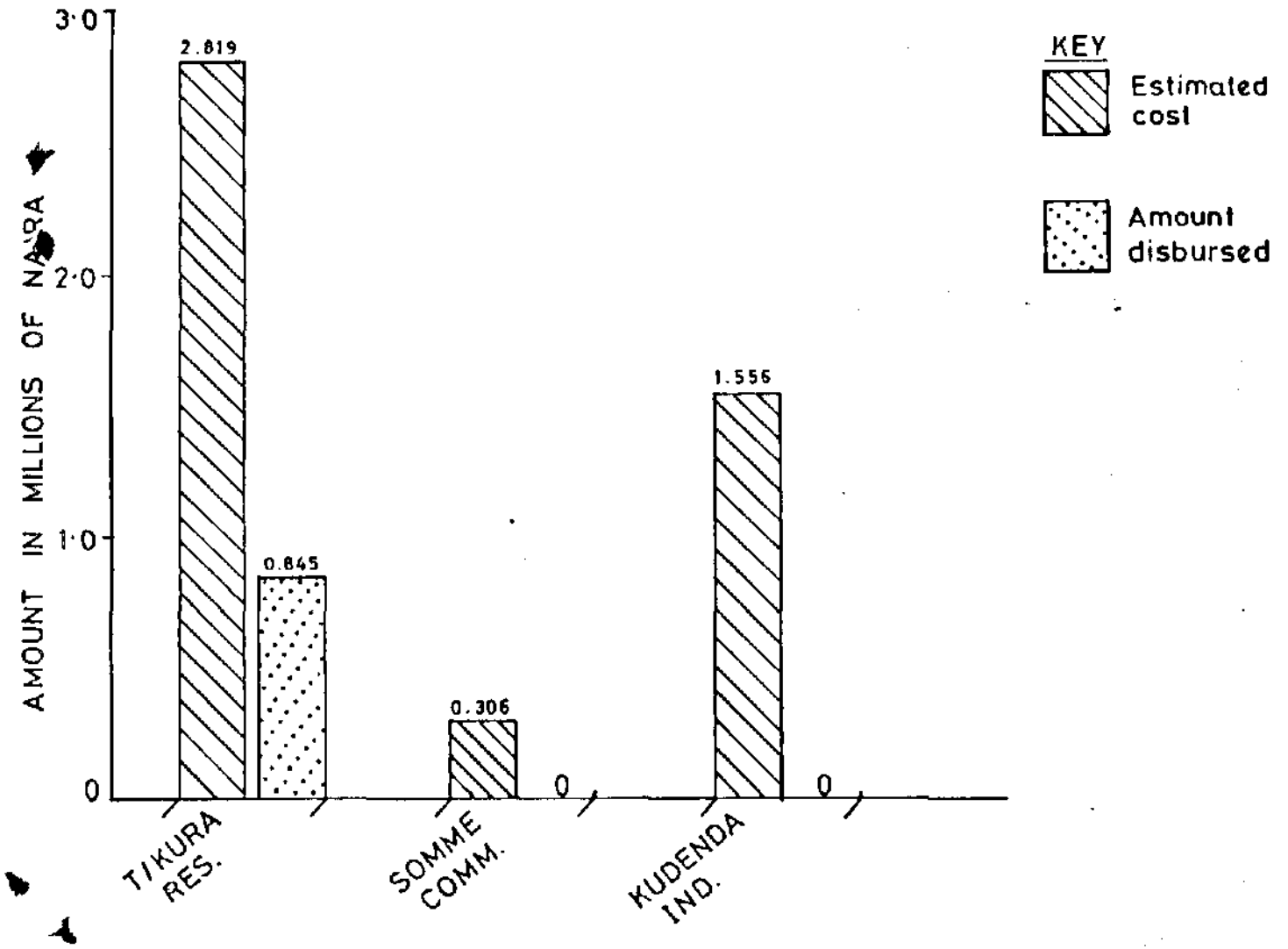


Fig: 4.07: Government financial commitment for the provision of roads/drains on the three areas.

Source: Dept. of Lands & Surveys Kaduna 1991

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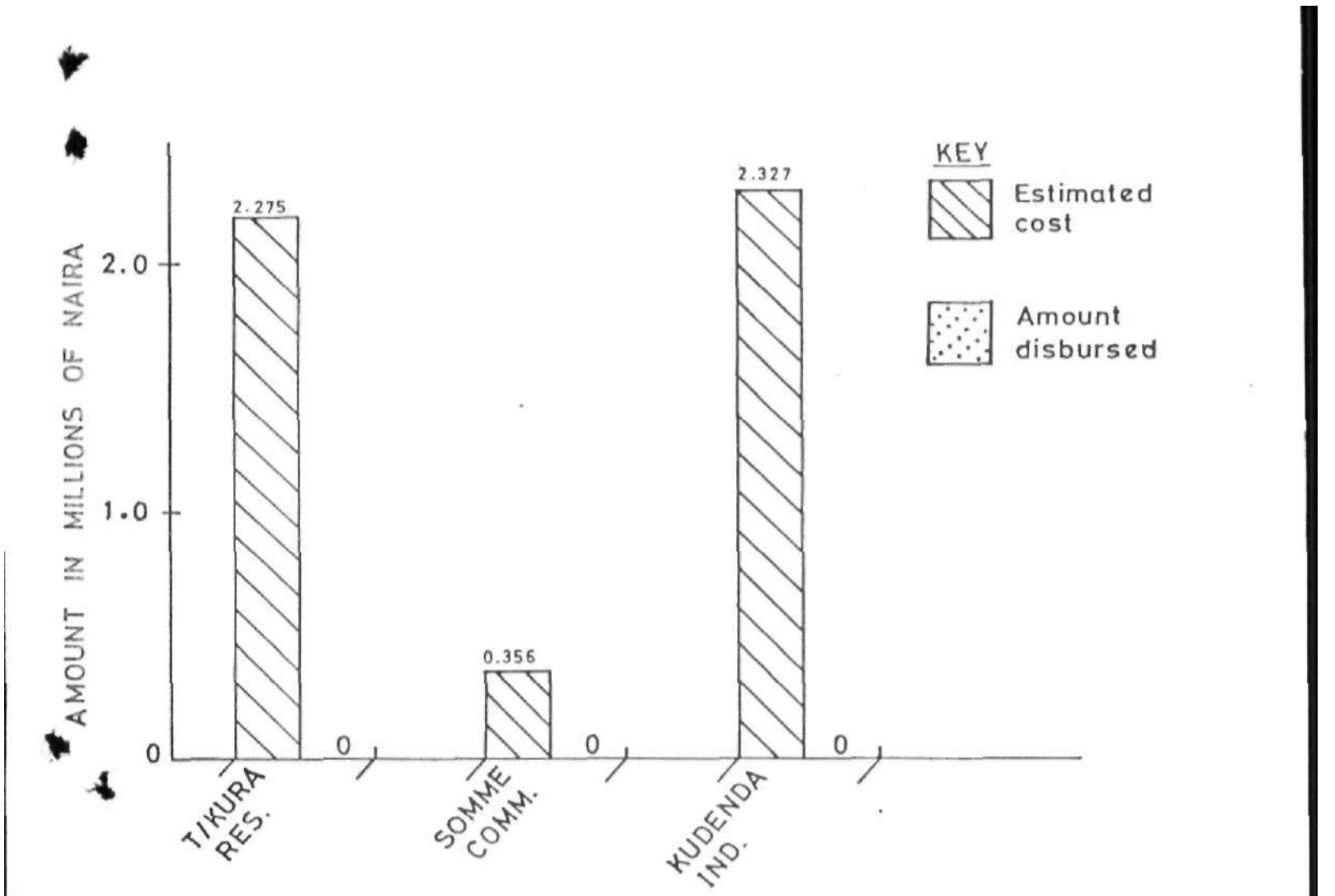


Fig: 4.08: Government financial commitment for the provision of water mains on the three area.

Source: Dept. of Lands & Surveys Kaduna 1991

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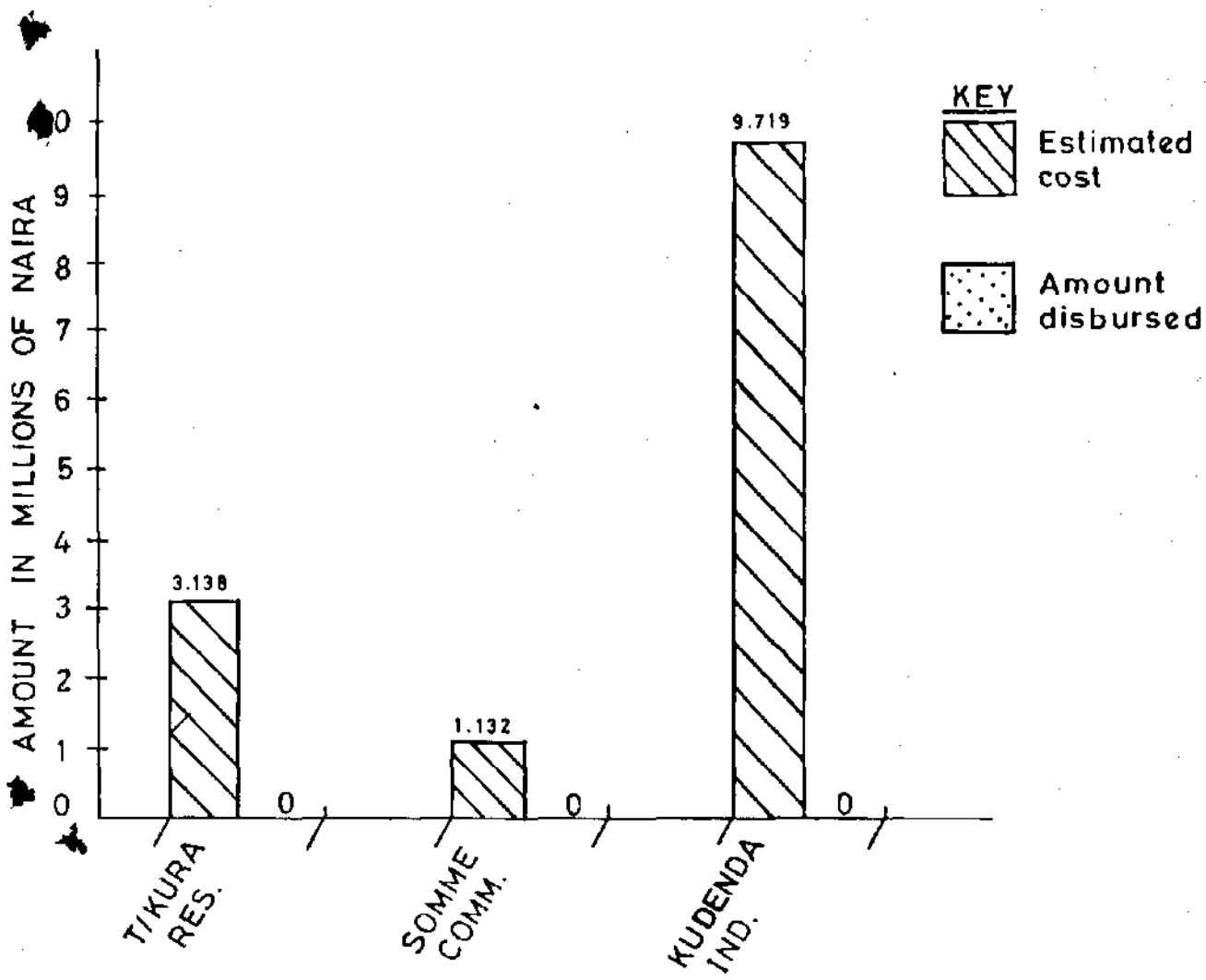


Fig 4.09: Government financial commitment for the provision of electricity lines on the three areas.

Source : Dept. of Lands & Surveys Kaduna, 1991.

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Table 4.2 and 4.3 below give a summary of the level of government's financial commitment towards the provision of pipe borne water and electricity in the three selected areas.

Table:4.2:- Comparison between estimated cost and amount disbursed for water provision in the three areas.

	ESTIMATED COST IN MILLION NAIRA	AMOUNT COMMITTED (N)
T/Kura Residential layout	N2.275million	NIL
Somme Commercial layout	NO.356million	NIL
Kudenda Industrial Layout	N2.327million	NIL

Source: Dept. of Lands and Surveys Kad.,1991.

Table:4.3:- Comparison between estimated cost and amount disbursed for electricity provision in the three areas.

	ESTIMATED COST IN MILLION NAIRA	AMOUNT COMMITTED (N)
T/Kura Residential layout	N3.138million	NIL
Somme Commercial layout	N1.132million	NIL
Kudenda Industrial Layout	N9.719million	NIL

Source:Dept. of Landsand Surveys, Kad.,1991.

Analysis of information contained in these tables has indicated that, nothing was disbursed out of the estimated amounts on all the three layouts for pipe borne water

provision. Thus the percentage achievement on all the layouts in terms of pipe borne water provision is 0%. The same applies to electricity supply on all the activity areas.

It can be inferred from the above analysis that funds for infrastructure development on approved layouts are due only very occasionally, and they do not always materialize (see figures 4.07, 4.08 and 4.09). It can also be deduced that the failure of the government to implement the infrastructure development projects might be attributed to the lack of adequate funds at the government disposal resulting from the poor state of the economy.

4.22. Comparison between revenue accrued and cost incurred in the three selected areas.

Table 4.4 below is a summary of the revenue accrued from survey fees, ground rents and plot development levy charged on plot beneficiaries and the cost to be incurred to provide roads/drains, pipe borne water and electricity in the three areas.

Table 4.4.:- Comparison between revenue generated and expenditure involved in the provision of infrastructure in the three areas.

	REVENUE ACCURED IN MILLLION (N)	COST INCURRED IN MILLION (N)
T/Kura residential layout	0.446	8.232
Somme Commercial Layout	0.060	1.794
Kudenda Industrial Layout	1.745	13.602

Source: Dept. of Lands & Surveys Kad., 1991.

Analysis of the information above has shown that on the residential layout the cost to be incurred is 1845% higher than the revenue accrued, likewise on the commercial layout it is 2890% higher while on the industrial layout it is 679% higher.

It can be inferred from the above analysis that, the cost of infrastructure provision on approved layouts is hundreds of times higher than the revenue accrued from charges imposed on plot beneficiaries. Thus, the entire programme takes the form of a Social Service.

In this period of financial squeeze, government can not provide adequate funds to cover up this wide gaps (See figures 4.10, 4.11 and 4.12). Thus, the poor or complete lack of implementation of infrastructure projects on new layouts.

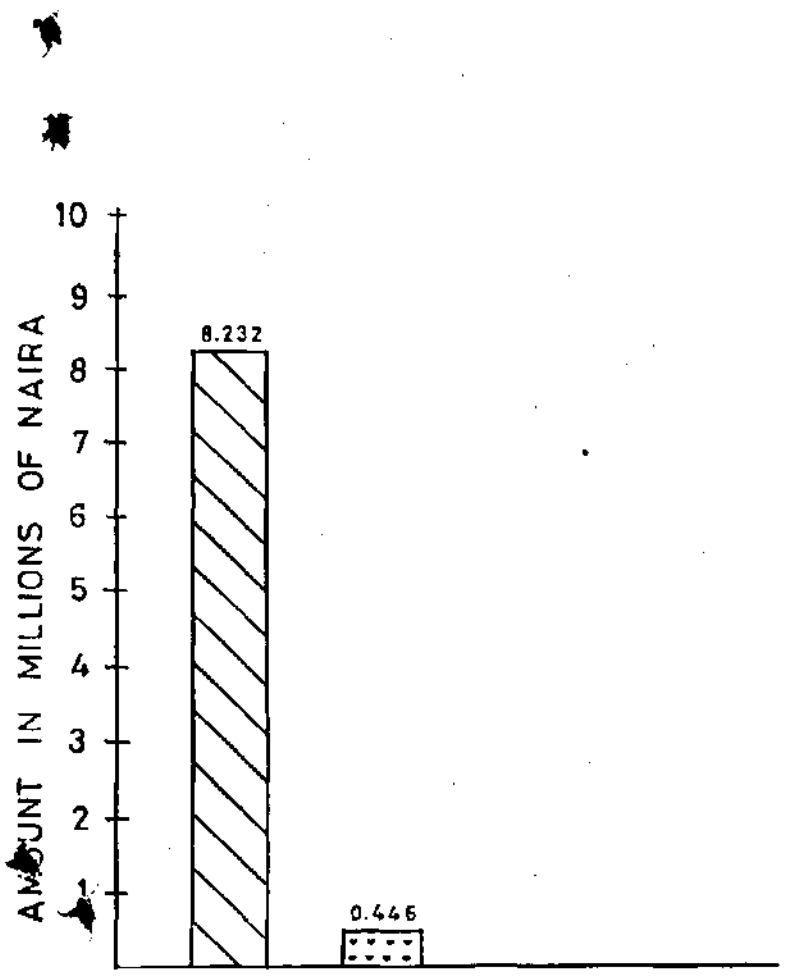


Fig: 4.10: Comparison between cost to be incurred for the provision of infrastructure and the revenue accrued on Tsaunin Kura residential layout.

Source : Dept of Lands & Surveys Kaduna 1991

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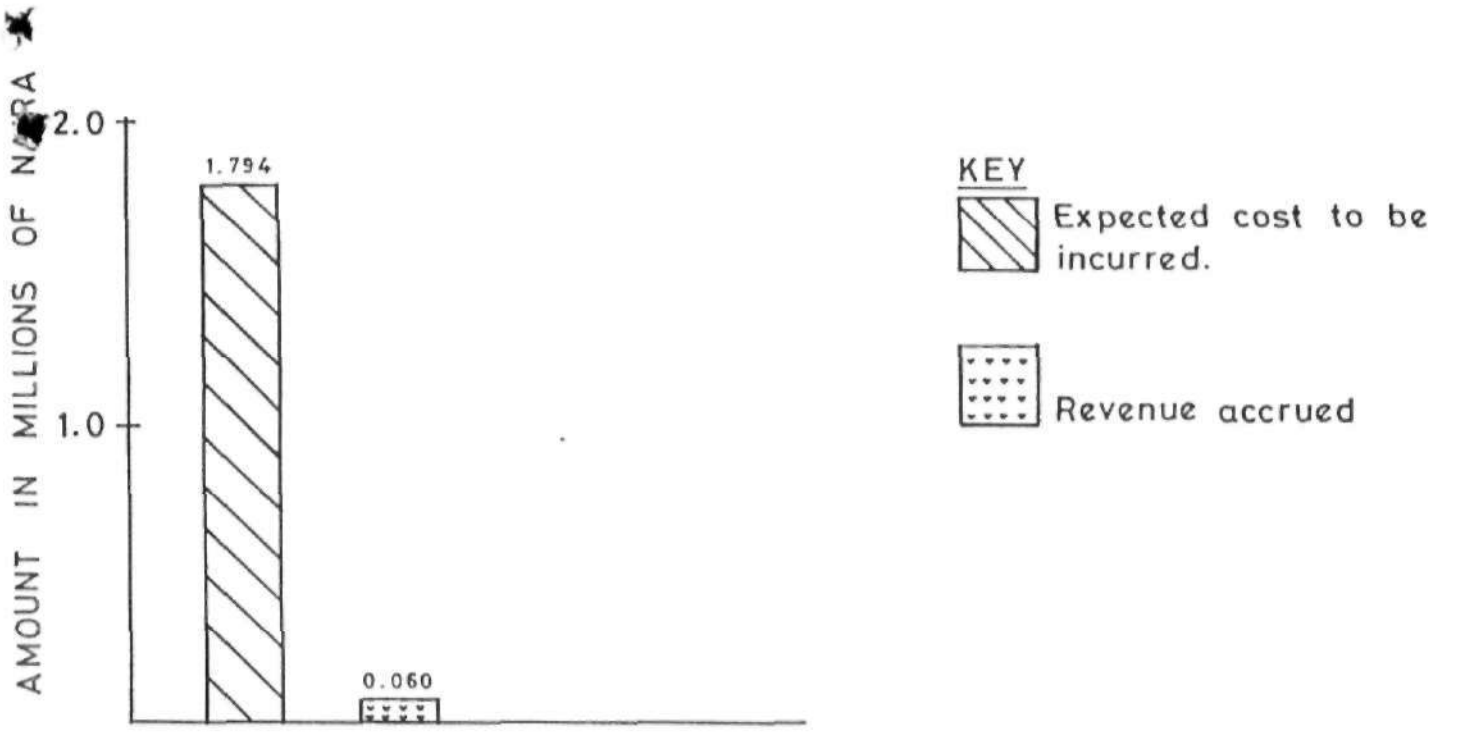


Fig: 4.11: Comparison between cost to be incurred for provision of infrastructure and the revenue accrued on Somme Commercial Layout.

Source: Dept. of Lands & Surveys Kaduna 1991

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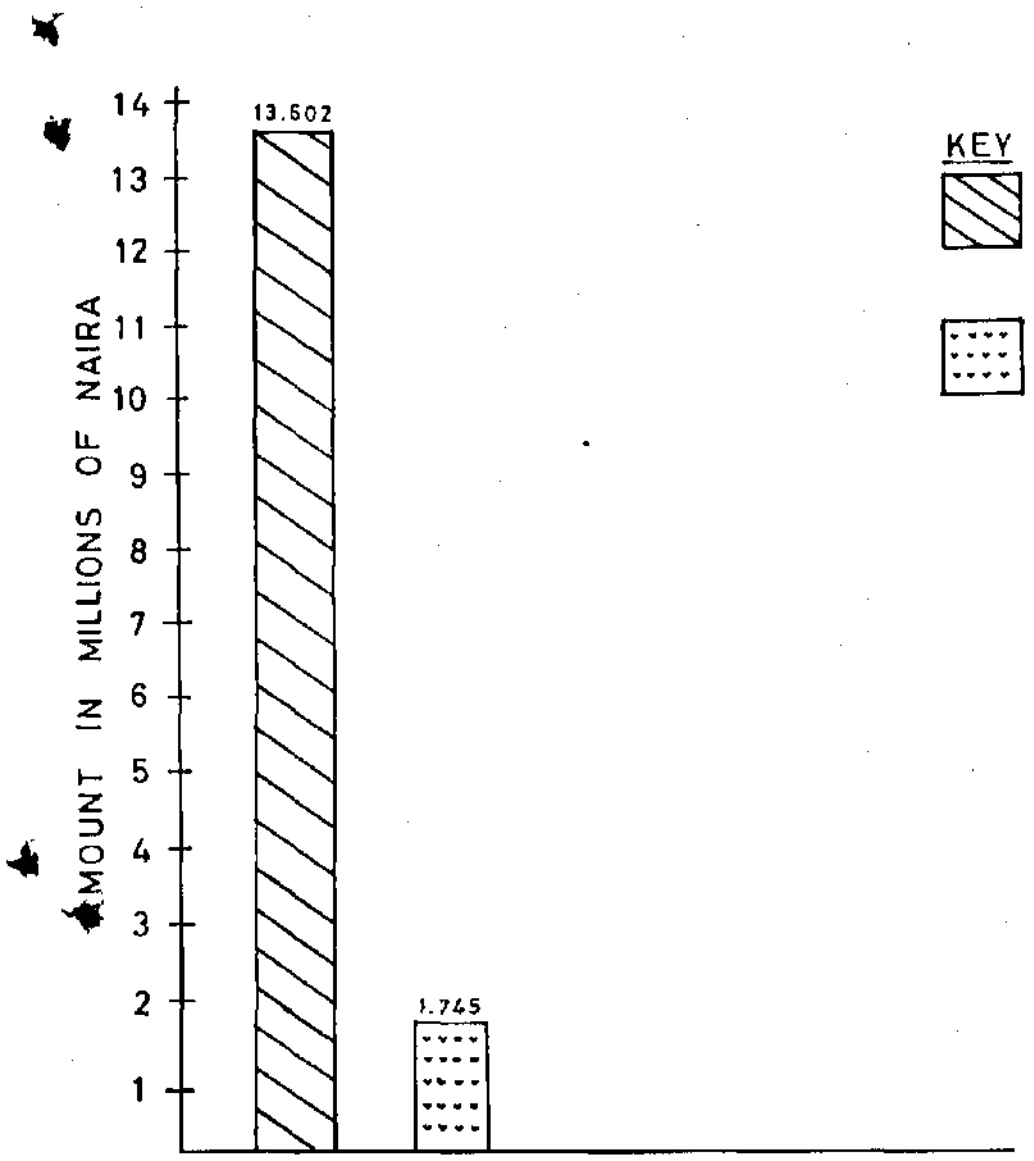


Fig: 4.12: Comparison between cost to be incurred for the provision of infrastructure and the revenue accrued on Kudenda Industrial Layout.

Source: Dept. of Lands & Surveys Kaduna 1991

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4.23 *Performance of plot beneficiaries towards developing their plots.*

Table 4.5 below is a summary of the total number of plot beneficiaries that have so far developed their plots out of the 50% sample interviewed in the three areas.

Table 4.5: Table Show % of plot allottees that have developed their plots

	YES	NO	
T/Kura Residential Layout	1 (0.3%)	311	
Somme Commercial Layout	0 (0 %)	31	
Kudenda Industrial Layout	11 (28.3%)	28	
TOTAL	12	370	382
%	3.15%	96.85%	100%

SOURCE: Field Survey, 1991.

Analysis of information above has shown that, out of the 50% sample interviewed on the residential layout, only one beneficiary representing 0.3% has so far developed his plot. On the commercial layout none of the beneficiaries has develop his plot. On the industrial layout, eleven beneficiaries representing 28.3% have so far developed their plots.

4.24 Reasons for the failure of most plot beneficiaries to develop their plots.

Table 4.6 is a summary of the reasons why most plot beneficiaries fail to develop their plots within the specified two years indicated on their letters of grant.

Table 4.6: Respondents view as to the reasons why plot allottees fail to develop their plots in the three areas.

	Residential Layout	Commercial Layout	Industrial Layout	
Lack of Infrastructure	259 (83%)	30 (98%)	34 (88%)	323 (84.5%
High cost of building materials	53 (17%)	1 (2%)	5(12%)	59 (15.5%
Others	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Source: Field Survey, 1991.

From information contained in items 4.23 and 4.24 it can be inferred that, the lack of infrastructure is the major reason that impedes the rate at which plot beneficiaries develop their plots. For out of the 50% of beneficiaries interviewed on each of the three areas, 83% from the residential; 98% from the commercial and 88% from the industrial areas have all indicated that the lack of infrastructure prevent them from developing their plots.

It can be inferred from the above analysis that, the failure of most plot beneficiaries to develop their plots on

the three areas was a result of the lack of infrastructure, although other reasons were attributed like the high cost of building materials (see figures 4.13, 4.14 and 4.15). Thus, even though plots were allocated in the areas for well over five years, only an insignificant percentage (3.15%) has taken over possession and put up structure.

4.25 Willingness of plot beneficiaries to develop their plots.

Table 4.7 below is a summary of how willing plot beneficiaries were to develop their plots within the two years specified in their letters of grant if adequate infrastructure were provided.

Table 4.7: Respondent's view as to their readiness to develop their plots if basic infrastructure were provided

	RESIDENTIAL LAYOUT	COMMERCIAL LAYOUT	INDUSTRIAL LAYOUT	TOTAL	%
YES	259 (83%)	30 (90%)	34 (88%)	323	84.5
NO	53 (17%)	1 (2%)	5 (12%)	59	15.5
				382	100

Source: Field Survey, 1991.

Analysis of the information above has shown that in all the three areas, well over 80% of the 50% sample interviewed were willing to develop their plots once the basic infrastructure will be provided on the layouts.

ALL FIGURES BELOW SHOW REASONS FOR THE FAILURE OF PLOT BENEFICIARIES TO DEVELOP THEIR PLOTS.

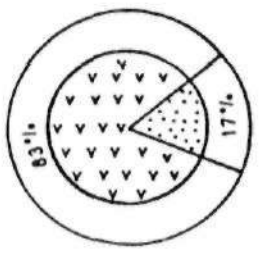


Fig: 4.13: FINDINGS FROM TSAUNIN KURA RESIDENTIAL LAYOUT

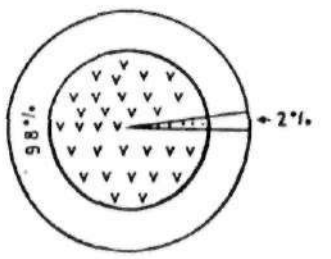


Fig: 4.14: FINDINGS FROM SOMME COMMERCIAL LAYOUT

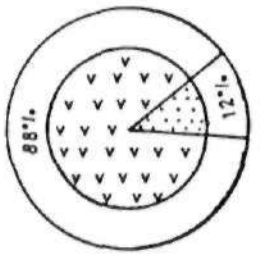


Fig: 4.15: FINDINGS FROM KUDENDA INDUSTRIAL LAYOUT

LACK OF INFRASTRUCTURE

HIGH COST OF BUILDING MATERIALS

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Source: Field Survey, 1991

It can be inferred from the above analysis that most plot beneficiaries fail to develop their plots because of the lack of basic infrastructure in the areas, despite the fact that they are willing to do so.

4.26 **Whether government should continue to be solely responsible for the provision of infrastructure on approved layouts.**

Table 4.8 below is a summary of the above view as collected from the respondents from the three areas.

Table 4.8: Respondent's view from the three areas as to whether Government should be solely responsible for infrastructure provision on layout.

	RESIDENTIAL LAYOUT	COMMERCIAL LAYOUT	INDUSTRIAL LAYOUT	TOTAL	%
YES	50 (31.5%)	8 (25.9%)	9 (23.1%)	67	17.5
NO	262 (68.5%)	23(74.1%)	30(76.9%)	315	82.5
				382	100

Analysis of the information above has shown that, of the 50% respondents interviewed on the residential area, 68.5% were of the view that government should not be solely responsible for the provision of infrastructure on approved layouts. This view was upheld by other respondents on both the commercial and industrial areas, where 74.1% and 76.9% held that view respectively.

It can be inferred from the above analysis that generally plot beneficiaries have now realized that the government can

no longer be able to shoulder responsibility of financing infrastructure provision on approved layouts. Therefore, they felt beneficiaries should make some contributions to that effect (see figures 4.16, 4.17 and 4.18).

4.27 Percentage financial contribution plot beneficiaries were ready to contribute.

Table 4:9 below is a summary of percentage of infrastructure cost plot beneficiaries were ready to contribute on the selected activity areas. Although not all respondents interviewed responded to this question, therefore the response of those that responded from all the three areas was analyzed together. This is to enable a more factual inference to be deduced.

Table 4.9: Table showing % cost of infrastructure plot beneficiaries were ready to contribute.

% of Infrastructure cost to be borne	Number of Respondents	Percentage %
1 - 20	39	13.37
21 - 40	75	26.40
41 - 60	117	41.19
61 - 80	53	18.66
81 - 100	0	0
TOTAL	284	100

Source: Field Survey, 1991.

RESPONDENTS'S VIEW AS TO WHETHER GOVT. SHOULD CONTINUE TO BE SOLELY RESPONSIBLE FOR FINANCING INFRASTRUCTURE ON APPROVED LAYOUTS.

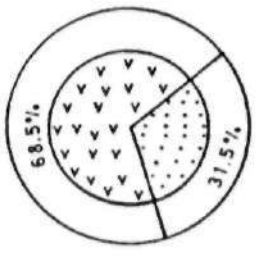


Fig: 4.16: FINDINGS FROM TSAUNIN KURA RESIDENTIAL LAYOUT

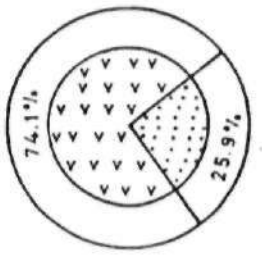


Fig: 4.17: FINDINGS FROM SOMME COMMERCIAL LAYOUT

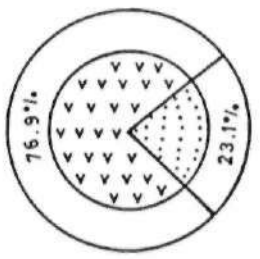


Fig: 4.18: FINDINGS FROM KUDENDA INDUSTRIAL LAYOUT

KEY

GOVT. SHOULD BE

GOVT. SHOULD NOT BE

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Source: Field Survey, 1991

From the analysis of the above information, it is clear that a higher proportion of the respondents interviewed (67.59%) were of the view that, individual plot beneficiaries should between 21 - 60% of the costs of providing infrastructure on approved layouts. (See fig. 4.19).

4.30 General Inferences.

(1) Government has over the years shown declining Commitment towards financing the provision of infrastructure on layouts.

(2) Layout plans are in most cases not accompanied with comprehensive subject plans and cost estimates.

(3) The existing strategies in use in the study area for financing urban infrastructure development projects has proved to be ineffective.

(4) Lack of infrastructure impede the development of plots by the beneficiaries.

(5) Individual plot beneficiaries are willing to contribute towards financing urban infrastructure development projects.

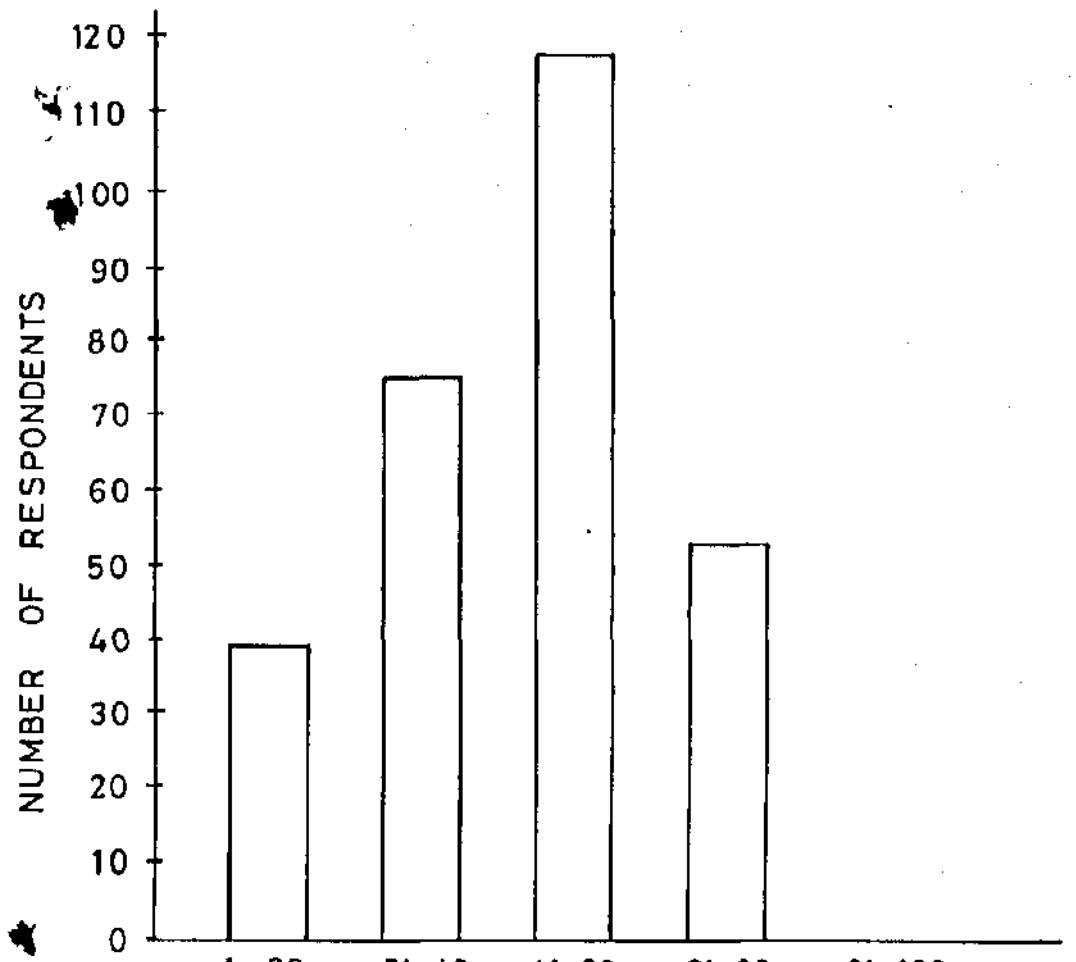


Fig: 4.19: Showing percentage financial contribution plot beneficiaries were ready to contribute.

Source: Field Survey 1991

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CHAPTER FIVE

5.00 SUMMARY, RECOMMENDATIONS AND CONCLUSION

In this concluding chapter a summary of the research findings is given, with an emphasis on the constraints to efficient financing of infrastructure development projects as experienced in Kaduna. Recommendations are then made on appropriate policy guidelines and strategies that can initially check the problems. These are expected to ultimately set in motion such forces that can promote effective financing of infrastructure development projects in Kaduna.

5.10 SUMMARY

There are many ways of looking at financing infrastructure development projects.

Depending on the objective or view point chosen, answers with different emphasis may be given to the question of what constitute the problem of infrastructure development project financing.

However, having examined the various strategies used for financing urban infrastructure development projects in Kaduna, in terms of achieving project implementation, there is need to offer suggestions on how to improve the existing system. From the analysis conducted in Chapter Three and Four, it is clear that there is the need for the evolution of an alternative approach for the financing of urban infrastructure development

projects taking into consideration the socio-economic characteristics of the area. Since the strengths and weaknesses of a good financing strategy must be related to a systems existing resources, it socio-economic characteristics and very particularly to its prospects for development, the strengths must be understood if they are to be used to proper advantage.

The following factors were identified as constraints to infrastructure development project financing in Kaduna.

5.11 Lack of Cost Computations during Plan Formulation

Although most of the procedures as stipulated in the town and country planning law regarding plan formulation were followed, one important aspect that is always left out is costing. This emanates from the fact that, right from the initial stage even comprehensive subject plans were not in most cases prepared from which the bill of quantities could be computed. Thus, most plans were prepared without costing and working the details of financing strategies for implementation. This is necessary to enable the policy makers take decision to either accept the plan in its totality or with some modifications or outrightly reject it.

5.12 High Cost of Providing the Infrastructure.

It has been established that, the proceeds realized in the form of revenue from ground rents and development levies

charged to the beneficiaries of the infrastructure always fall short of the cost of providing the needed infrastructure. Thus, most of the funds required for financing the developing of the infrastructure depends largely on grants from the government. In many instances, the public funds are not forth coming owing to the poor financial situation of the government at this period of economic recession. Hence, the level of achievement in terms of infrastructure provision especially in newly opened up areas and its maintenance in the built-up areas is far from satisfactory.

5.13 Administrative Constraints.

A major difficulty faced by most of the agencies charged with the responsibility of providing and maintaining infrastructure in the study areas is the cumbersome bureaucratic procedures involved before funds are released by government. In most cases their proposals during budget estimates were not accepted, funds for their execution are released piecemeal quarterly during the budget year In some instances the government fails in its obligation to release the quarterly grants, thereby leading to abandonment of some projects.

Another area of concern is the lack of coordination between the various agencies responsible for the provision of the different infrastructure and the body responsible for the acquisition, preparation and allocation of land. This results

in the various organs acting independently, which is detrimental to the overall development of infrastructure in the study area.

5.20 RECOMMENDATIONS

The Kaduna State Government has crucial policy decisions to make concerning financing infrastructure development projects. Genuine financing involves far more than the release of funds in the form of grants to the various agencies responsible.

The following recommendations are made in order to improve the state of the art in terms of financing urban infrastructure development projects in Kaduna.

(i) Since it has become clear that the government can no longer bear total responsibility of financing urban infrastructure projects, the communities who are the prospective beneficiaries should be mobilized in a way as to contribute. At this period when the government is promoting the policy of self reliance, the resources at the disposal of the communities could be a good source of investment for infrastructure development. To that effect, the self-help strategy adopted by the local communities should be well thought out and planned to make it more articulate. To further enhance the effectiveness of this strategy, an organizational framework should be thought out to act as a spring board, so that activities of communities carrying out

any infrastructure development project be coordinated and supervised by agencies responsible for the planning and/or provision of that particular category of infrastructure. Thus, the problem of un-coordinated growth and development of the city emanating from this lack of co-ordination will be eradicated.

(ii) It was discovered in this study that, the average plot sizes as provided in the different areas in the study area are un-realistic, thereby making cost of providing infrastructure extremely high. Therefore, average plot sizes should be rationalized in such a way as to cut down cost of providing infrastructure.

(iii) Government should <u>not</u> be solely responsible for financing the provision and maintenance of infrastructure in both the built-up areas and the newly opened up areas. The prospective plot beneficiaries should be made to contribute by rationalizing the charges for ground rents and development levies in such a way as to be related to the cost of acquiring and preparing the land and also proving the needed infrastructure. Also, all taxable adults within the urban areas should be levied monthly. The monies so collected should be kept in a fund to be only used for the maintenance of existing infrastructure in the built-up areas.

(iv) Revenues collected from groundrents and plot development levies should not be directed into the State's general revenue pool, but be directed into the coffers of an agency to be responsible for the provision and maintenance of infrastructure on layouts. For the newly opened up areas, the revenue generated during the first year should all be directed to that agency, while subsequent yearly payments only a certain agreed percentage should go to the agency for maintenance purposes.

(v) All layout plans should be accompanied with comprehensive subject plans and cost estimates before approval. This is to enable the policy makers have an insight of what the plan entails in order to know the modalities to adopt to see the scheme implemented.

(vi) The operational frame-work of the state's planning and consultative committee should be improve to make it more effective. That is to be transformed from just an organizational arrangement to a more formal body with statutory powers.

(vii) Both Valorization and Land-readjustment strategies for financing urban infrastructure development projects be adopted in the study area . The operational framework of these strategies were discussed in chapter three. The valorization strategy could be used

for maintaining existing infrastructure in the built-up areas, while, the Land-readjustment strategy could be used for the provision of infrastructure in the newly opened up areas.

5.30 PROPOSED INSTITUTIONAL FRAMEWORK FOR IMPLEMENTATION

In the preceding sections, attempt has been made to suggest effective strategies for combating the problems associated with financing infrastructure development projects in Kaduna. The recommendations are incomplete without incorporating appropriate institutional framework for their implementation. To that effect, the following proposals are made:

5.31 Urban Trust Fund

Such a fund should be established in order to harness the available financial resources within Kaduna urban area for the development of the town. This is because, Kaduna, like most urban centers in Nigeria suffer from inadequacy of Utilities, services and infrastructure. Where available, they are in a poor state of disrepair. Thus, enormous funds are needed for both provision and maintenance of these facilities.

Therefore, by establishing such a fund given all the administrative and legal backing, all taxable adults in the city will be required to contribute 50 kobo monthly. By this means,

a susbstancial amount could be generated, which could be used for funding the provision and maintenance of a number of urban infrastructure development projects such as, water supply, roads and drains street lightings, public toilet, et cetera. Such a fund should be under the care of a board of trustees to be named by the communites and sactioned by the Government.

Also communities determined to carry out any selfhelp project within the urban area can borrow from this fund in the form of loan under certain layed down terms of refunding may be instalmentally.

5.32 Infrastructure Development Fund Scheme (I.D.F.)

This is a World Bank assisted lending programme which was conceived and packaged essentially to support the establishment of a sustainable mechanism to fund priority urban investments with high economic and social returns and focuses particularly on the rehabilitation and maintenance of existing infrastructure.

The State Government should go into negotiation with the World bank in order to benefit from such a fund, since the funding mechanism is aimed at promoting fiscal self-sufficiency and a more efficient, equitable and sustainable delivery of urban services.

Under this programme the operational role of the private sector will be maximized, while that of the public sector will be minimized to only the essential involving policy formulation and guidance. Through this scheme, the State will commission some selected financial Institutions who will appraise, supervise and co-finance certain urban infrastructure projects. In this way the State will be able to manage and maintain existing urban infrastructure and services and also improve its infrastructure investment planning. Also the package will enhance the ability of the State to raise the necessary capital from financial houses to finance future urban infrastructure needs without undue recourse to public funds.

However, the responsibility of identifying possible sub-projects that could be funded under this scheme rest with the State Goverment and whichever merchant Bank that agrees to co-finance a particular project. Hence projects are to be selected in accordance with the following criteria:

a. Economic and Financial benefits;

b. technical Feasibility;

c. Feasibility of the cost recovery mechanism(s);

d. Effective Demand for the services;

e. Consumers willingness to pay; directly or indirectly;

f. Credit worthiness of the borrowing State and its ability to carry additional debt burden;

g. Institutional capability of the borrowing State to prepare and execute the project(s).

Through this mechanism quite a number of urban infrastructure projects could be provided and or maintained e.g. Roads, Drains, pipe borne water, sanitation facilities, electricity ecetéra.

5.40 CONCLUSIONS

The financing of infrastructure development projects in developing countries must always be considered as a process of progressive expansion. The length of period of the expansion depends on the circumstances of each country or state.

Therefore, efforts should be made to remove all the constraints affecting the financing of infrastructure development projects. Resources mobilization for the expansion of the sector should be pursued with vigour and consistency. When these constrains are removed, the rate of return of both public and private investments in infrastructure will be considerably improved.

It is encouraging therefore to note that, some of the financing strategies discussed in this thesis were either in use or could be adopted by most governments in Nigeria. However, before actual adoption, by an authority or developer(s) they should be assessed by considering factors like equity, economic efficiency, administrative capacity, yield and political acceptability.

It is hoped that some of the suggested methods will pass this local assessment and be able to improve and give solutions to the problem of financing urban infrastructure development projects in Nigeria.

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APPENDIX:A

Questionnaire administered to 50% sample of plot beneficiaries on the selected layouts.

To be Administered to Allottees within Kaduna Metropolis.

1. Have you ever applied for plot in Kaduna state? (YES) (NO)
2. For what purpose have you applied?

   (Residential) (Commercial) (Industrial).
3. Since when? (Month and Year Only) .....
4. W ere you allocated the plot? (YES) (NO)
5. If allocated, since when? (Month and Year Only).....
6. Have you develop the plot? (YES) (NO)
7. If your answer to Qu-6 is yes how do you go about financing the project.
8. How long has it taken you to commence development from the time of allocation of the plot? (1 year) (2 years) (3 years) (4-5 years)

   (Over 5 years)
9. Give your reasons for your answer to Qu.-8.

   .....

   .....

   .....
10. If your answer to Qu-6 is No, then what are your reasons?

    .....

    .....
11. Mark (√) against the Utility (ies) and facility provided on the layout before you commence development of your plot.

    (i) Roads/Storm Water drains .....

    (ii) Pipe-Borne Water .....

(iii) Electricity Lines .....

(iv) Telephone Lines .....

12 Who financed the provision of the marked infrastructure at Qu-11?

Government .....

Community .....

Individual (s) .....

Others (Specify) .....

13. Assuming the said utilities and facilities were provided on government layout, do you think that will encourage plot allottees to develop their plots within the specified 2 years mentioned on their letters of grant?

(YES) (NO)

14. Whatever is your answer to above question, give your reasons.

.....

.....

15. Do you succumb to the idea that government should be solely responsible for the provision of these infrastructure on the layouts?

(YES) (NO)

Give your reasons .....

.....

.....

16. Do you subscribe to the idea that, the individual plot allottees be charged for the provision of these infrastructure on the layouts? (YES) (NO)

Give your reasons .....

.....

17. Can you suggest what % of the cost should the allottees shoulder for these projects? (10-20%) (20-30%) (30-40%) 50-60%) (60-80%) (100%)

Give your reason(s) for the above suggestion

.....

18. Any other comment.

.....

.....

.....

APPENDIX: B

Questionnaire administered to the Director General,

Department of Lands, Surveys and country planning, Kaduna State.

The researcher has intended to use three selected layouts in Kaduna metropolis as case studies. The following are questions particularly on the selected layouts. The chart on the next page is to be filled to enable you answer the following questions.

1. Are the funds collected under items four and five used for the provision of infrastructure on the layout? Yes or No.
2. If yes, are they adequate for that purpose?
3. If no, do you succumb to the opinion that such funds be used for that purpose?.
4. If your answer to question 3. above is yes, can you suggest whether there should be an increase in the ground-rents and plot development levy so as to meet those demands more effectively?.

S/No.	Name of Layout	Compensation Paid.	Survey/Beaconing Fees.	Extent of Allocation	Amount realised as G/Rents on the year of Allocation	Amount Realised as Plot Dev. Levy on the year of Allocation.
1.	Tsaunin Kura Residential Layout					
2.	Kudenda Industrial Layout					
3.	Some commer - cial Layout Kaduna-South					

APPENDIX: C

Questionnaire administered to both the General manager, Kaduna state planning Authority (KASUPDA) and the Director of planning, Dept. to Lands and Surveys, Kaduna State.

1. What role did your organisation play interms of planning generally within the state?
2. What role(s) did your organisation play in terms of development o f layout?.(ie construction of roads and storm-water drains, pipe-borne water and Electricity.
3. In your own opinion, can you assess whether Kaduna State Government has over the years satisfactorily carry-out urban planning projects.
4. If your answer to above question is negative, then can you suggest alternative strategy (ies) for carrying out such projects.
5. Do you think Kaduna State government consider the provision of utilities and facilities on approved layouts as social over-head or Economic proposition ?.
6. Give your Reasons.

BUDGETARY ALLOCATIONS FOR THE PROVISION OF ROAD AND STORMWATER DRAINS, PIPE-BORNE WATER/ELECTRICITY ON APPROVED LAYOUTS. WITHIN KADUNA.

YEAR	ESTIMATE PROPOSALS	AMOUNT DISBURSED AT THE END OF YEAR.
1981		
1982		
1983		
1984		
1985		
1986		
1987		
1988		
1989		
1990		

(i) What was the mode of disbursement of such funds?

(ii) Are such funds adequate ?

(iii) If not adequate, then what alternative ways do you follow to ensure that you provide such utilities and facilities.

PERCENTAGE OF PLOT ALLOTTEES THAT DEVELOP THEIR PLOTS ON ALL APPROVED LAYOUTS BETWEEN 1981-1990 IN KADUNA.

'Bo	Name of Layout	0%	1-10	11-50	51-90	91-100	Possible reasons