FACTORS AFFECTING THE GROWTH OF THE INDUSTRIAL SECTOR IN NAKURU TOWN

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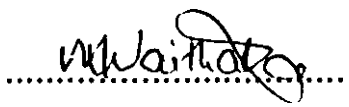
DECLARATIONS

I, Margaret Wangari Waithaka, hereby declare that this thesis is my original work and has not been presented for a degree in any other university.

Margaret W. Waithaka



This thesis has been submitted for examination with my approval as university supervisor.

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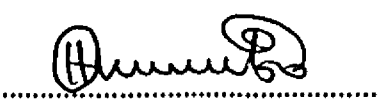

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ABSTRACT

Despite the fact that, theoretically, Nakuru town has all the ingredients of an excellent industrial centre, the performance of its industrial sector seems to defy theory. Several firms in the town are merely hanging on to survival and have had to cut down on production or layoff workers in a bid to remain in business. As presented in Chapter One, this study sought an answer to one question - to what extent can constraints to industrial development in Nakuru town be attributed to location characteristics, or do extraneous factors also play a significant role? It was the hypothesis of the study that the influence of government has a more significant impact on industrial development than any other location factor. To test this hypothesis the primary objective was to identify factors that are significant to industrial development in Nakuru town and the role played by the state in this development. A second objective was to come up with suggestions on how to promote and encourage industrial development in the town.

Literature review, contained in Chapter Two, comprises theories of industrial location and regional development, factors of industrial location in practice, a guide through industrial development in Kenya and the policies and strategies that have helped shape the process. Chapter Three presents an overview of the physical aspects of the study area i.e. geographical features, socio-economic factors, and infrastructure. The rest of the chapter is devoted to introducing the sample of industries in Nakuru town as listed by the Registrar of Industries, and their various activities.

The core of the research lies in Chapter Four which presents the findings of an investigation into the experiences of Nakuru industrialists in the day-to-day existence of their establishments. The chapter is directed towards achieving the study objectives vis-a-vis the problem statement by identifying factors that impact on industrial development in Nakuru town. Of these factors the high cost and/or shortage of credit was considered the most critical to plant under-utilization by the industrialists. The high interest rates payable for borrowed funds was cited as the main obstacle to obtaining industrial finance. Infrastructure-related problems were rated second highest, with the prohibitive cost of fuels and insufficiency and breakdowns in the supply of water cited as most critical to the production process.

In most aspects of industrial life, the role played by the government in industry was seen to be a tremendous one. However, a combination of factors impact on industrial development and it would not be true to state that the influence of government has a more significant impact than any other location factor. Nonetheless, even where the state does not directly affect industrial development, an efficient policy framework could set the course for enhanced growth of the sector.

The concluding section of the study, Chapter Five, was largely perceived from the stand-point of policy. The chapter discusses several recommendations addressed towards factors considered by industrialists as having the most impact on their industrial endeavours. For instance, there is a strong and pressing need to relax lending conditions for small and medium-scale industries.

The problems of, inter alia, finance, security, equity requirements should be geared towards promoting investment in industry. In addition, many firms are impervious to vocational and technological training of their workers and there is a need to create fora that encourages industrialists to improve the quality of their labour force. With regard to deficiencies in infrastructure-related services, there is a serious need for policy to be designed to allow for a more active participation by the private sector. The study ends on an optimistic note that the government's commitment to industrialization objectives shall keep in step with a liberalised Kenyan economy.

TABLE OF CONTENTS

CONTENTS		PAGE
Thesis title	.....	(i)
Declaration	.....	(ii)
Acknowledgements	.....	(iii)
Abstract	.....	(iv)
Table of contents	.....	(vii)
CHAPTER ONE	.....	1
Introduction	.....	1
Problem statement	.....	2
Hypothesis	.....	4
Objectives of the study	.....	4
Research methodology	.....	4
Scope of the study	.....	6
Definition of terms	.....	7
CHAPTER TWO	.....	9
Theories of regional development	.....	9
Some theoretical adoptions:-	.....	12
The experience of developing countries		
Theories of industrial location	.....	19
Factors of industrial location in practice	.....	27
Industrial development in Kenya	.....	36
Industrial policies and strategies	.....	52
Summary	.....	56

CHAPTER THREE 59

Introduction to the study area 59

Regional setting: Nakuru district 60

Geology and physical features 60

Soil and land use patterns 62

Climate 63

Natural resources 64

Administrative and political units 65

Markets and town distribution 65

Infrastructure distribution 66

Nakuru town: a central place, growth and development centre 68

The industries of Nakuru town 70

CHAPTER FOUR 77

Industrial development: the experience of Nakuru town 77

Summary 99

CHAPTER FIVE 101

Conclusions and recommendations 101

Policy framework for industrial development 111

Areas of further research 116

BIBLIOGRAPHY 117

Appendices 126

CHAPTER ONE

INTRODUCTION

Local industry is to a community what a stomach is to the body. This should certainly be the case in Kenya whose economy is agro-based. Industry, and in particular manufacturing, is very important as a growth-generating sector having a profound influence on all other activities in a region. According to Ogendo (1989), a country's industrial sector is of strategic importance for a variety of reasons.

Firstly, the experience of countries that have undergone industrialization indicates that manufacturing grows faster than other sectors and hence accelerates the overall growth rate of the economy. Secondly, manufacturing has linkages both to the raw materials and services sectors as well as providing inputs for both. Thus the output of manufacturing can accelerate the growth rate of agriculture and services by lowering costs, providing inputs and widening development options such as providing irrigation pumps to expand agricultural production. Thirdly, manufacturing helps to promote national independence by reducing the country's reliance on foreign consumer goods. In addition, manufacturing facilitates the diversification of exports. Since the terms of trade for manufactured goods are less volatile than those of agricultural goods, a more stable source of export revenue is guaranteed. Fourthly, manufacturing is important for employment purposes. This importance stems not from the proportion of the labour force employed in manufacturing, which is normally low for developing countries, but the productivity of this labour force. For instance, only 2 per cent of Kenya's labour force is employed in manufacturing yet it produces 13 per cent of the gross domestic value-added. Lastly, manufacturing is critical for its technological aspects, creating a large scope for learning and innovation.

Industry is thus a very important aspect of all modern economies. With a resource-based economy and in the face of deteriorating terms of trade for raw materials, Kenya like other developing countries aspires to transform its economy into an industrial one. At present a much smaller part of Kenya than is generally believed accommodates practically all the country's manufacturing and service industries. The Nairobi core zone is the favourite location for major industrialists

for the obvious reason of being virtually endowed with all the necessary development components such as, inter alia, capital, technology, all types of labour and external economies terms of trade. However, Nairobi suffers from congestion and in order to lessen this and create greater efficiency, it is vital to divert the inflow of development factors to less favoured national zones. Towards this end the government has selected Nakuru, Eldoret, Kisumu and Thika as proposed secondary cities with increasing roles to play in the country's industrialization process.

PROBLEM STATEMENT

In theory Nakuru town is an excellent choice as an industrial centre. With its agricultural highland hinterland, it serves as a major source of raw materials. In addition, Nakuru town is geographically very focally situated in relation to the rest of Kenya and this centrality makes it the most accessible town in the country. The town lies within what has been termed the Central Zone, the most attractive from the viewpoint of industrial location theories (Ogendo, 1972). The core of this zone has all the favorable location factors, for instance, it is clearly demarcated by the electricity-distributing areas. Theoretically, therefore, a rational investor seeking favourable returns from investment in industry should be able to do well by locating in Nakuru town.

Yet the mediocre performance of the town's industrial establishments seems to defy theory. Many firms are merely hanging on to survival and in recent times have closed down operations while others have had to cut down on production or lay-off workers in a bid to stay afloat. In 1992, Elliots Bakeries (Nakuru) Ltd. one of the oldest bread-making firms in Kenya, wound up leaving about 600 employees out of jobs (Daily Nation, January 1993). The firm's management said that the decision to close down was taken to avoid further losses after having incurred a Shs 51.9 million loss in its previous financial year. Within the same period, Valley Bakeries Ltd. a leading bakery in Nakuru town also ceased operating following what it described as acute shortages in vital raw materials (Daily Nation, January 1993). Other types of industries in the town have been experiencing difficulties too, as illustrated by the now defunct Pac Industries and Nakuru Oil Mills. Industrial

establishments in the town attribute these hardships to a variety of reasons such as, inter alia, weak consumer demand aggravated by an upward review of official prices, increased production costs arising from interruptions in power supply and higher fuel prices, rapid depreciation of the Kenyan shilling leading to higher costs in long-term financing, shortages and increased prices in raw materials. Just recently, 80 industrialists, members of the Kenya Association of Manufacturers (KAM) from Nakuru town, claimed that production in their factories is falling due to what they termed acute shortages of water (Daily Nation, February 1996). Criticism has also been leveled at inappropriate directives and actions of the government and other state-owned institutions such as National Cereals and Produce Board (NCPB) and Kenya Grain Growers Cooperative Union (KGGCU).

Additional testimony to the surmise that all is not well in Nakuru town's industrial sector comes from the local councils of Nakuru. Sources there attest to the fact that industrial growth in the town, projected to a certain percentage, has recently fallen short of the mark. This is corroborated by statistics of firms entering the sector. Industrialization in Nakuru began in the early 1970s and by 1979 there were 302 industrial firms. Presently, almost fifteen years, later the figure stands at a mere 400 firms. Moreover, a comparison between the periods 1984/1988 and 1990/1994 reveals that the number of new firms entering the sector has dropped by 50 per cent.

A cursory glance at Nakuru town's industrial problems seems to suggest that industries all over the country are similarly afflicted. This notion is reinforced by reports of the trouble-ridden Kicomi in Kisumu which is on the verge of collapse owing to a decline in consumer demand (The Standard, May 1994); Kenblest in Thika which recently closed down following raw material shortages (Daily Nation, February 1993) and Anglo Swiss Ltd. in Mombasa which was adversely affected by a combination of factors (Daily Nation, January 1993). This study sought answers to several questions; for instance, does Nakuru town have what it takes to serve as an industrial town in line with the government's decentralization policy? To what extent can constraints to industrial development in the town are blamed on purely location characteristics, or do extraneous factors also play a significant role?

HYPOTHESIS

The influence of government has a more significant impact on industrial development than any other location factor.

OBJECTIVES OF THE STUDY

This study was essentially an investigation of factors that affect the industries of Nakuru and, consequently, industrial development in the town. The study was not unduly concerned with the reasons why industrialists have located as they have in Nakuru town but rather in their experiences in chosen locations. The investigation evolved about the following objectives:-

1. To identify factors that impact on industrial development in Nakuru town and the role played by the government in this development.
2. To come up with suggestions on how to promote and encourage industrial development in Nakuru town.

RESEARCH METHODOLOGY

To achieve the objectives of this study it was vital to acquire information that would shed as much light as possible on all aspects of industrial life in practice. The nature of primary data collected aimed to obtain specific facts on individual firms in Nakuru town, for instance, mode of acquisition of industrial land, number of operatives employed, products manufactured by the firm and major markets for these products. Once this information was established for the individual firm it was possible to make useful inferences and deductions about most of the industrial establishments in the study area. It was also important to obtain unspecific data, mainly assessments and opinions. Obviously firms differ by virtue of their diverse activities and varying entrepreneurial ability and it was thus necessary to draw out subjective views on a variety of issues. This was accomplished by inviting suggestions on, say, how to ease labour problems or how to improve the performance of industries in Nakuru town.

The nature of primary data required made it a requisite to elicit this information from a managerial perspective, that is, the industrialists themselves. However, to achieve a balanced account, contributions were also obtained from people external to the industrial establishment. Participation was thus enlisted from personnel in public offices based in Nakuru town such as the Ministry of Commerce and Industry at Dimo House, the departments of Land and Physical Planning, the municipal and county councils of Nakuru and Kenya Industrial Estates (KIE).

The collection of this data was done through two types of questionnaires. One set was administered to industrialists as managers of their establishments from a sample of 50 firms in Nakuru town. A second questionnaire was administered to government and institutional personnel whose input was further corroborated by informal interviews. Sources of secondary data consisted of a review of existing literature related to the subject such as:-

- classical and neo-classical theories that have been developed on industrial location,
- theories of regional development and their application and usefulness to developing countries,
- factors that have influenced industrial location in practice and related studies as carried out by other researchers in various Kenyan towns, and
- national industrialization policy as stated in National Development Plans, government publications, sessional papers, regional reports etc..

Data collected from the field was both qualitative and quantitative by nature and, either way, it was categorised to establish the various responses. From the categorised responses, the analysis of data was achieved through frequency runs to establish rate of occurrence and facilitate ranking. Data presentation has been done through assessment tables giving percentage figures derived through ranking. These statistics were geared towards meeting the objectives of this research by

identifying the significance of different factors of location during the lifetime of an establishment and hence to industrial development in Nakuru town.

SCOPE OF THE STUDY

The boundaries of Nakuru Municipality formed the study area. The study was restricted to manufacturing industries and excluded retail and warehousing. The manufacturing industry in Kenya has three main sectors:-

- the agro-based industrial sector,
- the engineering and construction industrial sector and
- the chemical and mineral industrial sector.

The agro-based industrial sector has seven major sub-sectors namely: food-processing, animal feeds, beverages and tobacco, fibres and textiles, wood and wood products including paper and pulp, miscellaneous foods, and leather and leather products. Engineering and construction industries fall into four sub-sectors: transport equipment, electrical and electronics, iron and steel, and foundry. The chemical and mineral sector comprises petroleum and petroleum refining, paints and varnishes, basic industrial chemicals, cement, lime ceramics, soaps and cosmetics, plastics and rubber.

As the Nakuru region is basically agricultural it was expected that the majority of firms would be involved in agro-based activities. However, it was intended that both the engineering/construction and chemical/mineral industrial sectors be represented in the sample no matter how minimal their number of firms. The sample did not prove difficult to select since the population of manufacturing industries in the town did not exceed fifty (50) firms at the time of this research. Of the 50 industrialists to whom questionnaires were administered, 37 responded and the study findings were based on this number.

Moreover, the sample was derived from only those industries which are registered by the Registrar of Industries. Under the Industrial Registration Act of 1987, all factories in Kenya which are engaged in manufacturing, mining, quarrying and construction activities and which were in existence on 1 July, 1987 or were established subsequently are required to register. In cases where one firm has two or more factories each factory has to be registered separately. Exempted from registration by the Act are informal set-ups engaged in manufacture such as "Jua Kali sheds" and "foot-loose" cottage industries. By this classification and in an attempt to reduce outliers in the population of industries, the coverage of the study was limited to the "modern" sector and defined to include all establishments in urban areas. It was thus expected that the sample in this study would comprise all registered manufacturing industries located within Nakuru Municipality, subject to the cooperation of the industrialists.

DEFINITION OF TERMS

1. For the purposes of this study "growth", "progress" and "development" are used interchangeably to mean the realization of potentialities of the industrial sector.

2. A manufacturing industry refers to both agricultural and non-agricultural industries. Manufacturing is taken to mean an economic activity which involves the conversion of primary or secondary raw materials of organic origin into more valuable form. Both processing and fabrication are stages in the manufacturing process.

3. Processing occurs early in manufacturing and it is the conversion of primary raw material of agricultural or mineral origin into secondary raw material e.g. separating cotton seed from cotton wool. Making cloth out of the cotton wool is secondary processing which stage forms the basis of most manufacturing industries.

4. Fabrication is the changing of raw materials due to secondary processing into more useful form, e.g. making of apparel out of cloth, or furniture out of sawn timber. Fabrication is thus the last stage of the manufacturing process.

5. An industrial establishment or firm is used to mean a factory which is the individual plant in which goods are manufactured.

6. Manufacturing operatives, or simply operatives, are employees engaged principally in manual work directly associated with the actual production of goods. These persons include working foremen and all non-supervisory workers engaged in processing, fabrication, assembly and other services associated with productive operations excluding management personnel.

CHAPTER TWO

THEORIES OF REGIONAL DEVELOPMENT

This section of the literature review examines theories of regional development. Before any attempt is made to grasp the evolution of industrial development through the location decisions of the individual firm, it is essential to understand the spatial structure of regions, i.e. the environment in which a single firm exists. Industry is so bound up with national, regional and community development policy that a broad view of the overall working of an economy is essential for astute planning. Hence the need to turn first to more general spatial theories.

Myrdal (1957) and Hirschman (1958) were the first to recognize that the development process has spatial implications. Hirschman's main concern was with economic growth, maintaining that economic development occurred through a "chain of disequilibria". New investments are made as a result of increased output of existing activities and consequently growth will be unbalanced. New industries will be located near existing ones, resulting in specific growing points. This spatial concentration is paralleled by retardation in other areas. The result is regional polarization and an uneven geographical spread of development. Subsequently, however, various "trickling down" effects will ensure a correction of the imbalance. Myrdal views development as a process of interaction between areas, which tends to increase initial differences in prosperity. Yet he too believed that later, when economic development has reached a certain level, these differences would be equalized. The two basic mechanisms in this process are "spread" and "backwash". Spread occurs for instance when a growing urban centre stimulates agricultural production in its vicinity. The aging of the population in expulsion areas provides an example of backwash. Another well-known backwash effect is the process of capital transfer from less developed to higher developed areas. In poor countries economic and political power often coincide and both tend to be concentrated in the relatively well developed poles, and both Hirschman and Myrdal theories contain elements of the former. Perroux's growth pole has no specific location; it is viewed in an abstract economic space. Governments introducing regional development programmes have

increasingly adopted its geographic equivalent, the growth centre. In Perroux's ideas growth poles are likely to be firms or industries with a basic function and a strong potential. Some activities in a region are "basic" in the sense that their growth leads and determines the region's overall development through the function of persons producing goods and services for the external market. "Non-basic" activities are simply consequences of the region's overall development, meeting only the needs of a town's own inhabitants. Growth poles are dominant and privileged points containing a group of what he called propulsive firms or industries which are characterised by rapid growth because they are involved in activities at an early stage in the production life cycle and by a tendency towards large-scale, capital intensive production and organizational concentration.

The propulsive industries or firms which positively influence others that depend upon them for a high proportion of their input and/or output, thus generating spread effects. There is no assurance that these effects will be felt in the immediately surrounding peripheral geographic region, which Perroux dismisses as "banal" space. They may not even be felt in the same country as the propulsive enterprise. Nonetheless this influence extends beyond direct and induced increases in production to include a change of "atmosphere" which encourages further progress as economic and social changes set in.

John Friedmann (1966) moves away from a purely economic argument towards a linkage between regional polarization, interaction and the theory of modernization. In his opinion any country consists of one region called the periphery. In fact it is the urban system that constitutes the "core regions", its relations with the core then define the periphery. Core regions exercise a decisive influence on the periphery and consolidate their dominance by:-

- the dominance effect: the periphery is weakened by constant net transfers of natural, human and capital resources to the core,
- the information effect: potential contact and interaction are greater within the core region,
- the psychological effect of innovation success,

- the modernization effect: at the core, social values and behaviour change more rapidly to conform with innovations,
- the linkage effect: or innovations breed innovations, and
- the production effect: the creation of an attractive reward structure for innovations, including specialization and growing economies of scale.

Core-periphery systems occur at every level, from a single city region to national and even world level. As Friedmann explains it this self-reinforcing character of regional growth that may have positive results but eventually it will become dysfunctional, unless the spread effects of core region development to the periphery can be accelerated. The unbridled growth of primate cities in many developing countries seems a point in case. This point is accentuated by growing political and social tensions between core and periphery. This will then lead to the emergence of new core regions in the periphery and thus to a gradual incorporation of large parts of the periphery into one or more new cores. These political and social tensions arise from resentment in the periphery, which receives too few investments and sees its resources being drained continuously.

Hilhorst (1971) relates his theory to the centre-periphery model and attempts to show how under the impact of the factor of distance as well as economies of scale, agglomeration centres of socio-economies and political administrative power can emerge that act as innovation creating forces. He also argues that if regions are to be regarded as open sub-systems which form part of a larger system, it becomes necessary to examine the effects of the interrelationships between them upon their development i.e. economic relations between regions and their socio-political interplay.

Hilhorst has synthesized five propositions that contain the core of the theories of regional development so far advanced by economists and geographers:-

(1) Regional growth results from a set of decisions made inside and outside the region, leading to sustained growth which depends upon the ability of the region to diversify its economic structure and to minimize the polarization effects exerted by the primate region. The exports sector will determine the region's infrastructure during the early phases of regional development.

(2) Regional growth, as all economic growth, is speeded up by specialization and the creation of economies of scale, leading to a certain spatial structure of centres.
(3) Within the structure of centres, a certain hierarchy will be established which is explained on the one hand by administrative forces but on the other hand by the desire on the part of producers and consumers to minimize transport costs. In addition natural accidents and political factors play a role.
(4) The process of regional development finds its culmination in a situation where spatially distributed and specialised activities are internally integrated and form an integral part of a larger whole, which may be the nation.
(5) There exist various reasons why a region may not develop or will slump back, the most important being exhaustion of natural resources, structural change in demand and deficient socio-political structure.

SOME THEORETICAL ADOPTIONS :

THE EXPERIENCE OF DEVELOPING COUNTRIES

After World War 2 when concern with the Third World countries became widespread, most development economists agreed that growth in aggregate output should be the prime economic objective for these poor countries. During the 1950s there was a consensus that Third World countries were caught in the so-called "low level equilibrium trap" i.e. the tendency of population growth to outpace growth in production, keeping the per capita income level unchanged in the long run. It is not surprising that many of the lessons taught by western development economists were merely reflections of past development patterns in the now industrialized countries. Since rapid capital formation had played a crucial role there, it was assumed that the same would be true in the poor world and that capital accumulation could be realized in the industrial sector. Furthermore because productivity of labour is high in industry and low in agriculture, it was generally agreed that economic development i.e. growth of national output, required the transfer of labour from the primary to the secondary and later to the service sector. Agriculture would be freed of a huge labour surplus while more productive sectors of the economy would enable aggregate output to increase. Moreover industrialization would raise productivity in

agriculture by increasing the demand for agricultural produce and making available tools and equipment needed to improve agricultural techniques. The spread effects induced by industrial expansion would affect other parts of the economy. New factories would not only need labour but also machinery, raw materials, infrastructure, transport, communication, etc.. Some of these requirements in turn would stimulate domestic production. Higher wages would increase demand for consumer goods and further enhance domestic production. In short, what was supposed to get under way was the familiar multiplier-acceleration mechanism that would lead to cumulative expansion in all sectors of the economy. Industry was to fulfil the leading role.

Of course development theorists were aware of the obstacles which would inhibit development along these lines in poor countries. There would be difficulties in the supply of technical, managerial and administrative manpower, bottlenecks in the availability of materials and equipment and inadequacies in the provision of transport, power and communication systems. But through conscious planning these problems might eventually be solved. Moreover, industrialization would take place with the help of foreign investments and considerable aid funds which would close the foreign exchange gap. There was also a more practical reason why industrialization was accorded such a high priority in development policies. The "old colonial role" as exporters of primary commodities and providing a market for manufactured goods from the industrialized nations proved to be detrimental to the poor countries. Export prices of primary commodities tended to fluctuate heavily and lagged behind prices of manufactured trade goods. There were also high protective tariffs against processed goods entering the rich countries. The combination of these factors called for the creation of an industrial base in the developing countries. It should be noted that concern for unequal income distribution effects as a result of the advocated industrial policy was almost absent. It was simply "theorized away" with the argument that uneven income distribution was an indispensable condition for capital formation and an indispensable outcome of development in the early stages of growth. Also, a process of more equal income distribution would set in once per capita income had crossed a certain threshold.

This "trickle-down" effect which would lead to a widespread distribution of the fruits of development, and introduce more and more people into productive employment, was generally accepted as the long run solution to short-term regional and sectoral problems of inequalities. Furthermore, as far as foreign investment and aid are concerned, little attention was paid to the inherent "side effects" of massive surplus transfers abroad and the intensification of import dependence caused by the implementation of modern (capital-intensive) production techniques.

During the past ten years the term "growth-centre" has gained widespread use in government, academic and planning circles. The concept's prime virtue lies in its seemingly inherent simplicity and logic. If a government is to introduce a policy of economic dispersal then clearly every region cannot be the recipient of major new industrial activities. The growth centre concept offers a means of taking advantage of modern technology and external economies of scale while permitting a measure of decentralization, it permits the provision of infrastructure to poorer areas while permitting both a measure of decentralization and a measure of economy in its distribution. In addition, many planners have argued that the establishment of a propulsive sector in selected centres will stimulate the economies in the regions surrounding these centres (Friedmann, 1966; Berry, 1969 and Nicholls, 1961). The new economic stimuli will lead to upward shifts in the local demand schedules for labour, raw materials and agricultural produce and will generate higher prices, thereby stimulating a rise in productivity and in the employment of local factors of production. The creation of growth centres may also lead to an acceleration in the rate of diffusion of new ideas and technology, firstly, from the metropolitan centre to the growth centres themselves and, secondly outwards into their respective regions. In spatial terms, therefore, the growth centre strategy is seen to contribute to economic and social development by helping to integrate the space economy.

Unfortunately growth centre strategies have not worked as smoothly in practice as in theory and their utility is being questioned on a number of counts. Principal among these is the concept's imprecision and its limited ability to accelerate development in poorer regions. One aspect of the growth centre's supposed planning role is its ability to induce development in surrounding areas.

Alan Gilbert, drawing on a South American example, examined the limited "spread" effects of a dynamic industrial growth centre. His results support the conclusion of other studies, made in both developed and less developed nations, that growth poles rarely assist rural development. The main implication for planning is that growth centres strategies are likely to be effective only if supported by policies which modify existing rural-urban relations. Furthermore, it has often been difficult to create propulsive sectors in poorer regions and where such centres have been developed they have frequently failed to bring development to their hinterlands. One reason for these difficulties has been that few attempts were made until recently to refine the concept. Indeed one critic has suggested that the nature of growth centres is so vague and so broadly defined that growth centres "...exist only in the eye of the beholder". As a result growth centres have definite virtues for governments which wish to appeal to regional sentiment and feelings of exclusion, while effectively doing nothing. The clearest finding from these studies has been that the spread of development in many less-developed areas is not significant and different kinds of socio-economic regions require different kinds of growth stimuli. Two tentative, related, conclusions may be drawn from the results of these studies. The first is that social services and infrastructure improvements do not diffuse from growth centres beyond a certain limited area, whether the region is located in a rich or in a less-developed nation. The second, is that either as the result of weak economic "spread" effects the regions beyond the immediate vicinity of the growth centres receive little in the way of positive economic benefits. If these conclusions are substantiated, the most critical implication is that growth centres do not automatically induce rural and regional development and cannot operate effectively without direct efforts to improve agricultural and social conditions. Without such measures and without some modification in large-scale capital intensive industrialization strategies, growth-centres will rarely achieve their function of generating "spread" effects and stimulating rural development.

Analysis of the urban strategies that have been implemented in Kenya, indicates that these strategies have largely failed, particularly as ways to resolve the problem of uneven growth. Until 1967, urban development was carried out on the

basis of land use plans prepared by and for each town. Little consideration, and in some cases none, was given to the size and function of towns relative to overall national and regional requirements or to the establishment of a suitable network of service centres. Consequently, services were developed in a scattered, uncoordinated and sporadic manner and the needs of much of the rural population were met inadequately or were provided on an uneconomic basis (Development Plan, 1974-1978). It was with a view to correcting the situation created by this form of urban planning that the government established, in 1967, the Physical Planning Department (PPD). In order to make feasible plans for metropolitan development, the PPD has made studies and projections of population growth for the country in general and urban areas in particular. By 1980, of a population of about 2.2 million, 82.5 per cent were living in the eleven largest towns and planning for these eleven central places was the main concern of the Physical Planning Department. To achieve its goals, the department formulated an urbanization policy and strategy which gave guidelines for the 1974-1978 Development Plan. The Physical Planning Department recognized that its strategy for urban development first and foremost required producing the necessary infrastructure at more than twenty times the speed achieved in the past. The major strategy to be followed was that of growth centres with the hope that concentrating urban development in selected centres will promote the formation of small towns in rural areas. As these towns grow, they will form a level of urbanization which is large enough to be economically served with public water supply, sewage disposal, electricity, postal and banking facilities, etc.. (Development Plan, 1974-1978).

Thus, the policies to change the urban balance in Kenya presuppose a growth centre strategy. But questions have been posed as to what extent the adoption of central place strategy would be able to alter the fundamental socio-economic structures that create the problems of excess rural-urban migration and squatting. The central place strategy adopted by Kenya seems to be modeled especially after the versions of central place theory developed by Christaller and Losch. The 1974-1978 Development Plan outlined and located a hierarchical order of service centres. The plan considered the agglomeration of human community

(village, market place or town) to be a good indicator of the "crystallization of mass around a nucleus" - to use Christaller's terminology - and this is seen as a necessary and elementary form of order. It is in such a "nucleus" or central place, therefore, that certain economic activities will be located. Since the central places differ in size, provision of goods and services etc.., they are classified in hierarchical order. The importance of the central place is not so much measured by size as by functions, goods, and services produced there. Hence the nature of the central place is determined by either of two principles.

According to the market principle, a geographic hierarchical arrangement is needed to reduce the distribution of various types of goods to the least number of places. Thus, for instance, Meru town would receive priority because it serves a large concentrated population isolated to some degree from any other town (Development Plan, 1974-1978). The traffic principle maximizes the movement of goods at minimum cost. Examples are Nyeri, Kakamega and Embu towns which get priority because although provincial headquarters, they are comparatively small in size, have low industrial potential, and have a level of infrastructure below other municipalities. The consumption of central place goods is more important than their production, so it is the trading rather than the production of a place that will determine its centrality. Since consumption is likely to be scattered over a region, each central place is tied to a complementary region that it serves or indeed, dominates. The relationship between the centre and region will be determined by the consumption behaviour of the population. The plan states that the successful creation of service centres at all levels depends on the concentration within the centre of all urban infrastructures required by the particular area served by the centre.

However, three types of limitations of the central place strategy have been uncovered. The first evolves from the current socio-economic system in Kenya. During the Third Plan period a major assumption of the government seemed to be that cityward migration is caused largely by lack of various amenities and services in the rural areas. These factors may contribute, but they are not the major motives. The government plan overlooked the fact that structural poverty is at the root of the

problems planners are addressing. The plan, therefore, worked out a strategy within the present socio-economic structures that are generating the problems in the first place. Second, as does the central place theory in general, the plan made the success of the strategy contingent on the main assumptions of the neoclassical model of perfect competition i.e free entry, minimal profits etc.. The plan states very clearly that once a central place has its basic infrastructure facilities it will tend to attract commercial and industrial development which will enrich the lives of the people of the rural areas and provide employment opportunities (Development Plan, 1974-1978). Assuming such a theory is plausible, the fact remains that even if commercial and industrial activities are attracted, the socio-economic status quo is such that they will enrich those who straddle the urban as well as the rural economy and not the poor majority. The second set of limitations arise from the theory and its implications. Kenya adopted the central place theory at a time when this strategy was being rejected by other developing countries. Michael Conroy (1973) in his paper "Rejection of growth centre strategy" gives examples of Chile, Colombia and Bolivia, which abandoned them and turned to alternative bases for regional planning. The value-bases believed to be implicit in the theory and the implications of growth centre strategies for overall long-run national development began to be seriously questioned.

Conroy (1973) argues that it is impossible to separate the reasoning behind internal polarized growth and that same reasoning applied at the international level. Strict interpretation of the theory has three concrete implications:- (1) aligning one's national economy with a world pattern of dominant and subdominant poles of development means submission to the economies of the United States, Japan and Western Europe; (2) artificially inducing internal growth consistent with the world system of dominant poles, and (3) encouraging further foreign investment as the only feasible means of obtaining the requisite large-scale dynamic, oligarchic, high technology, propulsive industries which Perroux described as the core of any polarized scheme of development. These implications have already been manifested in Kenya's application of the growth centre strategy, as indicated by international financiers who have advanced huge loans to promote light industries in the

numerous growth centres in the country. Hence, one tends to agree with the view that the focus of concentrated decentralization to which the growth centre strategy logically leads is a solution dictated by an apparently unchangeable private concentration of economic activity in mammoth corporations and by the absence of government policy instruments to effect anything other than the location of these increasingly concentrated units (Conroy, 1973). The growth centre strategy in Kenya, therefore, is in effect a new form, albeit more reformed, of persuading the less developed countries of the capitalist-oriented world to open their doors and establish a satisfactory climate for the implantation through investment of multi-national corporations and their local companies or holdings. Furthermore there is the issue concerning the transferability of the theory from the highly industrialized developed countries, where it was originally conceptualized, to less developed areas, which possess substantially different patterns of organization.

The third type of limitation of the growth centre strategy involves whether it will eradicate inequality through urban planning efforts in a country such as Kenya. Conceived as administrative centres, not productive bases, the colonial heritage of African cities bestows no real growth points. Nairobi, being the dominant "growth centre" of Kenya, maintains a relationship with the international capitalist economy whose inherited interests continue to mould the city's form. Thus, Nairobi is a primate city, with a clear dominance over all other growth centres in Kenya. Its growth and role as a primate city reflect an urban economy whose role is not only to exploit its periphery, the rest of Kenya, but also to channel part of the country's wealth to the international metropoles.

THEORIES OF INDUSTRIAL LOCATION

A discussion of theories of industrial location seeks an answer to the question of what is the most rational location or pattern of land use for industries, describing why and how industries choose their actual sites or situations. Basically, location theory attempts to idealise the rational factors which ought to be considered before any use can be given a specific location. Concern would be to find that pattern of locational decisions which give the maximum amount of real goods

and services from the sources available. Should actual location patterns match the theoretical pattern, then persons in that community would not be able to gain any greater satisfaction by rearranging their economic activities.

Industrial location analysis is structured around three approaches; the least-cost approach which attempts to explain location in terms of the minimisation of factor costs; the market area analysis where there is more emphasis on the demand or market factors and the profit maximisation approach which is the logical outcome of the two.

Least-cost location theory rests upon the work of Weber (1909) who began on the premise that the best location was the one at which costs are minimized. Considerable emphasis was placed upon the transport costs involved in assembling materials at the manufacturing site and in delivering the finished product to the market, although Weber also recognised the influence of labour costs and the possibility that economies may be achieved as a result of the agglomeration of several plants in close proximity to one another (Chapman and Walker, 1987).

One of the fundamental weaknesses of the least cost approach is the over-emphasis of the input side (cost minimisation) and the under-emphasis of the output or demand side, simply assuming that the firm can sell all it produces wherever it locates. However, the market is a variable; buyers are scattered over a wide area and the intensity of demand varies from place to place. Firms will seek to gain access to the market and serve the greatest demand. Both these approaches are nonetheless one-sided, holding either the input supply or market demand constant. In practice, both costs and revenue vary with location and the optimum location is the one which yields the greatest profit as upheld by the profit maximisation approach.

The analysis of William Launhardt (1882) provided the basis for the theory of industrial location. It was his contention that the decision to locate in a particular place would be based on transport costs of raw materials, inputs, finished goods etc.. Using a simple model called the Location Triangle and the concept of ton-mileage, Launhardt suggested that as bulky products incur high transportation costs, the profits of finished goods should make these costs worthwhile; if not, a

rational manufacturer would opt to relocate, always seeking the point of least transportation costs.

Alfred Weber (1909) developed his least cost theory on the basis of Launhardt's analysis. In his contribution, Weber (1909) considered transportation costs, labour costs and agglomeration forces as the major factors of industrial location given the location of raw material and market, assuming that raw material locations are sporadic. On the basis of the Location Triangle, Weber concluded that transportation costs were the primary determinants of industrial location. A new aspect in Weber's refashioned Triangle was the use of isodapanes. He described these as hypothetical lines joining places of equal additional transportation costs from the least cost location of the industry that would be located somewhere within the Triangle. An industry would face increasing costs the further away it was located from the least cost location. Weber extended his analysis using isodapanes to include the effect of labour costs on industrial location, showing how cheap labour productivity would influence the decision of entrepreneurs in selecting the location of their industry. Through the same model Weber introduced the concept of raw material and market orientation where an industry would be attracted to the factor input product that is most costly to transport. If the finished product demanded in a particular market were bulky and thus costly to transport, the industry would be drawn to locate near the market i.e market orientation. Conversely, the industry would be raw material or resource-oriented if its finished product were "weight-losing" through the process of manufacture. Thus furniture-making and saw-milling would be market and raw material oriented respectively. On agglomeration it was Weber's observation that industries will concentrate in an area so as to enjoy the benefits of external economies or linkages with one another and from savings in transport costs. Industries would be compelled to cooperate in this clustering if their savings resulting from external economies generated by suitably linked industries were more than the transportation costs due to the least cost location of everyone in the industries involved.

The contribution of Alfred Weber was monumental and subsequent location theorists have upheld his analysis, emphasising transport costs as the basic factor of location. Tord Palander (1935) closely followed Weber in an attempt to solve the question of optimum industrial location. In his analysis Palander introduced the concept of "Threshold Areas" to describe the extent of market areas of the manufactured goods from an industry located in a hypothetical least cost location within the Weberian Triangle. The size of the market area that a firm controls will influence the profit that it makes. After his analysis of market areas in a context of spatial competition, Palander turned to his other major question: given the price and location of materials and market, where would production be located? The point of departure is Weber's analysis of transport orientation which Palander developed considerably. He looked at transport in terms of costs of movement rather than weight to be shipped and used Weber's isodapane technique to demonstrate the effect of transport costs on location. The approach developed by Tord Palander was greatly influenced by Weber's analysis of agglomeration on the grounds that no firm would move away from the least transport cost location to a potential agglomeration point unless it was sure that others would do the same. Palander stressed the importance of a dynamic view of location, taking into account changes in causal factors through time. Weber was aware of the time factor and brought it into some of his illustrations, but it was not built into his basic analytical framework.

The early work of Edgar Hoover (1944;1948) on industrial location is still among the most useful in this field, particularly for those who seek a clue to the general nature of the location problem without a high degree of abstraction and complex economic theory. As another least cost theorist Hoover's analysis has its roots in the work of Weber and Palander. His theoretical framework is broader than Weber's and like the latter's his approach has its limitations as something that could be analyzed separately and did not integrate other causal factors into his theory as fully as he might have done, and despite his references to market areas he was much more concerned with cost than with the demand factor.

The Central Place Theory is a model that tries to explain the spatial distribution of human activities within a region. The centrality of a place is a term that denotes the relative importance of that place with respect to the region surrounding it - how much its services are required in the particular region or the level of demand in the region for its services. Thus central places may have higher, lower or decreasing centrality. The concept also means that certain specialised good and services are available for sale to the periphery from the nodal area. The importance of a central place consists not so much in the production of goods as such, but in the offering of these goods and services to the peripheral area. In some cases least-cost locations of some industries need not be found in central places.

Although the Central Place Theory was not primarily concerned with industrial location, the model gives insight into the spatial distribution of human activities within a region. The theory owes its existence to Walter Christaller and August Losch and its foundation on the centralistic principles applicable to towns as centres of regional human communities. All those activities whose production efficiency depends on the central place location tend to locate in urban areas because most urban areas tend to nucleate in positions of spatial accessibility in relation to the general region. Services for surrounding areas became concentrated in urban areas and the result is the creation of a hierarchy. The rank of an urban area on this hierarchy depends on its accessibility relative to those of other central places in the area and the most effective and efficient pattern of tributary areas is the hexagon. Both Christaller and Losch believed that hexagons best fit a spatial plane in a market economy where firms located in equilibrium, so that each is equidistant from the other and so that each minimises the total distance from its point of location to the market area.

Losch, in 1940, went further to produce the first general theory of location with demand as the major variable. He rejected the least-cost perspective of Weber and his followers, as well as the alternative of seeking the location at which revenue is greatest, claiming that the right approach is to find the place of maximum profits where total revenue exceeds total cost by the greatest amount. Losch also added a dynamic element to market area analysis by introducing the effect of pricing

elements on the market area. He considered the effect of the irregular distribution of resources and population, local differences in accessibility, human differences, the effect of international trading conditions such as tariff walls, and political factors such as boundaries.

Walter Isard (1951;1956) attached great importance to the fusion of location theory with other branches of economic theory which he attempted through the substitution principle. The basic idea in this principle is that general location theory can be developed by applying substitution analysis to the way an entrepreneur combines expenditure on the various factors of production in choice of location. Like most earlier location theorists, Isard gave much attention to the transport factor, putting transport input on the same level as the four conventionally recognized factors of production i.e land, labour, capital and enterprise, as a requirement of the productive process. He did this not necessarily so that transport was regarded as another factor of production and consumption processes. Isard also attempted to define more vigorously the agglomeration function of urbanisation economies. He criticized the equal area patterns of hexagons proposed by the central place theorists, asserting that regular hexagons are unlikely to occur in practice because of (a) urbanisation economies (b) agglomeration economies and
(c) economies of urban concentration. Production centres tend instead to transform scattered centres into concentrating together. This is because production centres tend to effect improvement of some mode of transportation, causing progressive differentiation and selection between sites with superior and inferior resources and trade routes.

To Melvin Greenhut (1956) transportation should be regarded as a major determinant of plant location, to be distinguished from other factors, not confused with them. An entrepreneur will tend to economize on transportation if freight costs comprise a large part of total costs, but this will be possible only if transfer costs vary significantly at different locations. Material orientation as a product of transport costs is considered, and it is concluded that today this occurs in two special cases: where the materials are perishable, and where transport cost on the material is much greater than on the finished product. Otherwise, the transport

factor does not require material on market orientation. Greenhut also gave special attention to the demand factor, considering the effect of "cost-reducing " and " revenue-increasing" factors. Cost-reducing factors refer to gains that arise essentially from agglomeration or deglomeration; for example, the external economies that a firm may derive from a location in a town familiar with the firm's type of business.

Revenue-increasing factors, which refer to advantages gained from personal contacts between individuals. Purely personal considerations that may influence the precise choice of location, providing the entrepreneur with "psychic income" were also considered.

Rawstron (1958) was interested in finding out to what extent the choice of industrial location is restricted by various factors in its adjustment towards economic optimality and how such restriction comes about. He identified three factors that constrain such location:- physical, economic and technical restrictions. Physical limitations would be posed by the availability of raw materials, economic restrictions by the spatial margins of profitability, while technical restrictions would incorporate the need for specialised factor combination, machinery, labour etc.. and how such need is satisfied.

Allen Pred (1967;1969) used his new concept of the behavioural matrix to explain the causes of sub-optimal industrial location decisions in the real world, which cannot be explained by theoristic deterministic models. The concept emphasized that decisions are taken by individuals and organizations that diverge, to varying extent, from the theoretical norm of economic man. Notions of probability and uncertainty were introduced, and the acknowledgement that survival is only possible for a limited period outside the spatial margin was an implicit recognition of the dynamic character of manufacturing distributions. Further-more, the possibility that some firms may be "lucky" in their choice of location does exist and may be related to certain important ideas concerning the dynamics of industrial location patterns. All in all, Pred concurred somewhat with Greenhut that personal considerations sometimes made entrepreneurs "satisfiers" i.e aiming at a minimum

level of profits so long as other values are met e.g social prestige, the desire to locate close to home, the "golf-course effect" etc..

Other theorists arguing from a different perspective from the foregoing include Hamilton and his colleagues who were social scientists. Hitherto the latter half of the twentieth century, industry location theory had concentrated on the constraints to financial resources and entrepreneurs could choose to locate anywhere in an idealized homogenous unitropic space. In the opinion of Hamilton and his group, locational determinants of the multi-product multi-national firm have been inadequately analyzed. Unlike the uni-product firm, the multi-national would be so diversified in products that the individual location of one operation in any one country may carry very little weight as long as it does not violate the business policy of the concern. Tendency towards monopolistic concentration would affect the locational considerations and the scale of operations.

A very recent trend in economic theory is the attempts to reconcile its micro-economic and macro-economic components. In the area of regional economics this reconciliation involves bringing together the theory of industrial location, i.e how the individual firm or household decides where to locate, and the theory of regional growth. In this particular case the integration is particularly difficult. On top of the usual aggregation problem there are two further major obstacles. First, industrial location theory is by definition a spatial theory whereas regional growth analysis is usually based upon the assumption that the inter-regional system consists of a set of spaceless regions. Second, the dynamic aspects of industrial location are grossly underdeveloped so that the analyst is faced with how to relate static models of location to the dynamics of the regional growth process. It is not easy to find an internal consistency between the cost and revenue variables facing the individual location decision-maker in a particular industry and the overall macro-economic variables, e.g regional employment, with which regional growth differentials are measured.

The simplest solution, according to Richardson (1973), is to adopt a neoclassical framework to deal with both levels of aggregation. This means assuming that location decision-makers have perfect knowledge and attempt to maximise

profits while regional growth paths are determined by optimality criteria whereby factors are allocated between regions according to the distribution that maximises national income i.e maximisation of the output of the inter-regional system as a whole.

FACTORS OF INDUSTRIAL LOCATION IN PRACTICE

Both the classical and the behavioural approaches to industrial location theory do give an insight to real world industrial location patterns, particularly the latter approach since it relies on actual firm surveys for testing. However, in practice, it has been found that a series of location factors has influenced the location patterns of various individual industries during their respective periods of evolution. No single location factor on its own absolutely determines or clearly indicates the right location of a given industry. Among the principal factors enumerated by the theorists, transportation costs in general, and those of finished products in particular, seem decisive in the choice of the location of most industrial plants in Kenya. This view has been upheld by, inter alia, Ogendo (1972) and Ikiara (1976). According to Ogendo (1972), aspects of personal considerations also exert a relatively decisive influence on location decisions especially those associated with cost reduction and revenue increase. He adds that although other manufacturing and servicing costs may be considerable in given instances, they are not necessarily as influential as both transport costs and the cost and "revenue" features associated with personal considerations.

Various studies indicate that the importance of each locational factor varies for different geographic areas and for different types of industries. Apart from Ogendo (1972) who examined factors influencing the location and structure of agricultural manufacturing and fabricating industries, Nixson (1973) also studied factors of location for manufacturing industries in both Kenya and Uganda. Dosio (1973) explored the potential of Thika as an industrial base and the factors that have attracted entrepreneurs to the town, while Wescott (1976) took up a study of Kenya's textile industry. Obara (1976) examined the ecological factors influencing sugar-growing in the sugar-belt i.e Muhoroni-Chemelil-Miwani cane-growing zone.

Odabo (1979) undertook an economic appraisal of the sugar-cane industry in the Lake Victoria Basin. Obiero (1980) studied location factors and the development-inducing role of the sugar industry in Kenya. Factors important to industrial location as found by these and other studies, not arranged in any particular order, are as follows:- land, capital, transportation, raw materials, labour (quality and quantity), managerial skill, power, access to markets, agglomeration, public policy and personal considerations.

LAND

The issue of land and its attributes is of initial concern to an industrialist. Although land cost may be a major cost item in the initial setting up of a firm, it becomes much less important when considered over a long period and may be relatively insignificant in determining choice between comparable sites (Wanjohi, 1991). Nonetheless it may rule out certain very expensive locations. Of more significance is that the land be physically suitable for its intended purpose or at least adaptable to development. Climatic, geological and other physical attributes may affect the location of some industries while others remain indifferent. Of considerable advantage is land which is already serviced prior to development; industries will be attracted to sites where infrastructure, public utilities and amenities are easily accessible. Other industries will be drawn to the occurrence of large quantities of water while others will be concerned with the deposit of industrial effluence. Also significant to location is the size of land parcels and their related costs (Wanjohi, 1991). Sites that are otherwise desirable may have to be eliminated either because they are not of adequate proportions or due to the prohibitively high cost of the land. This is generally true of city or town-centre locations where plots are small or a manufacturer is not able to outbid commercial users.

CAPITAL

The accessibility of a proposed industrialist to finance capital is another factor of industrial location. Finance capital is necessary before land or other inputs like machinery, equipment, buildings and so forth, are acquired. For small firms and those just getting established, capital may be obtainable more easily in some places than in others. Frequently too, industrialists would prefer to locate within easy reach of financiers.

TRANSPORTATION

This is often considered to be the most important determinant of plant location. Few firms can overlook the transport factor when making their location decision, and for many the total freight charge will be the largest difference between cost at alternative sites. Important innovations under-taken in the recent past have had considerable impact on the factor of transportation and its related costs with regard to raw materials and finished goods. The use of pipelines for moving tricky commodities like petroleum and oil, and the development of container systems have greatly facilitated the transfer of goods by road, rail, air and water. The more efficient transportation becomes in terms of decreasing costs of overcoming distance, the more flexible the manufacturer's choice of location (Harriman, 1980).

The nature of material or product to be transported affects the means of transport to be adopted. Bulky goods of relatively low value such as iron ore and coal are cheaply shipped on water. A commodity of high value in relation to its weight and volume, on the other hand, may justify air transport. If it is crucial that goods are moved quickly, then road is preferable to rail which is preferable to water. Other goods require special facilities such as refrigeration or careful handling and the selected mode of transport should cater to these needs. The distance over which the goods are to be moved is also important. For a majority of items trucking is the cheapest mode of transport over relatively short distances, railway suitable for medium distances and waterway best for long hauls. All in all a good transport system with direct access to primary distributor roads is a prerequisite for industrial areas. This is because most transportation will be by road owing to the inadequate

supply of land that can be serviced by railway. One only needs to witness the pressure on industrial sites close to a good road network to illustrate this point, at least at local level (Wanjohi, 1991).

RAW MATERIAL

The essence of industrial process is the conversion of one thing into another of greater value, hence all manufacturing activities require raw materials. Industrial raw materials can be grouped into organic and inorganic. The leading organic raw materials are those derived from agriculture i.e agro-industrial raw materials. Inorganic materials include minerals and water- power resources for hydro-electric generation. The effects of raw materials on industrial location arises from the issue of transportation costs. Materials vary enormously in terms of bulk, weight, and perishability, while others need special treatment in transport, handling or storage. The outlay incurred in acquiring raw materials involves the costs of both production and transportation to the factory. The cost of extracting a mineral or manufacturing a component will affect locational choice only if there are significant variations in the price from different places (Wanjohi, 1991). Owing to a dependence on transport charges, the cost of raw materials varies with distance from the source in a fairly regular manner. However, where a uniform delivered price is adopted as is frequently the case, the cost of the particular raw materials would be the same anywhere and its effects on plant location insignificant.

LABOUR - quality and quantity

The amount and type of labour necessary for operation varies from one industry to another and one firm to another. Some industries require thousands of employees while others can run with a few operatives. Some industries need a highly skilled labour force, some a large clerical and managerial staff, and others need numerous unskilled manual workers. The distinctive labour requirements of some concerns make certain locations more suitable than others. A firm needing a large labour force supplying a diverse range of skills would find it easier to obtain in a metropolitan area than in a small town. However, labour is likely to be more costly

to the industry in large cities or national core regions than in the periphery where the cost of living is lower. However, if the right labour is not available at an otherwise attractive location, it is possible to obtain it from elsewhere since labour is mobile both geographically and in terms of occupation (Smith, 1981).

MANAGERIAL SKILL

Managerial skill is a category of labour and has a vital bearing on the success or failure of a business. Other than the policy-making function and organization structuring, management has the important decision-making task beginning with the initial choice on location, the balancing of various considerations and the assessment of such nebulous concepts as the local "business climate". The need for skilled managerial employees may bestow locational advantages to areas best able to supply them. A firm requiring a range of managerial personnel with specific skills is more likely to locate where it can find it which would probably be in major urban area rather than in a small town (Wanjohi, 1991).

SOURCES OF POWER

Electricity is the main source of motive power for most industries today. It is more mobile geographically than the earlier forms of industrial energy, namely water and steam power since it can be transmitted from one place to another at little cost. This means that over fairly large areas the cost of electricity may not vary much if there are no significant differences in local production costs, and in those circumstances its influence on industrial location will be negligible. However, there are instances where large supplies of cheap power are necessary and this will have an important effect on industrial location (Wanjohi, 1991). Certain metallurgical and chemical industries such as aluminium and copper processing and the production of fertilizers which are especially sensitive to the cost of power; areas that can produce electricity cheaply have been able to attract important manufacturing industries of this type. The historical tendency has been for sources of power to play a steadily decreasing role in industrial location since electricity has

replaced water and steam power. Still, there is a natural limit to the availability of the so-called fossil fuels on which the advanced industrial world has come to rely on so heavily for its energy. There are also political uncertainties which impact on oil supply like Iraq's annexation of Kuwait (1990) which led to a reduction in supply and related hike in oil prices (Daily Nation, March 1991). These considerations together with the rapidly rising prices of oil and the environmental hazards associated with atomic energy production, may lead to cheap power, from whatever source, reasserting itself as a major consideration in industrial location (El-Hinnawi, 1981).

ACCESS TO THE MARKET

For many industries the significance of the market is growing in relation to such considerations as the cost of labour and materials. Freed from the original necessity of being close to sources of raw materials, many firms now show a distinct preference for a location close to major urban centres. The market is not the only attraction of a metropolitan location; the large concentration and relatively affluent body of final consumers found in the city, together with its large industrial market, is certainly one of the main reasons for relatively rapid industrial growth in and around major urban areas. The market can also influence plant location through its effects on costs. Finished products have to be transported to the consumer and for many industries the outgoing freight bill can be a substantial addition to the cost incurred in acquiring the inputs and conducting the process of manufacture. Proximity to the market if it is spatially concentrated, or a central location if consumers are dispersed, can thus be an advantage (Harriman, 1980).

AGGLOMERATION

The areal concentration of industrial activity often provides firms with collective benefits that they would not enjoy in an isolated location. These collective benefits take the form of external economies or agglomeration. Two types of external economies/agglomeration may be identified; the first involves one industry or a group of related activities while the other relates to the advantages that a firm in

any industry may gain by locating in some large urban industrial complex. The advantages of a new firm locating among other firms engaged in the same activity include: a pool of labour with particular skills, special educational institutions geared to the needs of the particular industry, both of which reduce the cost of training workers. Firms may also join together to develop a research institute, a marketing organization, and other collective facilities that individual manufacturers would be unable to provide for themselves. In addition, a region specializing in one industry will often have machine-makers, repair-works, suppliers of components etc.. and other activities ancillary to the main one and providing goods and services for it. All these benefits of agglomeration when added together offer considerable cost advantages over alternative locations. The second aspect of agglomeration relates to the benefits that arise in any large urban industrial area and which are potentially available to any firm irrespective of the industry to which it belongs. The main advantages of a large city or industrial region arise from the existence of a relatively well-developed infrastructure i.e highways, railways, airports, utilities, commercial facilities, educational institutions, research organizations and many other services that might not exist or would be less developed in a smaller place. However, a city location is not always to the advantage of the firm which may instead experience diseconomies of urbanization or deglomeration (Wanjohi, 1991). In addition to the high price for land, taxes, labour etc.. a firm may also have to contend with traffic congestion, lack of space, pollution and so forth. Nevertheless the balance of advantages still appears to favour the city.

LINKAGES

It is important to make a clear distinction between industrial linkage and agglomeration. Linkages, both within and between firms, may encourage the geographical concentration i.e agglomeration of interdependent activities; more often than not such activities are separated by considerable distances. Generalizations from linkage studies have been few and far between. This suggests that linkages only reflect other factors and conditions that are the explanatory variables in industrial location. One of the key determinants of an industry's actual and potential

importance for industrial development is the range of its backward and forward linkages. Backward linkages occur when finished goods of a firm are used in the manufacturing process of another firm. Backward linkage is extremely common because so much of the activity in any region is producing for and oriented to the regional market. Forward linkages occur when a firm produces raw materials or intermediate products that are used in the manufacture of finished goods by another firm. This means that an impact of change is transmitted to an activity further along in the sequence of operations. Inter-industry trade in the Kenyan economy is weak, but it is expanding. Large food processing industry has developed linkages with agricultural producers, transporters and packaging suppliers. The agro-related industry (within it the textiles, food-processing, pulp and paper and building materials industries) has probably the most significant linkages. For instance the textile industry is mainly cotton-based and is linked to primary cotton production via cotton-growing enterprises, to suppliers of dyes, printing and finishing chemicals and producers of synthetic fibres for blended textiles. The main forward linkages are to tailors and to final consumers through retail outlets. Significant potential exists for other linkages of the textile industry to engineering workshops for machines parts, to specialised tailors, hotels and service for curtain and upholstery materials, and for exports to regional and world markets. The motor vehicle assemblers and coach builders have established some linkages with smaller workshops for a few components. In many other industries linkages are very feeble. In order to expand the linkages between various industries there is a need for incentives designed to promote the development of the core industries. Core industries are those industries that are considered essential for the formation of a strong and sustainable industrial base and are vital in forging the necessary relationships between industry and the agricultural, transport, and communications sectors of the economy (Ogendo, 1989).

PUBLIC POLICY

Many countries now seek to actively direct industry to particular problem regions or when they believe that certain economic, social or strategic objectives can be achieved more readily by planning than by leaving manufacturers to locate where they please (Smith, 1981). National or local government bodies can influence industrial location in two ways: (1) freedom of choice of site may be restricted through land use zoning or by some tax penalty in an area where new industrial development is to be discouraged and (2) encouraging firms to locate in certain areas which need new development by offering financial inducements in the form of loans, subsidies or tax incentives. Aid at the local level is more often organizational than financial. Local help with regard to matters such as housing requirements and planning permission, can be a real factor in the choice between alternative locations. In addition, many local authorities, as in the United Kingdom, band together to sponsor regional scale industrial development associations, each seeking to lure the limited supply of mobile industry to its own constituent authority through a combination of publicity campaigns, industrial promotion and political pressure (Smith, 1981). In countries where industry is state-owned or where the positive direction of industry to selected areas is possible, public action can modify existing location patterns speedily and effectively. In a free-enterprise economy, however, the adjustment is likely to be less rapid and predictable since whatever the national government may think is best for the nation, and whatever inducements are offered, location decisions are still subject to the capriciousness of the individual entrepreneur.

PERSONAL CONSIDERATIONS

Almost any industry reveals cases of plant location that cannot be explained by obvious economic factors. The choice of one site over possible alternatives might seem to be entirely a matter of chance, with historical accident or the personal whim of the entrepreneur as the only possible explanation. The random factor in the diffusion of industrial innovation can also have a bearing on the spatial pattern of the adoption of new techniques, with some places and some

entrepreneurs being more receptive to change than others. Once a plant has been built, personal factors as well as immobility of fixed capital may prevent relocation, even if it seems desirable on other economic grounds. In addition to leaving familiar surroundings, a move involves an increase in managerial effort while it is planned and undertaken, with some degree of risk and uncertainty as to the outcome. Some manufacturers may simply prefer to stay put, no matter how attractive an economic proposition an alternative location may be. Such attitudes make an important contribution to industrial inertia and existing industrial location patterns a degree of stability and permanence that economics alone may not justify.

INDUSTRIAL DEVELOPMENT IN KENYA: a historical over-view

PRE-INDEPENDENCE ERA

Kenya's industrial development has been based on changing scenarios over the years. In the early years Kenya's economic activity was concentrated on the agricultural and commercial-agricultural sector which led to the establishment of service industries particularly around Nairobi and Nakuru. The first few industries had strong agricultural linkages, as is the case today. However, despite the existence of these agro-based industries during this early period, the European Settler Community controlled the manufacturing sector. At the same time Asian industrial effort started emerging in the form of industrial extension of their trading activities. The Asian-owned firms were however of marginal effect compared to the European holdings. To consolidate this set-up, some selective import-substituting processing firms were established by foreign, mostly British capital. In essence this was the starting point for Kenya's industrialization process behind tariff protected walls. For the next two decades after 1945, import substitution gained dynamism leading to the emergence of an industrial nucleus ("Faster industrialization of Kenya", 1992).

POST-INDEPENDENCE ERA

After Independence Kenya adopted and pursued the import substitution strategy. In essence this policy meant that what had formerly been imported in consumer goods was produced locally instead. Arguments for this strategy included:-

- the already established markets for the new industries,
- government protection of the infant industries through bans on competitive imported goods and concessions on sales tax and customs duty on inputs, and
- a reduction in the relative importance of foreign trade thus reducing vulnerability to externally induced fluctuations.

In many developing countries, including Kenya, the import-substitution industrial strategy allowed for impressive growth of the industrial sector. Foreign direct investments were greatly attracted to the country's manufacturing sector in contrast to the pre-independence period. During this period the import-substitution industrialization strategy proved not only catalytic but also instrumental in inducing crucial structural changes in the Kenyan economy. The policy instruments chosen to promote the import substitution strategy included high levels of protection i.e. high tariffs and import quotas enforced through foreign exchange allocation. Protection was supported by an exchange rate policy that produced an overvalued currency, which in turn discouraged exports and kept the prices of imported capital goods and intermediate inputs relatively low, subsidized interest rates which encouraged investment, and direct state participation in manufacturing industry.

INDUSTRIAL DEVELOPMENT IN KENYA : PRESENTLY

The manufacturing industry in Kenya has three main sectors namely:-

- the agro-based industrial sector,
- the engineering and construction industrial sector, and
- the chemical and mineral industrial sector.

Countrywide the agro-based industrial sector contributes the major part (68 per cent) of manufacturing value added and is mostly based on domestic raw materials. The agro-based industrial sector has seven major sub-sectors: food-processing,

animal feeds, beverages and tobacco, fibres and textiles, wood and wood products, miscellaneous foods, leather and leather products. Despite the sector being diversified, traditional domestic resource-based industries tend to dominate. These include food, beverages and tobacco, footwear and textile industries. In addition to these, there are other groups of industries that draw upon local raw materials and intermediates; these include cement, metal, paper and various chemicals.

The engineering and construction industrial sector includes the areas of basic metal industries, fabricated metal products, machinery and equipment, metal furniture and fixtures, structural metal products, non-electrical machinery, electrical machinery, transport equipment and miscellaneous machinery. This sector plays a major role in the economy by providing equipment, implements and machinery to other sub-sectors such as agriculture, transport, building, services etc.. It is the largest employer and provides new technological achievements by producing new products that in turn produce other products which compete in both local and international markets, thereby earning the country foreign exchange. This sector is the most important one for if Kenya aspires to transform its economy into an industrial one, a sound engineering base and successful technology transfer are key elements ("Faster industrialization of Kenya", 1992).

The chemical and mineral industrial sector is dominated by mixing, blending and formulating operations using imported industrial chemicals to produce goods; about 90 per cent of chemical imports are intermediate inputs. The industry has low employment potential, exhibits scale economies and is research-oriented. Its key industries are petroleum and petroleum refining, paints and varnishes, basic industrial chemicals such as sulphuric acid, cement lime ceramics, plastics and rubber.

THE MANUFACTURING SECTOR

1. STRUCTURE AND PERFORMANCE

The manufacturing sector in Kenya is quite small, both in absolute term and as regards its contribution to GDP. Despite being small, however, the sector i relatively diversified. This diversification has been brought about by the import substitution strategy that encouraged the establishment of industries t manufacture goods which were previously imported. Despite the sector bein diversified, traditional domestic resource-based industries tend to dominate it. Thes include food, beverages and tobacco, footwear and textile industries. In addition t these there are other groups of industries that draw upon local raw materials an intermediates. These include cement, metal, paper and various chemicals. Amon these sub-sectors the food processing industry accounts for the largest share i manufacturing value-added (MVA).

There are however a number of sub-sectors whose share to MVA ha declined over time. These include metal products, paper and printing industries an machinery and transport equipment. Table 2.0 shows the performance of the variou manufacturing industries in the period 1983 to 1993. The meat and diary product sub-sector recorded a marginal growth in the years 1992 and 1993. The adverse weather conditions, which prevailed for most of 1992, resulted in a drop in output o liquid milk from 198.3 thousand litres to 171.6 thousand litres in 1993. Since 1990 output of milk has been on the decline with 1991 recording the highest drop of 53.1 per cent. Despite government incentives to the sugar industry that led to a growth o 3.6 per cent in output, demand still outstripped supply and as a result sugar wa imported to meet the shortfall.

BLE 2.0 QUANTUM INDEX OF MANUFACTURING PRODUCTION

(1985-1993) '000 KG/LITRE 1976=100

OD PROCESSING	1985	1986	1987	1988	1989	1990	1991	1992	1993
at and dairy products	81.0	97.0	115.3	127.9	130.9	136.6	122.2	91.8	93.6
ned vegetables. fish, oils & fats	194.9	228.2	268.1	267.7	291.1	306.1	346.7	323.3	366.8
in mill products	177.4	192.2	198.3	224.7	175.5	227.8	228.0	218.4	198.3
ery products	120.9	134.6	151.5	155.4	155.1	158.4	166.4	173.2	178.9
ar and confectionery	177.6	180.1	189.5	201.5	210.0	194.9	202.2	187.9	190.4
cellaneous foods	142.8	169.0	189.7	224.7	225.6	225.9	226.5	235.8	219.2
d manufacturing	135.7	144.9	157.8	167.5	171.0	169.7	171.1	164.9	164.5
erage	141.9	166.8	196.9	207.9	210.3	208.9	202.0	237.8	233.2
acco	151.8	156.2	170.8	178.1	178.6	177.7	173.0	192.2	194.2
erages and tobacco	144.6	166.0	194.3	201.9	204.1	208.3	201.7	233.1	232.0
XTILE AND WEARING APPAREL									
tiles	174.3	186.5	192.5	197.2	202.3	221.9	213.0	213.0	245.6
hing	352.5	354.8	359.8	368.3	378.6	337.7	314.8	311.9	284.5
her products and footwear	80.1	81.9	83.5	88.1	94.7	92.2	94.4	90.3	81.7
OD PRODUCTS , PAPER & PRINTING GROUP									
d and cork products	66.4	67.1	68.1	66.4	68.1	68.3	71.2	72.1	71.8
iture and fixtures	71.6	72.7	73.5	72.7	72.9	73.4	70.5	46.6	49.4
r and paper products	147.1	157.1	170.0	189.3	194.9	198.3	208.7	250.7	175.6
ting and publishing	330.8	350.4	372.2	389.1	392.9	397.8	401.9	407.2	407.2
EMICAL INDUSTRIAL GROUP									
strial chemicals	163.3	166.5	170.0	182.1	198.1	194.2	215.0	215.1	224.9
oleum and other chemicals	257.2	279.0	303.5	342.9	396.0	396.9	442.2	417.1	406.2
CHINERY - TRANSPORT EQUIPMENT GROUP									
ber products	247.2	262.3	277.0	286.3	308.7	302.3	299.1	584.7	577.3
ic products	198.0	205.7	212.3	202.8	219.1	220.1	253.9	299.6	330.6
ery and glass products	289.1	289.7	291.7	306.5	338.1	210.1	207.0	251.1	225.8
-metallic products	121.9	135.0	142.7	140.7	147.0	163.5	166.8	196.8	192.7
llic products	94.8	104.4	116.2	133.1	154.6	150.5	174.8	158.2	158.6
-electrical machinery	109.6	118.4	127.9	138.7	132.8	108.7	105.5	99.6	98.9
trical machinery	154.5	162.9	168.4	189.3	193.8	185.7	188.8	182.8	163.3
sport equipment	674.8	593.7	547.4	612.4	638.0	646.4	635.4	579.5	481.1
ellaneous manufactures	202.1	260.1	336.0	360.3	375.0	390.1	423.7	425.5	425.4
AL MANUFACTURING	178.2	188.7	199.4	211.3	223.8	219.8	228.2	231.1	235.3

SOURCE: Central Bureau of Statistics - Statistical Abstracts, various years.

Since 1990 the rate of growth in GDP has continued to slide below 4.0 per cent, drastically falling to a mere 0.4 per cent in 1992, the lowest since independence. This slowdown in GDP growth since 1991 could be explained in terms of the actual decline in real output and value added in agriculture due to a below average amount of rainfall, sluggish growth in aggregate private domestic demand, foreign exchange shortages leading to reduced imports of intermediate goods, and perhaps due to repercussions from the suspension of donor aid. The changes in the rate of growth are shown in Table 2.1.

TABLE 2.1 GROWTH RATES OF REAL GDP (%)

YEAR	AGRICULTURE	MANUFACTURE VALUE ADDED	TOTAL GDP
1983	1.6	4.5	2.3
1984	-3.9	4.3	0.8
1985	3.7	4.5	4.8
1986	4.9	5.8	5.5
1987	3.8	5.7	4.8
1988	4.4	6.0	5.1
1989	3.9	5.9	5.0
1990	3.4	5.2	4.3
1991	-1.1	3.8	2.3
1992	-4.2	1.2	0.4

SOURCE: Development Plan, 1994/1996 and Economic Survey, 1993.

The rapid growth in manufacturing during the first decade of independence can be attributed to the import-substitution strategy. This strategy which was supported by high levels of protection, had the desired effects at first but eventually created conflicting forces that later were causes of inefficiency and slower industrial growth. High levels of protection resulted in an anti-export bias by making

production for the domestic market more profitable than exporting. They also created a cost permissive atmosphere that did not encourage efficiency and international competitiveness. The effects of this can be seen in the slow overall growth of exports and in the decline in the proportion of manufactured output exported. In the light of all this it became increasingly clear that the scope for continued rapid growth of industry based on investment in highly protected, fairly simple, import-substitution industries was limited. Most of the easy possibilities had been exhausted, so the policies that supported this type of industrialization were perceived to be as longer appropriate. They were imposing costs on the economy at large which, in any case, had been adversely affected by the two oil crises of the 1970s and the associated acceleration in the accumulation of foreign debt, declining coffee prices, and the collapse of the East African Community in 1977. A more dynamic and more diversified export structure was clearly necessary. The existing policy stance was seen to be inhibitive to the further development of the economy and to its manufacturing sector. The manufacturing sector had become import-dependent, internally capital-intensive and incapable of absorbing an adequate proportion of the rapidly increasing labour force. Its parastatal component was also not performing well. Domestic demand was the driving force of growth within the sector. In recognition of all this the government saw the need to restructure the manufacturing sector. The exchange rate was devalued, interest rates became positive and the import regime began to be liberalized. Structural adjustment programmes (SAPs) were first introduced in 1980. They are primarily meant to address adverse economic problems but are not necessarily meant to address industrialization; they may or may not encourage industrial growth. It is hoped that by improving economic performance, the effects of structural adjustment programmes will positively spill over to industrialization. The programme prescription for reforming the industrial sector was to open the economy for imports to compete. Table 2.2 shows the growth in the domestic manufacturing sector for the period 1983 to 1993. The value of output at current prices grew by 34 per cent in 1993 compared to 10 per cent in 1992. Manufacturing value added increased similarly by 16 per cent, while intermediate consumption rose by 36 per cent in

1993. Total wages paid increased by 16 per cent in 1993 compared to 12 per cent in 1992 (Economic Survey, 1994).

(a) **Employment**

The manufacturing sector in Kenya derives its importance from its contribution to the employment objective. Despite the importance placed on the sector, however, manufacturing accounts for a very low proportion in the modern sector employment. This is demonstrated by the fact that in 1988 the sector accounted for only 12.9 per cent of the modern sector employment.

TABLE 2.2 MANUFACTURING SECTOR - OUTPUT, WAGE AND PRODUCT AT CURRENT PRICES (1983-1993) K£ MIL.

YEAR	VALUE OF OUTPUT	INTERMEDIATE CONSUMPTION	VALUE ADDED	TOTAL WAGES PAID (K£ mill)
1983	2425.58	1996.47	429.11	149.40
1984	2956.67	2471.97	484.70	168.72
1985	3535.62	2992.82	542.80	188.24
1986	4296.67	3688.43	608.24	205.48
1987	5089.68	4399.54	690.14	233.64
1988	6102.68	5305.12	797.56	266.68
1989	7282.57	6375.66	906.91	313.19
1990	8816.31	7774.96	1041.35	345.12
1991	10817.57	9583.31	1234.26	376.71
1992	11877.06	10568.15	1308.91	420.23
1993	15907.51	14394.66	1512.85	486.79

SOURCE: Economic Survey, various years

This is demonstrated by the fact that in 1988 the sector accounted for only 12.9 per cent of the modern sector employment. Furthermore, in terms of growth in employment the sector rose from 187,701 persons in 1990 to approximately 193,508 in 1993. This is an increase of 5,807 persons or 3.1 per cent, giving an annual average growth rate of approximately 1.0 per cent, over a period of three years (Economic Survey, 1994). The lowest annual growth rate of about 0.3 per cent was recorded in 1982 and was attributed to gross under-utilization of capacity due to lack of imported raw materials and stagnant domestic demand which led to the closure of a number of firms. High rates of 1985 (3.7 per cent), 1986 (3.8 per cent) and 1987 (4.5 per cent) were attributed to raised incomes arising from increased agricultural output that consequently led to a rise in the demand for manufactured goods and an improvement in the availability of imported inputs through the better provision of import licences and foreign exchange allocation. The combined effect of the two factors was the rise in capacity utilization and hence the creation of more employment. On average the food-processing sub-sector accounts for the largest share of manufacturing employment followed by the textiles and wearing apparel subsector. Other subsectors with substantial contribution to employment include the wood products, paper and printing subsector, machinery and transport equipment, metal products and chemical industries.

(b) **Productivity**

Labour productivity is defined as the manufacturing value added per worker. In order to compute labour productivity it is essential to have data on MVA and employment in the manufacturing sector. The rate of growth fluctuated greatly from year to year in the period 1983 to 1993. Labour productivity declined steeply from positive 3.4 in 1991 to 0.1 in 1993.

The overall index of manufacturing output indicates an increase of1.8 per cent in 1993 with employment growing by 1.7 per cent. As shown in Table 2.3 the proportion of wage costs to total manufacturing value during the past five years has averaged at roughly 34 per cent, leaving 66 per cent for potential reinvestment.

Labour costs include salaries and wages paid in cash plus cost of other labour benefits.

TABLE 2.3 INDICATORS OF LABOUR COST AND PRODUCTIVITY IN MANUFACTURING (%)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Change in the quantum index of manufacturing	+4.5	+4.1	+4.6	+5.9	+5.7	+6.0	+5.9	+5.3	+4.1	+1.2	+1.8
Change in numbers of employed in manufacturing	+1.3	+2.9	+3.7	+3.8	+2.3	+2.6	+2.8	+2.7	+0.6	+0.4	+1.7
Implicit change in labour productivity	+3.2	+1.2	+0.9	+2.1	+3.4	+3.4	+3.1	+2.6	+3.5	+0.8	+0.1
Wage cost as percentage of gross output	6.1	5.7	5.3	4.8	4.6	4.1	4.3	3.9	+4.1	+3.5	+3.1
Wage cost as percentage of value added	34.7	34.8	34.7	33.8	33.8	30.7	34.5	33.1	35.7	32.1	32.2

SOURCE: Economic Survey, 1994

c) Capacity utilization

The import-substitution strategy for industrial development though successful in serving its intended objective at the time, had a number of structural problems. One such problem is the fact that it made capital relatively cheap compared with labour. Hence entrepreneurs established capacities far greater than the domestic market could cope with. Some entrepreneurs established huge capacities with an eye on the former East African Community Market. After the collapse of the Community in 1977, therefore, the market for Kenya manufacturers was profoundly contracted. This, together with the inward-oriented production adopted by some industries, led to high under-utilization of the installed capacities. Such under-utilization of existing capacities is still in place, however, due to the

absence of statistical estimates, no accurate judgement of the size of this excess capacity can be made.

(d) Manufactured exports and imports

Exports

Kenyan exports are predominantly agricultural commodities, notably coffee and tea. As for the manufactured goods (excluding products in food, beverages and tobacco), export performance has not been very good. The proportion of manufactured goods exports to the total exports of the economy has not changed much over the years. The main industrial exports are chemicals (mainly pesticides, soaps and medicaments), cement, leather, textiles, machinery and transport equipment. The fastest growing exports during the 1980s included textiles and woodcarvings. Most of the other manufactured goods exports have either barely increased or decreased in current prices. This picture is improved slightly if beverages and tobacco are included in the list of exports of manufactured goods. This is because exports of these goods have increased substantially in recent years. Export price indices by commodity groups for the period 1983 to 1993 are given in Table 2.4. The general rise in these indices which has been experienced for all the groups of commodities over the years continued in 1993. Generally, high growth rates were registered in 1993 compared to those of previous years.

TABLE 2.4 VOLUME INDICES FOR EXPORTS (1983-1993) '000 KG

EXPORTS	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Food and live animals	105	102	114	188	125	120	133	154	132	134	142
Beverages and tobacco	155	105	231	148	235	180	186	275	302	565	723
Crude materials, inedible	101	110	116	121	121	153	113	111	120	125	97
Minerals fuels	85	84	69	81	78	96	76	75	96	80	89
Animal/vegetable oils & fats	156	460	201	159	116	150	250	146	183	428	1088
Chemicals	92	94	106	167	99	88	108	100	137	131	165
Manufactured goods	83	78	77	115	98	130	133	170	162	180	290
Machinery & transport equip	51	38	44	322	84	53	59	25	34	67	110
Miscellaneous manufactured articles	76	82	104	174	107	122	130	181	233	118	358
All exports	96	95	99	152	110	116	115	122	126	126	148
Non-oil exports	100	98	108	174	119	121	127	143	135	141	164

SOURCE: Central Bureau of Statistics - Statistical Abstracts, various years

Imports

Fuels, capital goods and raw materials and intermediate goods for the manufacturing sector dominate imports. Food imports have declined considerably over the years. Due to the restrictiveness of the protective system, non-food consumer goods, mostly items that are not manufactured in Kenya, accounted for only 6.4 per cent during the period 1980-1987. The composition of imports has shifted considerably largely reflecting the increase in the value of the petroleum products. However, the share for the value of petroleum products to the total import bill has been fluctuating from year to year. The changing importance of imports of machinery and transport equipment reflects the growth of gross fixed capital formation in the economy since 1985. Table 2.5 gives import price indices by commodity groups for the period 1983 to 1993.

TABLE 2.5 VOLUME INDICES FOR IMPORTS (1983-1993) '000 KG

IMPORTS	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Food and live animals	85	206	158	161	113	69	107	217	148	211	91
Beverages and tobacco	72	46	53	218	54	63	59	62	85	85	121
Crude materials, inedible	138	134	107	144	158	178	157	158	176	194	179
Minerals fuels	92	90	91	77	100	98	101	104	94	91	123
Animal/vegetable oils & fats	72	63	86	159	117	165	141	150	154	176	138
Chemicals	85	87	74	227	122	126	118	97	113	115	131
Manufactured goods	72	91	82	165	105	125	127	108	112	99	114
Machinery & transport equip	60	84	77	198	102	134	152	135	95	92	84
Miscellaneous manufactured articles	73	103	83	137	107	107	128	98	114	112	118
All exports	79	93	86	147	106	119	125	119	111	107	113
Non-oil exports	72	94	83	187	109	128	135	126	119	114	109

SOURCE: Central Bureau of Statistics - Statistical Abstracts, various years

2. OWNERSHIP PATTERNS

The Kenya government is committed to a mixed economy with the private sector playing a major role in industrial investments. Besides playing a supportive role by providing infrastructure facilities and services to the private sector, the government also participates actively with equity and loan capital from its development financial institutions such as ICDC, IDB and DFCK and occasionally directly from the Treasury. In fact, the financial participation by the government has been the feature in the expansion of Kenya's manufacturing sector. Over the years, development finance institutions have been the backbone of financing industrialization in Kenya, with credit facilities being directed mostly towards rural based enterprises. However, these institutions have not performed as expected in the last few years with most of them only financing already existing projects and no new ventures. Table 2.6(1) shows that since 1989 the lowest number of projects financed

was in 1993 when only 121 projects were financed compared to 205 and 140 projects in 1991 and 1992 respectively.

TABLE 2.6(1) Industrial projects approved by selected government or quasi-government institutions (1983-1993)

INSTITUTION	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Industrial development Bank Ltd. (IDB)	2	6	6	10	18	15	8	8	7	4	7
Development Finance Co. of Kenya (DFCK)	22	12	13	10	12	4	3	9	9	21	11
Kenya Industrial Estates (KIE)	139	114	229	411	164	205	131	219	169	105	94
Industrial, Commercial Development Corporation (ICDC)	7	8	9	12	15	14	6	12	20	10	9
TOTAL	170	140	257	443	209	238	148	248	205	140	121

SOURCE: Economic Survey, various years

Government participation in industry is concentrated in large-scale enterprises. As regards the private sector, medium and large-scale manufacturing enterprises are almost entirely owned by multinational companies and Kenyans of Asian origin. Kenyans of African origin own very few medium and large-scale enterprises. Yet it is universally accepted that in order to maintain economic and political stability in any country, a significant portion of investments should be in the hands of its nationals and especially the dominant group. In recognition of this, the government has pursued a Kenyanisation strategy so as to increase the participation of local people in various activities of the economy ("The Second Industrial Development Decade for Africa", 1990).

3. GEOGRAPHICAL DISTRIBUTION

With over 80 per cent of the population living in rural areas and with half the number of manufacturing enterprises located in Nairobi, the government has seen it fit to design policies that would encourage the dispersion of industries i.e. away from major urban areas to smaller towns and rural centres ("Faster Industrialization of Kenya", 1992). In a move toward this end incentives have been provided for the development of small-scale enterprises. These incentives have included reductions and exemptions from income and value-added taxes. Table 2.6(2) shows approved expenditure figures for industrial projects by some selected organizations.

TABLE 2.6 (2) Expenditure approved (K£ mill.) for industrial projects by selected government or quasi-government institutions (1983-1993)

INSTITUTION	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Industrial developemnt Bank Ltd. (IDB)	2.7	2.5	3.3	5.7	11.3	6.5	3.3	3.4	9.6	7.1	15.0
Developemnt Finances Co. of Kenya (DFCK)	2.6	3.7	6.6	4.2	6.1	0.7	0.8	5.3	8.9	22.5	11.5
Kenya Industrial Estates (KIE)	2.4	2.1	2.1	4.3	2.4	3.3	2.5	4.0	3.7	2.9	2.0
Industrial, Commercial Develpoment Corporation (ICDC)	1.3	3.6	1.9	6.1	7.6	3.1	7.0	4.0	20.6	8.7	1.9

SOURCE: Economic Survey, various years

4. INSTITUTIONAL AND LEGAL FRAMEWORK

The institutions supporting industrial development in Kenya are many. They include public institutions such as government ministries and parastatal bodies. The Ministry of Commerce and Industry is the overseeing body for industry in Kenya, others are private institutions. In addition to setting up institutions to support industrial development, the government has also put in place necessary legal framework to give protection to investors and their investments. To improve the domestic market, the government has removed price controls on some manufactured products. In order to create a competitive environment the Restrictive Trade Practices, Monopolies and Price Control Act (1988) was enacted.

5. DOMESTIC AND FOREIGN MARKETS,

Manufacturing for exports has not done well in Kenya as most of the goods manufactured being consumed in the domestic market. This market has been highly protected, and price controls have been administered on some goods. Price controls while justifiable as a means of protecting the consumers, may lead to shortages, low profits and in-built uncertainties. These act as disincentives to investment in the production of price controlled products. Due to this the government has in the last years gradually lifted price controls on various items in the "General List" retaining only twelve items in the "Specific list". The removal of price controls however has its dangers if monopolistic firms control markets. To guard against this the Restrictive Trade Practices, Monopolies and Price Control Act (1988) was enacted and empowered to guard against monopoly and collusion in price fixing and the control of markets by large firms against the smaller ones, factors which tend to kill the competitive spirit that ought to be fostered in the economy.

6. PRIORITY AREAS

The sluggish rate of growth in the export of manufactured goods has been of major concern to the government. In this respect policy changes are being effected to increase exports of manufactured goods. Other areas being accorded priority are the establishment of core industries and the promotion and development of small-scale industries. As regards small-scale industries the government has realized the potential that lies with these enterprises in terms of employment opportunities ("The Second Industrial Development Decade for Africa", 1990).

INDUSTRIAL POLICIES AND STRATEGIES

The results of the decision by the government of Kenya, after independence, to opt for an import-substitution strategy as its vehicle for industrial development were initially encouraging. The strategy allowed for impressive growth of Kenya's industrial sector. The manufacturing sector's share in GDP rose from 10 per cent in the late 1960s to 13 per cent in the early 1980s. Employment growth in manufacturing was significantly higher than in other sectors although not as rapid as the growth of real output in the sector, reflecting rising labour productivity over the period. The policy instruments chosen to promote the import-substitution strategy included high levels of protection (high tariffs and import quotas enforced through foreign exchange allocation). Protection was supported by an exchange rate policy that produced an over-valued currency which, in turn, discouraged exports and kept the prices of imported capital goods and intermediate inputs relatively low, subsidized interest rates which encouraged investment and direct state participation in the manufacturing industry. By the 1980s, the existing policy stance was seen to be inimical to the further development of the economy and to its manufacturing sector. It became painfully clear to observers that industrial growth alone is not able to alleviate the problems of mass poverty, income inequality, unemployment and regional imbalances.

Gradually, from the late 1970s as a result of the government's recognition in the 4th Plan (1979-1983) of the need to restructure the manufacturing sector and also as a consequence of the stabilization measures introduced in the early 1980s to

correct the alarmingly high deficits on the current budget and balance of payments, the policy stance began to change. The exchange rate was devalued, interest rates became positive and the import regime began to be liberalized. With the publication of Sessional Paper No.1 of 1986 (Economic Management for Renewed Growth) the government intention of moving toward a more market-oriented and more outward-looking development strategy, including a more export-oriented industrialization strategy, became explicit. This document revealed the government's realization for the need to have an industrialization-based initiative to attract new foreign and local direct investment into the export processing zones (EPZs) so as to accelerate industrial development in Kenya. Many, although not all, of the necessary changes in policies and in policy instruments needed to give effect to this new strategic approach were spelled out in the 6th Development Plan. Indeed Sessional Paper No.1 of 1986 was designed to provide a blue print not only for the erstwhile plan but, in taking year 2000 as its time horizon, for subsequent plans as well.

At the macro-economic level, the environment within which the manufacturing sector operates has been improved through policy changes regarding areas of public finance management, the foreign exchange regime and foreign investment climate, credit and interest rate policy and taxation. In an attempt to reduce the current budget deficit and bring order to the public finances the government has been trying to improve the revenue side by improving tax collections and introducing some cost-sharing on beneficiaries of public health and education services. The Central Bank maintains a trade-weigh peg of the Kenya shilling to the currencies of the IMF's Special Drawing Rights. Since 1982 it has gradually but increasingly devalued the shilling's real exchange rate. By 1987 it had fallen by nearly 22 per cent and the Bank seems set to continue with this policy of gradual devaluation. The Foreign Investment Protection Act guarantees foreign investors the right to repatriate all their profits but they often encounter long delays. Previously investors had to deposit their profit in low-interest frozen accounts, sometimes for years, while awaiting foreign exchange. The government is now trying to speed up the process; meanwhile investors are permitted to put their profit in deposit accounts at market rates of interest. Credit policy still awaits a major overhaul.

In the manufacturing sector the key aspects of the credit system are: the tendency of commercial banks to extend mainly short and medium term finance, the lack of sectoral priorities on the part of the development finance institutions (DFIs), the failure of DFIs to roll-over their loans to fund new investment; the inability of many DFIs to offer funds free of significant foreign exchange risks; the prohibitive expense of the Central Bank's future contracts for foreign exchange; and the absence of long-term export credit financing. On the whole financial institutions are overly conservative and their lending policies tend to be biased against all but the very large manufacturing enterprises. In order to make a larger share of credit available to the private sector, the government's share was projected to decline from 35 to 28 per cent during the 6th Plan period. Since the late 1980s real interest rates have again become positive and the 6th Plan's stated intention was to maintain this policy in order to make interest rates the main instrument of credit allocation. The stated long-term intention was to gradually allow market forces to determine rates, including those of government bonds. In reality the move to market determined rates is likely to happen relatively soon. The final change in macro-economic policy which is contributing to an improvement within which the restructuring of the manufacturing sector is being pursued is under the heading of taxation; the system has been streamlined. Corporate taxes have been reduced from 45 to 40 per cent, and in 1990 sales tax was replaced by the more efficient value-added tax.

Of more direct relevance than the macro-economic policy environment to manufacturers and the prospects of a successful restructuring of the manufacturing sector, are the government's policies in relation to protection, export incentives, pricing policy, the private sector/parastatal balance, the role of small-scale and medium-sized enterprises (SMEs), rural-urban balance, environmental sustainability, and the promotion of the economic status of women. Protection is still high in Kenya. Inefficient producers are shielded from competition and can penalize consumers by charging unduly high prices. Effective rates of protection (ERPs) are also very high. Indeed they are higher for the parastatals than for private sector enterprises (184 versus 60 per cent). Measures have already been taken to rationalize the tariff system so that similar goods bear similar rates. Official policy

is to reduce protection in order to foster competition, but fears of bankruptcies, even among potentially efficient enterprises, are being expressed in discussions relating to implementation. At the time of writing this report the cumbersome import licensing system was still in operation. Depending on the availability of foreign exchange, import licenses have been granted according to pre-determined list of priorities. Declared policy is to rely less on quantitative restrictions and more on the exchange rate and tariffs. As a first step the list of goods that can be imported with a few restrictions has been increased from 803 in 1984 to 1,212 in 1987 and further liberalization is planned for the future. Since there has been slow growth in exports of manufactured goods, the government has over the years introduced a "zones of export" incentives schemes. One such scheme is the Export Compensations Scheme introduced in 1974. However, delays in processing and paying claims, the absence of clear eligibility criteria, taxation of payments and an openness to abuse have all prevented the scheme from promoting exports of manufacturers to any significant extent. The on-going liberalisation of the Kenya economy, however, is bound to make some definite and positive changes to the industrialization process ("Kenya National Programme for the Second Industrial Development Decade for Africa" - 1990).

In the 6th Plan the government declared its intention to improve the operation of the scheme by setting up a three-stage duty draw-back facility providing for the remittance of import duties on the actual value of imported inputs of manufacturers. The facility includes manufacturing-under-bond, export-processing zones, the Green Channel Scheme and expeditious foreign exchange allocations to exporters to buy imported inputs. The export processing zones programme, perhaps the best known of them all, was launched in 1990 with the overall objectives of facilitating and promoting the establishment of export-oriented investments in designated zones and the development of an enabling environment for such investments.

The government controls prices of a wide range of manufactured products. In 1987 the prices of eleven basic foods and beverages and forty manufactured goods were subject to price controls. Since then the range has been reduced and further

liberalization has been announced. The new Monopolies and Price Commission within the Ministry of Finance is mandated to control monopoly pricing in the absence of competition from imports. Most of the state's majority holdings in the manufacturing sector are in textiles, sugar refineries and cement production. Due to the poor performance of so many parastatals, they are currently under review and being classified according to need for rehabilitation or restructuring, need for divestiture and privatization, and need for retention. Clearly policy appears to be moving in the direction of a lower degree of government involvement in manufacturing primarily through privatization and through the promotion of private sector investment by indigenous Kenyans and foreign investors.

SUMMARY

To accept that a businessman will fall in with a plan based solely on the concepts of location theory may be very misleading. Entrepreneurs aim at finding a 'satisfactory' location which enables a business to break even, gradually survive and eventually become a profitable venture. Theory suggests that for each activity an optimum location does exist and that the correct set of variables should ensure the success of a business in a given location. The key elements in location theory - transport, labour, agglomeration and market factors - are all seen to be of importance in practice, setting the basic parameters to any location decision. But at times location theories contradict how location decision-makers actually behave. Practice suggests that there are also behavioural and institutional factors, difficult to quantify in a simple model, which may also influence location decisions within the framework provided by other factors. For instance, the effectiveness of a location decision may depend on the ability of the entrepreneur to perceive and evaluate relevant criteria and data. Imperfections in knowledge, uncertainties about the future course of costs and revenues at each location, high relocation costs, personal location preferences etc.. make a profit-maximizing location model unacceptable. All manner of individual circumstances can be evoked to account for sub-optimal economic behaviour. Sub-optimality refers to decisions that are not the best, whether the criterion is profit maximization or a "non-economic" objective.

Decisions made on the basis of personal factors, however, need not be sub-optimal. Besides personal or individual factors, another feature that tends to militate against the choice of optimum location lies in the fact that when a firm investigates the alternative locations at its disposal for a new industrial establishment, that firm incurs extra expenses whose magnitude varies with the thoroughness of the investigation. Since such expenses have to be set against the capitalized benefits expected to accrue from the choice of the best location available, the benefits need to be large in comparison with the cost of ascertainment. In Kenya such benefits are in many cases not large hence many industrial firms do not normally press their investigations far and seem satisfied with sub-optimal locations (Ogendo, 1989). The quality of many firms' investment decisions is not as sophisticated and thorough as would be desirable. In addition, industrialists often have little choice but to fall in with plans by local authorities for specific industrial sites. It is also important to note that in Kenya industrial circumstances tend to change rapidly during the life of an industrial business. As with most things, the significance of each location factor changes overtime. The growth of light industry may result in a decline in the importance of proximity to markets and suppliers. Similarly, improvements in transport and communications are also likely to make movement over larger distances more acceptable, with the emphasis changing from `how far' to `how long'.

The concept of an optimum location, therefore, is a hazy one and seems to signify little in the Kenyan context. And yet many firms do manage to get by on sub-optimal decisions, which negates to some point the fact that the right decision was not made "ab initio". Indeed it has fortunately been found in certain cases that location decisions are in fact rational and even optimal in a sense. Moreover, as in the words of Hoover (1948),.. "competition, insofar as it prevails, will reward the well-located firms and shorten the lives of poorly located ones. Even if new establishments were to be located purely by guesswork or whim or by sticking pins into a map at random, and if they were never relocated, some semblance of a reasonable pattern would still emerge as a result of competition."

But industrial location theory, even when modified by empirical evidence, is still essentially a theory of location of the firm. Many studies have been devoted to industrial location from the perspective of the individual firm or industry and indeed cost structures, personal considerations etc.. are of paramount importance not only in the decision to locate but also in the continued well being of the firm. That new firms may face location decisions is evident, and if bad location decisions are to be avoided, it is necessary to examine location determinants in practice. Yet the location problem must be faced not only by new firms seeking their first site, but also by established firms struggling to keep afloat in rough waters. The possibility that the problems and constraints facing existing firms are internal to the firm can obviously not be overlooked and faced with these pressures most firms would first investigate whether or not the resources of existing sites could be used more efficiently. However, the problems afflicting many industrial establishments may have less to do with the individual location and circumstances of the establishment and more to do with extraneous effects beyond the control of industrialists. There is a marked gap in existing research with regard to difficulties experienced by establishments once they have located.

CHAPTER THREE

BACKGROUND TO THE STUDY AREA

This chapter presents an overview of the physical aspects of the study area. Although the study was restricted to industries within Nakuru municipality, it would be impossible to isolate the pertinent area from its regional hinterland. It is essential to examine the environment in which these industries exist as pertains to physical features, socio-economic factors and infrastructure.

Introduction

Nakuru town started as a railway centre along the Kenya-Uganda Railway at the beginning of the century. The railway opened the hinterland to large-scale farming and the town grew as a service centre for farmers, eventually becoming the administration centre of the Rift Valley Province. With the advent of Kenya's independence came an influx of people from various parts of the country particularly from neighbouring Central Province which was densely populated. Farm buying cooperatives were formed to purchase large-scale farms thus increasing the demand for services in the municipality. In 1972 the municipal boundaries were extended and the area increased to 78 square kilometres. Most of the new areas incorporated the cooperative farms whose subdivision began in earnest so that members could settle on individual parcels. Planning for these new settlements became difficult and the demand for local authority services outstripped supply. It was also difficult to deal with the demands of the cooperative farms as some of them went against planning standards. Meanwhile the population of Nakuru was rising rapidly. Sources from the town-planning department say it rose from 47,000 in 1969 to 93,000 in 1979. This excessive increase gave rise to the mushrooming of unplanned settlements and slums with the resultant inadequacy in urban facilities. Thus began a legacy of uncontrolled planning whose effects can be seen in the town even today. At the time of this research, plans to formally elevate Nakuru town to municipal status were in the pipeline.

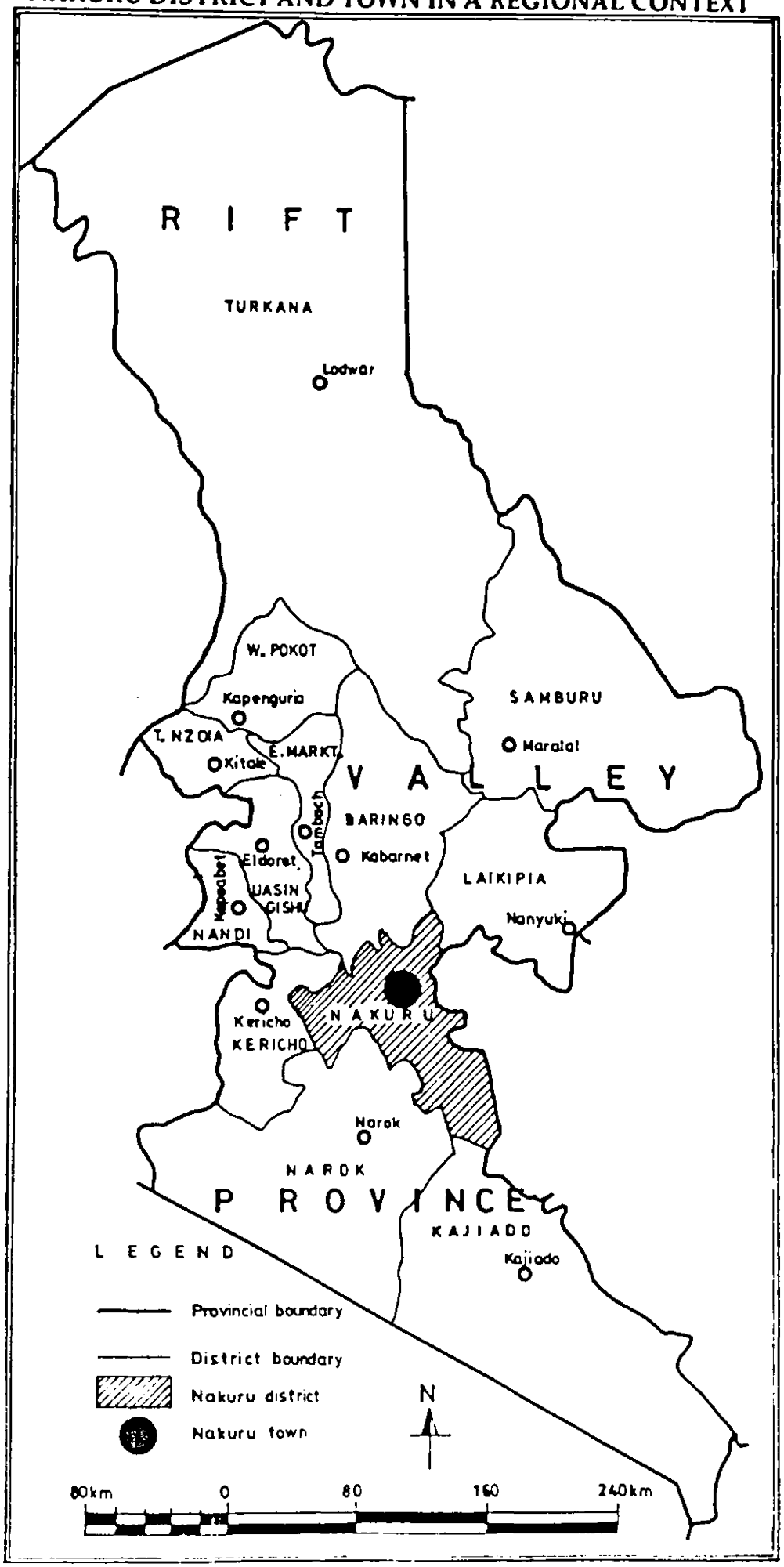
Regional setting: Nakuru district

Nakuru town lies within Bahati division of Nakuru district. Nakuru district which has an area of 7200 square kilometres is located between 35 degrees 28' and 36 degrees 35' East and 0 degrees 13' North and 1 degree 10; South. Presented in Map 3.0 is Nakuru district and town in a regional context. The district is one of the fourteen districts of the Rift Valley Province and lies within the Great Rift Valley, bordering seven other districts: Kericho to the west, Baringo and Laikipia to the north, Nyandarua to the east, Narok to the south-west, and Kajiado and Kiambu to the south. The area is one of the most diverse in Kenya, extending as it does from the moorlands over 2700 metres above sea-level to the hot lowlands bordering Baringo district at a little more than 890 metres. Most of Nakuru district lies within the higher parts. There are dormant and extinct volcanoes such as Longonot (2774m), Eburru (2682m) and Menengai (2280m). Faulting within the district is evidenced by such features as the Aberdare and Mau Escarpments and the Rift Valley Lakes Nakuru (52Km^2), Naivasha (210Km^2) and Elementaita (21Km^2) of which Lake Naivasha is the only fresh water lake. The western part of the district which comprises mostly Molo and Olenguruone divisions, is situated on the Mau Escarpment and generally lies at an average altitude of 2500 metres above sea level. The eastern fringe of the district which covers parts of Bahati, Naivasha and Gilgil divisions lies on the Kinangop Escarpment at an altitude of about 2100 to 2500 metres above sea level.

Geology and physical features

The geology and the physiographical features of Nakuru district have been greatly influenced by the tectonic activities associated with the evolution of the Rift Valley. The Valley was formed by a series of minor and major faulting episodes that have taken place in the past and are still occurring mainly as a result of subsequent eruptive series. The action of erosion and reaction of lava with the varying nature of rocks and soil has in time moulded the structure of the Rift Valley floor to its present form. There are numerous faults in the crust of the earth, some of which are

MAP 3.0 NAKURU DISTRICT AND TOWN IN A REGIONAL CONTEXT



visible while others are hidden underground. Many occurred a long time ago but may continue to split or extend with continued exertion of pressure on them.

The Rift Valley system of faults have formed by the fact that its crust received tremendous tension and eventually split and subsided. Furthermore, the Great Rift Valley is expanding continuously. According to geologists it is expanding east-wards at a rate of 0.02 cm annually and the frequent earth tremors in parts of Kericho, the Nandi Hills and many other parts of the Valley are as a result of this movement of its structure (McCall, 1966). The movement is caused by the pull to the east of "conventional natural forces". The occurrence of earth quakes due to the movement of the Rift Valley affects many variable forces on the crust and the rock composing it cannot endure the stress. The part of the Great Rift Valley in which the Nakuru area mainly lies is called the Gregory Rift Valley and has been grouped among one of the minor seismic zones of the earth, that is, earthquakes of shallow focus occur there on a limited scale. Minor shocks are fairly frequent in the area, being most commonly felt at Solai and Subukia and seeming to approach from the northeast i.e. from the direction of the Laikipia escarpment. Although the area has been classified by seismologists as one of minor seismicity, this very fact emphasizes the existence of faults in relatively high proportion since quakes will occur where parts of the crust of the earth are thinner or more liable to crack than in other parts due to weakened spots. The tension exerted in the crust by earthquakes and shocks further weakens already existing faults and tends to cause them to expand or split.

The result of these tectonic and volcanic disturbances is a complex serrated topography. There are two basic land surfaces in the district. These are the highland masses forming the shoulders of the Rift Valley and the Rift Valley floor. The highland masses are to be found to the eastern and western boundaries of the district. The eastern shoulders of the Rift Valley are dominated by the Kikuyu escarpment and the Mau escarpment dominates the western wall.

Soil and land-use patterns

The distribution of soils in the district is complex, having been influenced by the extensive variations in relief, climate, volcanic activity and underlying rock types. The soils are derived primarily from weathered volcanic and basement rock system. According to the Nakuru District Development Plan (1994-1996) the soils in the district are classified into three types:-

Latosolic soils - these are well-drained red soils derived from volcanic and basement complex rocks and are found in upper Subukia Valley and north Rift Valley. Imperfectly drained loam with dark brown sub-soils cover the highlands of Bahati and the steep slopes of Njoro and Elementaita Hills. They also cover Nakuru Municipality and Maai Mahiu area. The fertility of these soils is moderate to high. The main agricultural activities found in these areas are the growing of wheat, maize, pyrethrum, sunflower, finger millet, potatoes, pigeon peas, vegetables, beans, peas, sheep and dairy farming.

Planosolic soils - these are poorly drained dark brown clay with highly developed textured topsoil. Well-drained humic lawns with dark brown sub-soils are also found in the district. The fertility of these soils is high covering areas of Olenguruone, Molo, Rongai, parts of Bahati, parts of Njoro and Kinangop. The main agricultural activities in these areas are sheep and dairy farming, the growing of wheat, pyrethrum, maize, vegetables and barley. Sheep and dairy farming are concentrated in Molo, parts of Njoro, Bahati and Olenguruone. The pyrethrum and wheat areas cover 800 square kilometres in Molo, 390 square kilometres in Njoro and small parts of Naivasha and Bahati.

Alluvial and lacustrine deposits - these are shallow soils developed from sediments of volcanic ashes and other sources. They cover the Rift Valley bed between Lakes Nakuru and Naivasha, Solai and Menengai Crater. The soils surrounding the lakes have low to moderate fertility. Main economic activities in these areas include livestock rearing (mainly ranching), sorghum, sisal and millet growing. Most of Nakuru district's land type is between medium and high potential. Table 3.0 gives land classifications and land use patterns in the district.

TABLE 3.0 LAND CLASSIFICATION

Land classification	Land area (ha.)	Land use pattern
High potential	291,000	Dairy, crop production
Medium potential	390,000	Crop, beef ranching, horticultural crops
Range land	180,000	Ranching, beef, dairy, crop production, irrigation
Low potential	51,000	Dairy, crop production, beef ranching, horticultural crops

SOURCE: District Agricultural Office, Nakuru

Climate

The climatic conditions of the district match the topographic variety of the area. Both the temperatures and the rainfall reflect the contrasting conditions between the Rift Valley floor and the shoulders. Thus there is considerable variation in climate throughout the district. The rains fall in the months of April and between October and December. The amount and occurrences has however differed from year to year, greatly affecting yields and pastures especially in the lower and more marginal areas of the Valley floor. The maximum mean temperatures here are between 26 to 30 C while on the western highlands of Molo and Olenguruone temperatures fall to 18 C. In general, Nakuru district can be divided into three broad climatic zones:-

Zone 1: Rainfall of over 1015 mm annually, humid to semi-humid equatorial climate with a moisture index of less than 10. This zone covers Mau Narok, Molo, Olenguruone and Lower Subukia.

Zone 2: Rainfall of 760-1015 mm annually, dry sub-humid equatorial climate with a moisture index of 10-30. The zone covers Bahati, Subukia, Njoro, Kinangop and parts of Rongai. Zone 3: Rainfall of less than 760 mm annually, semi-arid climate

with a moisture index of 30-42. This zone covers Gilgil, Naivasha, Longonot, Solai, Lanet and parts of Rongai.

Nakuru town at an altitude of 1850 metres and situated in the central part of the district lies in Zone 2, receiving 862 mm annually with maxima in the months of April-May and again in July-August. The highest record of rainfall is in May and the driest month is January. The rainfall increases westwards towards the Mau escarpment and in other elevated parts of the district. The areas which receive less than 760 mm are those that are generally in the rain shadow of rain-bearing winds that deposit much of their moisture on the Kikuyu escarpment. The Mau escarpment and the highland masses directly in the path of the easterly winds receive much rainfall.

Natural resources

The district's economy is based on agriculture. There are no major minerals except for diatomite, which is extracted at Kariandusi near Gilgil. Other mineral deposits are too small to justify economic exploitation. There are varying quantities of mica near Mt. Longonot, sulphur on the south-west side of Lake Naivasha and soda ash at Lake Nakuru but these and other possible mineral deposits have not as yet been exploited. There is also stone quarrying in various places notably Naivasha, Menengai Crater, Lare, Njoro and Molo and sand scooping in Nakuru and Naivasha for use in the local building industry. The other significant resource is forest. Forests cover the extreme areas of Molo south and Olenguruone, including south-east Molo, Siape and Mau Narok upto Keringet and a small portion of Bahati. The district has a total gazzetted forest area of 1331 square kilometres, a zone which has high potential for both indigenous forest species such as cedar and podo olive, and exotic species such as gum, cypress and pine. Also of importance are activities related to tourist industry centred on wild-game and bird-life especially the flamingoes at Lake Nakuru, and the scenic beauty of the Longonot-Naivasha recreation area. There are two national parks in Nakuru district: Lake Nakuru National Park and Longonot/Hell's Gate National Park. There are six game reserves: Kilombe Lake Elementaita, Menengai Crater Olenguruone Bamboo Forest, Londiani

Crater and the corridor between Lakes Nakuru and Elementaita. Commercial fishing is limited to Lake Naivasha which is the only fresh water lake in the district. However, the most important resource in Nakuru district besides human resources is the rich agricultural land. It is clear that agro-based industries offer the best chances in the use of local resources and employment opportunities.

Administrative and political units

Nakuru district is divided into nine (9) administrative divisions namely: Nakuru Municipality, Rongai, Bahati, Mbogoine, Gilgil, Naivasha, Molo, Njoro and Olenguruone. Four of these were created during the last plan period as were twelve locations and twelve sub-locations to make a total of thirty-four locations and fifty-nine sub-locations. The district has five parliamentary constituencies namely: Nakuru Town, Nakuru North, Nakuru East, Molo and Rongai. There are four local authorities namely: Nakuru County Council, Nakuru Municipal Council, Naivasha Town Council and Molo Urban Council.

Markets and town distribution

Nakuru district is well served with a hierarchy of urban, rural, market, and local centres. Most of the major centres are located along the Nairobi-Eldoret Highway while the very small local centres are located away from the highway.

Urban Centres: Nakuru, Njoro, Molo and Naivasha.

Rural Centres: Mau Narok, Elburgon and Gilgil.

Market Centres: Mbaruk, Ngwataniro, Ambusket, Elementaita, Kibunja, Banita, Morendat, Turi, North Karati, Nyamamithi, Mau-Summit, Maraigushu, Kabazi, Molo South, Kongoni, Kandutura, Keringet, Kariandusi, Siape, I Ikunbi, Karunga, Kambi Ya Moto, Kerisoi, Eburru, Maai Mahiu, Kamwaura.

Many other centres have been established over the last decade largely in areas newly settled and many have grown faster than the designated growth centres. These will also need to be provided with infrastructure especially roads, if they are to deliver the necessary services.

Infrastructure distribution

Nakuru being a newly settled district with a large influx of people over a short period of time has definitely experienced a short fall in availability of infrastructure. There has been a big increase in the provision of infrastructure facilities i.e. roads, schools, health, water and grain storage, but these have not kept pace with the increase in population.

Roads

As indicated in Table 3.1 the district has a fairly extensive network of roads with a total of 512.2 kilometres of bitumen roads; 631.6 kilometres of gravel roads; 409.8 kilometres of rural access roads. The bulk of the bitumen roads are international, national highways and trunk roads that pass through the district and connect with other parts of the country or neighbouring countries. The district has a shortage of good gravel roads to serve the farming community in the marketing of produce.

TABLE 3.1 ROAD NETWORK

CLASS	TOTAL KM.	BITUMEN	GRAVEL	EARTH
A	156.7	156.7	-	-
B	102.8	102.8	-	-
C	222.9	188.9	34.0	-
D	519.1	53.4	407.8	57.9
E	527.2	1.5	173.8	51.9
GOVT. ACCESS	36.1	8.8	16.5	10.8
RURAL ACCESS	255.9	-	-	-
TOTAL	1820.7	512.8	631.6	409.8

SOURCE: District Roads Engineer's Office, Nakuru

Water

The district relies almost equally on surface and ground water for its supply. Most of the operating water supplies are over utilized owing to the phenomenal growth in population as a result of immigration into both the rural areas and the towns. Due to the inadequacies of surface water sources there has been great reliance on ground water sources. Many boreholes have been drilled in the past and are at present disused and need rehabilitation. Out of the thirty operational rural and urban water supplies in the district, over half require rehabilitation owing to over-use if they are to increase their capacity.

Nakuru town obtains its water supply mainly from Lanet, Mwariki, Ruist Water Supply, Mereroni Dam and Barut Borehole. Water supply development in the town has been based on short-term solutions and mainly underground water sources; nonetheless it served the town adequately until 1985. Since then water shortages are chronic in the town. The Nakuru Municipal Council is dependent on three sources for its water supply: surface, underground and bulk water purchased from the National Water Corporation. The council has difficulties in its supply of sufficient water mainly because most surface water is obtainable from distances ranging between 12 to 50 kilometres and there are a limited number of permanent rivers flowing within that distance. In addition, boreholes are expensive to run owing to their consumption of electricity and need for repairs.

Grain storage

The National Cereals and Produce Board has recently commissioned new silos with a capacity of 550,000 bags to bring the grain storage capacity in the district to about 2.2 million bags. The grain storage capacity is sufficient to cater for all grain produced in the district. In 1987 the district produced 1,629,977 bags of mixed grain (maize and wheat) and 183,688 bags of beans. The storage capacity in the district serves also as a transit centre for grain from neighbouring districts.

TABLE 3.2 GRAIN STORAGE FACILITIES IN NAKURU DISTRICT

CENTRE	CAPACITY (bags)	TYPE OF SILO
Elburgon	50,000	conventional silos
Mau	55,000	conventional silos
Narok	160,000	conventional silos
Naivasha	230,000	conventional silos
Nakuru	550,000	new silos
Nakuru	550,000	old silos
Nakuru	450,000	cyprus bins
Nakuru	52,000	conventional silos
Njoro	16,000	conventional silos
Solai	70,000	conventional silos
Subukia	50,000	conventional silos
TOTAL	2,233,000	

SOURCE: National Cereal and Produce Board (NCPB).

NAKURU TOWN

A central place, growth and development-centre

The government has identified and designated various centres in Nakuru district where social and economic infrastructure and development projects should be encouraged to locate so as to speed up the process of rural development. The rationale behind this policy is that when projects are concentrated at one centre, it is possible to reduce the capital costs for any one agency since numerous users would share initial costs thereby reducing the burden for each of them. Furthermore, the concentration of development would reduce overall costs and ensure efficiency and convenience to the users of such facilities. Where developments are scattered, each agency provides its own services whenever development projects are undertaken. This is not an effective method of providing services to the rural area since resources available to the region and country as a

whole are meagre. Thus, when projects are located close together, besides the obvious advantages of coordination, there are economies of scale to be realized by developers. The government agency responsible for the coordination of this policy is the department of Physical Planning which has identified four levels of service centres each serving a smaller or larger hinterland. The four levels of centres are termed in their descending order of importance as urban, rural, market and local-centres. The strategy of locating activities in designated areas should promote the formation of small towns in rural areas. As these centres grow, they form a level of urbanization that is large enough to become economically served with public water supply, sewage disposal facilities, electricity, postal and banking facilities etc.. Once a centre has its basic infrastructure facilities, it will tend to attract commercial and industrial development that will enrich the lives of the people of rural areas and provide improved employment opportunities.

Amongst all the centres in the district, Nakuru town is the most favourable as a development centre. First and foremost the size of its population, estimated at approximately 212,883 people by 1996, has necessitated the highest level and range of services in the district (Nakuru District Development Plan, 1994-1996). The other centres have not only smaller resident populations but smaller effective hinterlands as well since the influence of Nakuru town reaches all corners of the district via the good road network. The growth of these rural centres has been largely abetted by the emergence of small centres all over the district and which have direct links with Nakuru town. The town has a broader infrastructure base that has attracted many manufacturing and service industries whose threshold extends to different regions in Kenya. In terms of industrial development the town serves not only the surrounding areas from which most of its industries get their raw materials and market the bulk of their products, but also serves different parts of the country. There are development inducing industries e.g. pyrethrum-processing, the dairy industry and to some extent grain milling. The industries mainly rely on the town's immediate hinterland and beyond for their raw materials. The dairy industry in the district gets its milk from farmers who sell the milk to the K.C.C factory in Nakuru town. The pyrethrum-processing industry draws its raw materials from farms in the district

and as far as Limuru, Kisii and Meru. Such industries greatly assist in developing the rural areas by promoting local development of their raw materials agriculturally. These industries, including others such as the Union Carbide Batteries and Nakuru (Blankets) Industries, are fairly capable of developing the town's hinterland. The industries generate external economies in the form of inter-industry linkages, labour and enterprise services that attract different small and medium-scale industries to Nakuru leading to a greater industrial diversification of the town. The development-inducing agro-based industries and other service industries serve the hinterland through their plough-backs and external economies by generating incomes further invested in other economic sectors (Nakuru District Development Plan, 1994-1996).

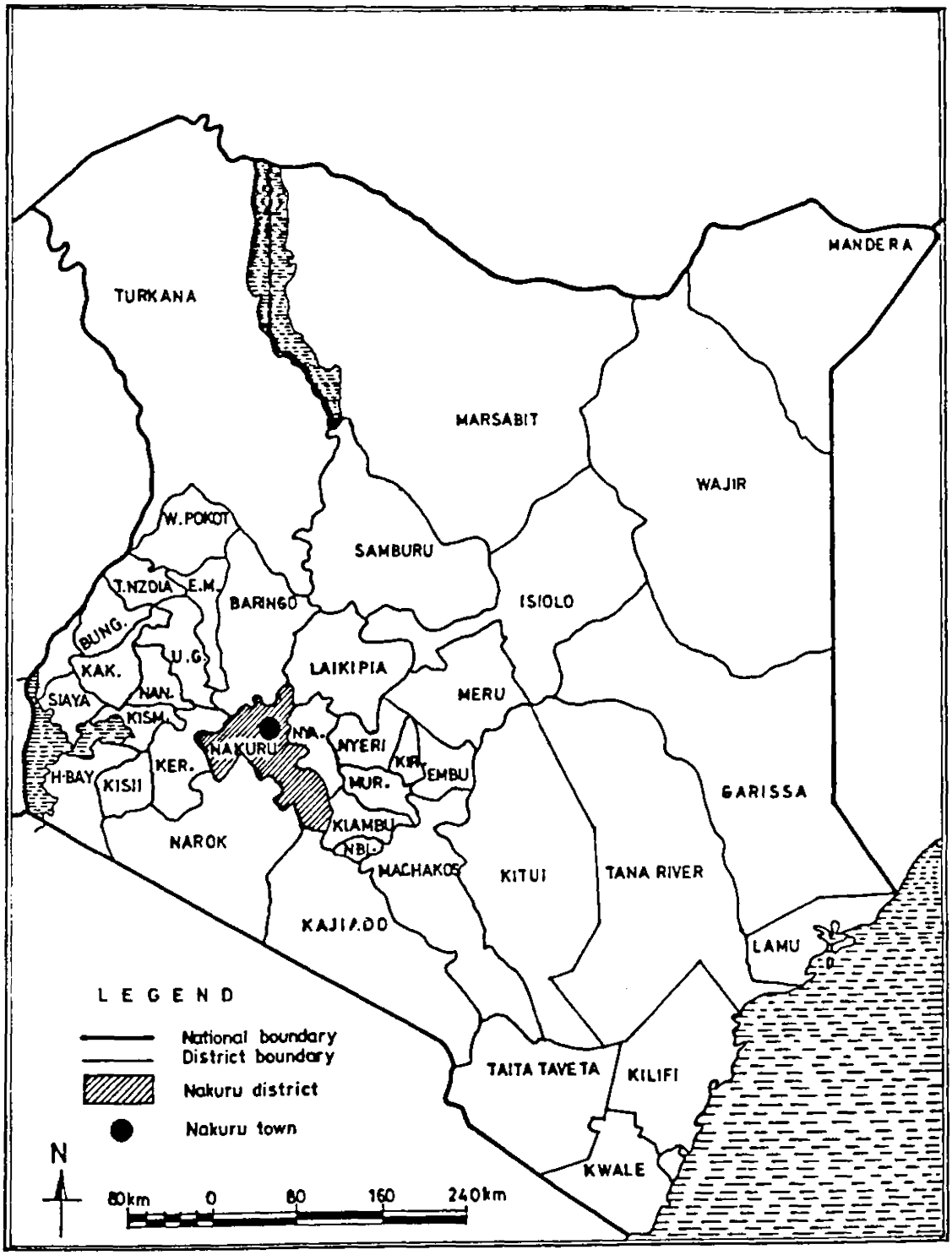
As illustrated in Map 3.1, an important attribute of Nakuru is the town's strategic central position relative to the regions of central and western Kenya. In addition, Nakuru's adequate transport network and broad infrastructure base including good financial facilities makes it capable of serving its hinterland as an ideal distribution point for manufactured products thereby promoting development in the region's economy.

The industries of Nakuru

Since Nakuru district is basically agricultural, industrial activity here is dominated by agro-based industries. In fact of those industries visited in the course of this research 74.2 per cent are agro-based industries of various forms, while the remainder i.e. the engineering and construction and the chemical and mineral industrial sectors each take 12.9 per cent of the sample. Almost all of the seven major subsectors of the agro-based sector have been represented in the survey. Most of the food-processing industries in Nakuru district are to be found outside the town and include Kabazi Canners, Pan African Vegetable Products and Njoro Canners. The main activities of these industries include canning, dehydration, freezing, extraction of juice, manufacture of jams and marmalades, packaging of agricultural produce such as coffee, pyrethrum, sisal, fruit and vegetables.

There are many flourmills to be found all over the district with a notable number located in Nakuru town. These firms specialize in both human and animal

MAP 3.1 NAKURU DISTRICT AND TOWN IN NATIONAL CONTEXT



feeds. Human consumption products include maize meal, bakers' bran and home-baking flour. Although most firms manufacture compound feeds, simple feeds are usually by-products of human food manufacture. Mills falling within this group include Unga Ltd., Kenya Grain Mills, Nakuru Flour Mills and Simba Posho Mills, all located in the main town.

In the beverages and tobacco group there are only a handful of industries in Nakuru district. The former group produce and bottle carbonated beverages and sodas while Mastermind Tobacco (K) Ltd. whose only competitor countrywide is B.A.T (K) Ltd. has its plant in Nakuru town.

The district also has a number of textiles industries such as Nakuru Industries, Spinknit, Bedi Investments, Londra Ltd., Nakuru Fibres etc.. and all these are notably located in the town while a smattering of others are in Naivasha and Gilgil. Fibres and textile industrial activity comprises cotton ginning, textile milling and garment manufacturers and in the district these firms are involved in the production of polyester, cotton and hand-knitting yarns, bedlinen (particularly blankets), carpets, knitwear and other garments.

Molo and Njoro areas have the largest number of sawmills in the district owing to their proximity to forest areas. However Nakuru town itself does have its own timber firms with names like Timsales and Timbercraft which deal in sawn timber and wooden standard joinery. There are also many establishments engaged in furniture and fixtures production. In the wood and wood products sub-sector, pulp and paper manufacturing is the most significant; Nakuru Press and Techno-press Ltd. both located in the town are involved in printing and publishing while Cartubox Ltd. deals in the manufacture of corrugated cartons, cones and paper tubes.

The miscellaneous food subsector is fairly diversified in the region with large concerns such as Elianto which is involved in the making of pasta, corn and soya oil. In the same group are K.C.C., Kenya Milk Products and Marya Food Products whose assorted activities include milk-cooling, processing (pasteurization and ultra-heat treatment), milk dehydration, the manufacture of cheeses, cream, butter, ghee and fermented milk or yoghurt. The industries cited in this category are all located

in the main town but there are several others in existence mainly outside of town such as Delamere Products, or as cottage industries.

Bakeries in the district are several too but as with the dairy industry many operate as cottage industries. Nakuru town has the larger firms such as Valley Bakery, Nakuru Patisserie and Rift Valley Bakery which are all bread, cake and biscuit makers.

Appearing in an one-off manner are Oil Crop Development (OCD) and Pyrethrum Board of Kenya both located in Nakuru town. Oil Crop Development is engaged in the manufacture of vegetable and oil planting seeds as are Kenya Seed, Simlaw etc., while Pyrethrum Board produces pyrethrum extract concentrates, insecticides powder and pye-marc that is used as animal feed.

Finally in the agro-based industrial sector is the leather and leather products sub-sector. This group has little representation in Nakuru district. The only firm is Nakuru Tanners which is located and has retail and export outlets only in Nakuru town. The tannery manufactures wet blue skins and finished leather products.

From the foregoing it is evident that Nakuru town has a fairly diversified agro-based industrial sector. To a much less extent is the representation of firms in the engineering/construction and chemical/mineral industrial sectors. Of the former category Premier Refrigeration and Engineering Ltd. is the only one of its kind in the district and it is located in Nakuru town. Premier Ltd. manufactures the Lec model of refrigerators, chest freezers and special units. Nakuru Aluminium Works, also located in the town, is involved in fabricated aluminium products and in particular dairy hollowares and other steel items. This firm has recently diversified its activities into textiles and furniture-making.

The chemical-mineral sector has the giant Eveready Batteries (K) Ltd. factory located in Nakuru town. As the name suggests this firm manufactures Eveready dry cells which are its only product. There are other firms in this sector and these are primarily involved in either soap or decorative paint manufacture. Gohil Soap and Menengai Soap Factories and Flamingo Paints are firms

representing this group and all are accommodated in Nakuru town. There is also Stoneart Ltd. which carves out soapstone products strictly for the export market.

The Municipal Council of Nakuru has zoned three main areas for industrial development in Nakuru town namely:-

- the main industrial area (275 hectares),
- the secondary industrial areas (4 hectares) and
- the Nakuru East or Lanet Road industrial area (40 hectares).

The main industrial area is characterised by processing activity and some of the oldest establishments such as Pyrethrum Board of Kenya (1900) are to be found here. Secondary industrial areas are scattered in areas adjacent to the main industrial area and along the Nakuru-Eldoret Road. These areas comprise largely service industries, go-downs, workshops and garages. Nakuru East has an industrial assortment with household firms like Nakuru Industries located here. The areas so zoned were selected for industrial development for three reasons:-

- the availability of suitable land,
- the existence of fairly well-developed infrastructure and in particular railway and road networks, and
- they allow for growth and expansion in pre-determined directions.

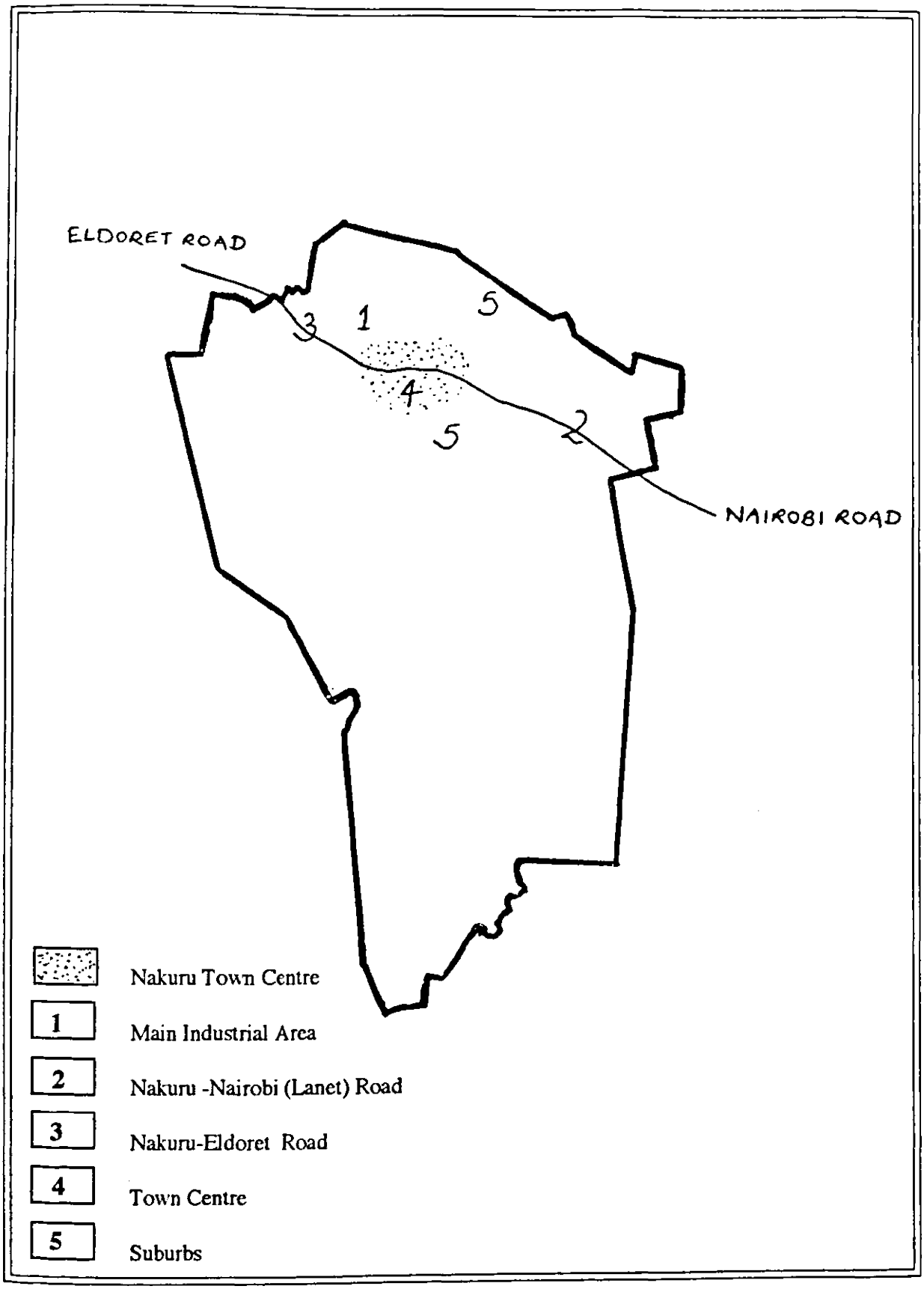
For purposes of clarity the zoned industrial areas were in this study classified with regard to geographical situations. The five areas so determined and the proportion of firms in each area are given in Table 3.3 and illustrated in Map 3.3.

TABLE 3.3 PHYSICAL LOCATION OF FIRMS

	LOCATION OF FIRM	NUMBER OF FIRMS (%)
1	Main Industrial Area	54.8
2	Nakuru-Nairobi (Lanet) Road	19.4
3	Nakuru-Eldoret Road	12.9
4	Town Centre	9.7
5	Suburbs	3.2

SOURCE: Field Survey 1995

MAP 3.3 LOCATION OF INDUSTRIES WITHIN NAKURU TOWN



SOURCE: Field Survey 1995

The western fringe of Nakuru town along Nakuru-Eldoret Road and proximate to the main and old industrial area is currently the favoured area. The local authority is intent on nudging development along this direction since the land is available and services and telecommunications are all set up. Conversely industrial development along Nakuru-Nairobi (Lanet) Road is discouraged owing to the residential nature of this area.

There are limits to the plot sizes that the council can allocate to an industrialist and these are determined by the use to which the land will be put. For very small firms not requiring ancillary space, plots are generally 100'x 50' while basic manufacturing and service industries are allotted plots measuring roughly 0.5 acre. Big manufacturers requiring factories and warehouses could be allocated 5.0 acres or more according to their storage and other needs.

Apart from the allocation of plots the local council has other roles to play in industrial development. It provides services such as piped water, sewerage, drainage, waste disposal and roads. In return for these services the council collects revenue through licences, service charge and annual land rates. These two tasks charged to the Municipal Council of Nakuru are vitally linked and are the tools used to encourage industrial development keeping in mind the government's industrial decentralization policy.

As a proposed industrial base, the fairly adequate infrastructure in Nakuru town is paramount to the decentralization objective. Throughout the country financing for the provision of infrastructure is the biggest constraint to industrial development and the local government relies heavily on donor funding to supplement its revenue. Revenue collection by local councils has for long been a controversial thorn in the side, particularly the system adopted for rating land. It is imperative that land rates are computed through up-to-date valuation rolls and the need to abandon unimproved site value (USV) in favour of improved site value is gaining urgency. The Municipal Council of Nakuru has worked diligently to this end having reviewed its valuation roll fairly recently. The annual rates for industrial plots in Nakuru town's industrial zones as given in Table 3.4, are based on the

valuation roll of 1992 which adopted 6 per cent of the rationalized market value of the land.

TABLE 3.4 UNIMPROVED SITE VALUE (U.S.V)

Industrial Zone	Value per acre	Annual rates per acre
Main Industrial Area	Kshs. 560,000.00	Kshs. 33,600.00
Secondary Industrial Areas	Kshs. 445,200.00	Kshs. 26,712.00
Nakuru East (Lanet Road)	Kshs. 242,800.00	Kshs. 14,568.00

SOURCE: Municipal Council of Nakuru

Besides the Municipal Council of Nakuru, Kenya Industrial Estates (KIE) which is a strategic government parastatal, has also played a key role in industrial development in the town. Kenya Industrial Estates was established in 1967 as a subsidiary of Industrial and Commercial Development Corporation (ICDC). With the government of the time recognizing that years of colonial rule had left the average African economically disadvantaged, the major role of KIE was to provide medium and long-term finance to indigenous entrepreneurs starting small-scale industries. It aimed at releasing the energies and business skills of many Kenyans who would otherwise never have had a chance to express their entrepreneurial flair. Over the years KIE has invested Shs 900 million in small industrial projects in market centres which form the core of the country's rural industrial base. The parastatal promotes all sectors of the economy with particular regard for the garment industries which take 30 per cent of the distribution. Other sectors assisted in decreasing amount are engineering, services, chemical/plastics, mining and quarrying and miscellaneous activities (The Standard, June 1995).

In the early 1970s KIE initiated a project in Nakuru town in which space was leased and finance made accessible to small-scale industrialists. The land availed for this project lies in the secondary industrial areas along Lower Factory Road and adjacent to the main industrial area. The 17.0 acre site is at present

teeming with the activities of twenty-five assorted firms. Previously the parastatal availed the funds for entrepreneurs to undertake construction on the vacant plots and establish themselves, but has since permitted the purchase of plots through mortgage schemes. KIE has relegated its role to primarily a financier one, relying on the audit reports of individual firms before advancing additional monies.

CHAPTER FOUR

INDUSTRIAL DEVELOPMENT: THE EXPERIENCE OF NAKURU TOWN

This chapter presents findings of an investigation into the experiences of industrialists in the day-to-day existence of their establishments. Certainly each firm will have its individual circumstances, for instance, depending on the nature of its activity and product, firms relying heavily on fuel for production would consider the supply and cost of this fuel paramount. Two indicators were used to determine possible problem areas. The theoretical factors of location were considered a useful guide since they fairly adequately cover all aspects of industrial life. Ideally every firm has its optimal level of production but for one reason or another most fail to attain this capacity. An investigation into the reasons for under-utilization of plant capacity was used as a second indicator of possible problem areas faced by industrialists in Nakuru town.

In a study undertaken by Owour Oloo (1980) to determine factors influencing the location of manufacturing industries in Nakuru town, it was found that the location of manufacturing industries in the town was not significantly influenced by transport costs as theory would suggest, rather respondents attributed the location of their industries to a host of factors mainly the availability of raw materials, market, accessibility to good transport network and power supply. This study, over ten years later, concurs with Owuor's findings. As presented in Table 4.0, access to infrastructure, access to market, personal considerations and availability and cost of labour, in that order, ranked as the most important factors in the initial decision to locate where firms have.

Moreover, it is significant that these five factors, with little variation, affect the firm subsequent to locating. Those factors that continue to play a vital role during the life of the establishment are also listed in Table 4.0.

Factors that warranted unremarkable ratings in both the initial decision and presently, remain fairly constant. The attitude of investment advisers, sharing of infrastructure and sources of machinery, repairs and specialized machine-makers were considered inconsequential to many existing firms.

TABLE 4.0 FACTORS CONSIDERED IN INITIAL DECISION TO LOCATE RANKED AGAINST SIGNIFICANCE TO EXISTING FIRMS

FACTOR OF LOCATION	RANKING OF FIRMS	
	INITIAL SIGNIFICANCE	PRESENT SIGNIFICANCE
Access to infrastructure	1	4
Access to markets	2	1
Personal considerations	3	6
Availability of labour and labour costs	3	3
Sources of raw materials	5	2
Cost of land	6	11
Housing for workers	7	4
Transport cost of raw materials	7	6
Attitude of industrial financiers	9	11
Physiography of the land	10	-
Government policy	10	8
Cost of construction	12	11
Transport cost of finished products	12	8
Presence of urban amenities	12	8
Deglomeration	15	-
Prices of finished products	16	-
Agglomeration	16	-

SOURCE: Field Survey 1995

Access to infrastructure

Accessibility to infrastructure is closely tied with the issue of land because it is important that chosen locations offer efficient transport links, water, drainage, electric power and telecommunications. About 50 per cent of firms studied in Nakuru considered access to infrastructure the most important factor in the decision to locate on existing sites. However, infrastructure drops down to fourth place in its contribution to significance long after firms have established. This is surprising because the inadequacies of infrastructural services remain a source of great worry to many investors in Kenya.

Infrastructure-related problems ranked highly as causes of under-utilization of plant capacity. Key infrastructural factors considered by manufacturers in the decision to locate are electricity, water, postal rates and telecommunication expenses, and fuel prices. Of the firms in this survey, 50 per cent complained about the high cost of fuels and for those firms relying heavily on fuel this has adversely affected production. Sources from the company confirm that in 1994 alone Kenya Power and Lighting Corporation raised electricity costs by 90 per cent. This means that electric power inputs now cost 231 per cent more than a year ago. In addition, 13.3 per cent of the firms decried the frequent breakdowns in the supply of power which interrupt and affect production.

Following closely behind the high cost of fuels is the problem of water in Nakuru town. Close to 47 per cent of the firms berated the local authority for breakdowns in the supply of water while 33 per cent ranked this problem as the most critical factor of under-utilization of plant capacity. However, the water problem has more to do with its insufficiency than breakdowns in its supply. Recently, some industrialists spoke out against what they termed a perennial water shortage in the town. They claimed that this problem is adversely affecting production and threatening the future of the municipality's industrial growth. According to the Rift Valley branch of the Federation of Kenya Employers (FKE), the current installed water supply capacity for Nakuru Municipal Council can only meet 60 per cent of the town's requirements (Daily Nation, March 1996). Many industrial establishments have taken matters in their hands and drilled individual boreholes

within factory premises to sustain production. But this has not resolved the problem for all as some borehole water contains minerals that causes damage to machinery.

Meanwhile, both the Federation of Employers and Kenya Association of Manufacturers (KAM) have expressed concern that the water shortage in Nakuru town has affected industrialists whose expansion programmes cannot be implemented. The two organisations said their members were considering relocating their business operations to other areas endowed with basic infrastructure.

Another element of infrastructure that caused concern was postal rates and telecommunications. In the last twelve months Kenya Posts and Telecommunications Corporation has raised postage rates twice, from Shs 3/= to Shs 6/= apiece, in other words by 100 per cent. Meanwhile telephone rates have been raised by 50 per cent. Thus, owing to fluctuating hard currencies, items denominated in shillings have in the last year risen by 122 per cent. While this may have no bearing on production for most, those relying on these services, such as export-oriented firms, are definitely adversely affected by the hikes.

Rather surprisingly the town's transport networks do not pose serious difficulties to the majority of industrialists with just 30 per cent of the firms concerned about poor transport facilities and/or high transport costs. With regard to transport networks industrialists focussed not only on the potholes on urban roads but also the inadequate road density or carrying-capacity within urban centres. The least troublesome infrastructure component is waste disposal. For most firms the mode of disposal is via local authority facilities i.e sewerage and trailers, while others prefer incineration or have privately owned facilities such as septic tanks, settling tanks, exhauster trailers and lorries. About 20 per cent of the firms say that their wastes are recycled into other commercial by-products, or are collected by other users such as farmers. Other firms report that they have no significant wastes as such. Close to 57 per cent of the firms claim to have no problems with regard to waste disposal while a smaller proportion only experience difficulties when the volume of waste is high causing temporary storage problems.

The Municipal Council of Nakuru acknowledges that its inability to keep up the maintenance of existing facilities as well as provide additional infrastructure poses a serious constraint to industrial growth in the town. The reason given is of course lack of finance but with the monthly service charge paid by industrialists, mismanagement of funds cannot be ruled out.

Access to markets

The importance of the market as a factor affecting industrial location has been recognized for a long time. Moreover, the market continues to have a powerful influence on the established firm and for many industries its significance is growing beyond such considerations as the source and cost of labour and raw materials. The market is certainly one of the main reasons for relatively rapid industrial growth in and around major urban areas. Nakuru town itself is a major market for industrial products manufactured there and acts as a distributing centre to other areas in Kenya, this by virtue of its centrality vis-a-vis the rest of the country. Other major markets for the town's industrial products are Nakuru district and other parts of Kenya, with the largest proportion of firms selling to all three markets. A smaller number of firms cater to outside consumers, selling to the rest of Kenya and the export market.

Close to 40 per cent of the firms in Nakuru town indicated that they experienced selling problems, attributing their troubles to competition from similar manufacturers and decreasing demand for their products. Those firms that depend on agricultural raw materials such as pyrethrum, wheat etc.. have to contend in addition with the vagaries of weather, insufficient or excess crop yield taking their toll on demand and supply accordingly. For firms in the dairy industry the cold weather brings with it dropped sales for their products, conversely fine weather precipitates higher sales. Bakeries in the town also experience fluctuating or seasonal demand depending on the time of the month or year. Generally, fewer people can afford to buy bread daily today and the middle of months is especially slow for this industry.

Other problems cited in selling finished goods include pricing, too few retail outlets, and transportation. Price decontrols have created differentials in the pricing structure making comparable products cheaper and thus more favourable than others. Moreover, the high taxation placed on some goods means that their prices reflect the cost. For instance, currently soft drinks are taxed at 47.5 per cent, and being luxury products to many Kenyans their demand is reduced by prohibitive pricing. Other firms attributed their selling problems purely to internal factors such as having insufficient retail outlets country-wide, and the obstacles encountered in transporting finished products to their consumers.

The textile industry has suffered a major setback following the massive importation of second-hand clothes (mitumba). Trade in second-hand clothes has severely constricted the market of the formal industry. Nakuru town is experiencing a flood of these clothes whose outlets are so simple that they are dotted all over the place. The situation is not, however, peculiar to Nakuru. Due to the influx into the local market of second-hand clothes many textile factories country-wide have had to declare workers redundant and in dire cases establishments have had to close down. The General Secretary of the Kenya Textiles and Tailors Workers Union recently said that membership of the union has fallen from 26,000 to 18,000. Painting a grim picture for the industry he added that even a giant like Kisumu Cotton Mills (KICOMI) was on the verge of collapse (The Standard, 15 May 1994).

An additional blow was recently inflicted on the textile industry following an imposition of a quota on certain garments from Kenyan exporters by Americans. The quota, imposed in July 1994, has had a devastating effect on Kenya's textile industry with analysts putting the loss of jobs at between 7,000 and 12,000 workers. Worst hit by the quota are firms operating under the Manufacturing-Under-Bond (MUB) scheme. Subsequent to the textile industry's severance from lucrative American markets, government sources say that roughly 50 MUBs have had to close down while those operating under the Export Processing Zone (EPZ) have cut down on production by half. Manufacturers in Nakuru town have appealed for a review and total scrapping of the quota to save the many jobs at risk in the industry. Analysts in the industry have expressed concern over what they perceive as

reluctance by government to salvage the situation through aggressive lobbying against the quota. Although this is not a typical incident, some of the town's industrialists are worried about what they term unrealistic government pronouncements. Coupled with a lack of clear policy, such directives according to the industrialists, only serve as constraints to the development of the textile industry.

Firms whose products are aimed at national and export markets decried the lack of and adequate finance for proper marketing strategies. A growing number of firms now recognise that advertising, for instance, is a powerful business tool that forms an important component in the overall strategy of any firm. It is also an expensive tool since to be effective, advertising should be a continous rather than one-off affair. Moreover, it should be supported by market research to enable firms to focus on their target markets and thus bridge the gap between a product and its consumers. The export market, in particular, requires the demand-pull approach and producing items according to demand requires careful market research before mass-production. Constant feed-back of market reaction and quality check/control are imperative if exporters hope to make any meaningful impact. But even beyond this there is a need to move towards adopting new business tactics in the creation of new merchandise and use of new marketing techniques. Many exporters, particularly of handicraft products find these tasks demanding and the cost overwhelming, to the detriment of their establishments.

Labour

The distinctive labour requirements of particular industries make some places more suitable than others but in Kenya there is very little variation in the cost of labour as this is determined by government policy through labour organizations in the country. But not for much longer. In mid-1994 the Ministry of Labour announced the removal of wage guidelines that have hitherto governed wage and salary increases for workers in the private sector (The Standard, 8 August 1994). This action, according to observers, is simply in line with the changing economic times now characterised by a freer play of market forces. Workers will now have an

opportunity to share in the benefits that accrue to their employers as a result of deregulation of prices as well as trade, exchange rates and a welter of other regulations which have in the past been restrictive to free trade. Employers and workers will be free to reach agreement on the price of labour which in turn will free employers to shape their own labour practices with the market being the determinant factor. Workers, on the other hand, will be able to argue from a point of advantage, knowing for instance, that in good trading times employers report good results whilst under the erstwhile regime, workers had to undergo a laborious process to get a share of what they were helping produce.

Labour and labour costs were ranked highly in the decision to locate by the industrialists of Nakuru town. As a factor that continues to be significant even after locating, the influence of labour was ranked third by 22 per cent of the firms. Despite the fact that most industrialists were reticent about their problems with regard to labour, 36 per cent of firms in Nakuru town disclosed that they had decreased production in the last three months, yet only two cited wage-related problems as causes for this reduction. Similarly only one firm attributed loss of product and under-utilization of plant capacity to labour problems but attributed these to shortages of skilled and technical labour.

That labour problems emanating from dissatisfied workers do exist is a reality for which there is little evidence from the managerial point of view. The employer /employee relationship has always been a delicate one, and recent trends in the labour market suggest that workers and management can never get along without problems. However, with the inception of liberalization and particularly the removal of labour wage guidelines, the work-force is bound to become a formidable entity (The Standard, August 1994). This partly explains the rise in industrial action that has characterised the industrial and services sectors since the onset of liberalization. Under the guidelines regime the lowly skilled and paid workers suffered immensely as the ministerial guidelines prohibited employers from raising payments beyond the ceiling placed by the government and there was very little wage difference between rural and urban workers in the same industry. Now, the system has been loosened and employers, together with unions, are expected to develop

their own guidelines for determining wage and salaries in specific industries. This should see the upward movement of urban wages. Labour joining in the foray in a freer play of market forces could ensure that the effect of this factor of location wanes somewhat during the lifetime of an establishment.

Raw materials and other inputs of production

All manufacturing activities require raw materials since the essence of an industrial process is the conversion of one thing into another of greater value. From other surveys (Ogendo, 1972; Owuor, 1980), it has been established that raw materials affect locational choice only if there are significant variations in prices from various sources or if the industrialist has to meet transport costs from different sources. Hence the industrialist will select that source that affords materials at least cost, i.e. where transport costs are lowest.

Sources of raw materials was rated the second-most important location factor that continues to play a significant role for the industries of Nakuru town. Consideration of transport costs of raw materials was also highly ranked. This is hardly surprising since the town's industries are mainly agro-based and Nakuru is well situated within a rich agricultural hinterland. The majority of industrialists in the town obtain their raw materials from various sources which include the same industrial area, within the Nakuru region, other parts of Kenya, and from outside the country.

Only 13 per cent of the respondents in this survey indicated that they experienced problems related to the provision of raw materials citing shortages and the high cost of both domestic and imported materials. Closely related to raw materials is the acquisition and the cost of inputs used in the production process such as plant, equipment, machinery, spare parts and construction materials. Some firms argued that the importation of materials was a cumbersome and lengthy process. In the latter case opinions varied only slightly; import control formalities are tedious, opening letters of credit and declaration forms problematic, while a few felt that the 2 per cent import commission payable was unwarranted and should be waived. Other industrialists said their problem lay in delays in transporting

materials from airports or the port at Mombasa. An entrepreneur whose only raw material comes from quarries in Kisii said that he may soon have to search as far as Tanzania unless something was done to alleviate the problems arising from the monopoly of such sources of material.

However, 45 per cent of the industrialists interviewed have no import problems and it was the general view that the on-going liberalization of the Kenyan economy has greatly reduced the red-tape in importation. The same sentiment was expressed with regard to imported spare parts. The majority of industrialists in the town obtain spare parts for plant and equipment from Nakuru, Nairobi and import items not locally available. About 50 per cent of the firms pointed out that spare parts are expensive to purchase or replace as well as costly to maintain and repair. A few argued that the low quality of local spares was less desirable than the headaches involved in importing.

Land

For the majority of industrialists the mode of acquisition of land was outright purchase while the remainder have leased their plots from the sources indicated in Table 4.2. Leasehold titles are the more predominant while a small proportion, comprising notably the oldest establishments, are of freehold tenure. Many establishments are the private limited type of organisation, however, several favour single proprietorship as well.

The issue of land and its attributes is of initial concern to any industrialist but its significance wanes considerably during the lifetime of the industry. Indeed this study revealed that 22.6 per cent of Nakuru firms considered the cost of land as important in the decision to locate while only 4.3 per cent admitted that it continues to play a significant role in the establishment today.

TABLE 4.2 PLOT ACQUISITION, TENURE AND TYPES OF ORGANIZATIONS

		NUMBER OF FIRMS (%)
Mode of acquisition	Purchased	77.4
	Allocated by local authority	6.5
	Allocated by Comm. of Lands	6.5
	Other (sub-leased etc)	9.6
Tenure	Freehold interest	19.4
	Leasehold interest	80.6
Type of organisation	Individual proprietorship	12.9
	Partnership	3.2
	Private limited	80.6
	Other (state corporation, group etc)	3.3

SOURCE: Field Survey 1995

Industrial land is fast becoming a significant location factor in Kenya. Owing to its fixed supply and ever rising demand land has become expensive particularly in the country's major towns. The initial cost of investment increases substantially because land must be purchased from private hands, a costly exercise given the rising demands on land. This deterrent not only affects would-be industrialists but also those with plans for the expansion of existing establishments. Smaller towns and centres still possess adequate land for future industrial expansion; in some of the smaller towns, local authorities even over allocate land for industrial development. Thus, in Kenya, whilst industrial land may not be vitally influential as a factor of location, it is the rents charged on the land which tend to affect location decisions in the larger towns. The higher rents payable in large towns may have a slight decentralization effect. This effect gives rise to the

tendency for industrial land to be located just outside the relevant municipal boundaries or in conveniently situated nearby centres where they still take advantage of the benefits of manufacturing.

Another fundamental criterion with regard to land is its availability. According to sources from the local authorities in Nakuru an important reason for the slow rate of industrial growth in the town stems from the insufficient supply of land. The area allotted to industries within Nakuru town covering a mere 339 hectares in total is grossly inadequate. This phenomenon has cost the town some lucrative new-comers, for example, Kenya Breweries Ltd. unable to acquire 20 acres along Lanet Road opted to locate in Kisumu instead. Similarly, Jua Kali artisans in the town will likely fail to benefit from World Bank funding for Nyayo Sheds if suitable land is not made available. In the latter case the need is for more than 20 acres of land close to town where electricity, telecommunications and the market are readily available.

The scarcity of industrial land is largely blamed by the local authority on urban growth which has resulted in areas earmarked for industrial use having to be taken up by more urgent forms of land use. Urban growth has not only been blamed for the inadequacy of industrial land in the town but also for the prevailing incompatible land uses. There are a few industries which have located outside the areas planned for industries and these have developed within the sanction of planning policy. A notable example is Nakuru Tanners located in the midst of the residential area known as Shabab. This tannery, owing to its emission of noxious waste and smell, was deliberately located there for this reason long before the area was designated a residential one. There are also small residential and commercial plots sited amongst light industrial plots between Total Petrol Station and Union Carbide along Nakuru-Eldoret Road. The local authority does not encourage the co-existence of such incompatible land uses but has no immediate answers to the problem first introduced by past planners. In the future, however, the situation may be rectified in the case of the hazardous Nakuru Tanneries for plans to relocate the industry are in the pipeline.

Past planning policy has also exacerbated the problem of the inadequacy of industrial land by failing to clearly predict the growth of Nakuru town. As a result of this unforeseen growth, municipal boundaries have had to be extended in the recent past and the town now encroaches upon private land on freehold title. Ideally industrial land should be situated close to town, but there are impediments to converting private land to industrial use owing to its multiple ownership. Land in the town is vested in the government, the local council and in private ownership. For political reasons the government is oft reluctant to exercise its powers directly under the Land Acquisition Act (Cap. 295), thus an industrialist seeking to acquire privately owned land may only elicit state intervention if he treatises with and avails purchase money to the affected party beforehand. The same rule applies where the local authority wishes to acquire industrial land, as was recently done for Kenya Pipeline Pumping Station 25 along Lanet Road.

The physiography of the land was lowly rated as significant in the initial decision to locate and this is primarily because this factor is taken into account when industrial areas are zoned. For Nakuru industries the primary consideration with regard to land was that it was accessible to infrastructure. It was important that sites selected offered efficient access to transport links, water, drainage, power and labour. While it has been a tradition in urban places to serve industry with both road and rail access, there is an increasing dependence upon the use of road transport.

Housing for workers

The availability of housing for workers was rated highly as both an initial and subsequent factor of location by the industrialists of Nakuru town. The majority of employers have just enough land for their factories and this can be attributed to the scarcity of and high cost of land. Infact only a handful of firms have provided housing for employees within or close to factory premises and these have comparatively high numbers employed. However, being a town whose activities are fairly confined within a small area, the issue of housing for workers does not present any real obstacles to the establishments of the town. Distances to and from work

places are quite easily covered on foot. The more central places like the main industrial area have an obvious advantage over others in that regular public transport plies the central routes. This factor is advantageous particularly for those firms employing a large labour force. Although the provision of housing to employees is not worrisome to most industrialists in Nakuru at present, it is likely to be in the future if establishments continue to locate in designated directions whose spread is bound to increase distances between places of work and residential areas. It is essential that land set aside for industrial development also incorporate accessible housing for factory employees particularly if Nakuru town is to attract large-scale industrial investors and the work-force numbers that this would entail.

Capital: finance and equipment

Capital is necessary before land or any other inputs can be acquired, and during the productive life of the industry when it is referred to as working capital. From other researches it has been found that although almost all industrial entrepreneurs are financed by local banks or financial institutions, these bodies do not control location decisions. They expect the entrepreneur to have done his research, their major concern being his ability to service loans without default. Even the amount of profit an entrepreneur makes is not of concern so long as sums owed are repaid within stipulated periods. In fact only 17.2 per cent of the firms in Nakuru town considered the attitude of industrial financiers in the decision to locate where they have and not even one considered the attitude of investment advisers significant. As indicated in Table 4.3 the majority of firms initially financed their businesses through loans from banks and financial institutions. Financiers to most industrialists in this survey are locally based.

The mode of finance for the majority of industrialists (46.7 per cent) was through loans as indicated in Table 4.3. On the whole it was not difficult to obtain industrial finance but 27 per cent of the firms argued otherwise, citing high interest rates and inaccessible financiers as reasons for their difficulties. The issue of security such as may be presented by lack of title deeds did not feature as a problem to any industrialist. Ranking highest as a factor of under-utilization of plant

capacity, however, is lack of credit requisite as working capital. Close to 57 per cent of the town's firms decried the high cost and shortage of credit, while 43 per cent are hampered by the inability to grant credit to their customers.

TABLE 4.3 INITIAL BUSINESS FINANCE

MODE OF FINANCE	NUMBER OF FIRMS (%)
Loan	46.7
Other facilities e.g. share contribution	23.3
Personal savings	16.7
Loan and personal savings	10.0
Loan and other facilities e,g share contribution	3.3

SOURCE: Field Survey 1995

Another major item of fixed capital is the machinery and equipment comprising the plant which is crucial to the transformation process. Problems experienced by industrialists with regard to plant were primarily related to components being expensive to purchase or replace. However, 23.3 per cent of the establishments experience poor performance owing to old (obsolete) plant, 20.0 per cent to bottlenecks in or unbalanced plant and 16.7 per cent to low plant productivity. Not one industrialist thought significant sources of machinery, repairs and specialized machine-makers in the decision to locate nor for the existing establishment. It is the opinion of many industrialists that investment in and utilisation of modern, innovative industrial technology particularly with regard to machinery should go a long way in improving the performance of industry.

The influence of government

Public institutions, such as local, regional or national manifestations of the state, form an important part of the operating environment of industry, affecting plant location in a variety of ways. Under capitalism, constraints on freedom of locational choice may be imposed in pursuit of economic, social, environmental and strategic policies that those who govern claim to be in the general public interest. An obvious example is land use zoning in town planning whereby specific areas are set aside for industrial development. Many capitalist nations today engage in some form of regional planning through which industrial development is encouraged in some places and discouraged in others by a system of financial incentives. The capitalist state can also engage directly in the process of industrial production with some degree of freedom to locate plants according to social welfare criteria such as the alleviation of unemployment or the stimulation of a stagnant regional economy. Another public policy is spatial variations in taxation especially in major urban areas with levels around the fringe often substantially lower than in the central area and such local tax differentiation can be expected to have some bearing on industrial location.

The policy of the government of Kenya as far as taxation is concerned is one that encourages decentralisation of industries from Nairobi and Mombasa to proposed industrial towns such as Nakuru, Eldoret, Kisumu and Thika. There is a reduction on custom's duty for all imported machinery for industries outside the city; this reduction increases as one moves farther away from Nairobi. There is also some investment allowance for these industries.

Only 20 per cent of the firms in Nakuru town were influenced by government policy in the decision to locate. Of these, 13.3 per cent gave the reason as being some inducement by the government, specifically tax incentives, while the remainder were attracted by some extra services provided by the local authority. A few had no choice in the matter as they are state corporations and no firm reported having been prevented from locating elsewhere. On the contrary, personal choice and preference came up strongly and ranked as the third most important factor in the decision to locate by 31 per cent of the town's firms. For many of the industrialists Nakuru is a

family base and the choice to locate in any given zone was primarily motivated by a committment to the town rather than any other external influence.

On the issue of taxation or duty, 76.7 per cent of the industrialists assessed the amount payable as too much while the remainder considered it reasonable. The majority of firms are not exempted from taxation at all, 20 per cent are exempted in part and one firm is fully exempted. Reasons for exemption are various but the most recurrent arises courtesy of the rural development and industrial deduction through which firms get 50 per cent off import duty on machinery. Establishments whose products are made for the agricultural sector and those whose products are intended for the export market are fully exempted. In addition, under the Income Tax Act, non-profit making service industries are also eligible for exemption.

The policy of the government as far as taxation is concerned is one that encourages decentralisation of industries from Nairobi and Mombasa to the less-favoured towns. But the majority of industrialists in Nakuru town say they detect few concessions in existing policy. Some claimed that there are inconsistencies that need to be clarified in the various statutes touching on exemption and that incentives by way of tax should be applicable to more categories of industry.

Cost of construction

The cost of construction of a factory varies from place to place and would have an important bearing on the location choice of a firm should the construction cost form a significant element in total cost or in the initial investment. However, there is no variation in cost of construction within the Nakuru town area and in fact only 10.3 per cent of the firms surveyed considered this factor important in the decision to locate.

External economies

The spatial concentration of industrial activity often provides firms with collective benefits that they would not enjoy in an isolated location. These take the form of external economies, one form of which is agglomeration. Agglomeration may be recognized for one industry or a group of related activities or form the advantages

that a firm in any industry may gain from locating in some large urban-industrial complex. The benefits of agglomeration when added together may offer considerable cost advantages over alternative locations. Small industries generally have most to gain from a location in an existing industrial concentration; larger ones can create economies internal to themselves that others have to obtain externally. Agglomeration also relates to the benefits that arise in any large urban industrial area, and that are potentially available to any firm irrespective of the industry to which it belongs.

The main advantage of agglomeration relates to the existence and sharing of a well-developed infrastructure. Included here are roads, railroad lines and termini and urban amenities such as banks, post offices, educational training and hospital institutions. And yet of the firms in Nakuru town only 10.3 per cent gave much thought to the presence of urban amenities, 3.4 per cent to agglomeration and none to the sharing of infrastructure in the decision to locate where they have. Furthermore, for existing firms these factors are relegated to insignificance. Rather surprisingly deglomeration was ranked higher than agglomeration as a factor of location. However, nuisance claims are few and are confined to pollution of the environment as a result of some activities of neighbouring firms. As regards relationships with other industries in the locality, 34.5 per cent of the firms do not depend on others for anything, 31.0 per cent compete against each other, while 17.2 per cent use each other's inputs or products.

It is noteworthy that certain factors of location were considered as unimportant in the initial decision to locate by all the respondents in this study. The attitude of investment advisers, sharing of infrastructure and sources of machinery, repairs and specialized machine-makers were deemed inconsequential and, not surprisingly, no problems were associated with any of them. However, there were other factors which came to light as serious handicaps to industrial development and the rest of this section is devoted to these.

Problems in management

This study was pursued from a managerial point of view since the over-riding objective was to uncover the difficulties experienced in the day-to-day life of industries in Nakuru town. From the onset it was anticipated that most industrialists would be reluctant to divulge all information and with this in mind the survey was extended to elicit the opinions of officials from the local authority, government ministries and other relevant personnel based in Nakuru town. Next follows an account of deterrents to industrial development largely perceived from this angle.

> "The problems afflicting many industries today are
> largely due to poor management of the business"

Asked to comment on this statement 70 per cent of the firms in this survey agreed that it is partly true, 26.7 per cent said it is wholly true and only one firm thought the statement false. On the question of how best to improve the general performance of industry several industrialists felt there is the need for concerted development of technical and professional man-power and specially at managerial level.

For many firms in Kenya today the inadequacy of entrepreneurial or managerial skill is a serious handicap to business development. This shortcoming manifests itself in various ways, for instance little or no attempt is made to study the market so as to ascertain the viability of a project. Entrepreneurs, particularly of small enterprises, are often ill-equipped to pursue ventures upon which they embark with such little preparation. It has also been observed, according to sources from Kenya Industrial Estates (KIE), that the majority of entrepreneurs do not carry out feasibility studies. Instead they tend to copy projects from each other which in effect not only augurs failure for the business but also creates unhealthy competition for the older establishments. Over the years KIE has invested Shs 900 million in small industrial projects in market centres which form the core of the country's rural industrial base. However, 30 per cent of these businesses have either failed or require rehabilitation and restructuring to make them competitive.

There is also the reluctance by some industrialists to employ and pay for skilled labour, opting instead for inept and cheap workers. The traditional entrepreneurial mentality breeds ego-centric managers who feel threatened by new and innovative business methods. Where possible, would-be industrialists should also demonstrate vision which goes beyond a restricted local market and the ability to read economic trends accurately. Clearly fresh and braver attitudes must be adopted and entrepreneurs encouraged to turn their backs on the comfortable, protected and limited ambitions of the old centralised system.

But poor management is by no means confined to aspiring or existing industrialists. Many public sector organizations perform dismally partly because their chief officers have little idea of the organisational objectives nor what the organisations priorities are. This is the recipe for the crisis management that a good number of Kenya's public sector institutions are known for. Problems in this sector have also resulted from the avarice of men in power, a failure to read economic trends aright, complicated by deteriorating trade conditions and ever-increasing tax bills. But there is another factor here, harder to categorise but evident in any perusal of the country's industrial efforts, i.e the extent to which players in the game look to a higher authority to solve their problems. In the case of KIE, clients frequently call for government protection from the chill winds of competition. Identification of an organisation's current goals is crucial to executive performance and the realisation of its mission. To help identify performance gaps it is often useful to consider other comparable organisations both within and outside the country. It is important to ascertain whether the organization meets the generally accepted standards of others of its type. If not, then there is an opportunity for resetting goals. But for trouble-ridden bodies such as Milling Corporation in Nakuru town the only workable solution seems to lie in privatisation.

Quality of goods

For the industries of Nakuru town low quality of products and competition from imports were ranked the least critical factors of under-utilization of plant capacity. Despite this low rating, however, the quality of local goods presents yet another constraint to industrial development since it determines how susceptible they are to the competition from other local and imported goods. Kenyan manufacturers have been repeatedly told that they should ensure that their goods are of high standard especially if they expect to be competitive in the cut throat international market. This advice was recently echoed by the executive director in Kenya of Japan External Trade Organisation (JETRO) who decried the low quality of Kenyan goods by saying that our manufactured goods could be of higher quality if local firms took quality control seriously. The problem of low quality and shoddy goods filtering into the market should not arise at all, however, given that there is a centralised quality control institution, namely the Kenya Bureau of Standards. The Kenya Bureau of Standards has the mandate to check on the quality of all goods manufactured locally to ensure that they reach certain set standards. Granted that the capabilities of the Bureau is a moot point, this survey of Nakuru's firms nonetheless exposed divergent sentiments. A small group, mostly in the textile trade attributed poor finished product to the quality of material (cotton lint) available to them. According to others the general level of the town's investment in factory buildings, equipment, plant and entrepreneurial flair is of low quality, with the obvious consequence being poor output or end-product. Others are of the opinion that Asians are renowned for cheap mass production and that it is their industries which manufacture poor quality goods which they know will be absorbed into a market that is not particularly discriminate. On the other hand African-Kenyans when they do have the resources tend to be qualitative rather than quantitative. If these observations hold any truth and with Asians owning 61.3 per cent of the industries in this study, Nakuru town will continue to be recipient to low quality goods.

Lack of security

According to sources from the local authorities in Nakuru, the negative trend in the town's industrial growth should be largely attributed to the geo-political location of the town in relation to the rest of Kenya. Nakuru's accommodation of a multi-ethnic community makes the town and its region prey to numerous undercurrents and the machinations of a few individuals in positions of power. Incidences such as the recent ethnic clashes in parts of the Rift Valley province have added their mark to industrial plans going awry and in some instances investors have shied away from new investment in the town or considered relocating existing establishments. Kenya has a history of political stability which is critical to improving confidence in the economy and facilitating improved investment activity. Blame has been apportioned to and fro, yet it is clear that the state has the responsibility and the apparatus to put to an end this and any other like menace.

Besides political insecurity is the problem of lack of security on factory premises. Despite having round-the-clock watchmen several establishments reported frequent break-ins and burglaries. This problem is prevalent for factories in the more isolated locations such as along Nakuru-Eldoret Road where even the industrialist faces the menace of way-lays on the journey to and from the factory. In some cases the business has to be brought to a halt for hours in order for the establishment to beef up security.

The foregoing findings were elicited from industrialists in Nakuru town. Other persons interviewed in the course of this research whose work in government, local councils, etc.., is closely associated with industry, generally corroborated the problems cited by the industrialists. Under-capitalization came up again just as strongly; entrepreneurs often have the collateral to obtain initial capital but because their credit capacity is low, banks are not amenable to further lending. The goodwill demanded for both going-concerns and new premises is exorbitant and discourages many would-be investors. Shortages of raw materials was also cited as a constraint to industrial development and it is worse for local inputs like timber and quarry products owing to the royalties payable. Although basic infrastructure in Nakuru is considered adequate by most, communication channels particularly to regions

SUMMARY

Despite the problems experienced, nonetheless, close to 90 per cent of the industrialists in this study are of the opinion that Nakuru town serves well as the location of their industry and that it has real potential as an industrial base. A large cross-section felt that its centrality is its major advantage over other Kenyan towns especially with regard to accessibility to agricultural raw materials which form the base of most of the industries in the region. To others the town has adequate infrastructure and offers a cheap and fairly comfortable way of life to their employees. The town's potential for growth was recognised, however, that at present this growth is slow is considered beneficial to the less competitive firms. Other industrialists feel a sense of commitment to the town which is their family base and to them there was no question of locating elsewhere.

Those industrialists with unfavourable opinions of Nakuru town as the location of their establishments claimed that the town has serious handicaps to industrial growth paramount of which are its ill-developed water resources and unremarkable rate of growth. A Nairobi location would have been better for those few firms incurring high transport costs in the endeavour to reach the market while for those importing large quantities of raw materials by sea Mombasa would have been ideal.

It is noteworthy that the majority of firms in the study were not influenced by any government policy in the decision to locate at present sites. The hypothesis of this research was that the influence of government has more impact on industrial development than any other factor of location. It suggested that the industrial development of Nakuru town is largely determined by the government in pursuit of certain economic, social, strategic or other goals. Although government influence is in itself considered a factor of location, this is largely through actions of local government authorities which are empowered in the public interest to set aside land for industrial purposes through zoning procedures and to facilitate the process of industrialization in these areas. As such, the role of the state is to set options available to the industrialist in one zone or the other. But it is important to appreciate that government influence cannot be confined to a single label. Rather it

government authorities which are empowered in the public interest to set aside land for industrial purposes through zoning procedures and to facilitate the process of industrialization in these areas. As such, the role of the state is to set options available to the industrialist in one zone or the other. But it is important to appreciate that government influence cannot be confined to a single label. Rather it is amorphous and touches on most aspects of industrial life. The study aimed to investigate the actual role the government plays throughout the life of an industrial firm and thus its impact on industrial development.

Whichever way one looks at it the role played by the government in industry is a tremendous one. Even where the state does not directly intervene, an efficient policy framework could set the course for enhanced growth of the sector. Nonetheless, a combination of factors impact on industrial development and it would not be true to state that the influence of government has a more significant effect than any other location factor. The hypothesis of this study is thus disproved.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

This section of the thesis concludes the study by revisiting important findings as discussed in the preceding chapter. The chapter lays emphasis on seven (7) factors that industrialists revealed as being critical to industrial development in Nakuru town. Namely, these were the provision of infrastructure services; industrial finance; labour problems; technology, research and development; entrepreneurial and management development; raw material development; and, the protection of local industries. It is significant that none of these factors relate strictly to choice of one location over the other, rather they may be attributed to any industrial establishment in Kenya. The recommendations made alongside these factors are thus oriented towards policy in a bid to enhance industrial development country-wide.

The development of efficient infrastructure services

The findings of this study strongly attest to the fact that infrastructure services, the "wheels" of economic activity, remain a source of great worry to many investors in Kenya. Problems related to these services include unexplained power cuts, dry taps, the poor state of roads, and inflated telecommunication bills.

For the industrialists of Nakuru town the problem of dry taps is a particularly sore one. Insufficiency of and breakdowns in water supply was rated as a critical constraint to the production process and blame was directed at the local government i.e the Nakuru Municipal Council. The local authority urgently needs to develop water resources through the rehabilitation of over-used systems and the construction of new ones. More important, in order to achieve a planned sustainable water supply system, the authority requires its own water system that would not interfere with the rural areas and population. The water supply demand rate projected to match the growth in population presently stands at 45,000-50,000 cubic metres per day. Obviously the current supply is no longer capable of sustaining the town's growing population and activities. The National Water Conservation and Pipeline Corporation has exonerated itself from blame for the current water shortage

in Nakuru town, saying it releases between 11,500 and 13,300 cubic metres of water daily (Daily Nation, March 1996). Almost two years ago an engineering group named Konoike was contracted by the Municipal Council of Nakuru to supplement the town's water supply but the project has since collapsed owing to non-payment to the group by the council. In its defence, the council says that it is not able to render effective services to the populace due to "acute financial constraints". Recently the council increased its water tariffs to consumers by 34 per cent in a bid to raise money to settle its debts. As a first step, therefore, there is a need for reform of local government finances.

Other "wheels" of economic activity country-wide that also appear to be grinding too slowly are roads, railways and ports. Services are, in short, inefficient and unresponsive to user demand. The provision of industrial infrastructure in Kenya falls under different government institutions:-

- industrial land: Ministry of Lands, local government and District Development Committees (DDCs).
- power: Kenya Power and Lighting Corporation.
- telecommunications: Kenya Posts and Telecommunications Corporation.
- roads and railways: Ministry of Public Works, Ministry of Transport and Communications, local government and Kenya Railways Corporation.

It has been observed that the priorities of each of these bodies differ from the next. They do not act in harmony and the contribution of each is not optimally utilised. The presence of any one aspect of infrastructure in a given area has little effect in attracting industries to that area and the sustenance of such a service becomes a burden to the economy as it does not result in the creation of new resources. If the agglomeration of industries is to be encouraged through external economies, then institutions providing the various infrastructure services should act more harmoniously.

It is also time to seriously reconsider public and private sector relationships in the matter of infrastructure. This need has been expressed by the World Development Report 1994, the World Bank publication that recently addressed the issue of infrastructure development. According to WDR "market forces and competition can improve the production and delivery of infrastructure services. That is the consensus emerging from a re-evaluation of the sector based on experience, technological change and new insights into regulatory design". It adds that this new consensus is displacing the long-held view that infrastructure services are best produced and delivered by monopolies. Regulatory innovation has made possible the unbundling of activities i.e. the separating of activities, in which economies of scale are not important. Unbundling promotes competition by detaching activities that were earlier performed in monolithic organisations and opening them up to competition. Market forces do not eliminate the need to regulate prices and profits to protect consumers but calls for transparent, comprehensive and non-discriminatory practice. Presently, the burden on public finances is enormous with, on average, half of government expenditure accounted for by infrastructure. The WDR instructs that infrastructure be conceived as a "service industry" providing goods that meet customers' demands. Such a commercial orientation contrasts sharply with the situation in most government departments and state-owned public utilities which suffer from multiple and conflicting objectives and inadequate accounting for costs or financial risks. This country lacks a solid private sector base for meaningful participation in the production and delivery of infrastructure and policy should be directed towards strengthening this base.

Industrial investment financing

The high cost and/or shortage of credit was considered the most critical factor of plant under-utilisation by the industrialists of Nakuru town. The high interest rates payable for money borrowed was cited as the main difficulty in obtaining industrial finance. Indeed, financing of industrial investments is quite restrictive in Kenya. The vigorous conditions required by banks and financial institutions, even those under the Ministry of Commerce and Industry, have put

many would-be investors out of the bracket of their customers and acted as impediments to the growth of existing industries. Adversities affecting investment financing include high interest rates, high equity capital requirements (35 per cent standard), requirements for securities and guarantees (in most cases one and a half times the value of loan) and title deeds.

Interest rates as determined by banks and financial institutions are under the control of Central Bank of Kenya which is the custodian of monetary and exchange rate policy. The interest rates regime depends a great deal on the trend maintained by the Central Bank of Kenya in the face of general economic situations and inflationary rates.

In tune with the changing economic times, October 1994 saw banks start to lower base lending rates saying they will monitor the changes taking place within the economy and the direction set by the Central Bank of Kenya and continue to adjust their rates accordingly. However, the effective rates are still well above 20 per cent considering that most of the banks charge a spread of six to seven per cent over the base rate, depending on the quality of the borrower. Besides there are other fees of one or two per cent for credit appraisal, negotiation and deposit mobilisation which effectively put the real rate charged on the borrower at about 30 per cent.

There is a strong and pressing need to relax lending conditions for small and medium-scale industries. For export oriented projects 100 per cent loan financing should be seriously considered and industrial soft loans should be made available to enable the modernisation of industrial establishments. Special interest rates and removal of security requirements are also necessary for export oriented projects with the latter measure being applicable to small and medium-scale industries. The problems of finance, security, equity requirements etc... make investors more likely to shift into trade rather than industry.

On their part, potential investors in industry should endeavour to make fuller use of funding facilities available to them. Individual banks undertake various programmes they have instituted to deal with different categories of their clients. For instance, the Kenya Commercial Bank has the Graduate Loan Scheme which funds graduates willing to go into business. The scheme remains one of the most

popular programmes the bank has. The Bank also funds Jua Kali projects, something that has helped the informal sector achieve something resemblant of growth in a country where the job market is perpetually constricting.

Easing labour problems

Most labour problems are internal to the firm since they are often related to wages and terms of employment. The majority of industrialists in Nakuru town claim they do not have labour problems. Of the 29 per cent who do have labour problems the group with the problem is skilled and technical labour which the industrialists claim is difficult to find in the market. There were varied suggestions on how labour problems may be alleviated. With regard to shortages in skilled and technical labour, intensifying local training by creating more high standard facilities and creating attachment programmes for trainees or apprentices should ensure a steady flow of qualified workers. The government should encourage cottage and small-scale industries and the Jua Kali sector by providing some form of assistance e.g financial, material or technical, in a bid to promote self sufficiency which in turn would absorb surplus labour. On the other hand it has been found that many firms in Kenya rely heavily on unskilled workers for purposes of cutting down on cost in wages. This creates a situation whereby available artisans and technicians find it hard to get jobs. Available statistics show that Kenya has over slightly 20,000 engineers and a similar number of technicians (World Bank Report - Africa Technical Department, 1994). Yet firm level figures also show that in the last ten years the number of technicians in manufacturing firms continues to fall.

One of the prime objectives of industrialisation is to create jobs for local Kenyans but this is being frustrated by the continued importation of foreign workers into the country. This tendency is notorious with foreign investors, especially those of Asian origin. The government has the task of ensuring that job opportunities are more fully taken up by local Kenyans by promoting industrial training and, primarily, discouraging the influx of foreign workers into the country. Rather than check the practice, the immigration department abets the situation, an abuse of responsibility that arises due to the department's exclusive handling of the issuance

of work permits. The relevant government institutions with the mandate to handle the task include the ministries of Labour, Manpower Development, Technical Training, Commerce and Industry as well as other professional associations. It is important that these institutions be collectively involved in the issuance of work permits to foreigners. It is also proposed that an annual fee at an increasing rate be imposed on all foreign workers so that eventually it would be uneconomical for companies to rely on foreign workers and instead utilise Kenyan workers. Revenue collected from such fees could be put to use training local Kenyans in those fields presently occupied by foreigners (The Second Industrial Development Decade for Africa - Economic Commission for Africa, 1990).

Technology, research and development

Despite the fact that firm owners complained of a limited supply of the requisite workforce, it is evident from this study that they themselves do very little to improve the situation. One of the lessons emerging from structural adjustment efforts is that economic reforms, no matter how far reaching, are not enough to put this country on the road to industrial development. At least that is the verdict from the World Bank in its recent research designed to investigate constraints inhibiting entrepreneurship and industrial growth in various countries in Africa (World Bank Report - African Techical Department, 1994). The main issue, the report says, is that in Kenya many firms have been impervious to vocational and technological training of their workers. Technology is the knowledge and skill necessary for the productive functioning of an enterprise. It includes engineering, management, marketing and production know-how.

There is an urgent need for a developing economy like Kenya's is to establish a sound technological base in order to enhance industrial development in the country. This sentiment was reiterated by 21 per cent of the industrialists of Nakuru town who also felt there is a need for investment in and utilisation of modern, innovative industrial technology particularly with regard to machinery. For instance, of 218 firms in the World Bank study, only 14 had invested Shs 10 million on research and technology. With regard to Kenya the study found that only about 15

per cent of manufacturing firms are involved in research to increase the knowledge of their workers.

Given the low levels of technological capabilities in firms, there is a need for a comprehensive technology policy in this country that would encompass a broad framework as one way of raising technical and vocational skills in industry. With the liberalisation of the Kenyan economy, firms have to realise that they have to compete internationally with countries having high levels of experienced management and systematic worker training. Local economists Ikiara and Masai suggest that Kenyan firms seek linkages with firms outside the country. Such efforts would eliminate the handicaps inherent in local firms gaining expertise from more experienced firms in other countries.

In addition the government should come up with a vocational and technical education programme that would enable local firms to participate. Such a programme, the report suggests, should aim at efficiency of the overall manufacturing industry. Since technical learning in firms world-wide is obtained through private and informal channels the private sector should not leave training initiatives to the government but should face the challenge of training its own personnel.

Entrepreneurial and managerial development

There is also a need to develop a strong entrepreneurial capacity. Management problems are internal and have a lot of bearing on the success of an industrial establishment. A majority of industrialists in Nakuru are of the opinion that the problems afflicting many industries today are largely due to poor management of the business. Moreover, at present, industry is dominated either by foreigners or by non-indigenous Kenyans. Despite the fact that there is nothing wrong with Kenya relying on these people for her industrial development, utilisation of indigenous Kenyans has its advantages. For instance, if the repatriation of dividends and profits is reduced and investment enhanced in the country, there would be less incidents of capital flight and national pride would be enhanced.

Presently, indigenous entrepreneurs are concentrated in the informal sector. There are several reasons for their absence in formal industry though the prime ones include the fact that indigenous Kenyans with entrepreneurial ability often lack the capital required to invest in the formal industrial sector and there is no effort to impart entrepreneurial ability on those Kenyans with capital. In addition there is a marked inadequacy of facilities to train formal sector entrepreneurs. Rigid investment financing regulations also abet in eliminating many would-be entrepreneurs. Such and other adverse conditions need to be examined and eradicated. Currently there exists no government institution charged with the development of entrepreneurial skills.

Closely related to the foregoing is an institute named Kenya Industrial Training Institute (KITI) under the Ministry of Commerce and Industry. This institute offers industrial skills which are useful to the informal sector yet it could easily be transformed into a training centre for formal sector industries instead of concentrating only on informal sector entrepreneurial development. In fact, fresh university graduates could in future be enrolled at KITI to acquire the necessary skills. The report prepared on the institute by Professor Bohra in the early 1980s recommended that in addition to its on-going modernisation and expansion, two or more of its branches could be set up in other parts of Kenya. Ultimately KITI could play a role similar to that of the School of Law for law graduates.

In recent years there has been growing concern among enterprise promoters that management education and training has not been effectively meeting the real needs of small business owner-managers. The Kenya Management Assistance Programme (K-MAP) recently launched a new training programme to equip businessmen and women with better management skills. The "business growth" programme is designed to help owner-managers of small and medium-scale enterprises to identify their potential for growth. Even though there is no shortage of start-up businesses in Kenya, most of these tend to be small, under-funded and their promoters lack adequate management skills or resources to make them survive for long and grow. This was the opinion of many industrialists in this survey, 70 per cent of who also agreed that the problems afflicting many industries today are

largely due to poor management of the business. Despite the intervention of groups like K-MAP there is a marked lack of fora in which industrialists can participate. Some industrialists felt that a solution to this problem may lie in decentralizing the Ministry of Commerce and Industry, giving full autonomy to resultant regions handling all matters pertaining to true industrialisation. In addition, the Directorate of Industrial Training (DIT), which is formed from the ministry, should be more involved in its role which includes creating a platform to disseminate managerial and administrative skills to industrialists who pay the industrial levy.

Raw material development

With regard to the procurement of raw materials and other inputs of production, many industrialists are optimistic that with true liberalisation tedious import formalities and delays in transportation from ports of entry shall soon be relegated to the past. However, of more concern to the industrialists is the difficulties arising from shortages and/or the high cost of both domestic and imported materials.

Cutting across all industrial sub-sectors has been the issue of raw materials development. Although it would be in the country's interests to utilise local resources, in most cases these resources are simply not available. If industry has to develop its own raw material, the costs may be prohibitive for a single firm. The most illustrative example is the supply of raw materials to agro-based industries, which supply is not only acute but also of poor quality despite the high prices. Export oriented agro-based industries cannot thrive unless they have access to an ample supply of high quality raw materials at world competitive prices. A great deal of effort should be directed towards this formidable challenge if agro-based industries are to be promoted. As Nigeria has already done, our Ministry of Commerce and Industry should act on the already recognised need to establish a council charged with assisting industry to develop and exploit raw materials of whatever nature.

It has been realised that the jurisdiction of developing raw materials transcends a number of government ministries and institutions. The Ministry of Commerce and Industry needs to liaise closely with all ministries involved in the production of primary raw materials. On a different note, where raw materials are locally available, firms should be able to procure them with less restriction whether arising from royalties or unnecessary police-barriers.

Protecting local industries from unfair competition

Kenyan manufacturers recently complained that foreign goods were being dumped on the local market due to the country's mode of tariff protection (Sunday Nation, October 1994). Inadequate tariff protection coupled with duties imposed on some raw materials and finished goods has rendered local products expensive and uncompetitive. Moreover under the present liberalisation arrangement importers are free to acquire certain goods without an import licence or prior approval from the Ministry of Commerce and Industry and this has led to the off-loading of subsidised manufactured goods on the local market. At the 10th Federation of Kenya Employers (FKE) workshop held in October, 1994 importers were cautioned that an anti-dumping duty will be imposed on such products to ensure fair competition with local products. It was proposed that the tax be levied on imported consumer goods to ensure that no sub-standard goods are offered to consumers.

The quality of goods

The quality of local goods was presented as another constraint to industrial development since it determines how susceptible they are to the competition from other local and imported goods. While the government's concern for the success of local industries is understandable, how this concern is reflected in policy largely determines this success. It should be instilled in manufacturers that they are duty-bound to ensure that their goods are of high standards if they expect to be competitive in the cut-throat international market. Exporters who do not care for quality tarnish the image of the country. In India recently, worried that poor workmanship is hindering export, the government there considered jailing those who fail to meet specified standards.

But the problem of low quality and shoddy goods filtering the market should not arise at all, given that there is a centralised quality control institution, namely, the Kenya Bureau of Standards. This is a government statutory organisation set up to introduce and encourage standardisation among manufacturers, consumers and professionals with a view to creating order and improving quality in industry and commerce. The Bureau has the mandate to check on the quality of all goods manufactured locally to ensure that they reach certain set standards. On the other hand the problem of poor quality goods in Kenya should not arise at all given that there is a centralised quality control institution, namely the Kenya Bureau of Standards. Among its functions is the drafting of Standards and Codes of Practice for provision of quality production in the private and public sectors and protection of consumers from sub-standard products. So far 1,500 Kenya Standards have been drafted and are being implemented in various industries all over the country. And yet shoddy goods continue to find their way into the market. Therefore any attempt to raise the standards of quality of Kenyan goods must first be to ensure that KBS does its job efficiently and professionally.

POLICY FRAMEWORK FOR INDUSTRIAL DEVELOPMENT

The stated government objectives until the year 2000 include a strong agricultural growth, a large and vigorous rural non-farm informal sector based on strong linkages between agriculture and industry, a restructured and efficient manufacturing sector which together with agriculture and tourism generates the foreign exchange necessary to support growth without excessive reliance on external assistance (Government publication, 1992). The combination of these factors produces favourable grounds for industrialization. However, the policy element has been incongruent to the factors. There is a need for a discrete industrialization policy which will prioritize industrialization and tailor the rest of the economy towards meeting industrialization objectives. At present, industry is fabricated to meet our economic needs. This is next to impossible considering that industry in Kenya is still at its infancy stages.

The Kenyan economy and industrial development

The timing of this research was an issue that kept surfacing throughout this study. This is because though its early days yet, the present economic situation is at cross-roads: it is an economy in transition and this makes it difficult for any finding to be pinned down and accepted for a fact in the long-term. To the numerous firms citing economic hardships as the over-riding hurdle to the performance of industry, that Kenya's economy is on course for minor recovery following the implementation of far-reaching reforms is indeed welcome news. This turn of events augurs well not only from a point of view of the future but also has some immediate positive consequences to the local manufacturer. It is expected that by the financial year of 1995 the economy will grow by at least 3.1 per cent from a dismal 0.1 per cent only a year ago.

The exchange rate is one of the three critical and closely-related average price indicators in the economy. The others are inflation (the average price change of goods in the domestic market) and the interest rate (the domestic price of capital). The main purpose of economic stabilisation policies such as we have seen recently is to keep these three prices stable and at realistic levels so as to promote investment and structure the price of Kenyan goods relative to foreign goods in both the domestic and export markets. When the shilling appreciates Kenyan goods become expensive and lose out to foreign goods domestically and abroad. If the trend is sustained for a long period, scarcity of foreign exchange constrains the level of economic activity in the country.

Another consequence is that it becomes less profitable to produce tradeable goods i.e goods that can be exported or imported such as agricultural products, manufactured goods and tourism services. This causes investible funds to be channelled to "non-tradeable" sectors such as real estate development and land speculation or to simply find their way out of the country to seek better returns elsewhere. Thus, the present appreciation of the shilling is hurting the competitiveness of Kenyan goods both locally and abroad. This is the wrong type of adjustment because once Kenyan exporters are driven out of export markets, re-entry will be very difficult. However, in the long-term the situation can be viewed

with optimism for if this is indeed the beginnings of an efficient free market, the scarcity of foreign exchange would cause the shilling to depreciate as more shillings are bid for each available unit of foreign currency. This would restore the competitiveness of Kenyan goods at home and abroad. It has also been argued that with the appreciation of the local currency, the prices of both imported consumer goods and raw materials have concomitantly come down. The Central Bank of Kenya says that although it shares the concern of the business community in the appreciation of the shilling, its primary aim is to balance the conflicting interests of both importers and exporters in its role as custodian of the monetary and exchange rate policy (Monthly Economic Review, October 1994). In this regard the bank believes that the market forces of demand and supply provide a more efficient mechanism of balancing the interest of the two parties and its policies should be directed towards maintaining a stable exchange rate regime within a predictable path.

On a more positive note, inflation is falling and this has the same effect on the competitiveness of our goods as a depreciating shilling since it brings down the break-even price for domestic producers. This decline has been attributed to sustained implementation of appropriate monetary policies, the fall in basic food prices, the favourable gains in the exchange rate and the reduction or removal of excise duty on some products such as kerosene.

Liberalisation - a step in the right direction

The manufacturing sector has transformed from being import substitution-oriented to export-oriented. More important however, is that the sector has also been undergoing liberalisation and has subsequently become the fastest developing sector of the economy. Provisional data indicate that in 1994 the value of imported manufactured goods was 3,543 million Kenya pounds against 3,112 million Kenya pounds in 1993, representing an increase of 13.8 per cent. Manufactured exports were worth-valued at 1,297 million Kenya pounds in 1994 compared to 1,094 million Kenya pounds in 1993. For consumers the main advantage is that this has brought many competitors into the market thus offering a wider choice of goods both locally

produced and imported. Consumers of some manufactured goods however, have not benefitted as expected from the appreciation of the Kenyan shilling against major currencies as their prices have not fallen. However, it is notable that the prices that have fallen are, inter alia, those in the motor vehicle industry, soap and detergents, drugs and cooking oils. It is expected that once the impact of liberalisation is fully absorbed and the shilling stabilises, both consumers and manufacturers stand to benefit.

Indeed, there was overwhelming support for the government on the on-going liberalisation of the Kenyan economy by industrialists in this study. A positive consequence of the process is that a great number of ills that have until recently plagued industry have been eradicated and there is optimism that they have been relegated to the past. The external and internal trade regime has been liberalised. Import licensing and virtually all price controls have been abolished. Even the pricing and marketing of petroleum has recently been deregulated. The regime now depends more heavily on tariffs which are more transparent and easier to administer. Investors would now be more willing to invest vast sums in industry as a result of freeing foreign exchange control regulations save for the soon to be lifted restriction on foreign participation in the stock market. Provisions have been made where foreign investors are able to repatriate their profits without undue difficulty. Monetary management has been tightened and the Central Bank of Kenya has re-asserted its role as an impartial overseer of the financial sector. The tax system is being rationalised to put greater emphasis on indirect taxation. Kenya Tax Authority which is meant to infuse professionalism and efficiency in tax collection was to begin operations in July 1995. Concomitant with these decontrols has been a reduction in corruption as avenues for rent-seeking diminish. The combination of these factors point towards a positive trend and should give businessmen renewed confidence to activate investment proposals and generally enhance economic growth.

Although there are some misgivings over this sustained dismantling of controls, consensus has emerged that they have began to bear fruit. For instance, with regard to industry, manufacturing production was up 10 per cent in the first

half of 1994 compared to the same period last year. There was initial opposition to liberalising the country's import sector, driven by fears that imported goods would crowd out local ones. This growth is an indication that local industry is facing up to imported competition. Annualized inflation for September 1993 to September 1994 period was down to 13 per cent, aided by a stronger shilling and stable food prices. Interest rates have been coming down steadily in the line with falling Treasury Bill rates. The external account shows exports grew 6 per cent in the first quarter of 1994 and imports were up 27 per cent. Imports mainly comprised food items due to the drought of 1993.

But the time has come when the government and the country must either pursue the economic liberalisation course more fully or abandon it because a fudged compromise that often embraces the worst elements of both systems is not in the interest of this country's economic well-being. This brings us to the issue of whether we actually have a comprehensive economic liberalisation policy or whether we are largely following the guidelines and schedule drawn up in the policy Framework Paper for 1994-1996. The latter is a joint effort by the government with the International Monetary Fund and the World Bank. No doubt some in government would turn to the fairly unheard of Sessional Paper No.1 of 1994 on Recovery and Sustainable Development to the year 2010. Whilst this paper gives a reasonable overview of the intended economic direction, some observers feel it is too general on the specific micro-economic aspects which need to be tackled. There is also the point that most policy documents, including this policy paper's predecessor, spend most of their time gathering dust on bureaucratic shelves instead of being implemented.

It is imperative to follow up the recent macro-reforms with comprehensive action to address and delete the many bottlenecks. The bold measures that have been taken are laudable but their real success will be determined by success on the latter. However, the government has reiterated its commitment to the reforms and said there's no turning back now - that is definitely a step in the right direction.

Areas of further research

In line with the National Development Plan for the period 1997-2001, measures are underway to transform Kenya into an Newly Industrialised Country (NIC) by the year 2020. While the plausibility of this time period is debatable, no concrete plans have as yet been unveiled to prepare the economy for its industrial aspirations.

There is an urgent need to carry out further research to ascertain the best way forward in our country's industrialisation process, given Kenya's socio-economic variables and keeping in mind important factors in the global context. More important, research should be undertaken to determine in which direction industrial policy should be formulated. One option could evolve about the establishment and promotion of capital-intensive core industries such as those in the engineering and construction industrial sector. This sector, after all, plays a major role in the economy by providing equipment, implements and machinery to other subsectors. It is also the largest employer and provides new technological achievements by producing new products which in turn produce other products which compete in both local and international markets thus earning the country foreign exchange. On the other hand, industrial policy could be addressed to promoting self-sustaining domestic industry. In this respect, Kenya must utilise the full potential of her resources and reduce import-dependence by promoting and sustaining activities that rely less on intermediate and capital goods. Increased activity in agriculture, informal and Jua Kali sectors, and small/medium-scale enterprises form the backbone of the country's economy and are vital to the industrialisation process.

BIBLIOGRAPHY

Andrews, A. (1976) — A guide to urban planning. Ontario, Prentice Hall

Alonso, W. (1964) — Location and land-use: towards a general theory of land rent. New York, Harvard University Press

Bryce, M.D (1960) — Industrial development a guide for accelerating economic growth. London, McGraw-Hill

Bryce, M.D (1965) — Policies and methods for industrial development London, McGraw-Hill

Chapman K.and Walker D.F (1991) — Industrial location - principles and policies Oxford, Basil Blackwell Ltd.

Collins and Walker D.F (1975) — Locational dynamics of manufacturing activity London, John Wiley & Sons

Dosio J.G.O (1973) — "Thika industrial base" M.A thesis - Department of Urban and Regional Planning - UON

El-Hinnawi E.E (1981) — The environmental impacts of production and use of energy UNEP - Tycooly Press

Eliab Maina Oriedo (1971) "An urban study - a geographical approach to the general patterns of the physical and functional aspects of Nakuru town" B.A dissertation - University of Nairobi

Estall R.C and Olgilvie R.B (1973) Industrial activity and economic geography: a study of the forces behind the geographical location of productive activity in manufacturing industry London, Hutchnson's University

Fransmann M.(1982) Industry and accumulation in Africa London, Heinemann

Friedmann J.(1974) A spatial framework for rural development : problems of organisation and implementation Los Angeles, UCLA

Gilbert A.(1982) Regional studies - "A note on the incidence of development in the vicinity of a growth centre" Vol. 9 pp 325-333

Glasson J.(1980) An introduction to regional planning London, Hutchinson's University

Hamilton F.E.I (1979) Spatial perspectives on industrial organisation and decision-making London, John Wiley & Sons

Higgins B. and Sav - oie D.J (1988) Regional economic development essays in honour of Francois Perroux Boston, Unwin Hyman

Hoover Edgar M. An introduction to regional economics (1974) (2nd Edition) New York, Alfred A. Knopf Inc.

Isard W.(1988) Location and space economy - a general theory relating to industrial location, market areas, land-use, trade and urban structure Massachusetts, Massachusetts Institute of Technology

Kingoriah G.K (1988) "Introduction to Land Economics" - unpublished manuscript - Department of Land Development, UON

Kingoriah G.K "Economic development and industrial (1981) location in Kenya" Ardhi Journal of Land Development Vol.1 NO 2-11

Kirkpatrick C.H and Nixson F.I (1984) Industrial structure and policy in less-development countries. London, Allen and Unwin

Kituuka S. E. (1981) "Industrial real estate lending in Kenya". M.A thesis - Department of Land Development - UON

Lean & Goodall (1966) Aspects of Land Economics London, Estates Gazette

Livingstone I.and Ord H.W (1980) Economics for Eastern Africa Nairobi, Heinemann

Losch A.(1967) The economics of location London, John Wiley & Sons

McCall G. J. H. (1967) "Geology of the Nakuru - Thomson's Falls - Lake Hannington area" Republic of Kenya, Geological Survey of Kenya - Ministry of Natural Resources

Meilink Henk A. (1976) "The effects of import-substitution : the case of Kenya's manufacturing sector" IDS Development Papers No. 276

Michael Conroy F. (1973) "Rejection of growth centre strategy in Latin American regional development planning" Land Economics Journal, Vol.49, No.4

Ndegwa E.N (1977) "The impact of settlements on the development of Nakuru district" M.A thesis - Department of Urban and Regional Planning - UON

Ndwigah C. P. (1988) "Urban land policy and urban land values - a case study of land zoning" M.A thesis - Department of Land Development - UON

Nixson F.I (1973) Economic integration and industrial location - an East African case study London, Longman

Ogendo R.B (1980) "Reflections on economic development in East Africa - from a view point of planning" Seminar paper, Department of Geography - UON

Ogendo R.B (1978) "Industrial location in the Nairobi area" Geo-Journal 2-5 : 451-462

Ogendo R.B (1972) Industrial geography of Kenya with special emphasis on the agricultural processing and fabricating industries Nairobi, East African Publishing House

Ogendo R.B (1989) "Eldoret and its region(s) - a geographical analysis" - Workshop paper, Department of Geography - UON

Ogendo R.B (1969) "Industrial role of the main Kenya towns"
Nairobi, University of East Africa Social Sciences Council Conference

Ogendo R.B (1969) "The location and structure of Kenya's industries"
Department of Geography - UON

Ojany F.F and Ogendo R.B (1973) Kenya - a study in physical and human geography
Nairobi, Longman Kenya Ltd.

Owuor Oloo H. (1980) "Factors influencing the location of manufacturing industries in Nakuru town"
B.A dissertation - University of Nairobi

Republic of Kenya Development Plan 1974/1978
Government Printers, Nairobi

Republic of Kenya Development Plan 1989/1993
Government Printers, Nairobi

Republic of Kenya Development Plan 1994/1996
Government Printers, Nairobi

Republic of Kenya — Nakuru District Development Plan 1989/1993 Government Printers, Nairobi

Republic of Kenya (1992) — "Faster industrialisation of Kenya" Unpublished paper, Nairobi

Republic of Kenya (1990) — "Kenya National Programme for the second Industrial Development Decade for Africa (IDDA)" Paper prepared for the Economic Commission for Africa

Republic of Kenya (1972) — A guide to industrial investment in Kenya Government Printers, Nairobi

Richardson, W. Harry (1973) — Regional growth theory London, The Macmillan Press Ltd.

Smith D.M (1981) — Industrial location : an economic geographic analysis (2nd Edition) London, John Wiley & Sons

Sten Soderman (1975) — Industrial location planning : an empirical investigation of company approaches to the problem of locating new plants Stockholm, Almquist and Wiksell International

Stuart Chapin F.,Jr (1976) — Urban land-use planning. New York, Praeger Publications

Swainson N.(1976) — "The role of the state in Kenya's post-war industrialisation" IDS Working Papers No.181 - UON

The Economic Review — Economic Review Limited, Nairobi September, 1994

The Economic Review — Economic Review Limited, Nairobi October, 1994

UNIDO (1987) — Industry and development - Global Report

United Nations (1979) — Guidelines for rural centre planning- Economic and Social Commission for Asia and the Pacific. United Nations, New York

United Nations (1992) — Focus on African industry - Economic Commission for Africa - Volume V, No.2 United Nations, New York

Waithaka M.W (1986) — "Towards a better understanding of site analysis for building purposes in Nakuru district" B.A dissertation - Department of Land Development - UON

Development - UON

Wanjohi J.W (1991) "Industrial location : a comparative study of the Nairobi - Thika corridor and Athi River - Nairobi corridor" M.A thesis - Department of Land Development - UON

Wescott Clay G. (1976) "Industrial location and public - the case of study Kenya's textile industry." IDS Working Papers No. 288 - University of Nairobi

APPENDIX A

Questionnaire for industrialists

1.0 Name of factory .....

1.1 Year of establishment .....

1.2 Owner of factory .....

1.3 Type of organisation (individual proprietorship, partnership, private limited etc)

.....

1.4 Physical location of factory (street name) .....

1.5 Size of plot .....

1.6 Annual rates per year .....

1.7 Tenure (Freehold or Leasehold) .....

2.0 How did you acquire your plot? (Tick one)

Purchased

Allocated

Allocated by the local authority

Other, specify how

3.0 How many people have you employed?

Type	Quantity
Skilled	.....
Semi-skilled	.....
Unskilled	.....

3.1 Is getting labour a problem? (Tick one)

Yes

No

3.2 If "yes" specify for which group.

3.3 In your opinion what can be done to ease labour problems?

4.0 What product(s) does your firm produce?

Product	Quantity per day
1.	
2.	
3.	
4.	
5.	

5.0 What raw materials or inputs do you require to manufacture your products and which do you obtain locally and which do you import?

Raw material	Quantity	Local	Imported
1.			
2.			
3.			
4.			
5.			

5.1 If you do import any raw materials, do you have any difficulties in the process? (Tick one)

Yes

No

You do not import

5.2 If "yes" what is the problem?

6.0 Which are the major markets for your products? (Tick the appropriate)

Nakuru town

Nakuru district

Other parts of Kenya

Outside the country

6.1 Do you have any difficulties in selling your products? (Tick one)

Yes

No

6.2 If "yes" what is the problem?

7.0 Have you had any changes in production in the last 3 months? (Tick one)

Increase in production

Decrease in production

No change

7.1 If you have increased or decreased production what has been the contributing factor(s)?

7.2 Which of the following are reasons for under-utilization of capacity? (Please rank as follows:- 1 critical, 2 very serious, 3 serious).

Insufficient domestic demand

Shortage of domestic inputs

Shortage of imported inputs

Unbalanced plant (bottlenecks)

Old (obsolete) plant

Plant maintenance problems due to:-

Lack of spare parts

Shortage of skilled labour

High cost and/or shortage of credit

Breakdowns in supply of power

Breakdowns in supply of water

Competition from imports

Loss of products due to strikes, stoppages..

Uncompetitiveness of exports due to:

high price of products resulting from:

High cost of materials

High cost of fuels

High cost of labour

Poor quality of products

Poor transport facilities/high transport costs

Low plant productivity

Low labour productivity

Inability to grant credit to customers

Any other reason, (specify below)

8.0 How did you finance your business? (Tick the appropriate)

Personal savings

Loan

Other

8.1 If through "loan", name your financier(s) below.

8.2 Did you have difficulties in obtaining industrial finance? (Tick one)

Yes

No

8.3 If "yes" what is the reason(s)? (Tick the appropriate)

High interest rates

Financiers are not very accessible to you

No title deed

Other reason, specify below

9.0 What type of machinery do you require for production?

9.1 Where do you get spare parts for your plant and equipment?

(Tick the appropriate)

Nakuru town

Nairobi

Eldoret

Import items not available locally

Other, specify where

9.2 What problems do you experience with regard to spare parts, machinery and equipment? (Tick the appropriate)

Expensive to purchase or replace

Expensive to maintain and repair

Import problems

Other problems, specify which below

10.0 Was your decision to establish at your present location influenced by any government policy? (Tick one)

Yes

No

10.1 If "yes" for which of the following reasons? (Tick the appropriate)

You were attracted by some extra services provided by the local authority

You were prevented from locating elsewhere

There was some inducement by the government e.g tax incentives etc..

Other reason, specify which below

10.2 How do you assess the taxation or duty you pay? (Tick one)

Too much

Fair

Too low

10.3 Are you exempted in part or in full from taxation by the government? (Tick one)

In full

In part

Not exempted

10.4 If "in full" or "in part" what reason makes the government exempt you from taxation?

10.5 How long (number of years) is the tax exemption period?

10.6 Is this period reasonable in your opinion?

11.0 Does your industry produce any noxious waste or smell? (Tick one)

Yes

No

11.1 How do you get rid of your industrial wastes?

11.2 Has the issue of getting rid of it caused you any problems? Please specify the problem.

12.0 What is your relationship with other industries in the locality or town? (Tick the appropriate)

You use each other's inputs and/or products

You compete with each other

You do not depend on them for anything

They are a nuisance because they pollute your environment

They are a nuisance because they block your roads, water channels etc..

Any other relationship, specify below

13.0 Which of the following location factors were important in your decision to locate where you have?

Cost of land

Physiography of the land

Access to infrastructure

Attitude of industrial financiers

Attitude of investment advisers

Cost of construction

Availability of labour and labour costs

Housing for workers

Access to the market

Prices of finished products

Sources of raw material

Sources of machinery, repairs and specialized machine-makers

Transport costs of raw materials

Transport costs of finished products

Presence of other industries (agglomeration)

Absence of other industries (deglomeration)

Government policy

Personal considerations

Chance

Presence of banks, post office, educational and hospital institutions and other urban amenities

Sharing of infrastucture

Any other factor, specify which below

13.1 Which of these factors continues to play an important role in your business today? (Indicate by giving its number)

14.0 How do you assess the present situation with regard to government regulations and procedures? (Tick one)

The situation has improved greatly

The situation has improved somewhat

The situation is still as it was a year ago

The situation has worsened

15.0 "The problems afflicting many industries today are largely due to poor management of the business."

What is your opinion of this statement? (Tick one)

True

Partly true

False

16.0 What suggestions can you make on how best to generally improve the performance of the industrial sector?

17.0 What is your opinion of Nakuru town as the location of your industry?

APPENDIX B

Questionnaire for local authority officials

1.0 Date of interview

1.1 Respondent

1.2 Designation of respondent

1.3 Name of local authority and status

2.0 Which areas in Nakuru town have been zoned for industrial development and what are their sizes?

Area	Hectares/Acres
1.	
2.	
3.	
4.	
5.	

2.1 What are your reasons for zoning these areas for industrial development?

3.0 Are there many industries which have been developed outside the areas planned for industrial development? If so which are they?

3.1 If "yes" in 3.0, give the reasons.

3.2 Do you encourage such developments?

3.3 If so under what circumstances?

4.0 In your opinion is the land marked out for industrial purposes in Nakuru town sufficient? If not what are reasons for this inadequacy?

4.1 Are there other developments such as residential and commercial in those areas set aside for industrial development?

4.2 If "yes" who approved their being established there?

5.0 Do you give an entrepreneur a chance to choose where he wants to locate his plant?

5.1 Is there a preference for some areas over others?

5.2 If "yes" which are the areas preferred?

5.3 Give reasons for the preference.

6.0 Is there a limit to the plot size that you can allocate an entrepreneur?

6.1 If "yes" what is the limit (hectare/acre)?

6.2 Is this limit the same for all the industrial areas within your jurisdiction?

6.3 If not how is this limit determined?

6.4 What reasons are given for the limit?

7.0 What are the annual rates per acre for industrial plots in each area?

1.

2.

3.

4.

8.0 Do you liaise with the Ministry of Commerce and Industry or any other body in connection with industrial development?

8.1 If "yes" above, state which and how.

9.0 Apart from the allocation of plots what other role does the Council play in the actual development of industry?

10.0 How do you encourage industrial development in your area of jurisdiction keeping in mind the government industrial decentralization policy?

11.0 Have current industrial developments adhered to your plans?

11.1 If not, state in which areas the plans have not been adhered to.

12.0 Which of the following factors have led to plans not being adhered to? (Tick the appropriate)

Physical characteristics e.g topography, climate etc..

Poor accessibility

Land ownership and subdivision practices

Plot allocation practices

Social tastes and preferences

High land values

Customs and cultural background

Planning authorities not being strict

Deglomeration factors owing to the proximity of other industries

Others, specify below

13.0 In your opinion what are the constraints to industrial development in Nakuru town and its region?

13.1 How can the constraints be overcome?