



UNIVERSITY OF NAIROBI.

DEPARTMENT OF URBAN AND REGIONAL PLANNING.

**THE SPATIAL REGULARISATION OF INFORMAL  
SECTOR ACTIVITIES IN KISUMU TOWN.**

BY

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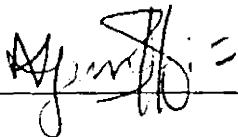


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**DECLARATION.**

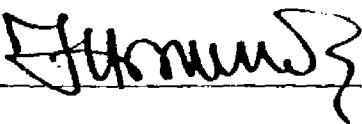
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THIS THESIS HAS BEEN SUBMITTED FOR EXAMINATION WITH MY  
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Signature  Date 14.6.2001

**DEDICATION.**

I dedicate this work to my late sister Mary Onyango and my Uncle David Odongo whose support propelled me to this level of education, but never lived to witness the completion of this work.

May your souls rest in peace.

**PROLOGUE.**

“Space.... is a concrete expression of each historical ensemble in which a society is specified... urban space is structured, that is to say it is not organized randomly... Space as a social structure, the economic, the political, the ideological and the conjuncture of social relation that result from them. Space is therefore, always an historical conjecture and a social form that derives its meaning from the social processes that are expressed through it”.

**(Castells, 1977 Cited in Mochache, 1990:124)**

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## ABSTRACT

The economic structure of African countries is basically characterized by subsistence economy, narrow production base, environmental degradation, urban biased public policies, dependence on external resources and neglect of the informal sector. In the recent years, many countries have come to realize the importance of the informal sector in promoting income and employment opportunities. For instance, available data in Kenya shows that outside agriculture and the public sector, employment opportunities in the informal sector outweighs those in the formal sector. The adverse view on the sector as a manifestation of massive underemployment or disguised unemployment, and of the excessive growth of unsophisticated tertiary occupations in the cities still persists. At worst the sector is considered as a parasite and a potential criminal, lumped together with beggars, prostitutes and thieves in the "*lumpenproletariat*" or simply viewed as a total irrelevant occupation. At best the sector's worker is viewed as an enterprising victim of the shortage of "productive" employment opportunities in the town, adopting a coping response in the face of urbanization process, which combines considerable rural-urban migration, rapid urban population growth, slow growth in industrial employment, and the application of imported capital intensive technologies to labour surplus situations. In the context of a dualistic model of urban labour markets, using formal-informal sector terminology, it is useful to examine the three sub-sectors of the informal sector as a means of testing the nature and significance of informality in the total economic system.

The development of the informal sector like any other commercial enterprises is affected by various factors such as policy environment, resource availability, entrepreneurship of the local community, legal and political system in a given economy. The Kenyan government views the sector as crucial for industrialization, commercial development and income generation. However, the sector faces a number of constraints, which hinders its sustainable development such as inadequate capital, poor management practices, lack of access to credit facilities, poor infrastructure, inadequate access to market and appropriate technologies, professional services such as banking, insurance and legal services. The solution to the above stated problems necessitates a comparative analysis of the manufacturing, trade,

and service sub-sectors of the informal sector, with an ultimate goal of developing an integrated model for spatial regularization of the Informal Sector Activities (ISAs). Using Kisumu town as a case study. Few studies have been carried out in Kenya to recommend an integrated model (siting regulation, assistance policies and environmental policies) for regularizing the sector. These studies simply describe the nature and functions of the various sub-sectors of the informal sector.

In order to develop an integrated model for spatial regularization of the Informal Sector Activities (ISAs), the following specific objectives were set: First, To examine the major factors influencing the siting and the spatial distribution of the informal sector activities in urban areas. Secondly, To examine the inter and intra linkages existing between the informal sector and the formal sector, and how these linkages influence siting of the activities. Thirdly, To assess the environmental impact of the informal sector activities and how this information can be used in determining suitable sites for the sector. Finally, to evolve planning interventions which can enhance sustainable development of the sector. The set objectives were to be met through analyzing the hypotheses, which were set at the beginning of the study. This study had two main hypotheses namely: There is significant relationship existing between the informal sector's structure, the actual siting and the spatial distribution of the ISAs within the town. The second one being that there are significant linkages existing between the ISAs and the formal sector in the town.

The target population for this study was drawn from the informal sector workers, where 100 of them formed the sample size. Informal sector activities being evident in all areas in the town, Nyalenda, Kondele, Kibuye and the Central Business District were selected as the sample areas. This study combined a wide variety of social research methods, both for data collection and manipulation. Primary and secondary methods of data collection were used. The primary techniques of data collection used in this study included the use of questionnaires, oral interviews, field observations and measurements, photography and focused group discussions with various agencies involved in the sector's development such as the municipal council representatives, central government officials, and other stakeholders like



the Community Based Organizations (CBOs), Non-Governmental Organisations (NGOs) and finally the residents living near the *jua-kali* sites. Further, secondary techniques of data collection such as secondary information from the District Development Plans, statistical abstracts, municipal council records, and the use of relevant maps and diagrams. The data was analyzed using both quantitative (inferential), qualitative, cartographic techniques as well as environmental impact assessment. The qualitative (descriptive) analysis used here included tables, pie charts and frequency tables mainly for the classification of the structural aspects of the sector as well as the effect of policies, regulations and by-laws on the sector. This stage was found to be important for it constituted a major step towards explanation of phenomena. Quantitative (inferential) statistics used include Factor Analysis, Multiple Linear Regression, Correlation Matrix, Input-Output model and Environmental Impact Assessment (EIA). The significant criterion was chosen using F-test with level of significant ( $\alpha$ ) set at 0.05.

The above stated analysis revealed that the significant factors influencing the siting and spatial distribution of the ISAs in Kisumu town are: - Nearness to the residence of the entrepreneur and hence familiarity with the area, influence of local politics, accessibility to major streets, the number of enterprises already at the site, prohibitive regulations and high standards in other areas, lack of alternative planned zones for the ISAs, proximity to market and sources of raw materials. These factors explained 76% of the siting decisions. However, economic considerations proved to be far superior to the socio-political considerations, because they explained 63% of the siting decisions. The procedure used in arriving at the optimal sites for the ISAs involved the feeding of the isolated significant factors to the heuristic model. Heuristic models are based on mathematical optimizing technique, which has been developed to solve the general problem of land allocation.

This study is divided into six chapters. Chapter One is the introduction while Chapter Two discusses the background information of the study area. In this chapter, the author raises critical issues on the origin of the ISAs in the town. These factors include socio-economic, demographic, physical and

political background of the town. Chapter Three is the literature review, which helped in the conceptualization of the problem and the ultimate envisaged solution of the problem.

Chapter Four is data analysis and presentation of the findings on the structure and environmental aspects of ISAs, while Chapter Five is the analysis on the policies, regulations and by-laws affecting the ISAs. Chapter Six is the presentation of recommendations. Emerging from this study is the realization that the informal sector is a complex scenario, which requires a comprehensive policy framework if a level of regularization is to be realized in the sector. This being the case, the author recommends an integrated policy framework which entails site proposals, land use policies, management structure, environmental policies, assistance programmes, legal and regulatory framework. This study culminated with presentation of the bibliography and the appendices.

## TABLE OF CONTENT

DECLARATION	ii
DEDICATION	iii
PROLOGUE	iv
ACKNOWLEDGEMENT	v
ABSTRACT	vii
<b>CHAPTER ONE: INTRODUCTION</b>	<b>1</b>
1.0: General Overview	1
1.1: Statement of the Problem	9
1.2: Objectives of the Study	12
1.2.1: General Objective	12
1.2.2: Specific Objectives	12
1.3: Hypotheses of the Study	12
1.4: Justification of the Study	13
1.5: Scope of the Study	13
1.6: Limitations of the Study	18
1.7: Operational Definitions	19
1.8: Research Methodology	21
1.8.1: Sampling Procedure	22
1.8.2: Methods and Tools of Data Collection	24
1.8.3: Methods of Data Analysis	24
1.9: Specific Analysis	25
1.9.1: Factors Influencing Siting and Spatial Distribution of the Informal Sector Activities	25
1.9.2: Inter and Intra Linkages in the Informal Sector	29
1.9.3: Environmental Impact of the Informal Sector Activities	31
1.20: The Procedure used for Establishing Optimal Sites of the Informal Sector Activities	32
1.21: Organization of the Document	34
<b>CHAPTER TWO: BACKGROUND INFORMATION ON THE STUDY AREA AND ITS INFLUENCE ON THE DEVELOPMENT OF THE INFORMAL SECTOR ACTIVITIES</b>	<b>35</b>
2.0: Introduction	35
2.1: Location And Size	35
2.2: Physiographical Background	38
2.3: Historical Growth of the Town	39
2.4: Land Uses And Land Tenure Systems in the Town	42
2.5: Physical Infrastructure	43
2.6: Economic Profile	44
2.7: The Administrative and Political Structure of Kisumu Town: The Implications on the Informal Sector Growth	47
2.7.1: Administrative Structure	47
2.7.2: Political Structure	49

**CHAPTER THREE: LITERATURE REVIEW AND CONCEPTUALIZATION OF THE SPATIAL REGULARIZATION OF THE INFORMAL SECTOR ACTIVITIES** 51

3.0: Introduction 52

3.1: General Approaches to the Study of Business Siting 54

3.2: Enterprise Siting Factors 53

3.3: Perceptions on what Constitutes Suitable Sites for the Informal Sector Activities 57

3.4: Towards a Conceptual Model for the Spatial Regularization of the Informal Sector Activities 63

**CHAPTER FOUR: THE STRUCTURE AND ENVIRONMENTAL IMPACT OF THE INFORMAL SECTOR ACTIVITIES IN KISUMU: DATA ANALYSIS AND FINDINGS** 69

4.0: Introduction 69

4.1: Distribution of the Informal Sector Enterprises in the Town 69

4.2: Enterprise Ownership by Gender 71

4.3: Entrepreneurs Age and Level of Education Per Category of Activities 72

4.3.1: Age Characteristics 72

4.3.2: Education Level 72

4.4: Enterprise Characteristics 73

4.4.1: Enterprise Ownership 74

4.4.2: Types of Business Premises 74

4.4.3: Premises Ownership 74

4.5: Employment Characteristics 76

4.5.1: Employment Size 76

4.5.2: Labour 78

4.6: Factors Influencing Business Expansion 79

4.6.1: Record Keeping 80

4.6.2: Training 80

4.6.3: Sources of Capital for the Enterprise 81

4.6.4: Trade Licenses 82

4.7: Spatial Distribution of the Informal Sector Activities 82

4.8: The Inter and Intra Firm Linkages 89

4.8.1: Raw Material Linkages 89

4.8.2: Technological Linkages 94

4.8.2.1: Subcontracting Linkages 95

4.8.2.2: Capital (Equipment) Linkages 98

4.9: The Environmental Impact Assessment of the ISAs 98

4.10: Study findings and their Planning Implications 104

4.10.1: Structure of the ISAs 104

4.10.2: The Spatial Distribution of the ISAs 109

4.11: The Inter and Intra Spatial Linkages 109

4.11.1: Raw Material Linkages 109

4.11.2: Technological Linkages 110

4.12: Environmental Impact Assessment 111

<b>CHAPTER FIVE: THE EFFECTS OF POLICIES, REGULATIONS AND BY-LAWS ON THE INFORMAL SECTOR ACTIVITIES</b>	<b>112</b>
5.0: Introduction	112
5.1: Policy Issues on the Informal Sector Operations	113
5.2: Institutional Support	116
5.3: The Effects of Regulatory Policies on By-Laws on the ISAs	118
5.3.1: The Trade Licensing Act	120
5.3.2: The Local Government Act (Cap 265) of the Laws of Kenya	121
5.4: Effects of Policy Maker's Attitude and Actions on the Informal Sector Activities	122
5.4.1: Attitude	123
5.4.2: Action Towards the Informal Sector Activities	124
5.5: Study Finds and their Planning Implications	126
5.6: Conclusion	127
<b>CHAPTER SIX: TOWARDS SPATIAL REGULARIZATION OF THE INFORMAL SECTOR ACTIVITIES: RECOMMENDATIONS AND CONCLUSION</b>	<b>128</b>
6.0: Introduction	128
6.1: Proposed Main ISAs Sites	129
6.1.1: A Case for Clustering of the Activities	130
6.2: Proposed Minor ISAs Sites	132
6.3: Policies to be Enacted by the Municipal Authority to Ensure that the ISAs Remain in the Allocated Sites	135
6.3.1: Land Use Policies	135
6.4: Management Structure and Site Allocation Proposals	136
6.4.1: Allocation of Site	137
6.5: Environmental Policies	138
6.6: Assistance programmes	139
6.7: Legal and Regulatory Framework	140
6.8: Future Programmes and Policy Issues which the Municipal Authority Should address for Optimal Development of the ISAs	141
6.9: Areas of Further Research and Data Collection	142
6.9.1: Education and Training	143
6.9.2: The Rural Informal Sector	143
6.9.3: Financing the Informal Sector	144
6.9.4: Technology in the Informal Sector	145
6.9.5: Gender Issues in the Sector	146
6.9.6: Policy Strategies	146
6.10: Conclusion	147
<b>BIBLIOGRAPHY</b>	<b>151</b>
Published Materials	151
Journals	155
Unpublished Materials	157

## LIST OF TABLES

Table 1.1:	Sample Size	23
Table 1.2:	Sampling Procedure	23
Table 1.3:	Grouping of Site Variables	28
Table 2.1:	New Income Brackets	41
Table 4.1:	Number of Enterprises Surveyed Per Category of Activities	70
Table 4.2:	The Percentages Distribution of Enterprise Ownership by Gender	71
Table 4.3:	Labour Force Composition by Gender	72
Table 4.4:	Average Age of Informal Sector Workers by Sub-Sector	73
Table 4.5:	Employment Characteristics	77
Table 4.6:	Sources of Capital for the Enterprises	81
Table 4.7:	Site Variables	83
Table 4.8:	Correlation Depicting Significant Relationships Among the Site Variables	84
Table 4.9:	The MLRA Results	86
Table 4.10 (a):	Spatial Aspects of Raw Material Linkages	90
Table 4.10 (b):	Proportion of Sampled Enterprises having Raw Material Linkages With the various Regions	91
Table 4.10 (c):	Inter and Intra Sub-Sector Raw Material Linkages	93
Table 4.11 (a):	Inter and Intra Backward Subcontracting Linkages	96
Table 4.11 (b):	Inter and Intra Forward Subcontracting Linkages	96
Table 4.12:	Capital Linkages for the ISAs	98
Table 4.13:	Aggregate Environmental Quality Index	103
Table 5.1:	Year of Business Establishment	113
Table 5.2:	Causes of the Major Problems	115
Table 5.3:	Institutions Contacted for Assistance	117
Table 5.4:	The Proposed Measures	124
Table 6.1:	Recommended Activities in Various Informal Sector Sites	132

## LIST OF FIGURES

Fig.3.1:	Conceptual Model for Spatial Regularization Of the Informal Sector Activities	66
Fig.4.1:	The Percentage Distribution of the Enterprises by Sub-sector	71
Fig.4.2:	Business Premise Types	75
Fig.4.3:	Average Number of Employees Per Sub-sector	78
Fig.4.4:	Categories of Labour Force	79
Fig.4.5:	Preferred Types of Training	81
Fig.4.6:	Scree Slope Graph for the Informal Sector Activities	85
Fig.4.7:	The Utility Function Curve Employed in Assigning Utility Values to Various Attributes	101
Fig.5.1:	Policy Problems	114
Fig.5.2:	Reasons for contacting Institutions	118
Fig.5.3:	Modes of Acquisition of Business Sites	125
Fig.5.4:	Percentage of Operators Relocated During their Business Cycle	126

## LIST OF MAPS

Map 1.0: Kisumu Town: National Context	36
Map 2.0: Kisumu Town: Regional Context	37
Map 3.0: Kisumu Town: Topography	41
Map 4.0: Kisumu Town: Land Uses	45
Map 5.0: Kisumu Town: Transport Network	46
Map 6.0: The Proposed ISAs Sites	133
Map 7.0: The Proposed Obaria Site Arrangement	134

## LIST OF PLATES

Plate 1.0: Informal Sector Activities Invade Central Park in the Town's Central Commercial District	49
Plate 2.0: Open Air Metal Workshop	76
Plate 3.0: Informal Sector Activities Operating on Verandah of Formal Shops	88
Plate 4.0: Proliferations of the Second Hand Clothes in the Major Streets of the Town: Angawa Street	92
Plate 5.0: Carpentry and Timber Dealings Cluster at a Site in Kondele	94
Plate 6.0: Chinese National Selling Petty Goods on the Streets as Opposed to the Trade Licensing Act Section 5(2)	121

## LIST OF APPENDICES

### APPENDIX I

Questionnaire to the Informal Sector Workers	161
--	-----

### APPENDIX II

Questionnaire for the Town Clerk/Physical Planner/ Chairman <i>jua-kali</i> Association and Ministry of Trade officials	166
--	-----

### APPENDIX III

Eigen Values for the Informal Sector Activities	169
---	-----

### APPENDIX IV

Varimax Rotated Matrix for the Informal Sector Activities	170
---	-----

### APPENDIX V

Multi-Attribute Utility Theory: Performance Profile for Various Informal Sector Activities in Nyalenda	171
---	-----

### APPENDIX VI

Multi-Attribute Utility Theory: Performance Profile for Various Informal Sector Activities in Kondele	172
--	-----

**APPENDIX VII**

Multi-Attribute Utility Theory: Performance Profile for Various Informal Sector Activities in Central Business District (CBD)

**APPENDIX VIII**

Multi-Attribute Utility Theory: Performance Profile for Various Informal Sector Activities in Kibuye



## CHAPTER ONE: INTRODUCTION.

### 1.0: GENERAL OVERVIEW.

Since the International Labour Organisation (ILO) Mission to Kenya in 1972 assessed and published the report "Employment, Income and Equity in Kenya, through the Informal Sector", a great deal of interest and discussion have focused on the sector as a key player in national development. These discussions have centred upon three main questions: first, whether the informal sector is a useful analytical concept, given the large number of problems in its definition; Secondly, what the economic significance of the sector is and thirdly, the question of whether the sector has the potential of contributing to regional economic growth. Answers to these questions are still bones of contention in many fora.

The dualistic nature of the economies of many developing countries is well understood by researchers in development economics. Most Third World Countries economies are seen as two juxtaposed systems of production, one derived from capitalist form of production, and the other from the peasant system of production (Ryan, 1986: 1). Yet other scholars view the economies as being of two types, a "firm centred" and a "bazaar type" (Boeke, 1953: Robert, 1978). Further, other views it as two circuits, the upper and lower (Santos, 1979). These labels emphasize the distinctive organization of production activities, whereas the usual "modern-traditional" dichotomy refers to the technology used.

To this array of labels, Hart (1973) added "formal" and "informal" income earning opportunities. His study differs from those cited above in one significant respect, in that it identifies a variety of new income-generating activities, many of which are recent in origin and

reflects a state of both unemployment and underemployment in the Less Developed Countries (LDCs). By their nature, these activities are concentrated in "*unorganised*" sector of the urban economy. Hart argues that owing to the inadequate employment opportunities in the formal sector and lack of training, new entrants to the labour-force are compelled to seek employment in the informal sector.

Mazumdar (1979) in his study on the "urban informal sector" proposed a dichotomy based on differences within the urban labour market rather than between enterprises composing the urban economy. He describes the informal sector as the "*unprotected*" sector. He argues that employment is protected for some individuals in the labour force in the sense that the wages and conditions enjoyed by workers in the formal sector are not available in general to all jobseekers in the market unless they manage to cross the barriers to entry. The protection, it is argued may arise from the action of trade unions, governments, or of both acting together.

One of the important findings of the ILO (1972) report on Kenya is that a substantial proportion of urban workers are self-employed in small enterprises. These firms are mostly unregistered; the workers have lower earnings than their counterparts employed in the public service, larger industries and commercial enterprises of the formal sector. The report further revealed that disproportionately large share of the additions to the urban labour-force, resulting especially from rural urban migration tends to be absorbed in such small enterprises. The report adopted Hart's (1973) terminology, defining these small enterprises as the informal sector.

The ILO's (1972) report suggested that the informal sector activities are characterized by the following criteria: -

- i) Ease of entry;
- ii) Reliance on indigenous resources;
- iii) Family ownership of the enterprise;
- iv) Small scale in operations;
- v) Labour intensive and adoptive technology;
- vi) Skills acquired out of formal school system;
- vii) Operate on unregistered and competitive markets.

This definition is however, inadequate as many small-scale enterprises within the formal sector also meet these criteria. The characteristics of the formal sector according to the report are the opposite of the above. This basis of dividing the economy into two sectors remains vague because many formal small-scale enterprises also meet the criteria of informal enterprises as suggested by ILO (1972) report. The problem of distinguishing the informal sector from formal sector enterprises therefore still remained. In this context, an enterprise in the informal sector is broadly defined to include any economic unity engaged in the production of goods and services: whether it employs only one person (the proprietor) or more; whether or not it uses fixed capital; whether or not it has fixed location for conducting business. Defined in this way, the universe consisting of the informal sector enterprises is large including the residual, including all the private firms in the economy as well as non-firm agricultural activities. Therefore, agricultural employment is excluded.

The ILO (1972) report having recognized the potential of the informal sector, urged the policy makers to recognize and support the sector through formulation of policy measures, which are positive to the sector. Among the recommendations, which the report came up with included urging governments to change the hostile regulatory environments into a positive climate that could enhance the expansion of the sector. The report further urged governments to enhance the technological capacity of the informal sector workers. Finally, the report requested governments to adopt flexible policies, regarding the output standards and quality for the sector to enable it have better chances of increasing its market share ILO, (1972: 226 - 231).

Notwithstanding the limitations of the report, it underscored the sector's role in promoting income growth and equity, employment creation and technological transfer. More studies have since been undertaken in several countries like Ghana, Zimbabwe, Indonesia and Malaysia, which corroborate the ILO's report. These studies suggest the need for increased awareness and credit facilities to the sector (Abuodha, 1993; Aleke-Dondo, 1988; Aleke - Dondo, 1991; Aleke - Dondo, 1993; Brundin and Sandstorm, 1992; Kanoga, 1978; Friedrich Ebert Foundation, 1990 and Ondiege, 1995). This was done in recognition that the sector operates under severe resource constraints, as their owners generally possess little education, technological skills and capital.

Other researches have shown that regulations also influence the growth of the sector. This is because full compliance with the regulations not only reduces the incomes of the micro enterprises significantly, but also limits their access to resources and marketing opportunities (Aleke- Dondo *et al* 1986; Amunga, 1990; Gichira, 1991; Mochache, 1990, Muench, 1977; and

Noor Mohamed, 1985). The two factors (access to resources and marketing opportunities) explain why the majority of the informal sector activities have remained outside the main stream economy where they choose to operate in this "*informal*" way, being unregistered, unlicensed, small scale in operation with low technological capacity.

Finally, these studies pointed out the existence of demand constraints due to biased development policies favouring the formal sector enterprises (Aleke - Dondo, 1989; Anangwe, 1993; Bhatia, 1986; Degroot, 1990 and Ikiara, 1991). This is because the majority of the governments, more so, those of the Less Developed Countries (LDCs), believed that development is synonymous with modernization. Therefore, they evolved development strategies based on import substitution, which implied promotion of large enterprises at the expense of the Small and Micro enterprises (SMEs). This consequently lowered the citizen's incentives to invest in the informal sector (Mochache, 1990; Onyango, 1992 and Obudho, 1981). The above findings provided the basis for Kenya's policy on Micro and Small Enterprise activities, particularly the urban informal sector. This policy led to the removal of strict regulatory framework against the sector to conducive regulatory framework, which promote the sector's growth and also facilitate the sector's access to credit facilities, markets and other resources.

It has been noted by a number of scholars and researchers like Obudho (1981:14), Mochache (1990), and Atieno (1986: 7- 13) that the evolution of the informal sector in Kenya can be traced back to the early 1960s, when the newly Independent state introduced trade licenses, work permits and state owned monopolies, as part of the broader strategy for economic indigenisation. Since then, this sector has witnessed bustling activity and renewed interest both by external

agencies and the government, with desire to intervene directly, which contrasts with neglect which characterised the early years.

In November 1985, President Daniel Arap Moi visited one of the favourable informal sector industrial clusters located in Kamukunji, Nairobi. This acted as an important milestone in the evolution of the sector in Kenya, because it initiated a crucial process of political recognition of the sector at the highest level.

Within a period of three months, the president touched on the following policy issues, which later constituted the key areas of policy focus for the sector:

- ◆ The provision of sheds.
- ◆ The possibility of security of tenure on sheds by providing the sheds freely and issuing title deeds to the allottees.
- ◆ The sector's organisation through formation of groups like the *jua-Kali* associations.
- ◆ The possibility of subcontracts: -This included the government vehicles being repaired in the informal workshops of Gikomba.
- ◆ Incorporating the sector into National Industrial Policy and Planning.

In 1986, an official policy focusing on the sector came into being with publication of Sessional Paper No. 1 of 1986 on "**Economic Management for Renewed Growth**". By the time it was released, the casual term "informal" sector was given a new positive dimension by being substituted with the term *Jua-Kali*. The Sessional Paper highlighted the potentials of the sector

and how to change its image, from an employer of last resort to a spring of technological innovation and aggressive entrepreneurship. This paper, prepared against the background of a declining economic growth, introduced radical changes and outlined a development strategy, which put great emphasis on informal sector development.

The Sessional Paper further recognised that approximately 80% of the rural population are involved in off-farm activities and proposed the establishment of a task force to review local authority's by-laws and regulations governing the informal sector activities. This was meant to create a healthy legal and regulatory climate for the informal sector activities (ICEG, 1999: 4).

In 1989, the Government of Kenya (GoK), through the Ministry of Planning and National Development published a document entitled "**A Strategy for Small Enterprise Development In Kenya: Towards the year 2000**". This paper focused on the constraints the sector was experiencing. The constraints were broadly classified as: -

- ◆ The Enabling Environment
- ◆ Investment and finance
- ◆ Promotional Programs and Enterprise culture.

These constraints subsequently formed the basis for designing fairly focused policies on the sector. By 1992, the policy focus had been refined and was published as Sessional Paper No 2 of 1992 on "**Small Enterprise and *Jua Kali* Development in Kenya**". This paper has since served as the basis of all programs for the development of the sector. An agenda for action was defined

covering a period of 12 to 24 months, in those areas considered crucial for the promotion of the informal sector. This period expired in February 1994.

Early in 1994, under the **Agenda for Early Action**, thorough assessment of policies, the government carried out strategies and programmes. The obstacles inhibiting growth in the sector were identified and further analysed. The following issues emerged:

- ◆ There were multitudes of actors involved at various levels of implementation of the policy. Due to weak or non - existent coordination mechanisms, the results were minimal impact. Furthermore, the government's capacity to play its facilitative role was weak and required strengthening.
  
- ◆ The regulatory environment still remained hostile to informal sector activities, despite the review of the disabling by - laws and regulations inhibiting the sector's growth. This was due to inadequate dissemination of information to the implementers.

In order to address these issues the MSE Unit in the Ministry of Planning and National Development was upgraded to a division with two distinct sections. The first section being policy section was mandated to develop, monitor implementation, co-ordinate policies, disseminate information to the target population, and further assess the impact of the policies on the beneficiaries. The second section was the deregulation unit, mandated to facilitate the creation of an enabling environment for promoting the informal sector. This was to be achieved by addressing the existing constraints, specifically those regulations that proved punitive to the sector's development.



During the same period, a number of donor agencies such as, the United Nations Development Programme (UNDP), the British Department For International Development (DFID), the United States Agency for International Development (USAID), German Technical Development Agency (GTZ) and the European Union, simultaneously designed a series of support programs to promote the growth and development of the informal sector in Kenya (ICEG, 1999:7). It is on this background that USAID in collaboration with Kisumu Municipal Council, in 1992 provided funds for the development of various *Jua-Kali* sites, such as Kowino, Migosi, Manyatta and the expansion of Kibuye *Jua-Kali* market based on integrated site and service scheme. Despite the project's completion by 1994, their performance has been lackluster.

### **1.1: Statement of the problem.**

This work was prompted by search for a model on how the informal sector activities can spatially be regularised. Since attainment of Independence, major urban centres in Kenya such as Nairobi, Mombasa, Kisumu, Nakuru and Eldoret have witnessed rising population. This is due to uncontrolled influx of the rural population into the urban centres in search of employment opportunities, which often has turned elusive (Freeman and Norclife, 1985: 14). However, the urban poor have to find alternatives through which they can meet their basic needs. The best alternative has been through the goods and services rendered by the informal sector.

Due to uninformed planning and inadequate considerations on the economic needs of the informal sector, the municipalities do not give due regard to these activities. Therefore, these traders find their own sites by encroaching into spaces allocated for other activities. Often this has resulted in land use conflict. This has consequently led to poor environmental and aesthetic

conditions of urban centres as well as insecurity of tenure for work sites, resulting into further haphazard mushrooming of the informal business in urban centres, and frequent harassment by local authorities.

Significant evidence proves that physical infrastructure constraints the growth and development of the informal sector (ICEG, 1999:7). Circumstances may differ spatially, but there are many problems in common. The major fallouts in the infrastructure provision for the informal sector are the limited access to electricity, running water and sewer facilities. This especially inhibits manufacturing, catering, and food processing and similar categories of the informal sector activities. In many parts of the urban centres, poor access roads and other utilities makes it difficult for the informal sector activities to operate viably. These factors explain why business and financial services are unavailable in the normal areas where the sector's activities are concentrated in the urban centres. The solution to these problems lies in the spatial regularisation of the informal sector activities, both in urban and rural centres (Kinyanjui, 1987:88). This will further address the environmental degradation effects created by the informal sector activities in the urban centres.

Evident in many studies (Opondo 1989; Kinyanjui, 1987; McGee, 1973 and McCormick, 1988) is the fact that if regularisation is not attained, the traders will move into the allocated sites temporarily and relocate after few months or years. It is also important to note that regularisation of the sector should not erode its *"informal"* nature as this is the sector's attribute which gives it the advantages for competing with the formal sector. The regularisation process should be tied to other policy measures such as provision of credit facilities, infrastructure, technological capacity

building and reorganisation of the informal sector workers into semi-formal groups through which they can access credit facilities (ICEG, 1999; Matrix Development Consultants, 1993 and Kongstad, 1975). The need for regularisation of tenure as a policy has also been recognised by the informal sector operators. There is clear evidence that the informal sector has lost all legal grounds to own land, which often leads to difficulties in regularising the sector. A good example is illustrated in box 1.0.

**Box 1.0.**

**Kamukunji plea by jua kali workers.**

**By JOHN ole KISMIR.**

JUA Kali artisans last week proposed that the government should give them the city's Kamukunji grounds. The secretary of the Kamukunji jua kali Association, Mr. Julius Musandu said that the Jua Kali artisans will build more workshops and solve the problems of political battles and riots that have brought a lot of agony to traders in the area. The traders have suffered losses as a result of the recurrent rallies that have turned the Kamukunji into a battlefield. They decried the damage caused by fighting between rival political groups last Saturday. Most businesses were closed for fear of the looting that has characterised such rallies in the past.

Traders complained that many of them were caught in the melees as the rival groups fought. "The police mistakes us for thugs, they just beat people without giving time to identify one self." Said George Ngari. They also incurred losses as customers shied away from the area even a day before the rally. "It was a day of zero work, said Mr. Jackson Mweu.

**Source:** (*The weekly-advertiser*, Issue No 77 of August 28-September 3, 2000).

This study aimed at evolving a strategic structure plan for the informal sector activities siting in Kisumu town based on the premise that legal recognition is the prerequisite for a growing and viable informal sector. This was done with a view that if the informal activities are regularised, then they will become more productive and thus enhance the municipality's environmental condition besides easing the process of revenue collection from the traders. The regularisation

envisaged should not erode the informal nature of the sector but should instill organisation in the sector as will be seen in the subsequent chapters.

## **1.2: Objectives of the Study.**

### **1.2.1: General Objective**

The main objective of this study was to propose a model for spatial regularisation the informal sector activity siting. This was tested in Kisumu town.

### **1.2.2: Specific Objectives.**

Accordingly, the study aimed at addressing the following objectives:-

- (i) To examine the major factors influencing the siting and spatial distribution of the informal sector activities in the urban areas.
- (ii) To examine the inter and intra-linkages existing between the informal sector and the formal sector, and how these linkages influence siting of the activities.
- (iii) To Asses the environmental impact of the informal sector activities, and how this information can be used in determining suitable work sites for the sector.
- (iv) To evolve planning interventions that can enhance development of the sector.

### **1.3: Hypotheses of the Study.**

Following the research problem and objectives set, the following research hypotheses were formulated for testing:

- (i) There is significant relationship between the sector's structure, the actual siting and the spatial distribution of the informal sector activities in Kisumu town.
- (ii) There is a significant linkage between the informal sector activities and the general urban formal sector in Kisumu town.

### **1.4: Justification of the Study.**

Sub-Saharan countries of Africa had very high expectations of economic progress in 1960s. This was in regard to rising incomes, employment and the improvement of the general welfare of their citizens (Ondiege, 1995). In order to achieve this economic prosperity, they embarked on political emancipation and infrastructure expansion to support industry and other forms of employment.

However, by the turn of 1970s, the growth had started to falter reaching its lowest ebb in 1980s due to regional calamities such as famine, hunger, wars and general economic mismanagement. The disintegration of infrastructure over time is a manifestation of the decline in economic growth and rise in poverty levels. Between 1990 and 1998, the average economic growth in Africa was 0.4%, while the per capita income declined by 2.6% over the same period (UNECA, 1988; World Bank, 1994).

In the past, the African economies tended to ignore the informal sector. By 1989, it was estimated that the informal sector accounted for 20% of industrial output, and over 25% of the total labour force (World Bank, 1989), these figures being only what was known in the statistical abstracts. The same World Bank survey further indicated that the informal sector accounted for about 20% of the Gross Domestic Product (GDP) per annum in Africa. This proves that the informal sector is a significant sector where the African labour force eked their living either as entrepreneurs, employees or as customers. This proved that this sector plays a major role in production, distribution, finance and employment opportunity creation in Africa. The above being the case, it is important that this sector should be given serious consideration to help Africa transform her economic status (Ondiege, 1995; Mochache, 1990; Mochache, 1985; McCormick, 1988; Ikiara, 1991; Bowa, 1987 and Kabagambe, 1975).

The informal sector also acts as a source of technological innovations (Giaoutzi *et al*, 1990; and Ondiege, 1995:1). The combination of formal and informal sector is an important strategy for promoting the economic welfare of a less developed country such as Kenya. This is because the strategy is crucial for the maintenance of socio-economic stability and income pooling at the household level.

During the 1980s, when International Monetary Fund (I.M.F) and the World Bank introduced the structural adjustments programmes. It emerged that these macro-economic adjustments did not achieve the desired responses especially in regard to private investments. This prompted the development of an alternative strategy that was found to be the development of the informal sector.

Studies based on the evaluations of a variety of promotional efforts and projects like *Nyayo Jua Kali* shades in Kenya have shown that the effectiveness of the informal sector can be improved by addressing siting factors, linkages and aesthetic aspects of the sector. Thus it emerges that when designing policies and programmes meant at promoting the growth of the sector, it is germane to incorporate the siting factors, socio-political factors, linkages and aesthetic aspects of the sector, which were the ultimate aim of this work.

In as much as there is immense literature on the characteristics of the informal sector and factors affecting its performance, there is scarcity of literature on how they should be located viably in the urban centres. It is argued that if the planning is not considerate enough, the informal sector activities may proliferate in many areas with immense environmental problems. In addition, the informal sector activities will perform poorly in terms of economic out-put if they are not rationally planned (Hosier, 1987; Mochache, 1985:19 Mochache, 1990; Okwiri, 1987; Okoth, 1990; Nyabuti, 1984; and Njoroge, 1985).

Indeed, planning being a rational activity, it has to be put in place to guide the informal sector.

Such planning, as noted by Gruen (1973:58), should have the following as its objectives. It: -

- (i) Should promote the opportunity for direct human communications.
- (ii) Should promote the opportunity for easy and free exchange of goods, services and ideas.
- (iii) Should promote the enjoyment of human freedom as expressed by easy access to a multiplicity of choices concerning every expression of life.

Therefore, it emerges that planning for the informal sector should take care of the public interest, which has been abused over time by the planners as noted by Brindley *et al*,

"In city centre business and financial districts most planning authorities would not consider any other sort of development besides offices. In other words, certain types of land uses are seen as logical, sensible and financially sound. Therefore, there is tendencies towards zoning of land for uses which are seen not as profitable thus illogical like for the informal sector activities outside the city centre. "<sup>1</sup>

In many development plans, the allocation of land has been very similar to that which occurs under market forces. If this is the case, then the informal sector activities are often pushed to the periphery of the urban centres. Activities in this sector are a major source of revenue for the municipal authorities and for the sector to continue playing this crucial role, conditions under which the activities thrive must be taken care of. This can be achieved through the provision of adequate infrastructure, which is also seen as a cardinal right of the informal sector workers as argued out in box 2.0. However, the structure plans such as proposed in this work should precede the infrastructure provision for the informal sector.

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<sup>1</sup> Brindley.T *et al* (1989: 15). Center for Urban Environment. Van Nostrand, Reinhold Company.



**Box 2.0.****Furore Over lack of toilets****By Nation Correspondent**

Traders at the Kibuye open-air market have given the local municipal council one-month to build toilets or they would boycott paying market fees. Their representative, Mr. Raymond Odidi Genga said, despite being a leading revenue earner for the council, there was not a single toilet for thousands of traders. Mr. Genga said most traders answered calls of nature out in the open where they would sometimes be arrested by police and forced to pay bribes.

"Lack of toilets poses a serious health risk, especially on Sundays when traders and buyers come here even from neighbouring countries," he said. He said previous pleas to the council on the issue had fallen on deaf ears. Traders at the market deal in food, clothes, *Jua Kali* merchandise, carpentry and metal-works, among others. Mr. Genga said the local councilor and MP has also refused to respond to their pleas.

"We have vowed that we will not pay the daily market fees unless enough toilets facilities are in place. If the toilets are not constructed within a month, we shall instead collect the money and use it to construct them," he said. He challenged newly elected Kisumu Mayor Shakeel Ahmed Shabir to "Use his new broom to clean the filth at the market. "Council employees posted to maintain cleanliness have long abdicated this duty and are instead running businesses while still drawing salaries," he said.

Source: (*Daily Nation*, 11<sup>th</sup> August, 2000).

As noted by Mochache (1985) and Matrix Development consultants (1993), siting policies should be flexible. Jenkin further corroborates this: -

"Planners must help create the right conditions and ensure that the entrepreneur initiatives prosper...planning procedures should not hamper the economic recovery.... Planning authorities must thus adopt flexible and pragmatic approaches to meet the versatile enterprises (read: - informal sector), therefore all planning authorities should be sympathetic to the informal sector".<sup>2</sup>

As things stand at the moment, the informal sector will still be an important part of Kenya's economy no matter how problem ridden that future may be (Freeman and Norcliffe, 1985: 158).

This is because the individuals who are already involved in it have developed the sector to an indispensable part of the urban economy due to many economic advantages it has as highlighted above. However, it needs articulate planning intertwined with ecologically sound programs to

improve the sector's productivity. While not intending to portray the informal sector as a cure to all economic ills in urban development, one can confidently assert that the sector has a significant role to play in the entire economy.

### 1.5: Scope of the Study.

This study focused on the informal sector activities within Kisumu town. The categories of the informal sector activities that were considered in the study included: - Manufacturing, trade and spatially fixed service activities. However, transport and construction elements of the informal sector were excluded from the study because they are not site specific.

Kisumu town was chosen for the study because it has one of the highest urban population growth rates, glaring unemployment and low rate of formal sector development. All these are happening at a time when the informal urban economy has continued to proliferate. This situation is aggravated and compounded by inadequate urban development policies, which lead to the chaotic informal sector.

The data used in this study was sought from:

- ◆ Informal sector workers,
- ◆ Municipal authority representatives,
- ◆ Central government officials.
- ◆ Other stakeholders like the community based organizations (CBOs), Non Governmental Organization (NGOs) dealing with the informal sector and finally the residents living near the *Jua kali* sites.

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<sup>2</sup>Jenkin.p. (1984: 15). " *Secretary of State Address*" *The Planner* 70 (2): 15-17.

### 1.6: Limitations of the study.

Two factors were major obstacles to the successful completion of the study:

- (i) Inadequacies of accurate data on the informal sector activities in towns like Kisumu, where hardly any meaningful statistics (inventory) of the informal sector has been done. The data available are not systematic, therefore not accurate for making valid conclusions.
- (ii) The inadequacy of the research period that occurred under busy planning curriculum.

However, with the above limitations, ways and means were sought to overcome them by combining different methods of data collection and analytical techniques as shown in the subsequent sections of this chapter.

### 1.7: Operational Definitions.

**Informal Sector:** - These are the sum of all the activities carried out to earn one's living outside the formal modern sector. In this study the term should be understood to mean the residual, removed from the employment pool of the public sector, and employment in private sector which are formal, and employment in the urban agriculture (Aleke - Dondo *et al*, 1986:3).

Aleke-Dondo *et al* (1986:3), Hart (1973), Mochache,(1990), Gilbert and Gugler (1984:73) agree that the informal sector is characterised by:-

- (i) Ease of entry and exit;
- (ii) Reliance on indigenous (local) resources;
- (iii) Family ownership of the enterprises;

- (iv) Small scale in operation normally employs between one to twenty people.
- (v) Labour intensive and use of adapted technologies.
- (vi) Operate on "*unregulated*" and competitive markets.

In this context, an enterprise qualify to be categorized as informal if it engages in either trade or production of goods and services: - whether it employs only one person (the proprietor) or more; whether or not it uses fixed capital or operates on fixed sites for conducting business (Gilbert and Gugler, 1984: 73).

**Spatial:** - To do with space.

**Regularisation:** - Methodological, systematic, ordering of a phenomenon for smooth operation.

In this work, the term spatial regularization of the informal sector activities means a rational organisation of the informal sector activities over space.

**Optimal sites:** - Those sites that are reasonably favourable for the informal sector activities in terms of accessibility, marketing and sources of raw materials.

**Manufacturing:** All those processes through which raw materials are assembled, fabricated and turned into finished products (Ogendo, 1967: 14).

**Industry:** That which brings together human and natural resources to produce a desirable output within a varied scale appropriate for a regional market (Ogendo, 1967).

**Enterprise Structure:** Issues that appertain to mode of ownership labour types, organization and the interrelation of the business firms.

**Firms, Enterprises, Plants and Establishment:** -These words are used interchangeably to denote the factory, workshops or businesses.

**Entrepreneur or proprietors:** Person(s) who own the establishment.

**Urban centre:** Any urban centre or town in Kenya, which has been created by an Act of Parliament (Kola, 1993:17).

**Development:** Multi-faceted phenomenon, which entails improvement of welfare of the society towards, better living standards (Todaro; 1986). It is often measured in terms of levels of income and employment opportunities.

**Urban development:** - A strategy designed to improve the socio-economic standards of the urban population. It includes the strategies designed to extend the benefits of development to the marginalised communities within the urban set up (Mabogunje, 1980; MaColoo, 1984, Kola, 1993 and Northam, 1979:14).

## **8: Research Methodology.**

This section is aimed at examining the procedures that were used for guiding the research. First and foremost, objectives for the study were set, as we have seen. Hypotheses were formulated and to test each, data collection through filed survey was conducted. The field survey techniques

employed in this study-included questionnaires, field observations, measurements and photography, personal (oral) interviews, focused group discussions. Secondary data collection techniques such as the use of district development plans, statistical abstracts, municipal council records and relevant maps and diagrams. To enable the researcher make valid conclusions, data analysis techniques such as descriptive and inferential statistics were used.

### **1.8.1: Sampling Procedure.**

The target population for this study was drawn from the informal sector workers where 100 of them were sampled. As a result, the sample size was 100 informal sector workers.

Informal sector activities were evident in all areas in the town. In this regard, Nyalenda, Kondele, Kibuye and Central Business District were selected as the sample areas. The sampled areas are peculiar for they presented over concentration of the informal sector activities. Further, Kibuye was chosen as a control sample for a similar attempt at regularizing the informal sector activities had been attempted by the World Bank but failed. Therefore, it was found important to draw lessons from this exercise. The sampled informal sector workers were distributed per sampled areas as shown in Table 1.1.

**Table 1.1: Sample size.**

Sampled Area	Number interviewed.
Kondele	20
Kibuye	20
Nyalenda	30
Central Business District	30
<b>Total</b>	<b>100</b>

Source: (Author, 2000).

To decide which informal activity qualified to be included in the study, the procedure shown in Table 1.2 was followed.

**Table 1.2: Sampling Procedure.**

- 1.Manufacturing:** A manufacturing enterprise was included in the study if it satisfied one or more of the following conditions:-
- (a) It employed below 20 workers (including part-time and casual workers).
  - (b) It operated contrary to government regulations.
  - (c) Members of the households or the household heads worked in the enterprise.
  - (d) It operated in semi permanent premises or in a shifting location.
  - (e) It did not observe fixed hours and days of operation.
  - (f) It did not depend on formal financial institutions for its credit needs.
  - (g) Its output was normally distributed direct to the final consumers.
- 2.Trade:** - A trading enterprise was included in the study if it satisfied one or more of the following conditions
- (a) Any of 1(a) to 1(g) above.
  - (b) If the enterprise dealt in second-hand goods.
- 3.Service:** A service enterprises was included in the study if is satisfied one or more of the following conditions.
- (a) Any of 1(a) to 1(g) above.
  - (b) If the enterprise sold prepared food

Source: (Advanced from Sethuraman, 1986).

### **1.8.2: Methods and Tools of data collection.**

To interview the informal sector workers, stratified random sampling technique was used. This is because it was found out that the informal sector workers engaged in similar activity do cluster, thus one cluster formed stratum for the study. After identifying the strata, systematic random sampling of varying interval was used in picking the workers to be interviewed. The number of traders in each stratum determined the number of traders included in the study.

A part from guided interviews; oral interviews, field observations, measurements and photography were also used as methods of primary data collection. Information from District Development Plans, statistical abstracts, Municipal Council records and relevant maps were further used as secondary sources of information. Emerging from the above is that at various stages of data collection, different facilities were used. In summary they included:

- ◆ Questionnaires (both to the informal sector worker and to institutions as shown in appendix II and I respectively).
- ◆ Coloured film camera
- ◆ Base maps
- ◆ Minor facilities (like pens, notebook, observation sheet and random number table).

### **1.8.3: Methods of Data Analysis.**

The necessity of data analysis was to separate from the bulk of data available the relevant ones that suited the subject of the study. Both descriptive, inferential statistical and cartographic techniques were used at various stages. Descriptive analysis such as tables and pie charts were



used in the classification of the structural aspects of the sector. The classification stage was found to be important for it constituted a major step towards explanation of phenomena.

Inferential statistical techniques such as factor analysis, multiple linear regression, correlation matrix, and Input-Output techniques were deployed. Further, Environmental Impact Assessment on the ISAs was done per sampled area.

### **1.9: Specific Analysis.**

This study had specific objectives and hypotheses. Therefore, it is important to give in-depth statements on the analytical techniques used to approve or disapprove various hypotheses of the study. The analyses of the specific hypotheses are presented in sections 1.9.1 to 1.9.3.

#### **1.9.1: Factors influencing Siting and Spatial Distribution of the Informal Sector Activities.**

To capture the factors contributing to the siting of activities in a place, the best mode of analysis to use is perception analysis (Opondo, 1989; Ogendo, 1967 and Kinyanjui, 1987). The perception studies concentrate on cognitive assumption that human beings are rational. In effect, human beings have perfect knowledge of their environment. This knowledge is stored in mind and organized in a scale of preference on factors to consider when siting an enterprise in a given area.

In this case, either attitude scaling and factor analyses are often used. However, in this study, only factor analysis was used. To elicit data on this, an open-ended questionnaire was administered to the informal sector workers, asking them to state the variables they considered

before siting their enterprises. The responses were expected in four ways indicating the strength of each variable.

Factor analysis was used to identify the most significant factors for the siting of the enterprises.

The preferences were further converted to a nominal scale as follows: -

- Very Important            10
- Important                    7
- Fair                            5
- Least important            1
- Not important              0.

After this, the 10-point scale scores were categorized and compiled using correlation matrix. Eigen values were further generated to give total variance explained by each factor in form of a table.

Equally, rotation by means of **varimax matrix**<sup>1</sup> was done. This had an effect of emphasising the stronger loading and minimising the weaker ones. After rotation, only the factors with Eigen value greater than one were extracted. To avoid factor interpretation problem, the factor loading was chosen by starting with the first variables and the first factor of the rotated matrix, then moving horizontally, from left to right, across the factors. The loading with the highest absolute value was chosen. This process was repeated for each variable.

The scree slope<sup>2</sup> graph was used as suggested by Cattell (1978); Goddard and Kirby (1976) to determine the number of factors to be considered. This technique is based on the identification of a distinct break of slope at a point, and the amount explained by each factor. The cut-off point in the scree slope was decided at positive or negative 0.400. In the study, the factors were grouped into five broad categories as in Table 1.3.

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<sup>1</sup>**Varimax matrix:** An orthogonal matrix is a step in factor analysis where a matrix is generated is to emphasizes the stronger loading and minimize the loading effect of the weaker factors so as to avoid factor interpretation.

<sup>2</sup>**Scree - Slope:** This is a step in factor analysis that is a graphical technique of determining the number of factors to be considered. It's based on the identification of a distinct break slope (Cut - off) at a point and the amount explained by each factor.

**Table 1.3: Grouping of site factors.****1. Transport and Non -skilled labour.**

Efficient transport to and from the CBD.

Nearness to town.

Access to a major street.

**2. Production costs and market linkages.**

Proximity to market

Low labour costs.

Possible evasion of tax

Low land prices and rates

Adequate land for expansion

**3. Presence of urban Economies or Diseconomies.**

Availability of electricity

Access to source of water

Industrial estate (Planned zones for the sector)

Personal contacts for business information

Prohibitive regulations and high standards in other zones.

Lack of alternative planned zone for the sector.

**4. Socio-political variables.**

Nearness to residential unit.

Proprietor lives at the site.

Social status/prestige

Psychological preference

Influence of local politics.

**5. Capital and raw materials.**

Availability of raw materials.

Availability of local capital for investment.

**Source:** (Author, 2000).

To obtain a general equation of factors responsible for the spatial distribution of the informal sector activities, multiple regression analysis was used. Logan (1970) has successfully applied

this analytical technique in the study of industrial location because of its accuracy in predicting the growth rates of manufacturing sector for individual local government areas.

The factors singled out from the scree slope should in addition be checked for co-linearity. Therefore as a rule for colinearity, where the correlation factor is greater than positive or negative 0.85, it is dropped from the analysis. The significant criterion was chosen using F-test. This implies that, the final Multiple Linear Regression (MRL) equation presents only the significant variables and the model takes the below stated form: -

$$\gamma_1 = \beta_0 \pm \beta_1\chi_1 \pm \beta_2\chi_2 \pm \beta_3\chi_3 \pm \beta_4\chi_4 \pm \beta_5\chi_5 \dots \dots \dots \beta_n\chi_n + e_1 \dots \dots \dots 1.1$$

Where: -

$\gamma_1$  = The observations of dependent variables (Number of enterprises in the Sampled areas)

$\beta_0$  = Regression constant

$\beta_0$  to  $\beta_n$  = The model parameters referred to as the partial regression coefficient.

$\chi_1$  to  $\chi_n$  = The observations of the independent variables

$e_1$  = Random distribution or the error term

### 1.9.2: Inter and Intra Linkages in the Informal Sector.

To analyse inter and intra linkages between the informal sector activities and the formal enterprises, simple Input-Output model was used. Due to limited time and for simplicity, this analysis was restricted to technological (capital and subcontracting arrangements) and raw material linkages.

The Input - Outputs model used involved the number of enterprises that have subcontracting arrangements for the sale of raw materials or equipment with formal sector and *vice-versa*. In this study, the linkages are given spatial dimension in order to trace the source and destination of capital and raw materials used in the production. This necessitated the use of the Input- Output model for it provides a convenient framework for measuring and tracing the spatial relationships.

Despite the apparent shortcomings of the Input-Output model, it has been found to be a powerful and instructive tool in regional economic analysis. In many cases, the chief value of input-output analysis is its descriptive rather than its predictive capacities. As a descriptive tool, input-output table presents an enormous quantity of information in a concise and orderly manner. It provides a comprehensive transaction picture and points up the strategic importance of various sub-sectors and hence highlights the true sources of regional growth.

The Input-Output analysis entails the proportion of transaction tables. The transaction table involves the listing of informal sector activities relative to structure interdependence. Many input-output analysts have found it helpful to assemble a destination of the output table. In this format, for each sub-sector, the proportion of total enterprises obtaining various raw materials, capital, having subcontract arrangements from various regions or various firms are computed using either model 1.2 or 1.3. On the basis of data in the transaction table, sub-sectors are ranked based on the links they have with various regions.

The transaction tables further reveals the backward or forward linkages existing in the sector. Forward linkages occur when an industry provide immediate output (raw material) which can be

used as inputs to another industry. In this case, the raw material is the forward linkage to the industry whose outputs are being used by the industry. Backward linkages occur when an industry creates demand for various inputs, which can be supplied by an existing industry.

The linkages were further expressed as:

**(i) Capital and subcontracting linkages (CL).**

$$CL = \frac{X_{ij}}{X_i} \dots \dots \dots 1.2$$

Where CL = Capital or subcontracting linkages.

$X_{ij}$  = The proportion of enterprises purchasing capital (equipment) or subcontracting firms (formal or informal) from region j.

$X_i$  = The total number of enterprises surveyed i.

**(ii) Raw Materials Linkages (RL).**

$$RL = \frac{X_{ij}}{X_i} \dots \dots \dots 1.3$$

Where RL = Raw Material Linkages.

$X_{ij}$  = The proportion of firms purchasing raw materials from region j or Firm j.

$X_i$  = The total number of enterprises surveyed i.

The (i) and (ii) above was done both at the local and country level.

**1.9.3: Environmental Impact of the Informal Sector Activities.**

The environmental Impact assessment (EIA) was done on manufacturing, trade and service categories of the activities. This analysis is detailed in chapter four.

### 1.20: The Procedure Used for Establishing Optimal Sites of the Informal Sector Activities.

The procedure used in arriving at the optimal sites for the ISAs involved the isolation of the significant factors determining the siting of the activities. Information on the current land-use and tenure system was also found to be important in making such decisions.

The Environmental Impact Assessment was also done for all the categories of activities as outlined in chapter four. This was found to be important in establishing the environmental implication of each activity relative to other land-uses. Finally to decide on the optimal sites, heuristic model was used as detailed below.

Heuristic model is based on mathematical optimizing techniques, which have been developed to solve the general problem of land allocation (Scott, 1971:27). The components of heuristic programming consist of: -

- (i) The objective function to be optimized
- (ii) The constraints, which restricts the range of feasible solutions
- (iii) The variables that are elements of the objective function.

Basically, the function should be defined in such a way that it captures the attributes a planner is interested in like, accessibility and minimization of transport cost. Thus the objective function is expressed as: -

$$S = \sum_{i=1}^n M_i d_{ij} \dots \dots \dots 1.4$$



This implies that at origin  $i$ , there are  $M_i$  traders and the distance between origin and the destination is  $d_{ij}$ . Therefore, a planner should try to find a position of  $S$  such that the aggregate distance traveled is minimal and most accessible for the siting of the informal sector activities.

This procedure takes the sequence stated below by Massam (1975:31):

- (i) Define solution space
- (ii) Choose an arbitrary point that looks reasonable  $P_1$
- (iii) Calculate

$$S_1 = \sum_{i=1}^n M_i d_i P_1 \dots \dots \dots 1.5$$

- (vi) Choose around point  $P_2$  a short distance from  $P_1$ .
- (v) Calculate.

$$S_2 = \sum_{i=1}^n M_i d_i P_2 \dots \dots \dots 1.6$$

- (Vi) Continue to search the space around  $P_1$  until the lowest value of  $S$  is found.

Essentially, the procedure can be described as searching over the surface the least cost position. The procedure should be repeated using different variables that are significant to siting of the ISAs. Using various variables as indicated above, if the surface has only one site, then heuristic procedure is said to have found the best solution called the global optimum. However, if there are several sites on the surface than we talk of local optimum.

### **1.21: Organization of the Study.**

The study is organized into six chapters. Chapter One introduces the study by covering the statement of the problem, study objectives, hypotheses, justification of the study, scope of the study, the operational definition of terms used in the text and finally the research methodology. Chapter Two provides background information on Kisumu town (the study area), and Chapter Three covers the literature review. The review is crucial for it points out the pool of knowledge so far, and demonstrates that weakness in understanding the informal sector subsystem emerges from conceptualization of the dynamics in the sector and models for the spatial regularization in particular.

Chapter Four presents the actual data computation and findings that enabled the researcher to make informed conclusions. Chapter Five is the analysis of the policy framework on the informal sector in Kisumu, and finally Chapter Six provides the study recommendations and conclusions. The thesis terminates with the presentation of bibliography and the appendices.

## CHAPTER TWO.

### BACKGROUND INFORMATION ON THE STUDY AREA AND ITS INFLUENCE ON THE DEVELOPMENT OF THE INFORMAL SECTOR ACTIVITIES.

#### 2.0: Introduction.

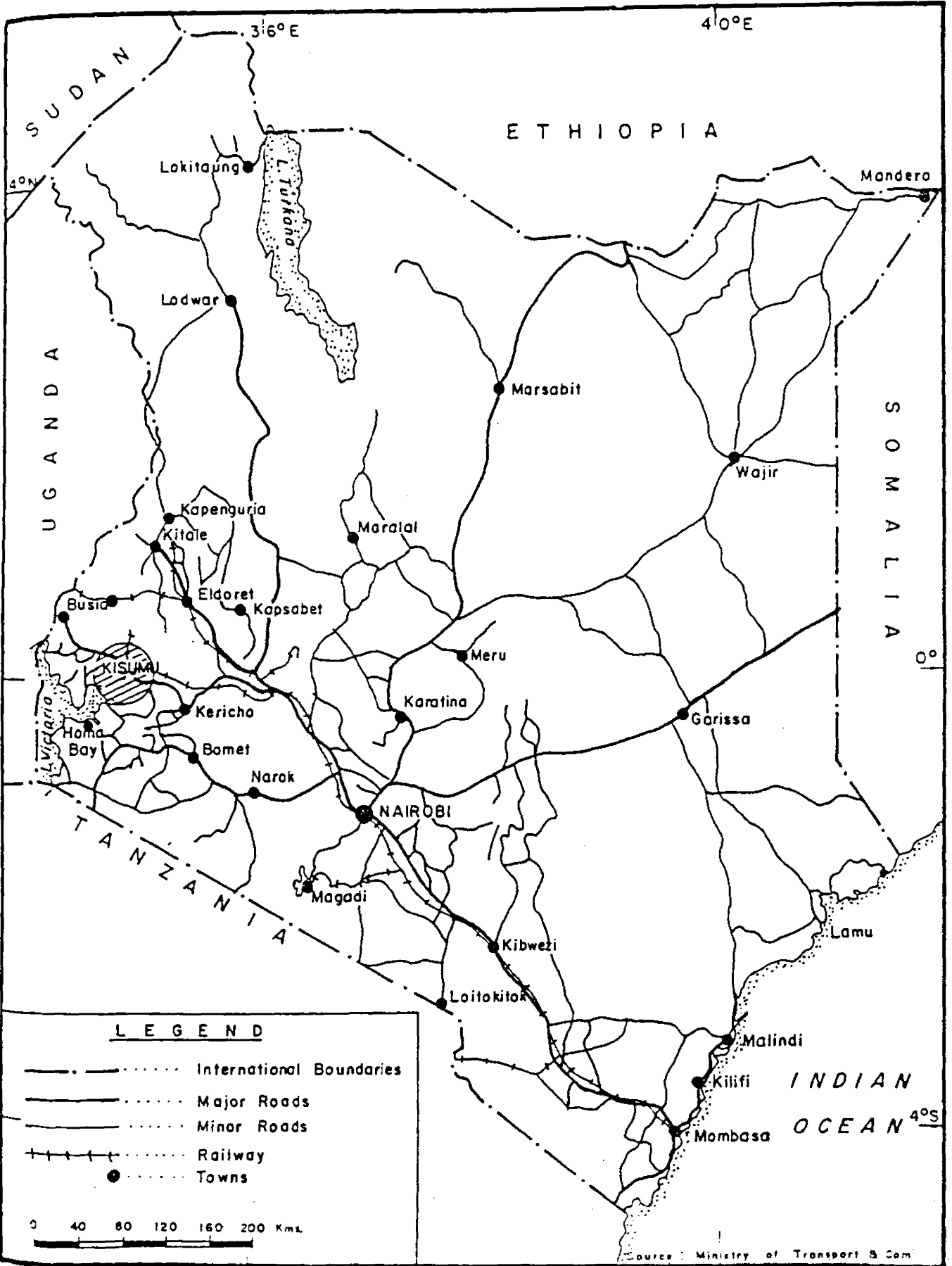
This chapter highlights the salient factors that have influenced the growth of informal sector activities (ISAs). This is in recognition that successful development of the ISAs in any urban centre is determined by social, economic, political and physiographical conditions of the urban centre. It is therefore significant to get a clear understanding of these factors in relation to ISAs.

#### 2.1: Location and size.

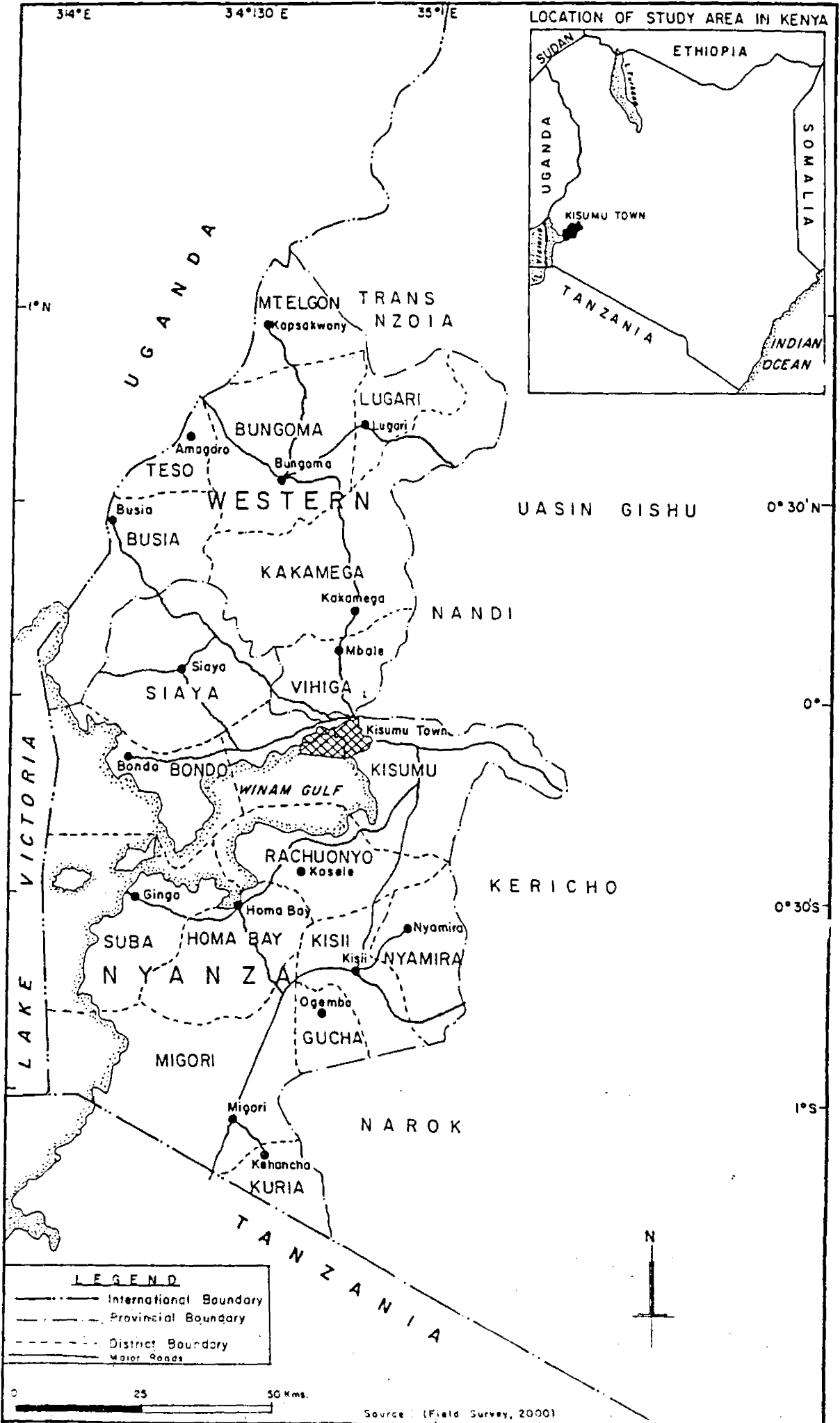
Kisumu town, which is the largest urban centre in western Kenya, is situated on the shores of Lakes Victoria (Map 1.0). It is located between  $0^{\circ} 07'S$  and  $0^{\circ} 12'S$  latitudes and between longitudes  $34^{\circ} 35'E$  and  $34^{\circ} 46'E$ . The strategic location of the town at the focal points of communication network makes it a regional centre in Western Kenya.

The town is Nyanza Provincial Headquarters as well as Kisumu District Headquarters serving an hinterland of about  $31,000 \text{ km}^2$ , occupied by over nine million people. This gives the town a comparative advantage over other urban centres in the region in terms of location of the commercial activities. This has further acted as propulsive force in attracting informal sector activities. Prior to the town's boundary extension in 1971, the town covered an area of approximately  $15 \text{ km}^2$ . However in 1993, the town's boundary was extended to cover an area of  $417 \text{ km}^2$ , out of which  $157 \text{ km}^2$  is water surface.

MAP 1-0 : KISUMU TOWN : NATIONAL CONTEXT



MAP 2.0 : KISUMU TOWN: REGIONAL CONTEXT



These boundaries and the district headquarters are still tentative and should not be quoted

## 2.2: Physiographical Background.

physiographically, the town is located on a region of varying height on Lake Victoria basin (Map 2.0), which is embraced by various features. The northeastern direction from the town is covered by Nyando and Kisian hills, which are part of the extensive Nandi hills. Lake Victoria which covers approximately 40% of the municipal's area, lies on the southwestern part of the town, while on the eastern side lies the Kano plains. On the lakeshore side, it rises from about 1,150 meters to approximately 1,200 meters, while on the northern side it rises to about 1,190 meters above the sea level (Map 3.0). This implies that the town lies on a gentle slope that is suitable for the use of diverse modes of transport relatively lowering the transportation costs and enabling ISAs to proliferate in the town.

The topographical condition of an area influences rainfall pattern, economic activities and overall development. The town experiences two major rainy seasons; the long rains and the short rains. The short rains usually come between the months of September to October, while the long rains fall between March and May. Occasional showers characterize the remaining months. The town receives an annual rainfall ranging from 876 mm to 1630 mm with an average of mean annual temperature of 23.1<sup>0</sup>C (Government of, Kenya, 1993).

The climatological parameters have significant influence on the ISAs in the town in that during the rainy seasons, the town's umland produces surplus agricultural produce, which find their way to the town. During this time the wholesale prices of the agricultural produce fall thus many traders prefer engaging in the sale of food produce, which significantly alter the composition of goods offered by the informal sector.

The northwestern part of the town embraced by Kisian and Nandi hills with basement rocks is industrial zone (Map 4.0). This has attracted various industrial establishments such as the defunct Kisumu molasses plant, soap industries, foam mattress factories, fish industries and Kisumu breweries plant among others. These plants acts as marketing centres for the informal sector goods and services. Partly, this is explained by the fact that majority of employees of these industries are casual workers, earning low wages and therefore rely on the informal sector goods and services because they are affordable. The southern part of the town is prone to flooding because its a flat land laying next to the lake. This is a zone of high-density informal settlement and thus has high concentration of ISAs.

### **2.3: Historical Growth of the Town.**

The origin of Kisumu town can be traced to 1901 when Uganda railway, which was being constructed, reached Lake Victoria basin (Obudho and Obudho, 1972). The place was found to be strategically placed as terminus port for both the rail and ships, which were to serve the three East African Countries. The colonialists also found it to be suitable for settlement and hence established an administrative post for administering the region. Indeed, the town owed its growth to its role as a principle port on the lake, from which it offered marine and engineering services to both Uganda and Tanzania until the break-up of East African community in 1977. However, these services recently have been resumed.

By 1903, the town had expanded to occupy an area of approximately 3.75 km<sup>2</sup>. Even though the town continued to grow, its growth was not stable due to the colonialists concern of gaining good administrative base rather than urban development (Kabagambe, 1975). Towards 1920 and afterwards, there were already some established shops and the Indian *Dukawalas* had started

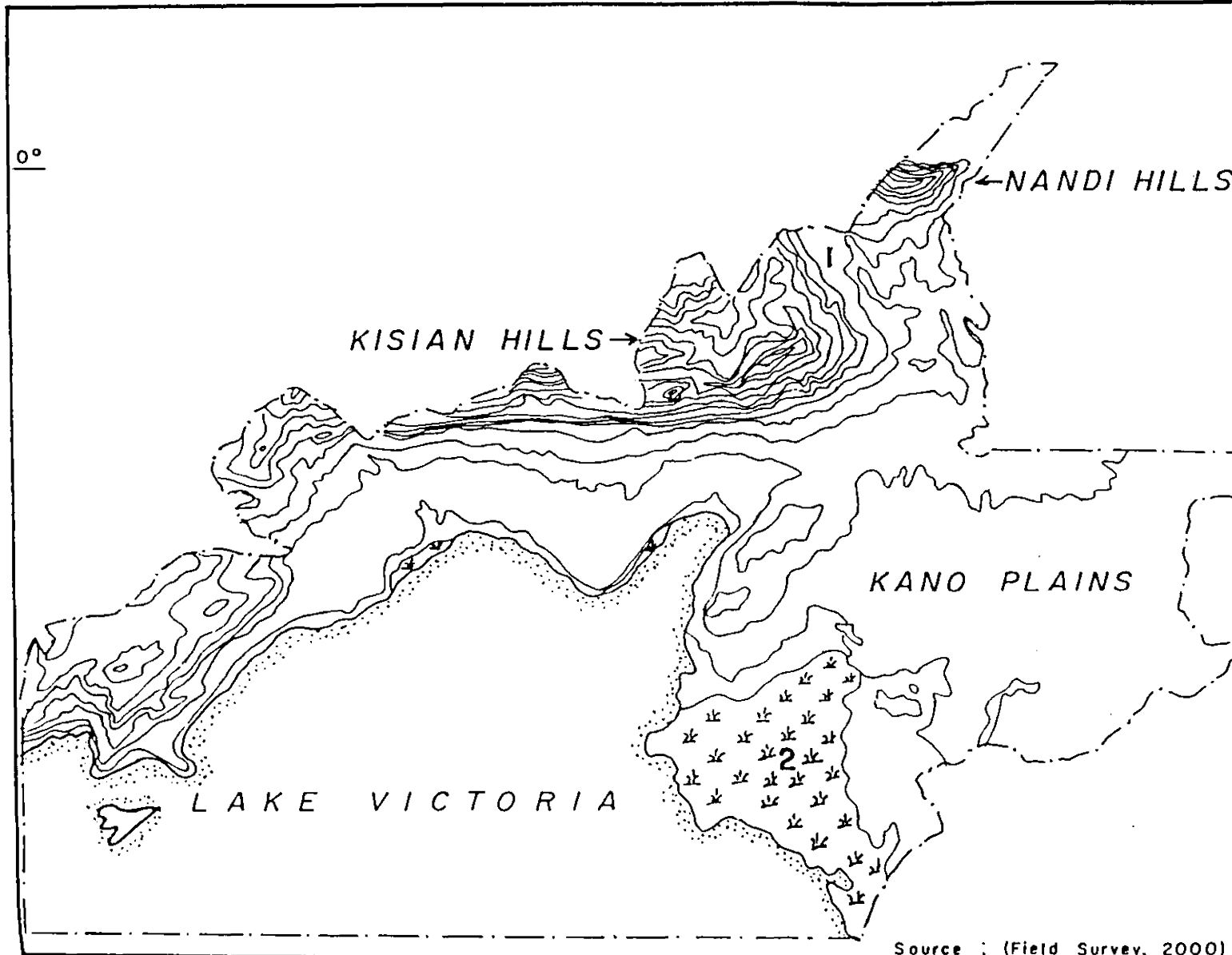
some commercial activities within the centre (Obudho and Waller, 1976). This attracted many to the centre for employment as well as enjoyment of the social and other economic facilities. The continued population rise in the town and lack of proper planning over the years has resulted into inadequate provision of infrastructure facilities and haphazard urban development (Groot, 1978).

By the year 1941, the town's population had risen to approximately 11,000 within an area of 15 km<sup>2</sup>. When the town was awarded municipal status in 1960, the population increased to 24,000 with an area of 21 km<sup>2</sup> (Obudho, 1981). The municipal boundary was extended again in 1972 to embrace an area of 417 km<sup>2</sup> into the peri-urban agricultural lands of Kajulu, Kolwa and Kisumu locations. A significant population from the hinterland has joined the peri-urban community, either as urban informal sector workers or as urban unemployed. Currently the municipality has an area of 417 km<sup>2</sup> (only 270 km<sup>2</sup> is land surface) accommodating approximately 450,445 people (Government of Kenya, 1999).

Over the years, the town has relied on its administrative, commercial and industrial supremacy to sustain the growth. However, in the recent years with economic depressions in the country, it has been recognized that this growth can be sustained through the development of both informal and formal sector. Unfortunately for the town, this period has coincided with that of a similar and more successful drive to attract industries to Eldoret town, located some 170 kilometres to the Northeast of the town.



MAP 3.0 : KISUMU TOWN: TOPOGRAPHY



Source : (Field Survey, 2000)

#### 2.4: Land Uses and Land Tenure System in the Town.

The location of various land uses in Kisumu town is structured on the traditional zoning system in the urban areas where the land uses are located at walking distances between one to two kilometers. The Central Business District (CBD), which is the foci of the town, comprises of various formal and informal businesses. The CBD is bounded by Oginga Odinga Street, Kenyatta Avenue, Otieno Oyoo Street and Obote road (Map. 5.0). Most of the residential areas are located both to southern and eastern side of the CBD. The high-income residential areas lies to the south while both the high and medium income residential areas lie to the east (Map 4.0).

The zoning regulation in the town has determined significantly the distribution of ISAs. This is evident by the fact that development control measures in the CBD have made it difficult for the informal sector workers to afford. Further, absence of demarcated spaces for ISAs in low-density residential areas has also significantly reduced the occurrence of the phenomenon in the zone. Therefore, ISAs has been pushed to the high-density residential areas, main industrial zones and to the bus parks.

Large proportion of the town has been adjudicated. The government has acquired and registered land to the northern part of the town for industrial development. However, much of the land in the town is still privately owned and the local authority needs to acquire much of it for sustainable urban development. Approximately one quarter is freehold, with much bulk being trust land, with a small portion under leasehold.

The sampled areas of Nyalenda and Kondele were until the extension of the municipal boundaries in 1971; trust land being agricultural and rural in nature. Nevertheless, with

increasing population, the plots have been subdivided for change of use from agricultural production. As a result of the area's inclusion into the municipality, land speculation has gone up encouraging further plot subdivisions and haphazard developments attracting informal sector activities. This trend hence calls for urgent systematic planning and acquisition of necessary land for future implementation of community projects such as areas for ISAs.

### **2.5: Physical infrastructure.**

The town is well connected to its hinterland centres such as Busia, Kericho, Kakamega, Muhoroni and Bondo as shown on map 5.0. This connectivity has facilitated the development of the ISAs due to increased accessibility to the hinterland. However, the peri-urban roads of the town are not graveled so they become impassable during rainy seasons. Apart from road transport, rail, lake and air transport facilities are also available. This gives greater opportunities for the development of ISAs.

Power supply within the town and its peri-urban areas has lagged behind residential development. With the recent power rationing in the town, the ISAs, has been adversely affected more so the fabrication activities which rely on power such as welding and carpentry. Due to the fact that the major industrial parks and CBD are not rationed, the informal activities have recently tended to move into these zones leading to haphazard development.

The municipality stands on the shore of lake Victoria, the second largest fresh water lake in the world, yet the problem of water scarcity has persisted because the demand outstrip the supply.

The time implications for getting water has made it expensive, thus many have resorted to using

untreated water. This hinders the development of ISAs more so those dealing with food production.

## 2.6: Economic Profile.

The position of Kisumu town as the largest urban centre in the western region of Kenya has polarized it to be the major industrial and commercial centre in the region. Similarly, as the headquarters of Nyanza Province, most of the provincial offices are located here. These factors have encouraged rural – urban migration, leading to unemployment. The above being the case, the informal sector has proved to be a significant alternative source of employment.

Income levels in Kisumu varies greatly. The Urban Labour Force Survey (Government of Kenya, 1996) revealed that the town has the highest number of low-income group as compared to other urban centres in the nation. The survey showed that Thika and Eldoret had over 85%, Mombasa had 63% and Kisumu had 94% in the lower income group. The incomes were calculated using the revised income brackets as shown in Table 2.1.

**Table 2.1. New Income Brackets**

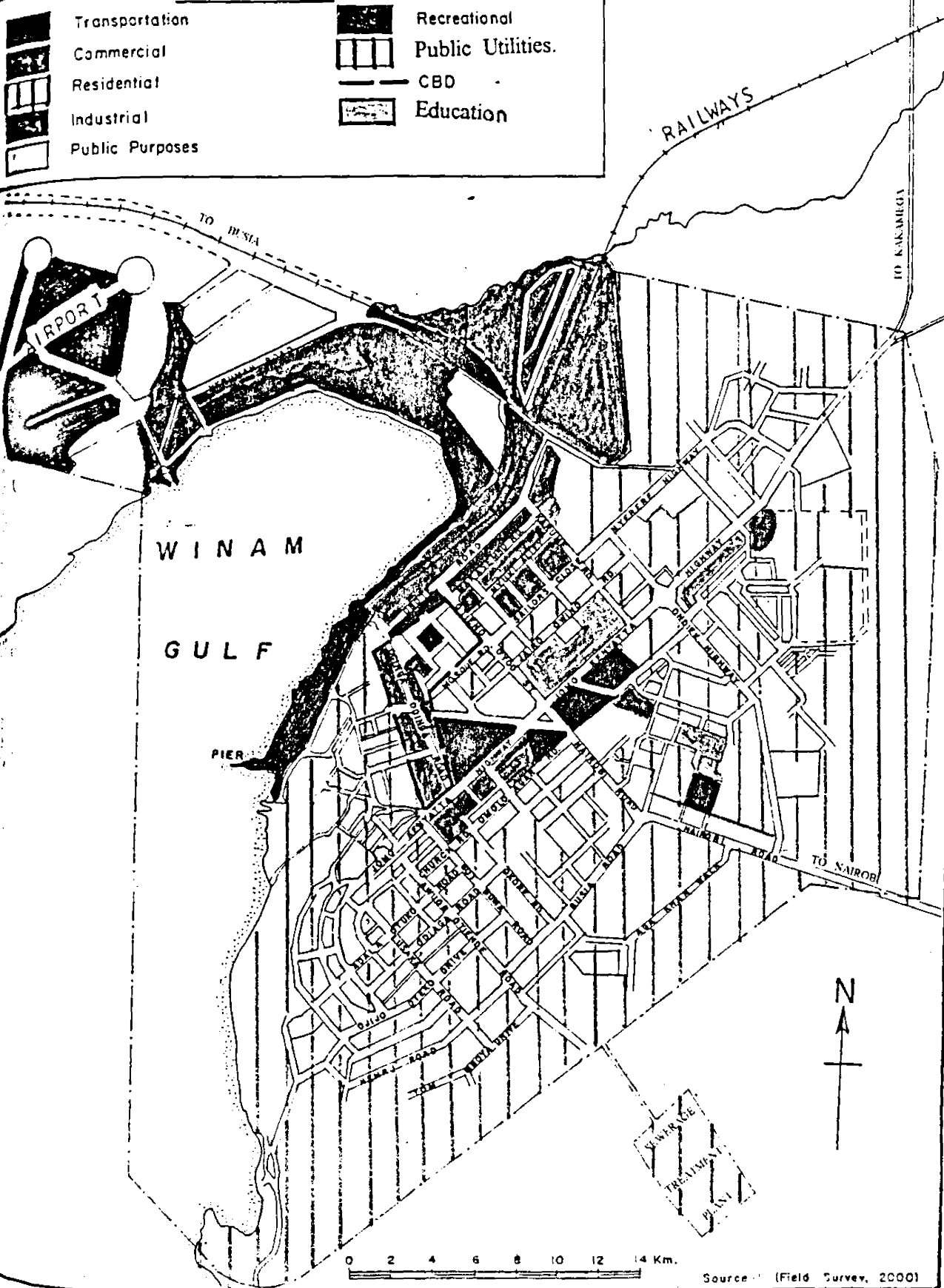
Income Group	Bracket
Lower	Under 3,000
Middle	3,000 - 9,000
Upper	9,001 +

Source: (Government of Kenya, 1996).

# MAP 5.0 : KISUMU TOWN: TRANSPORT NETWORK

## LEGEND

	Transportation		Recreational
	Commercial		Public Utilities.
	Residential		CBD
	Industrial		Education
	Public Purposes		



0 2 4 6 8 10 12 14 Km.

Source : (Field Survey, 2000)

The low-income levels in the town have depressed employment in the town. This is because low wages forces households to purchase limited quantity of goods, which cannot stimulate the Economy for jobs creation but instead fuel the growth of the informal sector, the service and trade oriented ISAs in particular.

## **2.7: The Administrative and Political Structure of Kisumu Town: The Implications on the Informal Sector Growth.**

### **2.7.1: Administrative structure.**

Like all the municipal councils in the nation, Kisumu Municipality is a creation of Local Government Act (Cap 205), which provides for the establishment of the local authorities. The Act clearly defines the composition, roles, and jurisdiction of the local authorities. The Municipal council of Kisumu has a legislative arm whose function is policy formulation and the executive arm, which implement the policies.

For the council to perform its primary task of managing growth of the town through elaborate planning and provision of services, the council is structured in the following manner: -

- (i) **The regulative arm:** Consist of the committee of elected council members to perform specific tasks. The council has seven committees including education, social services and housing, public health and environment, water and sewerage, housing development, town planning and works and finally finance committees.

- (ii) **The executive arm:** Are divided again into seven departments based on the nature of services provided. These include, General Administration, Municipal Engineer, Education, Social Service and Housing, Public Health, Water and Sewerage and Municipal Treasurer's departments. Each department is further divided into sections with specific powers and responsibilities.

Among the seven standing committees, the Town Planning and Works Committee is charged with the responsibility of town planning and administering development control. At the moment, the capacity of the council in undertaking planning and development control is rather low. This is due to lack of skilled personnel and elaborate enforcement machinery. In the first instance the council neither have a town planning department nor a planner. Therefore, all the planning issues are handled by the Municipal Engineers Department, which also handles numerous other issues, not giving planning matters the attention they deserve.

With this lax development control, the informal sector sprawls all over the town. The only visible form of development control the municipal council is applying at the moment on the ISAs is the occasional harassment. This matter has become complicated with political patronage while the municipal authority is left watching as the sector continue to proliferate, reducing the aesthetic and environmental condition of the town.

Plate 1.0: Informal Sector Activities invade Central Park in the Town's Central Commercial District.



Source: (Field Survey, 2000)

### 2.7.2: Political structure.

Historically, the region has never been in favourable terms with the ruling system. Since the colonial era, the expansion of the colonialists into the region was hampered by the Nandi resistant of 1904. Sooner had the colonialists defeated the Nandi, than they faced the Abagusii, Karungu and Kadimo revolts. Even though these revolts were defeated, the region remained a black spot for the colonialists. The colonial land policy demarcated this region as African reserve, prompting the region not to experience significant economic investment, apart from the sugar belts of Muhoroni and Chemelil. In post independent, the main political leaders from this



region again fell out with the ruling party and opted to join opposition parties. In the words of Oginga (1967) one of the opposition politicians when forming an opposition party asserted that: -

"If we started *uhuru* without an African elite, Kenya is now rapidly acquiring one... Ministers and top civil servants are rapidly competing each other to buy farms, cars, graded houses and have introduced licensing practice to confer monopoly power to benefit select groups of African traders and business men"<sup>1</sup>.

At this stage, there had already emerged social stratification, ethnic stratification and discrimination that made other regions (read: ethnic groups) move ahead economically while other regions lagged behind. This is the scenario, which made the region where Kisumu town is situated lag behind economically. The "adverse" political orientation of the region has made the region not to benefit in terms of government allocations like infrastructure and industries. A case in point is Kisumu Molasses plant, which never took place despite government having acquired land for it.

More evidence reveal that public land has been allocated to the ruling elite and spaces earmarked for the development of the informal sector sites have been privatized. This has caused a major conflict between the two classes that has translated into low economic development and mass poverty. With glaring unemployment, the majorities have resorted to informal activities. Owing to disorganization in the sector, the politicians in fighting their own ends have misused the majority of the workers here. The politicians normally use these traders to confront the council authority leading to loss and destruction of property and further chaotic development of the informal sector activities in the town.

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<sup>1</sup>Oginga, O. (1967). *Not Yet Uhuru*. London, Heinemann.

## CHAPTER THREE.

### LITERATURE REVIEW AND CONCEPTUALISATION OF THE SPATIAL REGULARISATION OF INFORMAL SECTOR ACTIVITIES.

#### 3.0: Introduction.

Informal sector as a development phenomenon has over the years attracted scholars from a wide range of disciplines. Leading the team are the economists like Gichira, Aleke Dondo, Kulundu - Bitonye, McCormick and Livingston. Planners such as Mochache, Logan, Gruen, and Degroot. Geographers like Macoloo, Kinyanjui, Opondo, Freeman and Norclife and finally sociologists such as Ofafa and Atieno. This has led to an evolution of a comprehensive body of knowledge that can be utilized by planning authorities for the betterment of this sector.

From these scholarly discussions, it emerges that the informal sector is no longer a black box, but a phenomenon well understood, and therefore can be modeled both in spatial location and philosophical terms. A comprehensive review of literature on the informal sector reveals that it can broadly be categorized as follows: -

- i) Literature on the role and characteristics (structure) of the informal sector.
- ii) Literature on Policy (education, training, institutional framework, information and technology, laws and regulation) issues on the informal sector.
- iii) Literature on factors determining the siting of the informal sector activities in urban centers.

However, the body of literature that addresses optimization of spatial location of the ISAs is still scarce except such studies as Mochache (1990), Nyabuti (1984), Njoroge (1985) and Muench (1977) among others. This study addresses the above areas of concern by providing understanding of how the ISAs can be sited optimally in the urban centers as well as

policies for sustainability of the sites. Informal sector activities being a sub-sector of the entire economic sector, it is important to focus the select literature review on a broad perspective.

### 3.1: General Approaches to the study of business siting.

The explanative theories that have been used in explaining siting of firms are normative, behavioural and structural. The normative theory as postulated by Weber (1929) was widely used in the 1960s. It is considered normative for it indicated the optimal site for an enterprise. based on the simple assumption that the best site for an enterprise is where the transport and labour costs are minimal (Chapman and Walker, 1991:19).

However, Weber's theory took no account of the effect of competition on the sales of the produce. This basic assumption has made it unrealistic to be used as a deductive base for postulating optimal siting of the informal sector activities. The extreme competition in the informal sector makes it impossible for one to authoritatively speak of a single best site, at which maximum profits are realised. In this regard, Smith's (1981) extension of the theory to include spatial margins where sufficient profit may be made to allow continued operation is realistic in explaining the siting of the informal sector activities. This is in recognition of the fact that for the informal sector workers to make any meaningful profits, they have to maximize on the market opportunities, which they can realize by either being mobile or by lowering the prices.

The concept of spatial margins to profitability led to the emergence of the behavioural theory in the study of enterprise siting (Simon, 1957 and Pred, 1969). Owing to the unrealistic assumption of rational (economic) man who has perfect knowledge of his environment and whose aim is to maximise profit, Simon (1957) observed that whereas economic man is a

maximizer, his real world equivalent is satisfier. Therefore, he advised that studies on business siting should focus on optimal rather than absolute sites (Pred, 1969: 81).

Pred's (1969) behavioural matrix (a device of identifying the position of decision makers relative to the normative concept of economic man) is an important concept for understanding the siting of informal sector activities because, it enhances the notion that the siting of activities should be where they optimize the profits.

In the search for a broader perspective, far removed from the normative and behavioural approaches, there emerged structural (marxist) approaches to the study of business siting (Massey, 1977; Stropher and walker, 1983). This was necessitated by the search for social justice in industrial location in the 1970s. This theory tends to emphasise the fact that it is an act of social justice if the business enterprises are equally distributed in a region (Dunford, 1979). Smith observed that: -

The chief merit of the Marxian approach is its strength which permits industrial (read: business) location to be analysed as an integral part of economic, social, and political "totality".<sup>1</sup>

As much as this approach has little to offer in term of regularisation of the informal sector activities, it corroborates the need for integrating the informal sector in the urban economy. As postulated by Marshall (1982: 165-6), the approach suggests that the siting studies should be aware of social and political implications of agglomeration of the activities in a region. Further, these studies should consider fully what groups are most disadvantaged if the resource allocation is left to operate through market mechanism. Even though these theories do not comprehensively provide conclusive analysis to the siting of informal sector

<sup>1</sup> H. H. Smith (1981:42). *Industrial Location: An Economic Geographical Analysis*. New York, Wiley & Sons.

activities, they highlight the political and socio-economic issues to be considered when siting the informal sector activities.

### 3.2: Enterprise siting Factors.

As earlier pointed out it is realistic to talk of a comparative advantageous site. This is because it is not realistic to find an ideal site, which has all the factors an entrepreneur may consider when siting a firm. Based on cost, it's possible to find an optimal site where advantages outweigh disadvantages (Smith, 1981: 71).

However, where there is great state interference, cost becomes less decisive in siting a firm, because the act has to comply with national or local authority's policy such as decentralizing employment zones (Greenhut, 1981: 26). In this respect, political aspect of a society must not be ignored when formulating policies for both formal and informal sector activities.

Wales and Moses (1972), Ogendo (1967) and Cadwallader (1985: 147) noted that transport cost is the single most important determinant of a plant location. It however influences the siting of economic activities selectively in a curvilinear fashion depending on the mode of transportation, weight of the commodity being transported, their perishability and the value of the products (Chapman and Walker, 1992: 43). This explains why majority of the informal sector workers are engaged both in production and trade on light goods.

Other factors determining the siting of business activities are factors of production such as land, labour and capital. The significant attributes of land normally considered in the location studies include: physical attribute of the site and proximity to disposal sites (Cadwallader, 1985). The quality of labour and capital costs have since become much distinguishing factor in the informal sector as the sector is known for employing either unskilled or semi-skilled

labour. However, capital becomes crucial for the enterprise expansion (Okoth, 1990; Okwiri, 1988; Muench, 1977; Mochache, 1990 and Ondiege, 1995). Economies of scale are also major determinants in siting both formal and informal commercial activities. Charney (1983) notes that the economies of scale can be viewed as either urbanization or localization economies. The urbanisation economies refer to the benefits, which accrue to enterprises by virtue of siting in a central part of a town. This, Charnery (1983) noted becomes crucial due to the zone's accessibility as well as prior existence of other related commercial ventures providing both backward and forward linkages. The central zones in a town provide diverse labour, minimise the transportation costs, while the agglomeration of related firms is conducive for providing backward and forward linkages.

On rational (economic) reasoning, one can argue that the CBD offers the best site for informal sector activities. However, it suffices to note that if the encroachment of the sector into the CBD is not controlled, the diseconomies of scale sets in, and facilities like transportation become congested, polluted and crime become major problems. These will lead to competition over space, thereby increasing the cost of land.

The localization economies occur when a commercial firm in the same business or closely related cluster at a site (Chapman and Walker, 1991). This is advantageous for it becomes cheap to provide services to the firms under this condition. Further, marketing aid by the central government becomes efficient. Similarly, commercial activities can also share suppliers and machine repairers. In as much as these ideas may appear noble for the informal sector, they have remained illusionary because the informal sector enterprises thrive by evading competition as well as taxation, which they cannot achieve through clustering (Ngethe *et al* 1985). Once the competition sets in, some may revert to being mobile

(hawking). However, the idea remains noble for the informal sector activities, which are spatially fixed and are fabrication oriented.

Njoroge (1985) emphasized the concept of spatial differentiation in siting the ISAs. She noted that the major factor responsible for this is the fact that local authorities do license the informal activities per street with regard to other land uses. She further noted the role market forces play in the spatial differentiation for the sector flourishes by attracting many customers and avoiding competition as much as possible. Therefore, busy pedestrian routes; shopping precincts, public transportation points are favourable places for the informal sector activities.

Okwiri (1988) noted the crucial role played by mode of ownership of the premises from which a particular activity is operated. He further observed that the informal activities do locate on unplanned and undeveloped neighbourhoods and arteries mainly in the low-income residential areas and in the periphery of urban centres, because such neighbourhoods do provide market for the informal sectors goods and services due to the low incomes. Further, the land rents for such sites are minimal thus affordable for the informal sector workers. However, he noted that the origin of these activities on these sites is attributed to the regulative policies of the local authorities, which has not recognized the informal sector by not demarcating land for them.

Abagambe (1975) brought in a social dimension in the sector by observing that the informal sector workers also consider proximity of the place of work and residence when siting their activities, for the maintenance of socio-economic links. Mochache (1985), and Bowa (1987) knowledge the role of space, availability of credit facilities and institutional organization in development of the informal sector activities. This was further corroborated by Pedersen

(1989) and Jorgen (1989). They summarized the above-mentioned views by noting that the crucial factors which determines the siting and development of the informal sector activities are:-

- ◆ Access to capital.
- ◆ Evading competition and taxation.
- ◆ Proximity to the market and source of raw materials.
- ◆ Access to adequate services (water and electricity).
- ◆ Technological advantages of a site.
- ◆ Legal and institutional policies like training, better layout of workshops to save time and increase productivity, as well as adoption of new and efficient tools.

These factors are mainly economic in nature but it has emerged that socio-political factors are also crucial in siting the ISAs. This proves that the above views are limited, succumbing to the normative school of thought in the study of business siting.

### **3: Perceptions on what Constitutes Suitable Sites for the Informal Sector Activities.**

Optimally come up with a model that caters for the space needs of the informal sector workers. It is important to understand the structural aspects of the sector, which enables it to compete with the formal sector. The optimal model should therefore, preserve the positive attributes of the sector, particularly those which enables it to withstand competition from the formal sector.

(1973) postulated that the majority of the informal sector workers would be self-employed in small-unregistered enterprises. He continued to argue that their being seen as such, necessitates the central government to often harass them (Onyango, 1986:14). This



poor attitude on the sector has further put financial constraints on the sector to an extent that the informal sector workers often find it difficult to secure business loans from the conventional lending institutions on the grounds that they are high-risk operators (Ondiege, 1995; Opondo, 1989).

Lack of registration and licensing implies that informal sector workers do not readily have a base from which their operations can systematically be harmonized in or near the Central Business District (CBD). This view is further corroborated by Ryan (1986:4) that the informal sector has often operated in the periphery of the formal sector. The informal sector workers in most cases lack resources, technological skills besides division of labour. Because of these, they often present a scenario of unsteady labour supply (Hart, 1973).

The informal sector workers do in most cases produce identical goods and services and hence compete for the limited market. The goods and services they produce range from food produce to light industrial products such as metal work. Other activities of the informal sector include manufacturing, transport services, construction and trade. In terms of employment, the informal manufacturing and repair services are an important source of employment for men, whereas trade and other forms of services are important for women (Ngau, 1995: 17).

Further, poor management practices, poor infrastructure and lack of legal protection are some of the major constraints to the development of the informal sector (Ondiege and Aleke-Opondo, 1991). Therefore to develop the sector, there is a need for the regularization of these activities. Regularisation should entail the attainment of a level of formalization, both as a way of increasing productivity, as well as changing the negative public image on the sector (Schache, 1985: 9). The bid to turn all the 'informal' activities to 'formal' would require

development of sufficient capacity at the municipal level as well as at national level. Such capacity will provide management, training and other skills needed for the management of these insufficiently trained informal sector workers to work in the proposed formalized sites (Mochache, 1990: 9). This further requires more capital outlays and much more time to effect. In summary, the regularisation effort advocated for here entails both operational and spatial regularisation. This regularisation should leave the informal sector at a level to which the sector still maximises the market opportunities with better working condition. This has a major advantage in that it enables the informal sector workers to satisfy their needs and at the same time conserve their working environments.

Muench (1977) noted that to come up with a conclusive site for the informal sector activities, there is a need for a systematic approach to the holistic urban land use. He foresaw difficulties in doing this due to absence of dynamic planning models, which can be used in harmonizing the sector with the formal sector. He further noted that planning should recognise duality in development studies, and should further be augmented with utilization of some recent analytical models in planning for the analysis of the sector's structure. The above being the case, the activities of the informal sector should be regulated in a carefully planned manner, as Mochache (1990: 24) notes: -

There is no doubt that if a panel of experts or indeed laymen was convened to consider the problems of LDCs urbanization, and recommend remedial action, they would agree unanimously that first and foremost, sensible and responsive urban planning is needed ... Yet if there would be an agreement on the ends of urban planning there would be dissent concerning its means".

When planning for the informal sector activities, it is important to recognise the existence of the dual economy and the plural society. The importance of this was postulation by Lewis (1958) and Boeke (1953) who noted that: -

"It is possible to characterise a society in economic sense, by the social spirit, the organizational forms and the techniques dominating it. These three aspects are interdependent (typifying a society ... it is not possible that a society be exclusively dominated by one social system. Where on the contrary simultaneously two or more social systems appear clearly distinct and each dominate part of the society."

The above argument implies that when planning for the informal sector activities, the co-existence between the formal and informal activities in the urban economy should be considered (Robert, 1978:71). This is because both the sectors provide forward and backward linkages to each other.

The classical theories that have been used for explaining the urban land uses are purely based on land rent concept. These theories if strictly applied in the urban centres for the space allocation, often push the informal sector activities to the periphery where the land rents are comparatively low. The classical theory of the **bid-rent curve**<sup>2</sup> which was developed by Von Thunen (1826) and further advanced by Alonso (1964) to explain the location of activities in urban areas were based on superfluous assumptions. Notorious among them is the assumption that each parcel of land is sold to the highest bidder thus all land users has equal access to land market. This assumption contradicts the essence of good urban governance, which requires that economic principles should be looked at in a broader perspective incorporating social justice (Amin, 1976).

The informal sector workers being economically disadvantaged cannot bid high for land in the Central Business District (CBD) and the alternative is to encroach into private land and open spaces. It is germane to note that if the siting of these activities are based on pure economic principles, they are destined to be moved to the periphery. The operators being

**Bid Rent Curves:** Lines of relationship between location rent and distance on which the cost of production is prohibitive enough to keep the producers out of production after paying the land rent. Its given by the equation:-

$$R = Y(P-C) - Ytd$$

where,  
 R = Location Rent.  
 Y = Yield/ Unit of land  
 C = Production cost/ Unit commodity.  
 P = Price in the market/ Unit of commodity  
 t = Transport cost/ Unit of commodity.  
 d = Distance from the market.

economically rational, they have perfect knowledge that markets are good in the CBD, hence they do all they can to locate in the CBD inspite of their low bid. This is the dilemma in the informal sector, which has not been fully modeled, in spatial terms.

Hartshorn (1980:214) and Hoover (1948) on analyzing Burgess (1925) concentric model of urban land use, pointed out that majority of the informal sector activities do locate in the zones of transition. They further extended this argument in analyzing Hoyt's (1939) sector model and Haris and Ullman's (1945) multi- nucleic model. In both cases, the two authors unanimously agree that the informal sector activities do locate in Zone II of the two models. Mochache (1985: 66) also confirmed this in the ideas he expressed on Gikomba informal market in Nairobi.

Cadwallader (1985:151) attributed the siting of informal sector activities in the zones of transition to the location of light formal manufacturing industries in the same zones. Northam (1979:413-17) was precise by noting that these light formal manufacturing industries are characterized by engaging in the production of household appliances, and fabrication machinery which necessitates these industries to have effective local market which is often catered for through co - existence with the informal sector as outlets of their products.

However, the above theoretical postulation only forms deductive base for siting the space oriented informal sector activities such as those engaged in fabrication, because the fabrication oriented informal sector tend to rely on the by - products of the formal industries as their raw materials (Opondo, 1989). This prompts a need to cluster them to reduce the raw material transportation costs. In as much as this may be the case, they need to establish commercial

outlets in strategic positions where they can maximize on the market. This concept further evokes the idea of spatial differentiation in the informal sector activity siting as was articulated by Njoroge (1985).

Other works such as those of Chapman and Walker (1991: 218); Keeble, (1968:330) and Dennis. (1978: 198) pointed out that the major factors determining the siting of the business enterprises in the urban areas are accessibility, space, labour, market and raw material sources. Taking accessibility into consideration, it is a known fact that zone in transition is poorly accessible despite labour abundance. Coupled by the reality that informal sector activities rely heavily on either household or casual labour, they are not restricted to this zone. This explains their movement to the CBD, which is highly accessible, and with good market opportunities. This problem has been aggravated by the ever-dynamic physical space requirement for the informal sector activities, escalated by unemployment.

To overcome the space obstacles, Hoover, and Vernon (1962: 27) recommends the use of multi- storey structure in the CBD as commercial centres. This entails the revision of development control and regulations such as plot ratios and plot sizes in the CBDs. Admittedly, the extents of intervention to accommodate informal sector activities in the optimal urban sites are great. Land use planning restrictions may be regarded as a special case of the intervention (Mochache 1985:14).

The searches for the cure or the dilemma of regularisation to accommodate informal activities in the urban set up heavily rely on the planning policies. This is because as demonstrated by Feagin (1988) a carefully articulated planning intervention have been instrumental in promoting decentralisation based on the principle of social justice and public interest.

However, the policies evolved towards the envisaged regularisation should emphasize participatory approach and should further ensure that the positive attributes of the sector, which enables it to compete with the formal sector, are left intact. In this respect, land use planning intervention should not be seen as the cure of the dilemma but should be integrated within a comprehensive framework, which entails organization, environmental and economic package.

### **3.4: Towards a Conceptual Model for the Regularisation of the Informal Sector Activities.**

Over the years, the general public lacked understanding of the planning and implementation process, and of central and local authority policies in the urban centres. The basic reason for this is that the public awareness was low and so was public participation in formulation and implementation of the policies.

An optimal model for siting informal sector activities is considered appropriate when it is understood, widely accepted and routinely applied in decision making in urban management and planning (Mwalukasa, 2000: 156). This calls for the adoption of planning and management process, which encourages institutional relationships under compatible political and social norms.

Due to various advantages of the informal sector upon the urban population, the sector has to be seen as a permanent component of the urban system (Freeman and Norcliffe, 1985). Various forms of informal sector activities exist and vary in accordance with the livelihood and resource circumstances of the workers. It is this diversity, which contributes to the need for careful synthesis of different conditions, characteristics and policy before designing and implementing regulatory measures for optimal siting of informal sector activities. The policy interventions must be linked to specific development objectives. If the informal sector is

expected to make significant contributions to development. As with other public policy intervention, it is particularly important that the impacts of policies on different livelihood groups are taken into consideration by involving the stakeholders.

As outlined in figure 3.1, the envisaged conceptual model for the regularisation of the informal activities in the urban centres should begin with an in-depth understanding of the factors determining siting and the structural aspects of the activities. This makes it easy to establish which types of informal activities are fixed in space and which ones are mobile. This concept is important for a planner in the spatial differentiation of activities. The knowledge on the structure of the sector like labour demands, residential sites of firm owners and linkages between the activities are significant because they influence the siting decision. The above substantive knowledge should be supplemented with rapid Environmental Impact Assessment. This culminates into the differentiation of the informal sector activities, where the first task is to distinguish between the informal sector activities which are potentially harmful (unhygienic or cause pollution) and the harmless activities. Having identified the harmful activities, planning for other activities can proceed by working out the performance standards of the activities in regard to other land uses. This leads to third step, which is the specification of the areas where various categories of activities are permitted, and designating them on the plan. When designating sites for the ISAs, a planner should take into consideration the costs and benefits of every site, which they think, are appropriate for the activities (Onokerhoraye, 1982: 29).

There are a host of technical procedures (allocation models) designed to assist planners in making siting decision. These techniques have been used to locate spaces for commercial activities based on their structural requirements such as raw material sources, transport costs

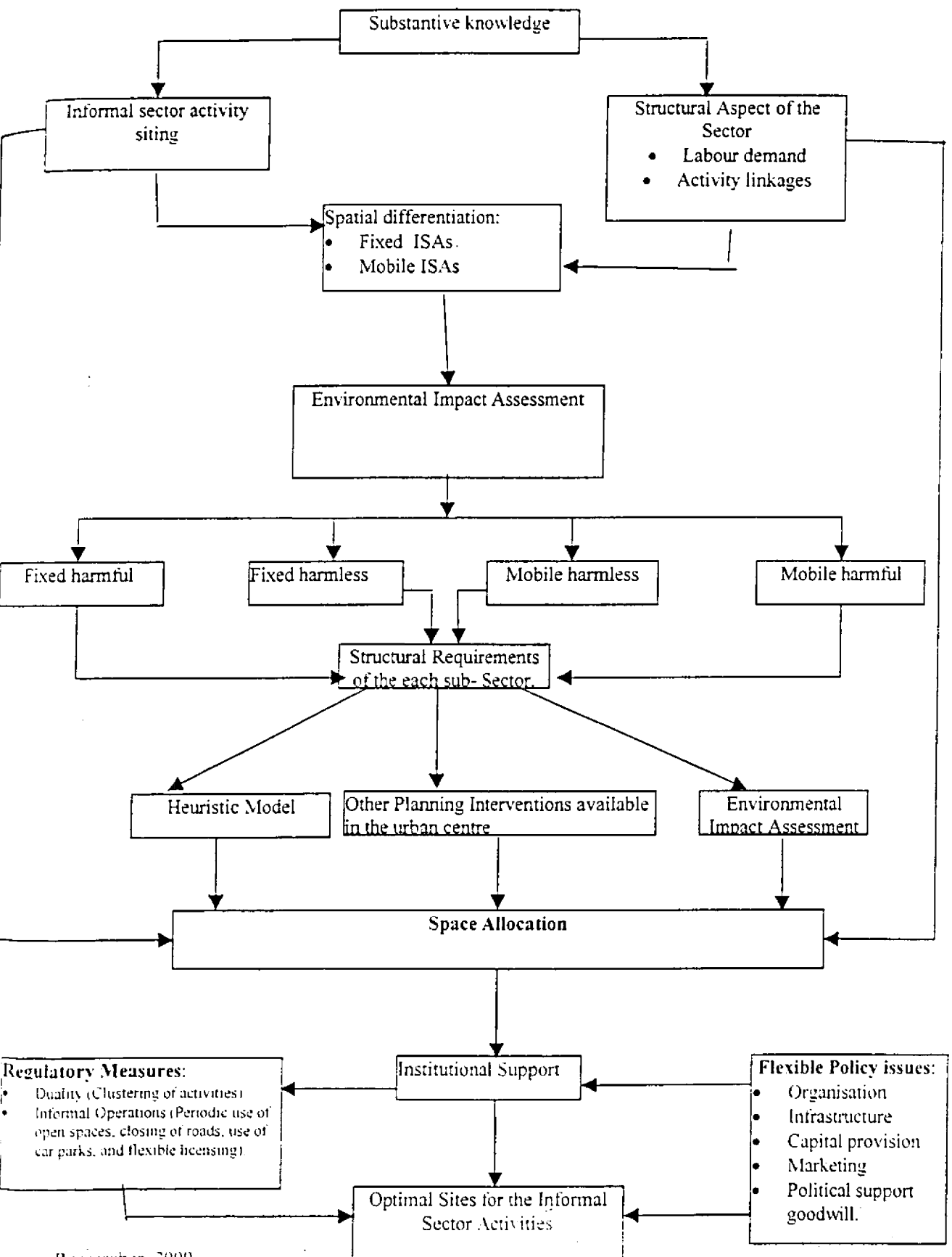
and markets. These techniques include mechanical, geometrical, heuristic, numeric (analytical) and simulation techniques. Their limitations lay on the levels of complexity and costs. Due to this, heuristic technique, which is computationally efficient and flexible, was applied in this work. However, it may not guarantee full optimality prompting the need to strengthen it with either sieve analysis or Environmental Impact Assessment as outlined in chapter four. The space allocation stage and the structural studies ideally should identify three broad categories of informal activities as: -

- (i) **Mobile activities:** These are activities, which requires no special structures, utility or facility and thus can operate amongst other land uses with minimal control.
- (ii) **Space fixed activities:** These include manufacturing and fabrication activities, which need optimal fixed site in terms of, designated spaces for workshop areas and manufacturing parks.
- (iii) **Service activities:** These include activities such as saloons and retail services. They can be allocated land on cluster basis in a commercial centre.

To ensure sustainability of the spatial regularisation, there is a need for institutional regularization, which should ensure that the ISAs maintain their intrinsic attributes, which enable them to withstand the competition from the formal sector. Further, the regularization should be as realistic as much as possible in conserving economic duality in the urban centres. This can be achieved through clustering the activities in identified accessible sites not far from the CBD and the sources of raw materials. Other short term measures which may be used entail periodic use of public open spaces, closing different roads at certain days of the week to allow the activities in the CBD and the use of car parks from 4.00 P.M. to 11.00 P.M for the general merchandise.



**Fig. 3.1: Conceptual Model for Spatial Regularisation of Informal Sector Activities (ISAs).**



Indeed, regularisation should be flexible as much as possible, because if the local authority's regulation press too much on the informal sector workers, they frequently obtain political intervention to exempt them from enforcement action. Therefore, the regulations should balance the economic needs of the residents, personal conviction of the policy makers and the political good will. If the regulations are flexible and sensible, the informal sector workers will follow them on voluntary basis thus reducing implementation costs. Some of the sensible regulations that should be enacted by the local authorities include designing flexible licensing system. At the national level, the central government should focus on streamlining Trade Licensing Act, reviewing of labour laws and enacting specific informal sector regulations among others.

There should also be policy change, both at the national and local authority level. For example to ensure that the informal sector activities flourish in the designated areas, basic infrastructure should be provided in the designated sites. Apart from the infrastructure, there is also a need for opening dialogue between the informal sector leaders, local authority representatives, Non-Governmental Organizations (NGOs) and the government officers. This necessitates that the informal sector workers should be organized into semi-formal groups. The advantage of this organization is that it makes it easy for the informal sector workers to secure loans, market their produce and for technical capacity building.

This conceptual model is developed based on experiences on the utilization of facilities provided by the World Bank towards regularizing the ISAs in Kenya and Kibuye market in Kisumu in particular. Majority of these projects collapsed due to poor project conceptualization which did not take care of participatory approach in decision-making. In this regard, the various stakeholders in the informal sector were not consulted in the initial

stages of the project formulation or implementation. This made the informal sector workers to view the project as belonging to the government thus total rejection.

## CHAPTER FOUR.

### THE STRUCTURE AND ENVIRONMENTAL IMPACT OF THE INFORMAL SECTOR ACTIVITIES IN KISUMU: DATA ANALYSIS AND FINDINGS.

#### 4.0: Introduction.

The aim of this chapter is to give an understanding of the structure and the sector's environmental conditions. This is done in respect to the objectives and the hypotheses set at the beginning of the study.

#### 4.1: Distribution of the informal sector enterprises in the town.

The enterprises surveyed were grouped into three categories as earlier stated. These included enterprises engaged in manufacturing, which constituted 29% of all the studied enterprises. Trade accounted for 41% while service sub-sector accounted for 30% of the sample.

The manufacturing sub-sector surveyed included tailoring (9%), carpentry (9%), metal work and tinsmith (9%), and posho mills (2%). The trade sub-sector included second hand clothes sales, which accounted for (11%), timber sales (4%), hardware dealing (4%), wood and charcoal sales (2%), petty trade (11%) and food produce sale (9%). Finally, the service sub-sector sampled included watch Jewelry and electronic repair (7%), shoe repair (4%), hair saloons (4%), bicycle repair (3%), goods storage (1%) and finally food restaurants (11%).

Table 4.1 gives the number of enterprises surveyed per category of activities.

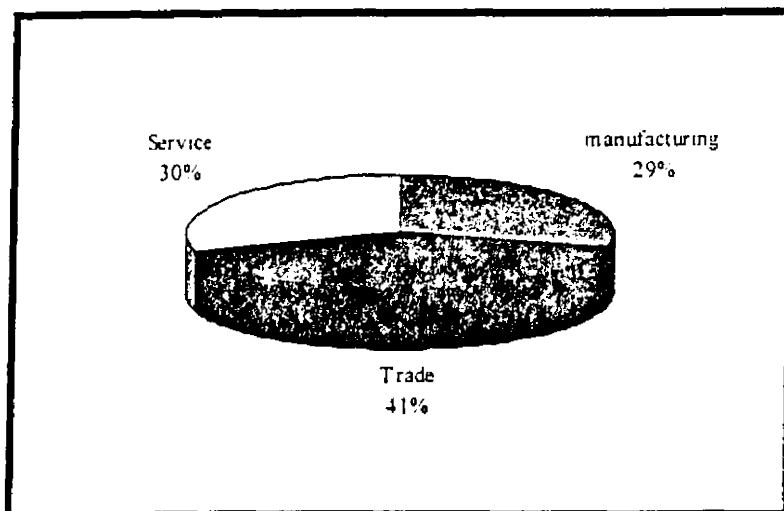
Table 4.1: Number of enterprises surveyed per category of activities.

Type of activity	Number of enterprises surveyed
<b>Manufacturing</b>	
Tailoring	9
Carpentry	9
Metal work and tinsmithing	9
Posho mills	2
<b>Total</b>	<b>29</b>
<b>Trade</b>	
Second hand clothes sale	11
Timber sales	4
Hardware dealings	4
Wood and charcoal sales	2
Petty trade (Hawking)	11
Food produce sale	9
<b>Total</b>	<b>41</b>
<b>Service</b>	
Watch, jewelry and electronic repair	7
Shoe repair	4
Hair saloons	4
Bicycle repair	3
Goods storage	1
Food restaurants	11
<b>Total</b>	<b>30</b>

Source: (Empirical Field survey, Author, 2000).

Taking the totals of the sub-sector into account, it emerges that the majority of ISAs in Kisumu are trade oriented, followed by service sub-sector and finally manufacturing sub-sector as shown in Figure 4.1.

**Fig. 4.1: The Percentage Distribution of the Enterprises by Sub-sectors.**



Source: (Empirical Field Survey, Author, 2000).

#### 4.2: Enterprise ownership by gender.

Enterprise ownership varied by sub-sector and gender as shown in Table 4.2.

**Table 4.2: The Percentage Distribution of Enterprise ownership by Gender.**

Sub-sector	Male	Female
Watch, Jewelry and Electronic Repair	100.00	00.00
Tailoring	50.00	50.00
Carpentry	100.00	00.00
Timber sale	60.00	40.00
Metal works/Tinsmith	88.00	11.01
Hardware dealing	80.00	20.00
Shoe/leather work	100.00	00.00
Food restaurants	30.00	70.00
Hair saloon	35.00	65.00
Wood/charcoal sale	00.00	100.00
Second hand clothes	40.00	60.00
Bicycle Repair	100.00	00.00
Petty Trade	69.20	30.80
Goods store	100.00	00.00
Food Produce Sale	27.30	72.70
Posho mill	100.00	00.00

Source: (Empirical Field Survey, Author, 2000)

From the survey, it is evident that males dominate manufacturing sub-sector (84.98%) and service sub-sector (77.0%), while females dominate the trade sub-sector, where they constituted 53.9% of the entrepreneurs. Out of the total 281 informal sector workers whose

details were considered in the survey, 71.89% were male, while females accounted for 28.11%. The distribution of employees also varied according to sub-sectors as shown in Table 4.3.

**Table 4.3: Labour force composition by Gender.**

Sub-sector	Male percentage	Female percentage
Watch, Jewelry and Electronic Repair	100.00	00.00
Tailoring	41.86	58.14
Carpentry	100.00	00.00
Timber sale	95.24	4.76
Metal works/Tinsmith	93.10	6.90
Hardware dealing	100.00	00.00
Shoe repair/leather work	100.00	00.00
Food restaurants	43.33	56.67
Hair saloon	00.00	100.00
Wood charcoal sale	33.33	67.67
Second hand clothes	64.29	35.71
Bicycle Repair	100.00	00.00
Petty Trade (Hawking)	83.33	16.67
Posho mill	100.00	00.00
Food Produce Sale	22.22	77.73
Goods store	100.00	00.00

Source: (Empirical Field Survey, Author, 2000).

### 4.3: Entrepreneurs Age and Level of Education per Category of Activities

#### 4.3.1: Age Characteristics.

Age of the entrepreneurs can influence policy design, performance and the management of individual enterprises. The average age of surveyed enterprise owners in the town is 32, while the average age of all the informal sector workers is 26. The mean ages varied by gender and activity as shown in Table 4.4.

Table 4.4: Average age of informal sector workers per gender by sub-sector.

Sub-sector	Average ages per gender		Average
	Male	Female	
Watch, Jewelry and Electronic Repair	29.0	*	*
Tailoring	23.0	23.0	23.0
Carpentry	27.0	*	*
Timber sale	29.0	33.0	31.0
Metal works/Tinsmith	27.0	33.0	30.0
Hardware dealing	30.0	32.0	31.0
Shoe repair/leather work	28.0	*	*
Food restaurants	30.0	27.0	28.0
Hair saloon	*	24.0	*
Wood charcoal sale	*	36.0	*
Second hand clothes	27.0	35.0	31.0
Bicycle Repair	30.0	*	
Petty Trade (Hawking)	26.0	28.0	27.0
Posho mill	28.0	*	
Food Produce Sale	28.0	31.5	29.7
Goods store	25.0	*	*

Source: (Empirical Field Survey, Author, 2000).

Key

\* All were from the opposite sex.

#### 4.3.2: Education Level.

The levels of formal education together with post school training affects the enterprise performance in terms of management and productivity, because low incomes realised from ISAs do not allow the entrepreneurs to hire the services of good managers and technical staff. This partly explains why the majority (94.3%) of the enterprises are owner managed, while only 5.7% of the enterprises had employee managers.

This analysis further reveals that 75.18% of the business owners had primary level of education, while 21.51% had secondary level education. Tertiary training accounted for 2.30% while marginal 0.47% had university level of education (1 respondent under timber trade).



#### **4.4: Enterprise Characteristics.**

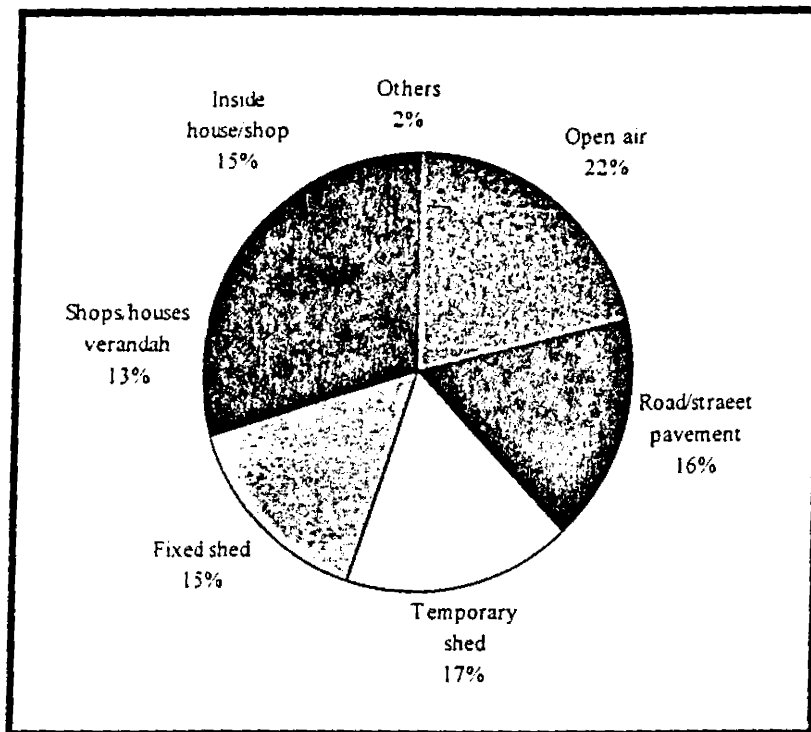
##### **4.4.1: Enterprise Ownership.**

Individuals mainly own the informal sector enterprises in Kisumu, because 87.3% of the enterprises surveyed were under sole proprietorship. Partnerships accounted for 11.1%, while co-operative (group) ownership accounted for only 1.6%. Manufacturing enterprises exhibited high levels of partnerships. For instance, the carpentry had 19.7% and 10.3% under partnerships and group ownership respectively. This is due to expensive technological needs of the sub-sector thus an aspiring entrepreneur having to pool together their resources. These findings have planning implications as discussed in section 4.10.

##### **4.4.2: Types of Business Premises**

In Kisumu the informal sector enterprises operates in different type of structures. It has been postulated by Ondiege (1997) that temporary sheds and fixed structures such as shops should attract ISAs, but from the analysis, it is evident that this is not the case because despite the provision of temporary sheds for the ISAs by the government and the World Bank in Kibuye market, the traders still prefer conducting their business in the open air, along the streets and on pavements as illustrated by Figure 4.2.

Fig 4.2: Business premise types.



Source: (*Empirical Field Survey, Author, 2000*).

Business premise type depends on the sub-sector, because each sub-sector has different requirements in terms of space, infrastructure and the type of equipment being used. For example, due to large space requirements of metal works, most of the sub-sector's activities are carried out in the open air or under temporary sheds. This corroborates the idea that, when considering providing workspaces and infrastructure services for the ISAs, this observation should be taken into consideration. This had also been noted by Ondiege. (1995), Mochache, (1985) and Gichira (1993) among the notable authors on the informal sector.

**Plate 2.0: Open Air Metal Workshop.**



*Source: (Field Survey, 2000).*

#### **4.4.3: Premises Ownership.**

Premises ownership of the ISAs were found to be as follows: - Rental basis accounted for 70%, fully owned 22.5%, while 7.5% were partially owned. The average rental costs were Ksh 600 per month per premise. This is substantially low compared to formal shops in the same area whose rents were over Ksh 1890 per month. The results by themselves show that displacing the informal sector into formal spaces cannot be viable, as they are unlikely to pay.

#### **4.5: Employment Characteristics.**

##### **4.5.1: Employment Size.**

Enterprise size (by employment) influences the type of assistance that should be extended to the informal sector. This is because assistance agencies may explicitly or implicitly target specific enterprise sizes for various assistance programmes. Table 4.5 shows various sizes of the enterprises surveyed.

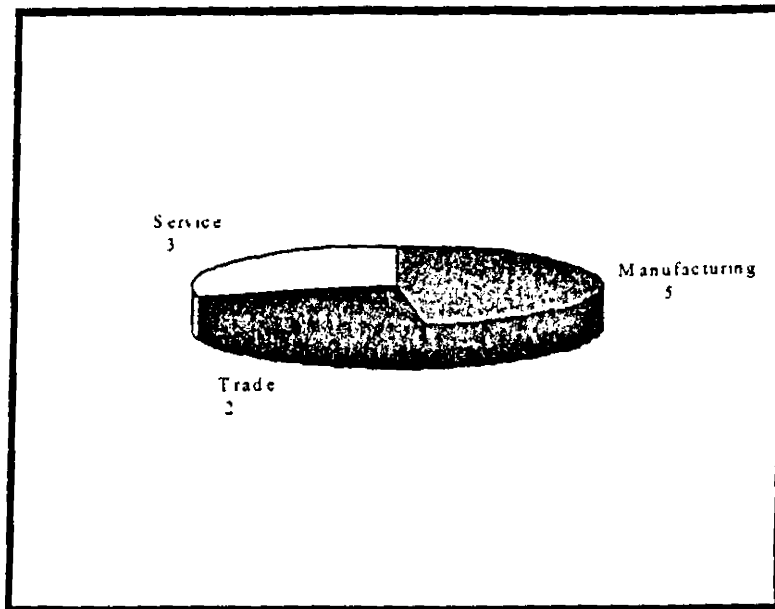
Table 4.5: Employment characteristics.

Sub-sector	Number of Employees						Gender		Categories of Employment				
	1	2-5	4-6	7-8	9-10	11+	Females	Males	Paid employee	Casual	Apprehensible	Unpaid family worker	Working proprietor
Watch/Jewelry Enterprise Repair	2	2	2	0	1	0	0	28	11	5	4	2	6
Tailoring	2	5	1	0	0	1	25	18	14	8	11	1	9
Carpentry	2	2	4	0	0	0	0	38	13	4	12	2	7
Timber Sales	0	2	2	1	0	1	1	23	6	9	0	1	8
Metal Works Tinsmith	2	2	3	0	0	0	2	29	12	6	2	2	9
Hardware Dealing	1	3	0	0	0	1	0	6	0	1	0	2	3
Shoe Repair/Leather Works	1	2	0	0	0	0	0	6	0	0	2	0	4
Food Produce	5	6	0	0	0	0	14	4	0	2	0	5	11
Hair Saloon	2	1	1	0	0	0	10	0	3	0	5	1	1
Wood/Charcoal Sale	2	0	0	0	0	0	2	0	0	0	0	1	1
Second Hand Clothes	4	5	0	0	0	0	6	9	6	0	0	1	8
Bicycle Repair	2	1	0	0	0	0	0	3	0	0	1	0	3
Petty Trade (Hawking)	7	6	0	0	0	0	3	15	2	1	0	1	11
Food Restaurant	2	5	2	1	0	0	16	13	17	0	0	0	12
Posho Mills	0	0	1	0	0	0	0	4	2	0	0	0	2
Goods Store	0	0	1	0	0	0	0	6	0	0	5	0	1
Total	34	43	17	2	1	3	79	202	86	36	42	19	99

Source: (Empirical Field survey, Author, 2000).

The distribution of the number of employees varied by sub-sectors as indicated by Figure 4.3.

**Fig 4.3: Average number of employees per sub-sector.**

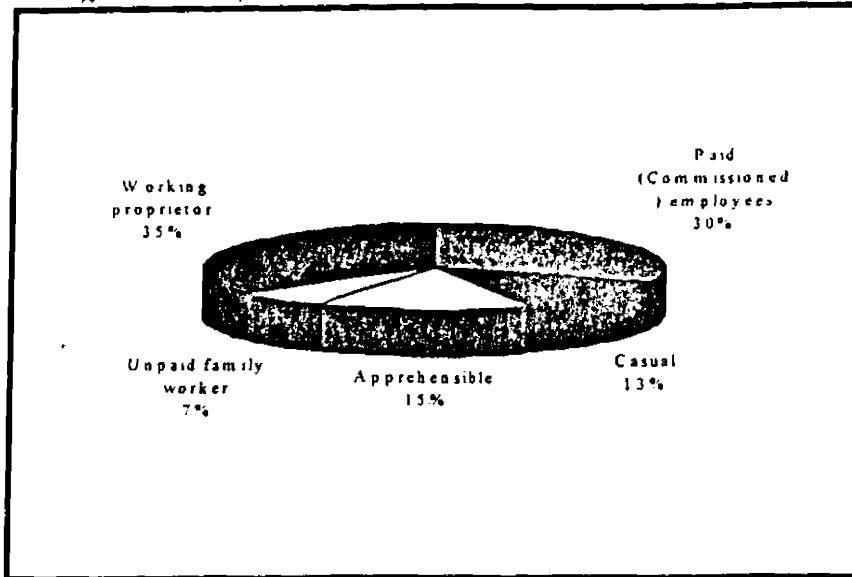


Source: (Empirical Field Survey, Author 2000).

The manufacturing sub-sector had the highest average number of employees, which was established to be approximately 5 employees per enterprise followed by service sub-sector having an average of 3 employees while the trade sub-sector had an average of 2 employees.

#### 4.5.2: Labour.

In this study, labour force was categorised as working proprietor, unpaid family worker, paid employees, apprehensible and causal. This study established that they are distributed as shown in Figure 4.4.

**Fig 4.4: Categories of labour force.**

Source: (*Empirical Field Survey, Author, 2000*).

The greatest numbers of employees are working proprietor (35.11%) owing to the fact that low income realised from the sector cannot permit incurring extra cost in hiring labour. Therefore, the enterprise owners prefer to work. The second category consisted of paid and apprentice employees who concentrated in manufacturing and service sub-sectors. The manufacturing and service sub-sector of the ISAs do face job fluctuations depending on the performance of the total economy. This prompts need for hiring, training and subcontracting whenever orders for products and services expand. It is on this line as observed in Table 4.5 that 31.58% carpentry labour force are under apprentice.

#### **4.6: Factors Influencing Business Expansion.**

This section presents a number of factors that affect the growth and development of informal sector. They include record keeping, training, capital sources for the enterprise as well as trade licenses.

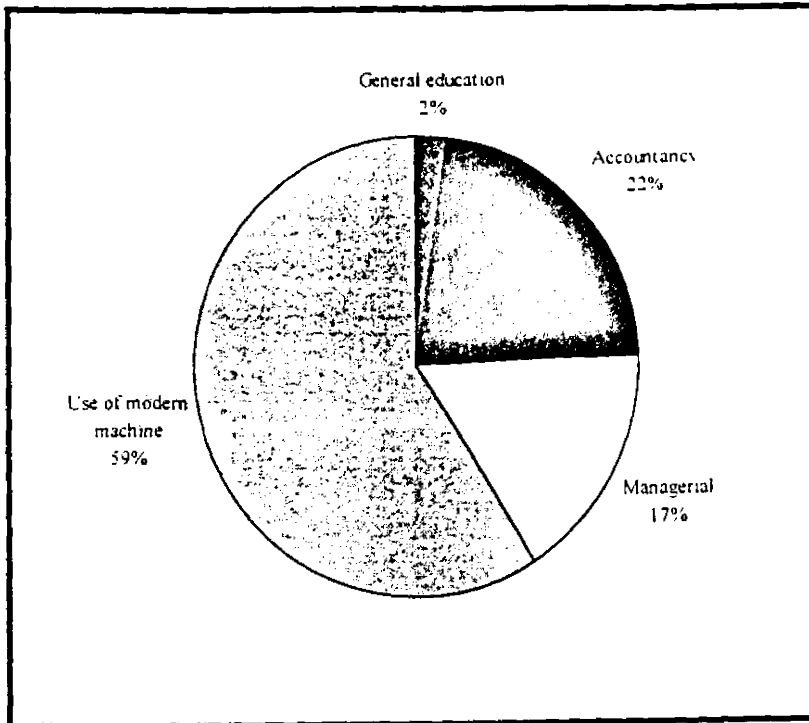
#### 4.6.1: Record keeping.

About 72.4% of the enterprises surveyed kept written records on creditors and debtors although with no budget records. Under such circumstances, proper business forecasting or planning becomes limited. This explains why the informal sector entrepreneurs probably could not easily secure bank loans.

#### 4.6.2: Training.

Manufacturing sub-sector had the highest number (68.1%) of entrepreneurs with post school training. This is due to the fact that proprietors who acquired the appropriate skills before establishing such enterprises manage most of the enterprises. Trade sub-sector present a scenario where entrepreneurs (78.3%) had no training at all. However, the trend is reverted in the service sub-sector where 59.29% of the entrepreneurs had vocational training. Nevertheless, 63.4% of the respondents prefer further training as illustrated by Figure 4.6. This is important because it proves that the majority of the informal sector workers have realized the importance of acquiring entrepreneurial skills for the successful running of an enterprise.

Fig. 4.5: Preferred types of training.



Source: (Empirical Field Survey, Author, 2000).

#### 4.6.3: Source of capital for the enterprise.

The analysis on the sources of capital for establishing an enterprise revealed that the main sources are informal. This limits a firm's investment capacity. Table 4.6 gives a summary of the main sources of capital for the initial establishment of enterprises.

Table 4.6: Sources of capital for the enterprises.

SOURCES	PERCENTAGE
Own savings	66.3
Borrowing from friends /relatives	16.8
Commercial Banks / other financial institutions	1.6
Government Lending institution	1.1
Personal borrowing	4.2
Own savings/Commercial Banks	3.6
Own savings / Government lending agencies	3.2
Joint ownership	1.6
NGOs	1.6

Source: (Empirical Field Survey, Author, 2000).



The amount of goods produced by the informal sector varied per sub-sector ranging from Ksh 15.00 to Ksh 350,000 per annum, while the value for the major raw materials ranges from Ksh 1 to Ksh10, 000 per unit.

#### **4.6.4: Trade licenses.**

The main form of trade "license" used by the informal sector workers is the municipal receipt (92.5%), because its only charged if the enterprises open up for business. In addition to this, the majority of the informal sector workers cannot afford to pay for the formal trade license at once therefore; they prefer receipts of Ksh 15 per day.

#### **4.7: Spatial Distribution of the Informal Sector Activities.**

The economic models cannot easily explain the complexity of varied business enterprises like ISAs. This prompted the use of Multiple Linear Regression Analysis (MLRA) and factor analysis as earlier stated. The MLRA being a stepwise procedure is used for identifying the variables previously hypothesized to have strong relationship with the intra-urban distribution of the enterprises. In this procedure, the first variable, which was considered for entry into the equation, was the one with the largest positive or negative correlation with the independent variables. The criterion chosen for significance was based on F-test corresponding to level of significance ( $\alpha$ ) set at 0.05.

To make valid concussions on the factors responsible for the spatial distribution of the enterprises, factor analysis was further employed and the generated factors rotated by means of the varimax matrix for emphasising the stronger loading and minimising the weaker ones

earlier stated in Chapter One. The site variables which were considered in the analysis are given in Table 4.7.

Table 4.7: Site variables.

V01	Number of establishments
V02	Adequate land for industrial expansion
V03	Lower land prices and rents
V04	Availability of transport
V05	Availability of electrical power
V06	Accessibility to source of water
V07	Nearness to town centre
V08	Nearness to residential units
V09	Proprietor lives here
V10	Proximity to market
V11	Nearness to other enterprises
V12	Industrial estate
V13	Social status and prestige
V14	Personal contacts for business information
V15	Psychological preference
V16	Influence of local politics
V17	Lack of alternative planned zone for the informal sector
V18	Availability of premises
V19	Availability of raw materials
V20	Prohibitive regulations and high standards in other areas
V21	Enterprise already at present site
V22	Access to major street
V23	Availability of wholesale stores
V24	Availability of local capital for investment
V25	Air transport facilities close by
V26	Lack of competition
V27	Government policy
V28	Local authority incentives
V29	General environmental features
V30	Trading license not required here
V31	Regional centre of sponsors
V32	Availability of machines for renting
V33	Allowed particular site by owner
V34	Nearness to home and hence familiarity with the area
V35	Industrial zone for particular product

Source: *Empirical Fieldwork, Author, 2000*.

Table 4.8 gives variables whose correlation equal to or greater than 0.400. The pairs of variables with excessive correlation ( $r = \pm 0.85$ ) were not included in the analysis for they essentially measured the same thing. For instance, the high correlation between V05 and V21 ( $r = 1.000$ ) can be explained by the fact that accessibility to water source depends on the accessibility to the main road because both are trunk infrastructure.

**Table 4.8: Correlation depicting significant relationships among site variables.**

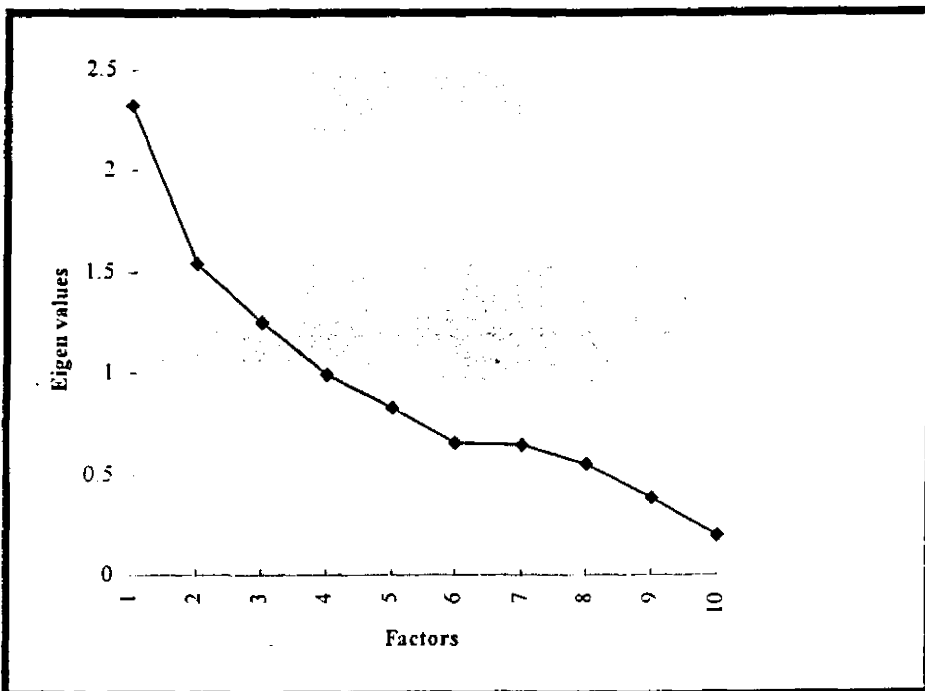
Site variables		r-value	Significance level	Percentage level of explanation
Lower land prices and rents vs. availability of transport	(V02/V03)	0.4417	0.05	19.5
Availability of transport vs. accessibility to source of water	(V03/V05)	0.5583	0.05	31.2
Lower land prices and rents vs. nearness to other firms	(V02/V10)	0.8136	0.05	66.2
Availability of transport vs. access to major street	(V03/V21)	0.5583	0.05	31.2
Availability of electrical power vs. general environmental features	(V04/V28)	0.4387	0.05	19.3
Accessibility to source of water vs. access to major street	(V05/V21)	1.0000	0.05	100.0
Accessibility to source of water vs. availability of goods stores	(V05/V22)	0.5732	0.05	32.9
Nearness to town centre vs. availability of raw materials	(V06/V18)	0.5732	0.05	32.9
Social status /prestige Vs prohibitive regulations and high standards in other areas	(V12/V19)	0.4813	0.05	23.2
Personal contacts for business information vs. psychic preferences	(V13/V14)	0.6112	0.05	37.4
Psychological preferences vs. governmental policy	(V14/V26)	0.4201	0.05	17.6
Psychological preferences vs nearness to home and hence familiarity with the area	(V14/V33)	0.5529	0.05	30.6
Influence of local politics vs. prohibitive regulations and high standards in other areas	(V15/V19)	0.5612	0.05	31.5
Access to major street vs availability of wholesale stores	(V21/V22)	0.5732	0.05	32.9
Government policy Vs regional centre of sponsors	(V26/V30)	0.5507	0.05	30.3

Source: *Empirical Fieldwork, Author, 2000*.

It emerges that the variables (V12, V13, V18, V15, V09, V08, V19, V21, V16 and V33) yields correlation factors greater than or equal to  $\pm 0.400$ . This strongly suggest that the urban's informal sector economy is influenced by economic, social and political considerations.

Factor analysis was employed to ascertain the underlying structure of the intra-urban distribution of the informal sector activities not revealed by the MLRA and it was established that ten factors given above are significant. The orthogonal varimax criteria was further performed on the 10 factors and the number of factors to be interpreted determined through the use of a scree-slope as indicated by Figure 4.6.

**Fig 4.6: Scree slope graph for the informal sector activities.**



Source: (*Empirical Fieldwork, Author 2000*).

The above analysis revealed that the following are the significant factors influencing the siting and spatial distribution of the informal sector activities in Kisumu town: -

- ◆ Nearness to residence of the entrepreneur and hence familiarity with the area
- ◆ Influence of local politics.
- ◆ Accessibility to major streets
- ◆ Enterprises already at the site.
- ◆ Prohibitive regulations and high standards in other areas.
- ◆ Lack of alternative planned zones for the informal sector activities.
- ◆ Proximity to market.
- ◆ Sources of raw materials.

Table 4.9: The MLRA Results.

Variables	Regression coefficient ( $\beta_i$ )	S.E ( $\beta$ )	F ( $\beta_i$ )	Significance (F)
Constant	0.07192	0.06720	1.070	0.2870
V08	0.03665	0.01381	20653	0.0086
V20	0.09281	0.04193	2.214	0.0291
V21	0.02971	0.01090	2.727	0.0075
V09	0.03308	0.01228	2.694	0.0083
V15	0.01918	0.01274	2.577	0.0341
V16	0.03105	0.01013	3.065	0.0026
V19	0.03308	0.01228	2.694	0.0083
V33	0.04995	0.09311	5.365	0.000
N=100	R=0.7781	S.E = 0.5852	F= 18.929	( $\alpha=0.05$ )

Source: (Empirical Fieldwork, Author 2000).

The fitted Regression model is of the form:

$$DV_{01} = \beta_0 + \beta_1(NV_{33}) - \beta_2(NV_{20}) + \beta_3(NV_{21}) + \beta_4(NV_{09}) + \beta_5(NV_{08}) - \beta_6(NV_{16})$$

$$\beta_7(NV_{19}) + \beta_8(NV_{15}) + \epsilon_1 \dots \dots \dots 4.1$$

Where

$\beta_i$ : Partial regression coefficient for  $V_i = 0$  ..... 8

$\epsilon$ : The standard error of the estimate of partial regression coefficient  $\beta_i$  for  $V_i = 1$  ... 8

F: F-statistics of the partial regression coefficient  $\beta_i$  for  $V_i = 1$  ..... 8

3. Multiple regression coefficient (constant).

The above variables together explained 63% of the siting decisions. This shows that economic factors are important as well as socio-political considerations. However economic considerations are far superior to the socio-political considerations since ISAs are economic activities. This had also been noted by Kinyanjui (1987) and Mochache (1990). The number of enterprises already at the site influence the siting of the ISAs in two main ways:- First, because the premises for new ISAs are scarce and expensive, an old entrepreneur who has already acquired substantive amount of capital may move to "better" premises, leaving the original premises to friends or relatives. This reveals social linkages in the ISAs. Secondly, the belief that the premises previously occupied by a successful entrepreneur will also be successful for the new occupiers.

Enterprises in the sector especially at their infant stages usually locate where there is demand for their product and services. These points are usually near or on the main roads passing through residential areas (Ondiege, 1995:55). This is partly due to accessibility and due to inefficient enforcement of the by-laws to discourage squatting on the road reserves. Indeed, road reserves and open spaces close to areas of concentrated commercial activities form the niches of ISAs.

The above being the case, this phenomenon is attributed to either prohibitive regulations and high standards in the ISAs demarcated areas or due to lack of alternative planned zones for the activities. Majority (74.9%) of the enterprises surveyed were located in the residential areas in their inception stages, more so the low-income residential areas because of proximity

market. Siting of enterprises varies with sub-sectors. For instance, the manufacturing sub-sector does cluster due to their technological needs, market focus, accessibility and infrastructure requirements. The trade sub-sector being market oriented tend to move to the CBD to compete with the formal enterprises if spaces are available. This is because in secondary towns such as Kisumu the regulations are partially enforced.

**Plate 3.0: Informal sector activities operating on the verandah of the formal shops.**



*Source: (Field Survey, 2000).*

It therefore emerges that when planning residential, commercial or industrial areas, there should be a special provision for the ISAs. However, this should be done in such a way that the land-use conflicts and eviction by local authorities are minimised.

#### **4.8: The Inter and Intra firm linkages.**

Linkages of firms show how the firms are interrelated. In this study, the main linkages, which were considered, are raw material linkages, capital linkages and subcontracting linkages. This was done with a view of clustering the firms to minimise transport costs and to further strengthen the linkages as noted by scholars like Livingston (1991), Hosier (1987), and Roderson (1989).

##### **4.8.1: Raw material linkages.**

This section focused on sources of raw materials. From the field data, each and every sampled activity was analysed in regard to the sources of raw materials. After this, the total number of firms obtaining the raw materials from various regions was tallied as shown in Table 4.10 (a).



Table 4.10 (a): Spatial Aspects of raw materials linkages.

SUB-SECTOR	REGION				Total
	Kisumu Town	Kisumu Rural	Other parts of Nyanza and Western Province	Others	
<b>Manufacturing</b>					
Tailoring	9	0	0	1	10
Carpentry	9	0	0	0	9
Metal works/Tinsmiths	8	1	0	0	9
Posho mills	1	0	1	1	3
<b>Trade</b>					
Timber sales	1	1	1	2	5
Wood /charcoal sales	0	2	0	0	2
Second hand clothes	4	0	2	4	10
Petty Trade (Hawking)	9	0	0	1	10
Food produce sales	9	3	0	0	12
Hard ware dealing	4	0	0	2	6
<b>Service</b>					
Food Restaurant	9	3	0	0	12
Electronic repair	7	0	0	1	8
Shoe repair/leather works	3	0	0	0	3
Hair saloons	6	0	0	0	6
Bicycle repair	1	0	1	0	2
Goods store	2	0	0	0	2

Source: (Empirical Field Survey, Author, 2000).

Further, to show the proportion of the sampled enterprises having raw material linkages with various regions, the researcher arrived at Table 4.10 (b).

Table 4.10 (b): Proportion of sampled enterprises having raw material linkages with various regions.

SUB-SECTOR	REGION				Total
	Kisumu Town	Kisumu Rural	Other parts of Nyanza and Western Province	Others	
<b>Manufacturing</b>					
Tailoring	0.900	0.000	0.000	0.100	1.00
Carpentry	1.000	0.000	0.000	0.000	1.00
Metal works/Tinsmiths	0.889	0.111	0.000	0.000	1.00
Posho mills	0.333	0.000	0.333	0.333	1.00
<b>Trade</b>					
Timber sales	0.200	0.200	0.2000	0.400	1.00
Second hand clothes	0.000	1.000	0.000	0.000	1.00
Wood charcoal sales	0.400	0.000	0.2000	0.400	1.00
Petty Trade (Hawking)	0.900	0.000	0.000	0.100	1.00
Food produce sales	0.750	0.250	0.000	0.000	1.00
Hard ware dealing	0.667	0.000	0.000	0.333	1.00
<b>Service</b>					
Electronic repair	0.875	0.000	0.000	0.125	1.00
Shoe repair/leather works	1.000	0.000	0.000	0.000	1.00
Hair saloons	1.000	0.000	0.000	0.000	1.00
Bicycle repair	0.500	0.000	0.500	0.000	1.00
Goods store	1.000	0.000	0.000	0.000	1.00
Food Restaurant	0.750	0.250	0.000	0.000	1.00

Source: (Empirical Field Survey, Author, 2000).

The above analysis reveals that ISAs in Kisumu do have high raw material linkages with the intermediate urban set up. This is followed by the town's immediate hinterland while there are insignificant linkages with other parts of Nyanza province, Western province and other regions. This can be explained by the fact that Kisumu town being the dominant urban centre in the region, it do enjoy the advantage of agglomeration of commercial enterprises, where goods and services destined for other regions originate from, so the town is the supplier of

goods and services to the hinterland. However, sub-sectors like timber sales, second hand clothes and posho mills exhibits uniform distribution of raw materials sources across the regions. For instance, in timber trade, much of the raw material are got from Maragoli hills in wholesale and sold to informal sector workers in retail, while some informal sector workers do obtain timber from Maragoli and Molo respectively. Busia in Western province being a major source of second hand clothes besides Kibuye market, which is a regional market, enables second hand clothe dealers to obtain goods at fair wholesale prices and sell at retail prices in the town. This phenomenon (double source of raw material in the vicinity of the town) has led to massive rise in second hand clothe dealing to an extent that locating land for such activities has become problematic, leading to proliferation of the sub-sector, invading all the major road reserves both in the CBD, the residential areas, and the open spaces.

**Plate 4.0: Proliferation of the second hand clothes in the major streets of the town; Angawa Street.**



*Source: (Field Survey, 2000).*

The second level of the raw material as a manifestation of linkages focused on the inter and intra-linkages of the sub-sectors. This was done with a view that an output of a sub-sector

may be an input to another sub-sector. Having identified that there are only significant raw material linkages at the town level. The analysis focused on enterprises whose sources of raw materials are within the town. This made the sample size to change from 100 to 88 enterprises. Out of this, it was established that there are significant raw material linkages between the ISAs and the trade sub-sector of the formal sector as shown on Table 4.10 (c).

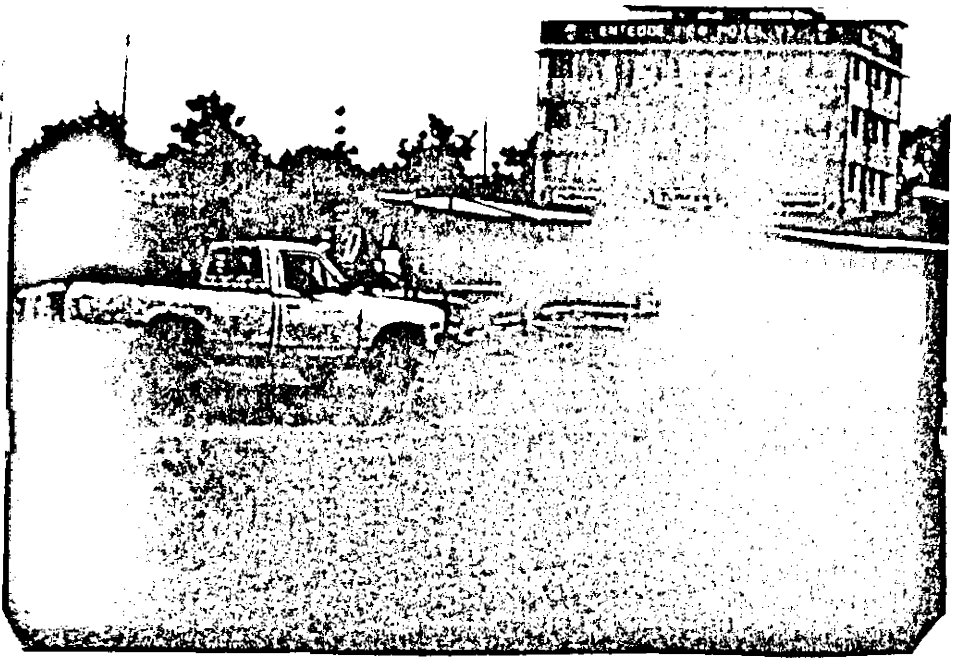
**Table 4.10 (c): Inter and Intra sub-sector raw material linkages.**

<b>Informal sub-sector</b>	<b>Informal trade sub-sector</b>	<b>Formal trade sub-sector</b>	<b>Total</b>
Manufacturing	24	18	42
Trade	16	9	25
Service	7	14	21
<b>Total</b>	<b>47</b>	<b>41</b>	<b>88</b>
<b>Percentage</b>	<b>51.09</b>	<b>44.57</b>	<b>95.65</b>

Source: (Empirical Field Survey, Author, 2000).

This analysis reveals salient attribute of the ISAs that they mainly cluster on a site due to proximity to the source(s) of raw materials. It emerges that, when planning for the ISAs the sources of raw materials for each and every sub-sector should be adhered to by first allocating land for the raw material oriented activities such as manufacturing to minimise the transport cost incurred by firms in transporting bulky raw materials.

plate 5.0: Carpentry and timber dealings cluster at a site in Kondele.



Source: (Field Survey, 2000).

**4.3.2: Technological linkages.**

One of the most important sources of technical knowledge for the informal sector is through establishing links with the formal sector (Ondiege, 1995:71). Valid conclusions on the capital linkages in the informal sector can be made by analysing the subcontracting and equipment flows in the sector (Ikiara, 1977:40). From the collected data, it emerged that manufacturing and the service oriented enterprises are the ones having significant capital and subcontracting linkages as was also expressed by Opondo (1989), Mochache (1985) and Livingston (1991). Therefore, this section of analysis neglected the trade sub-sector.

### 4.8.2.1: Subcontracting Linkages.

Subcontract is an arrangement whereby a firm requests another firm to undertake on its behalf the whole or part of an order it has received instead of doing the whole work by itself (Opondo, 1989:113). In Kisumu town two types of subcontracting arrangements were established to exist among the ISAs. The first and the most common type of subcontracting arrangement involved processing of certain parts of products of one enterprise to enable the subcontracting firm to accomplish its manufacturing process. The other form of subcontract was established to be where the formal firms subcontract the informal sector enterprises to produce for them goods. The first arrangement for instance, involved carpenters taking parts of beds, tables and beds for patterning to other firms having lathe machines. However, it was established that this type of arrangement is 86% confined among the informal sector enterprises. Among the manufacturing sub-sector, carpentry recorded the highest (42.9%) of such arrangements. Table 4.11 (a) and (b) gives the findings of the inter and intra subcontracting linkages in Kisumu town.

Table 4.11 (a) ; Inter and Intra backward subcontracting linkages

Informal Sub-Sector	SUBCONTRACTED BY INFORMAL SECTOR		SUBCONTRACTED BY FORMAL SECTOR	
	(%) Subcontracted for processing parts	(%) Subcontracted to manufacturing goods	(%) Subcontracted for processing of parts	(%) Subcontracted to manufacture goods
<b>Manufacturing</b>				
Tailoring	10.4	2.1	0.7	9.4
Carpentry	42.9	10.2	23.4	44.2
Metal works/Tinsmiths	26.3	20.4	30.3	10.3
Posho mills	6.1	6.1	0.0	0.0
TOTAL	85.7* <sup>1</sup>	38.8* <sup>2</sup>	54.4* <sup>3</sup>	63.9* <sup>4</sup>
<b>Service</b>				
Electronic repair	25.4	0.0	0.0	0.0
Shoe repair/leather works	25.0	0.0	25.0	25.0
Hair saloons	0.0	0.0	0.0	0.0
Bicycle repair	33.3	0.0	0.0	0.0
Food Restaurants	0.0	0.0	0.0	0.0
TOTAL	83.6* <sup>5</sup>	0.0* <sup>6</sup>	25.0* <sup>7</sup>	25.0* <sup>8</sup>

Source: (Empirical Field Survey, Author, 2000).

**Key**

\* The sample sizes varied

\*1 to \*4: The sample size was 40.

\*5 to \*8: The sample size was 18

The above analysis establishes that there are significant backward intra and inter subcontracting linkages in the manufacturing sub-sector of the informal sector. Leading in this category is carpentry followed by metal work and tinsmith. In the service sub-sector, significant backward subcontracting linkages was confined among the informal enterprises of which electronic repair recorded the highest percentage.

Table 4.11 (b): Inter and Intra forward subcontracting linkages.

Informal Sub- Sector	SUBCONTRACTING THE INFORMAL SECTOR		SUBCONTRACTING THE FORMAL SECTOR	
	(%) For processing parts	(%) For manufacturing Of goods	(%) For processing parts	(%) For manufacturing Of goods
<b>Manufacturing</b>				
Tailoring	10.4	15.0	0.00	0.00
Carpentry	42.9	0.0	25.00	0.00
Metal works Tinsmiths	26.3	0.0	12.3	0.00
Posho mills	0.0	0.0	33.3	0.00
TOTAL	76.6* <sup>1</sup>	15.0* <sup>2</sup>	70.6* <sup>3</sup>	0.00* <sup>4</sup>
<b>Service</b>				
Electronic repair	46.0	0.0	50.0	35.00
Shoe repair	33.03	66.7	66.73	33.33
Hair saloons	0.0	0.0	0.00	0.00
Bicycle repair	33.0	0.0	1.7	0.00
Food Restaurant	0.0	0.0	0.0	0.0
TOTAL	91.3* <sup>5</sup>	66.7* <sup>6</sup>	61.7* <sup>7</sup>	66.33* <sup>8</sup>

Source: (Empirical Field Survey, Author, 2000).

**Key**

\*The sample sizes varied

\*1 to \*4: The sample size was 40.

\*5 to \*8: The sample size was 18

The analysis above shows that there are weak forward subcontracting linkages within the informal sector and the formal sector. However there are markedly significant forward subcontracting linkages within the informal sector enterprises. This proves that the informal sector is much dependent on the formal sector. Subcontracting arrangements demands close contact between firms involved thus needs close proximity. Probably this is because of lack of communication systems such as telephone, high cost of transport and poor marketing techniques.



### 4.8.2.2: Capital (equipment) linkages.

The analysis on the equipment linkages established that informal sector exhibit high linkages within the local area, followed by the rest of the country and very marginal linkages with the immediate hinterland. This is because the sector takes advantage of locally available machinery within the town. Further, the sector shows significant linkages with the rest of the country, especially the manufacturing sub-sector due to the sub-sector's well established apprenticeship arrangements and formal training which cut across the entire country. This enables the operators to relocate with the machinery they acquired from various parts of the country.

**Table 4.12: Capital linkages for the ISAs.**

	Local area	The Regional context	Other parts of country
<b>Manufacturing</b>			
Tailoring	0.6423	0.0105	0.3472
Carpentry	0.5564	0.0200	0.4236
Metal works/Tinsmiths	0.5447	0.0163	0.439
Food Restaurant	0.5906	0.3480	0.0614
Posho mills	0.8222	0.0000	0.1778
<b>Service</b>			
Electronic repair	0.5545	0.0153	0.4302
Shoe repair/leather works	0.5786	0.0960	0.3254
Bicycle repair	0.5400	0.00	0.4600

Source: (Empirical Field survey, Author 2000).

• *Trade sector was not included in the analysis because its not capital oriented.*

### 4.9: The Environmental Impact Assessment of the ISAs.

Environmental impact assessment (EIA) is the backbone of a pre-emptive environmental policy (Makau, 1999:171). Although Kenya is in a hurry to industrialize through the contribution of informal sector, failure to conduct an adequate EIA before the establishment of a business could mean that the nation may pay dearly in future in terms of damage to the

people and natural resources due to ISAs. However, the EIA should not become a self-serving exercise or bottleneck to rapid investment. This means that EIA should be simplified as much as possible and carried out rapidly, especially in less complex ISAs. Environmental impact assessment encompasses varied disciplines and consequently requires the expertise of personnel knowledgeable in various technical areas (Jain *et al*, 1981:35). When assessing the environmental impact of a given project, four major elements are involved: -

- (i) Determining the agency associated with the implementing the action or the project.
- (ii) Determining the environmental attributes such that changes in the attributes reflects the impacts.
- (iii) Determining environmental impact.
- (iv) Reporting the findings

Various impact assessment methodologies have been developed such as Matrix display Technique, computer simulation methodology and systems approach among others. Virtually all of them employ a categorization of environmental characteristics in some form or another (Jain. *et al*. 1981: 37). However, EIA for this study employed **multi-attribute utility theory**<sup>2</sup>. Recent literatures on EIA indicate considerable interests in the application of multi-attribute utility theory. Virtually all the published studies on this methodology deal with energy projects and in particular site selection (Bisset, 1995), yet there is no inherent reason why this method cannot be applied to other types of projects and policies such as ISAs. Uys (1981) has used this method to assess alternative energy policies for South Africa. To prove that this method is valid in assessing environmental impact of alternative projects, Collins and Glysson (1980) used the method to assess two alternative solid waste disposal systems.

This is because the principles of multi-attribute utility framework are similar irrespective of the specific objectives of a particular application.

The first step in the utility theory involves the determination of the environmental attributes, which can be measured. For instance, water pollution can be measured in  $Ug/m^3$  of dissolved oxygen in mg/litre (Bisset, 1995:50). A number of such attributes, which provides a comprehensive picture of likely environmental impact, are selected. For each attribute different measures may exist, which have to be calculated using predictive techniques such as air pollution dispersion models (Mongkol, 1982:303). Once the attribute levels have been determined, the principles of this method enable their desirability (undesirability) to be established.

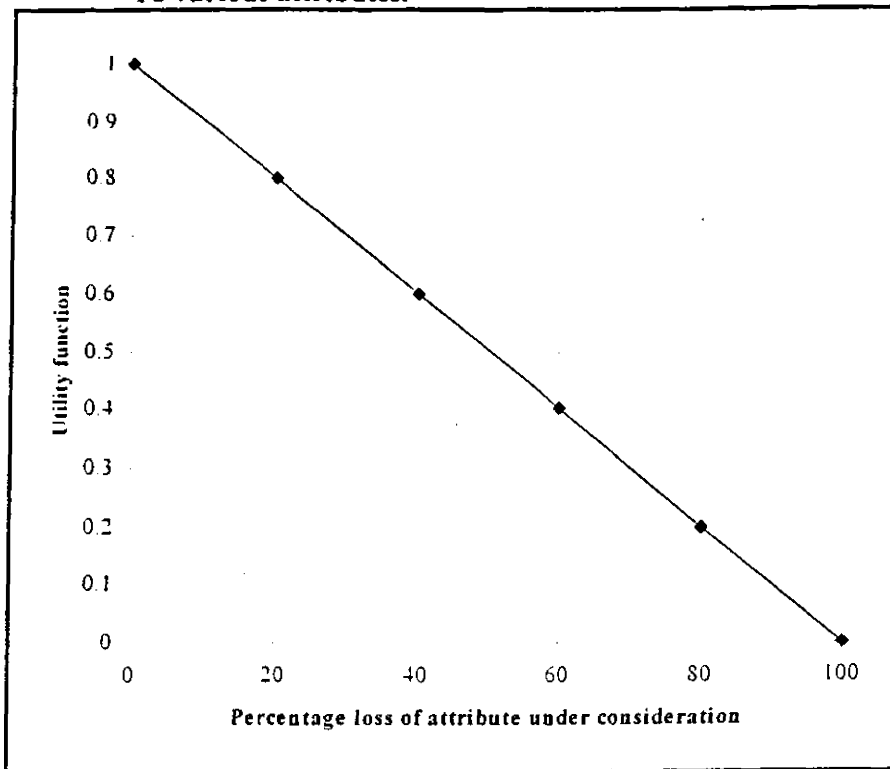
The major weakness of this methodology is that its operation relies on the subjective opinion of the experts involved. Nevertheless, it provides a logical framework for establishing the preference structure of experts' regards to the relative merits of different levels of attributes. Systematic comparison of the levels by the decision maker results into the formulation of utility curves.

Utility in this case was measured on a scale of 0 to 1, where 1 is the highest utility or most preferred, while 0 is lowest or least preferred. Invasion of a park by informal sector workers leading to total loss of flora in the park was viewed to be very serious and assigned a utility value of 0. This proceeded as shown in Figure 4.7.

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**Multi attribute Utility theory:** This approach of EIA is based on the scaling values, which reflects the relative importance of an attribute as perceived by a researcher.

**Fig. 4.7: The utility function curve employed in assigning utility values To various attributes.**



*Source: (Empirical computation. Author, 2000)*

Once the utility functions had been established for individual attributes, the next stage involved the calculation of the scaling value ( $R$ ) for each attribute. The scaling values reflect the relative importance as perceived by the researcher on different attributes. The assigned scaling value ( $R$ ) varied from sample areas based on the physical, economic, and sociological background of each and every sampled areas. The scaling factor ( $R$ ) was categorized into a nominal scale ranging from 1 to 5 where 1 represented most desirable condition, 2 represented no change, 3 slight change, 4 significant change and 5 extensive change. Total utility or a composite environmental Quality Index (EQI) was obtained from the below stated equation.

For conceptualization purposes the utility was assumed to be as low as zero, while in practical sense the utility only tend to zero.

$$EQI = U(x) = \sum_{i=1}^n R_i U_i(x_i) \dots \dots \dots 4.2.$$

Where

$R_i$  = Scaling factor of attribute  $x_i$

$U_i$  = Utility function.

The EIA for this study was simplified to only ten environmental attributes, namely:- effects of ISAs on the flora, fauna, aesthetics, amenity, existing land uses, chemical hazards, water pollution, air pollution, noise and health hazards. The computation of EQI for the various sample sites are shown on appendices V, VI, VI and VIII while the results of the Environmental Quality Index for each sampled area is presented in Table 4.13.

Table 4.13: Aggregate Environmental Quality Indices.

Subsector	Sampled Areas				EQI	Accepted EQI Values
	Nyalenda	Kondele	CBD	Kibuye		
<b>Manufacturing</b>						
Tailoring	13.80	21.65	22.50*	14.90	72.85	23.05
Metal work tinsmith	20.70	30.65	<b>33.45</b>	21.90	106.70	33.08
Food Restaurant	19.60	27.35*	28.25*	20.60	95.80	28.74
Posho mills	16.30	29.60*	<b>33.40</b>	23.00	102.30	30.69
Carpentry	16.10	25.70	<b>31.60</b>	18.30	91.70	27.51
<b>Service</b>						
Electrical repair	14.20	19.80	22.20	16.80	73.00	22.63
Shoe repair/ leatherwork	14.50	21.55	<b>25.50</b>	15.40	76.95	23.85
Hair saloon	14.20	16.50	17.70	14.50	62.90	19.51
Bicycle repair	15.40	26.95*	<b>29.10</b>	18.20	90.65	28.10
Goods store	13.70	21.65	<b>26.15</b>	15.20	76.70	23.78
<b>Trade</b>						
Timber dealing	16.00	24.85	<b>28.00</b>	17.50	86.35	26.77
Hardware	12.80	16.70	17.75	14.10	61.35	20.11
Food produce	17.80	27.25*	<b>32.05</b>	19.70	96.30	29.85
Second hand clothes	13.80	22.15	<b>25.10</b>	17.00	78.05	24.75
Petty trade (Hawking)	14.30	24.85	27.75*	18.60	85.50	27.80
Wood charcoal sale	14.50	24.10*	<b>27.90</b>	19.10	85.60	25.68

Source: (Empirical computation, Author, 2000)

\* Should be accepted under strict environmental policy regulations bolded: should not be accepted in the zone.

From these indices of utility, mean utility value for the town becomes 0.69, which when interpreted from Figure 4.7 means that it compromises 31% of the present environmental quality for ISAs development. However, with much consideration the bolded values in the Table 4.13 indicate the activities, which should not be allowed in the zone while the asterisks indicate the activities, which may be allowed under very strict environmental regulations. Owing to the fact that this analysis only considered basic environmental attributes, the activities, which are shown not to be compatible in various zones, should not be ruled out.

but should further be considered under social and economic impact. This is important because the EIA shows that the manufacturing activities do have adverse environmental impact while they are the major employer. Therefore, for sustainable urban development, the sub-sector must be carefully considered.

#### **4.10: Study findings and their planning implications.**

A number of significant structure and environmental issues arise from this analysis, which have implications for the optimal development of the ISAs. These are: -

- ◆ Distribution of the enterprises by sub-sector.
- ◆ Enterprise ownership and types of business premises.
- ◆ Entrepreneur's age and level of education per category of activities.
- ◆ Employment characteristics such as size and labour types.
- ◆ Factors influencing business expansion such as capital, training and record keeping.
- ◆ Site variables.
- ◆ Linkages.
- ◆ Environmental impact.

These are below discussed.

##### **4.10.1: Structure of the ISAs.**

The analyses on the structure of the ISAs reveal the following: -

- (i) Trade sub-sector accounted for 41% of the total enterprises in the informal sector, while the service accounted for 30% and finally, manufacturing sub-sector accounted for 29% of the total informal sector enterprises surveyed.

- (ii) The manufacturing sub-sector is the major employer because on average, manufacturing enterprises employed 5 people while trade employed 2 people and service enterprises 3 people.

The above being the case, it is evident that the future job creation in the town with informal sector as the center of focus lay on the optimal development of the manufacturing sub-sector followed by service sub-sector. Owing to the fact that manufacturing activities are space fixed, they need much attention in terms of space allocation relative to service and trade sub-sectors. This is further qualified on the grounds that they are the major employer despite being marginal numerically. This observation is further corroborated by the study finding that the enterprise mortality rate is higher in the trade sub-sector than either manufacturing or service sub-sector. The manufacturing sub-sector presents an emerging scenario whose future is very bright thus deserves more space allocation.

- (iii) Genderwise, men dominated the enterprise ownership. For instance, the males accounted for 84.98% of the total manufacturing enterprise ownership and 77.5% in the service sub-sector. This scenario changed only in the trade sub-sector where the females marginally dominated with 53.92% of the enterprise ownership.

Labour force composition by sex analysis established that 71.89% of the informal sector workers are males, while the females accounted for 28.11%. Various factors are responsible for poor participation of the females in the ISAs. These factors include low levels of education and training, capital requirements, access to credit facilities and social



acceptability of the work. Other scholars and researcher such as McCormick (1992), Atieno (1986), Masinde and Nzioki (1991) and Ofafa (1992), also came to similar conclusion.

This study established that the majority of enterprise ownership under trade is females, whose level of education is marginal, while men are engaged in manufacturing and service sub-sectors. As earlier noted, the two sub-sectors (manufacturing and service) need at least a tertiary level of training. Therefore, relatively educated individuals normally manage such types of enterprises. The level of formal education together with post - school training do affect the overall performance of an enterprise in terms of management and productivity (Gichira, 1993).

The above being the case, the production in the manufacturing and service sub-sectors has continued to grow, while the trade sub-sector has continued to experience higher enterprise mortality. This study thus underscores the vital role played by education in determining the success of a commercial enterprise and business location perception.

- (iv) Despite the efforts of the Ministry of Applied Technology in developing enabling environment for the ISAs, the policy focus on the informal sector has not adequately addressed the problem of enterprise location and premises provision. This is because the ISAs are still largely operating in the open air (21.7%), temporary sheds (17.8%), road/street pavement (16.7%) and on verandah. Even though it may be argued that business premise(s) varies with the business type, there is a level of

decency in the type of premise which should protect the entrepreneur and the goods from the ravages of weather.

This is evident by the fact that even at Kibuye, which is an old established *Jua-kali* site and where the ministry in collaboration with the World Bank focused on infrastructure provision, this component of the sector is still inadequate and the traders still operate in the open. The study further established that the ownership of even such sheds is concentrated in the hands of few individuals who may not necessarily be informal sector operators. Often, they overcharge Kshs. 600 per month. This charge is high for the majority of the informal sector workers who were only willing or able to pay Ksh 400 per month, leading to private plot invasion where they can operate without rental costs. This has led to constant harassment of the workers by either the private individuals or the municipal authority.

- (v) A significant proportion of those engaged in the informal enterprise are proprietor employees (35.11%). This clearly indicates that the sector is a key employer. However, this positive observation is turned down by the fact that sole ownership accounted for 87.3% of the enterprises surveyed. The main disadvantage of this type of entrepreneurship is that it is vulnerable to failure in the event of negative eventuality and further, it lacks mix of talents, further limiting access to credit facilities which are important for enterprise expansion.
- (vi) The development of ISAs in Kisumu is hampered by inadequate capital. This is because the major source of initial capital for the business establishment is own

savings (66.3%) and other informal sources of capital such as borrowing from friends and relatives (16.8%). The informal sector workers find it difficult to secure formal loans because they lack cash budget records, which is prerequisite under such arrangements. This study established that despite 72.4% of the entrepreneurs keeping records, they are only meant to record the creditors and debtors but not cash budget records. This problem has been identified universally as the key concern for development of the informal sector by scholars such as Gichira (1993); Ondiege (1995); Mochache (1985) and Njoroge (1985).

Due to low capital investment the value of goods handled by the informal sector ranges between Ksh. 15,000 to Ksh.350, 000 per annum, while the raw material input is approximately Ksh.200, 000 per annum. This leaves the entrepreneurs with marginal earnings, explaining why there is higher occurrence of proprietor employee in the sector. This calls for policy issues, which is focused on raising the capital base of the informal sector workers. The softer option may be through advising the workers to form semi-formal groups to negotiate for formal loans on behalf of the traders.

(vii) Stemming from the above observation is vital role which formal training play in the success of an enterprise. On this note the study established that the service sub-sector and manufacturing sub-sector had the highest number of entrepreneurs with post-school training, being 79.29% and 68.1% respectively. Trade, where the females dominated, most of the entrepreneur (78.3%) had no other type of training.

Nevertheless the majority (63.4%) of the entrepreneurs surveyed would like to go for further training. This is important because it proves that the informal sector workers have realized the importance of advanced skills in the successful running of an enterprise. This implies that any policy focus, which is enacted to promote entrepreneurial training, will be received positively.

#### **4.10.2: The Spatial Distribution of ISAs.**

This study established that economic factors as well as social and political factors are important in the siting of the ISAs. However, the economic considerations remained superior to the social and political variables. This is because from the analysis, its established that economic factors dominate the list of significant variables influencing decision to site the ISAs due to various reasons as outlined in section 4.7. It therefore emerges that when planning for the ISAs the quantitative attributes such as proximity to place of residence, proximity to market and raw materials should be considered.

#### **4.11: The Inter and Intra Spatial Linkages.**

##### **4.11.1: Raw Material Linkages.**

The analysis on the raw materials linkages, which the ISAs have with various regions, reveals that: -

- (i) The ISAs in Kisumu exhibit weak raw materials linkages with other regions and strong linkages within the town. This is because the town is the dominant urban center in the region and thus supplier of goods and services to other urban centers in the region.

- (ii) Manufacturing sub-sector has strong raw materials linkages with both informal and formal trade sub-sectors. This was followed by trade sub-sector and finally service sub-sector, which has stronger linkages with formal trade sub-sector than its informal counterparts. As earlier pointed out, this strengthens the case for clustering of the activities.

#### 4.11.2 Technological linkages.

This analysis focused on subcontracting and capital (equipment) linkages. Out of this analysis the following issues arose as the main findings: -

- (i) There are significant backward intra and inter- subcontracting linkages in the manufacturing sub-sector. However, in the service sub-sector, significant backward subcontracting linkages only exist in the electronic repair.
- (ii) There are weak forward subcontracting linkages between the informal sector firms and their formal counter parts. However, there are significant forward subcontracting linkages between the informal sector firms.
- (iii) The informal sector enterprises have significant capital (equipment) linkages with immediate urban set up but weak regional linkages. However, the manufacturing sub-sector showed significant linkages with the rest of the country.

In conclusion the hypothesis that there are significant linkages between the informal sector activities only apply in the manufacturing sector.

**Environmental Impact Assessment.**

The identification of environmental vulnerability of a site with respect to economic activities in the site. Out of the analysis, two facts came out clearly: -

1. Manufacturing activities has higher environmental degradation effects than either services oriented activities.

2. Although the manufacturing activities are the most economic viable activities in the site, existing needs thorough environmental precautions.

## CHAPTER FIVE.

### THE EFFECTS OF POLICIES, REGULATIONS AND BY-LAWS ON THE INFORMAL SECTOR ACTIVITIES.

#### 5.0: Introduction.

Excessive regulations constraint business performance worldwide (Karingithi, 1999:7) because they impose costs that hamper innovation and investment thus minimise opportunities for job creation (Njoroge, 1985:7). In Kenya, ISAs are particularly inhibited by cumbersome laws and regulations, most of, which are out of tune with current development realities (Amunga, 1986; Kulundu Bitonye, 1986). Some laws have provisions, which are either outrightly hostile to the ISAs, or not sensitive to the needs and situations of these enterprises (Aduma, 1990:2). However, an enabling environment for the informal sector must be provided if Kenya's economic growth and employment opportunities are to be met effectively. An important part of creating such an environment is through the amendment of legal and regulatory framework on which ISAs operate (Mochache, 1990).

While many policy analysts and donor agencies do contend that there is a priori case in favour of ISAs, it is never clear whether ISAs are yet panacea for development. This is due to the dilemma of negative public image on the sector. The negative public image suffered by the informal sector has partly been attributed to legal relationships and various institutional arrangements within the informal sector (Kulundu- Bitonye and Aleke- Dondo, 1986:5).

The purpose of this chapter is to establish the extent to which legal parameters constrain development of ISAs in Kisumu. The view here is that ISAs are logical, dynamic and efficient socio - economic response to the institutional costs and constraints imposed by legal

system which have excluded large segment of population from the normal protection offered by property rights and torts. Consequently, the transaction costs for ISAs is ever increasing while and their courses of action have remained limited due to uncertainty (Gichira, 1993:3).

### 5.1: Policy Issues on Informal Sector Operations.

The emergence and rapid expansion of Kenya's informal sector since 1960s is because the sector has grown to fill the gap left by the formal sector in meeting employment and income needs (Onyango, 1990; Oketch, 1991; Mbugua, 1999). To corroborate this observation, Table 5.1 reveal that the number of informal sector enterprises in Kisumu has grown gradually over the years. During the 1960s and 1970s the growth was gradual, and extremely rapid after 1980. This has translated into 78% of the surveyed enterprises being established less than ten years ago.

**Table 5.1: Year of business establishment.**

Year	Number of respondents	Percentage
1963-70	2	2.0
1971-1980	5	5.0
1981-1990	15	15.0
1991-2000	78	78.0

Source: (Empirical Field Survey, Author, 2000).

According to the official publication "*Small Enterprises Development Strategy for Kenya. Towards the year 2000*" (Government of Kenya, 1989), policy problems hindering the development of the informal sector include: -

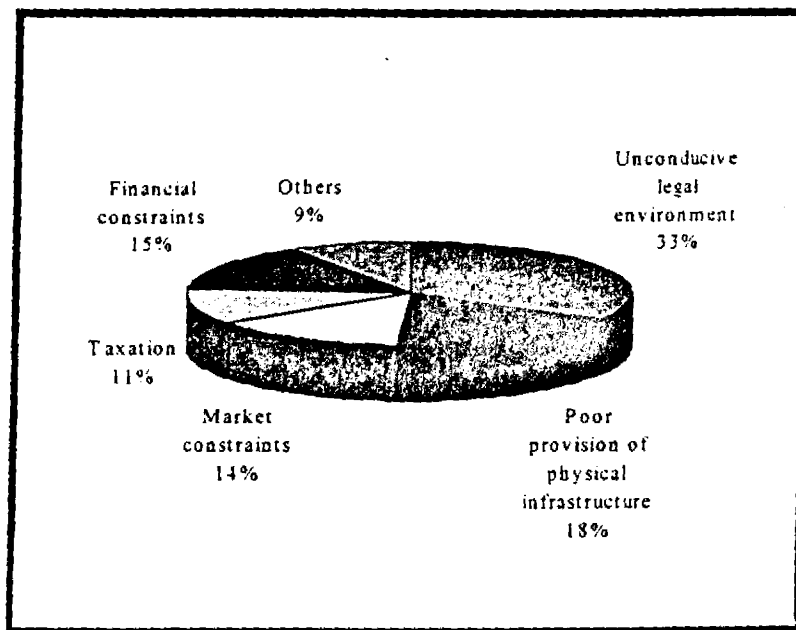
- ◆ Poor provision of physical infrastructure
- ◆ Poor access to technology
- ◆ Market constraints



- ◆ Inadequate institutional framework
- ◆ Unconducive legal environment

The 100 informal sector respondents for this study were asked to state the problems they face in their operations. The responses are summarized in Figure 5.1.

**Fig. 5.1: Policy problems.**



Source: (Empirical Field Survey, Author, 2000).

Approximately 30% of the surveyed entrepreneurs cited unconducive legal environment as the most pressing problem followed by poor provision of physical infrastructure (18%), financial constraints (11%) and others which included harassment and tenure of the premises accounted for 9%. The respondents were further asked to pin point what they perceived as the causes of the problems they mentioned. The responses along with number of mentions are shown in Table 5.2.

Table 5.2: Causes of the Major Problems.

Major problems	Causes	No. of Mentions
1. Unconducive legal environment	• Harassment by the local authorities	80
	• Multiple and expensive licensing requirements	75
	• Stringent building standards by the Public Health Officers.	65
2. Inadequate provision of physical infrastructure	• Inadequate of business space/premises	85
	• Inadequate access to electricity	40
	• Poor maintenance of access roads	35
3. Market constraints	• Competition from formal businesses	96
	• Inadequate access to government: procurement system	54
	• High transport costs	55
	• Low demand.	49
4. Poor access to technology	• Insufficient sources of technical information	80
	• Lack of appropriate technical skills	81
	• Lack of institutional counseling	80
5. Taxation	• Increase in market cess	90
	• High licensing costs	40
6. Financial constraints	• Lack of access to bank loans and high rates	79
	• High collateral requirements	61
7. Others [including Employment Act (cap 226) Industrial Training Act (cap 239)]	• Strict enforcement of the legal requirements	40

Source: (Empirical Field Survey, Author, 2000).

From the above, it is evident that the informal sector investment is particularly sensitive to the availability of access roads, electricity, water and commercial plots. Although the enterprises have the ability to respond to changing circumstances, their potential for innovation is restricted by inadequate access to market information. As noted by Government of Kenya (1989) "*Strategy For Small Enterprise Development In Kenya: Towards the year 2000*", the policy on ISAs should focus on enabling environment, credit provision and other promotional programmes. If these key policy issues are not adequately addressed. Then as Gichira notes: -

"The majority of the informal sector entrepreneurs are, and will remain, copiers because many of the informal sector entrepreneurs seem unfamiliar with new technologies or have no way of gauging the appropriateness of different technologies"<sup>1</sup>

### **5.2: Institutional Support.**

Institutions meant to support the informal sector should provide a variety of services like financial, training, technical and marketing assistance among others (Ghatty, 1984:17 and Bhatia, 1986: 2). From the field survey data, only 43% of the informal sector workers interviewed have heard of programmes (Institutions) assisting the informal enterprises. Out of the 43% only 30% of them have made an attempt of benefiting from the programmes. This numerically shows that out of the 100 respondents, only 13 informal sector workers have made the attempt. However, due to suspicion, it could not be determined the actual number of those who have benefited.

This proves that the level of information dissemination on the assistance is still very low in the informal sector, contrary to what is advocated for in the Sessional Paper No.2 of 1992 on: "*Small Enterprise and Jua-Kali Development in Kenya.*" Table 5.2 shows that out of the 13 entrepreneurs who have sought for assistance 36% of them contacted government agencies while equal number contacted parastatals. Trade associations ranked third (13.3%), while NGOs were contacted by only 9.5% of the respondents.

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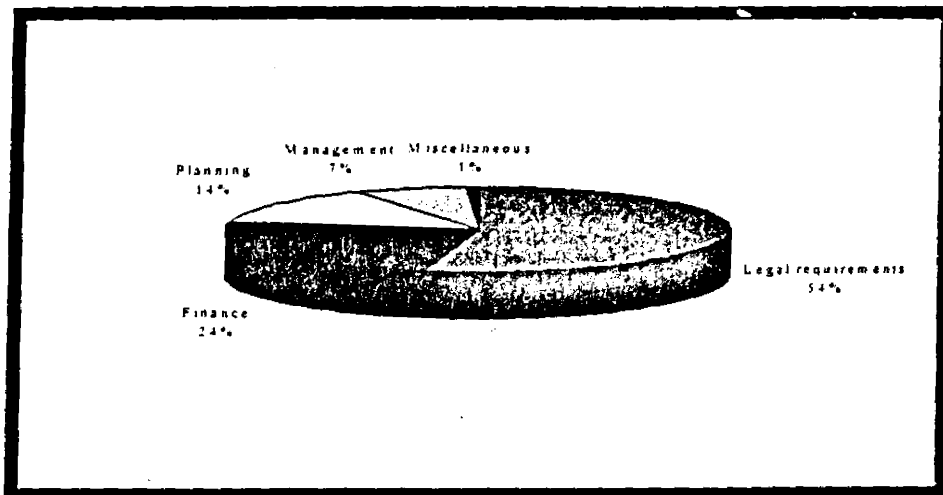
<sup>1</sup>Uchira, R. (1993:14). An Analysis of The Laws And Regulations Affecting the Development of the Informal Sector Activities In Kenya. Nairobi, K-Rep, Research Paper No 5.

Table 5.3: Institutions contacted for assistance.

Agencies	Percentage
<b>1. Government</b>	
<input type="checkbox"/> Municipal council	36.2
<input type="checkbox"/> Department of Industry and Trade.	
<b>2. Parastatals</b>	
<input type="checkbox"/> Kenya Industrial Estate	36.2
<input type="checkbox"/> ICDC	
<input type="checkbox"/> Commercial Banks	
<b>3. Trade Associations</b>	
<input type="checkbox"/> Kenya Association of Manufacturers	13.3
<input type="checkbox"/> Kenya Small Trade Society	
<b>4. NGOs</b>	
<input type="checkbox"/> NCKK	9.5
<input type="checkbox"/> K-Rep	
<input type="checkbox"/> Approtech	
<input type="checkbox"/> Kisumu Jua-Kali Association	
<b>Total</b>	<b>100.00</b>

Source: (Empirical Field Survey, Author 2000).

In addition to the above, Figure 5.2 show the reasons, which were given by the respondents for contacting the agencies. By far, the most important reason was to fulfill the legal requirements followed by financial reasons. Planning matters rank third while management fourth.

**Fig 5.2: Reasons for contacting institutions.**

Source: (Empirical Field Survey, Author, 2000).

The legal requirements here include registration of business, obtaining trade license and public health permits. Financial reasons include seeking financial assistance, while planning reasons entails seeking information on the details of available sites and business structure approval. Finally, management reasons entailed seeking advice and preparing business plan, marketing feasibility and formal business courses.

### 5.3: The Effects of Regulatory Policies and By-laws on the ISAs.

Many studies have been undertaken to analyse how legal policies constraints ISAs in Kenya. One of such Surveys by Mbugua (1999) analysed the legal policies affecting hawkers and other itinerant traders in Nairobi. Other scholars and researchers such as Njoroge (1985), Mochache (1990) and Mochache (1991) also undertook similar studies. Another study by Aleke-Dondo *et al* (1986) analysed the existing policy regulations and statutory laws to assess their effects on the development of informal sector activities, while Gichira (1993), Hoek-Smit (1973), Inukai (1973), and finally Wanyanga (1992), have since done comprehensive work on this segment of knowledge. It therefore emerges that this area is not scarce of literature. However, this study took similar perspective using Kisumu as a case study. Secondly, due to significant attention the sector has received in various Sessional

Papers. it is important to assess the extent to which recommendations from the papers has been translated on the ground more so in the intermediate urban centre such as Kisumu. Researchers mentioned above do reckon that the regulatory framework can be categorised broadly into two: -

- (i) The laws, which merely regulates enterprises within the informal sector. These laws take cognizance of the fact that competing interests must be considered and evaluated. Such interests normally include public health, safety and environmental considerations. These laws are enforced by statutes that play regulatory role such as **Factory Act (Cap 514)**, **the Public Health Act (Cap 247)** and the **Physical Planning Act 1996**.
- (ii) The second category includes laws that delineate the legality of the informal sector operations. Gichira (1993:19) and Karingithi (1999:7) noted that illegality in the informal sector is due to artificial limitations rather than to the nature of the activity itself. For instance, vegetable vending or shoe-shining are legitimate activities, but may be illegal because the operators are not in compliance with one act or another (Aleke-Dondo *et al.* 1986). The majority of activities undertaken by informal sector operators are regulated trade, which requires licensing under the **Trade Licensing Act (Cap 499)** or the **Local Government Act (Cap 265)** of the laws of Kenya.

Law in its proper context should take care of the ideals of the society such as socio-economic arrangements. A good law must have two basic components: a practical relevance to the subjects and a moral justification (Kalundu-Bitonye, 1986:64). However, practical relevance and moral justification are not always common characteristics of law for they may altogether be absent (Gichira, 1993:17). This is why law should be viewed as a mere collection of rules

of human conduct which have a binding effect on regulating and ordering certain aspects of human behaviour (Hermann, 1998:17; Kagira, 1995:24). Immense literature points to the fact that **Trade Licensing Act** and **Local Government Act** are key legal obstacles to the development of ISAs. Therefore the focus here is to establish the extent to which the two Acts inhibit the development of the sector.

### 5.3.1: The Trade Licensing Act.

As the Act stands, its requirements affect the informal sector whether engaged in commercial or industrial ventures. Section 5 of the Act states in part.

“No person shall conduct any business except under and in accordance with terms of a current license”

The purpose of this Act is to enable the state to allocate business and trade equitably among the entrepreneurs. This is aimed at avoiding concentration of wealth on few individuals. Before a license is issued to any entrepreneur, she or he must fill out form A3 issued under schedule of the Act and therein disclose what other business the entrepreneurs, directly or indirectly (by agent) manages. This information is meant to enable the state to assess whether or not the particular applicant should be allowed to acquire and manage a particular trade.

Section 5 (2) of the Act stipulates that non-citizens can only carry out business in a “general business area”, and engages in goods that are “specified under the Act”. This is to allow the citizens certain advantages both in terms of area of operation and items of trade. According to Sessional Paper No. 2 of 1992 on “*Small Enterprise and Jua Kali Development in Kenya*”, critical component of the enabling environment for the informal sector entailed reviewing of licensing arrangements and building codes for small enterprises. However, the salient problem with this Act in Kisumu is the cumbersome procedures which are complicated for many informal sector workers to comprehend given that majority (75%) only have primary level of education. The local authority issues licenses after approval

which introduces bottlenecks and opportunities for corruption into the system as shown on plate 6.0 of a Chinese national selling goods on the street contrary to section 5(2) of the Act.

**Plate 6.0: Chinese National Selling petty goods on the streets as opposed to Trade Licensing Act Section 5(2).**



*Source: (Field Survey, 2000).*

### **5.3.2: The Local Government Act (Cap 265) of the Laws of Kenya.**

Local Authorities are established under the local Government Act as political, administrative and service agents at the local level (Gichira, 1991:21). Once established, they become autonomous entities, which design their own programmes and are implored to promulgate by-laws for administrating areas under their jurisdiction. Through such by-laws, Kisumu Municipality has legal powers of regulating and controlling the ISAs. The Local Government Act (Cap 265) gives local authorities wide powers in controlling the activities of the informal sector, under the following section: -

- **Section 145 (p)**, Which appertain to establishment, control and management of markets under the authority's area of jurisdiction.



- **Section 147(b)** Prohibits obstruction in or on public places and provide for the removal and sale of any such obstruction and for the disposal of any moneys derived from any such sale.
- **Section 161(a)** Appertains to control of tea rooms, cafes, restaurants, eating houses, snacks, bars, butchers, shop, grocers and all factories and places where articles of food or drinks are manufactured or prepared for sale or use or are stored or sold whether for consumption on or off the premises.
- **Section 163** Control peddling hawking and street vending, Berbers and hairdressers shops.

All these sections of the Act translate into by-laws under section 201 of the Local Government Act (Cap 265) of the laws of Kenya. In Kisumu, there are diverse by-laws, which are used by the municipal authority in controlling ISAs. Singly or in combination, these by - laws are enough to paralyze the operation of the sector. However, the central issue still remains the licensing, as this is the main tool used by the municipal council for controlling the operations of the informal sector.

#### **5.4: Effects of policy maker's attitude and actions on the Informal Sector Activities.**

Numerous departments and agencies often have conflicting policy guidelines on how to act on informal sector issues (Mochache, 1990; Gichira, 1993:34). An understanding of the policy maker's attitudes and their actions towards the sector would facilitate the attempt to develop solutions that may easen their work and that of the informal sector (MucCulloch, 1998:15; Ondiege *et al.* 1997).

### 5.4.1: Attitude.

To solicit data for this analysis seven officers who are stockholders in the informal sector were interviewed as shown in appendix II. The officers were asked to enumerate how the municipality benefit from the ISAs and the policies their organizations have towards ensuring that there is optimal growth of the sector in the town. The responses are summarized in box 3.0 into four main clusters.

#### Box 3.0

#### Summary of the respondents of the key Jua-Kali stackholders

##### 1. Legislation and administration

- Majority of the informal sector operators are illegal
- Poor enforcement of the by-laws due to shortage of personnel and their dishonesty (Licensing officers) encourages unlicensed operators
- Exorbitant fees and charges encourages informality
- Lack of dialogue between local authority and the illegal operators
- Most local authority by-laws are outdated

##### 2. Planning Problems

- Over-crowding and overuse of existing physical facilities
- Inadequate resources to address the physical needs of the informal sector
- Zoning practices have not catered for the needs of the informal sector
- Inadequate recognition and acceptable of the informal sector by local authorities
- Lack of convenient trading area and of facilities for the informal sector.

##### 3. Health Problems

- Unhygienic preparation, display, handling and storage of food.
- Encourages presence of animals in trade areas resulting into epidemics
- Inadequate provision of clean water and electricity by local authorities

##### 4. Relationship Problems

- Lack of informal sector operators involvement in decision making
- Inadequate clarity of the role of the informal sector.

Source: (*Empirical Field Survey, Author, 2000*).

Arising from the above is that the ISAs are viewed as a distinctive occupancy category in the local authority context. The most prevalent view being that the informal sector is a problem that hinders the efficient functioning of the town. Far less common is the notion that these operators are an asset contributing to efficient functioning of the marketing and distribution system. A second opinion among the policy makers are that informal sector cannot be allowed complete freedom to operate. This is understandable for planner and town

administrators have an obligation of balancing the conflicting demands of a number of competing land uses, of which informal sector is just an element.

#### 5.4.2: Action towards the Informal Sector Activities.

The seven officials representing the main stakeholder organisations were further asked how in their amerceable opinion the problem of informal sector activity sprawl may optimally be solved in the town. The answers are summarized in Table 5.3.

**Table 5.4: The Proposed Measures.**

Policy Action	Type	Strategies
Enterprise siting	Relocation	<ul style="list-style-type: none"> <li>• Temporary siting</li> <li>• Permanent shifting</li> <li>• Removal scheme</li> </ul>
	Removal of operators without providing alternatives	<ul style="list-style-type: none"> <li>• Provision of notice to move</li> </ul>
	Stabilization of semi-mobile and mobile operators	<ul style="list-style-type: none"> <li>• Clearance and rearrangement of operators</li> <li>• Forced eviction</li> </ul>

Source: (Empirical Field Survey, Author, 2000)

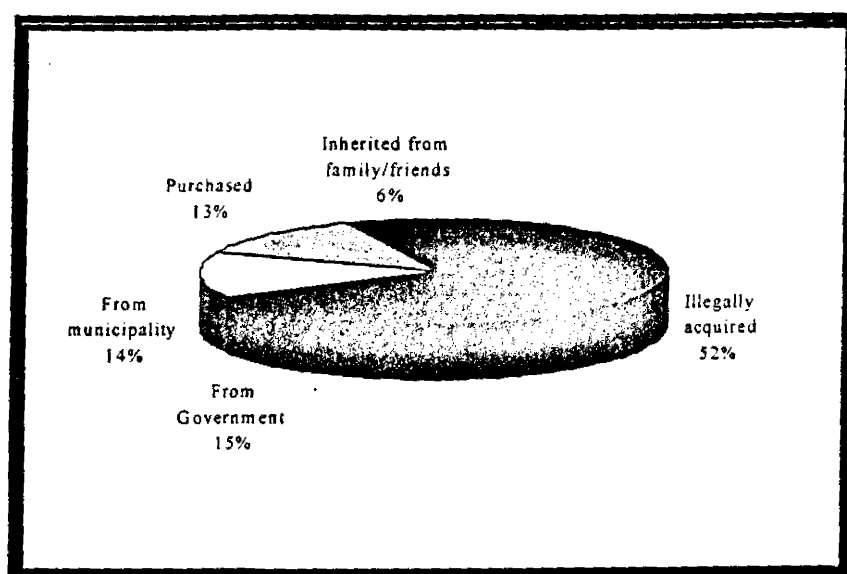
From the above analysis it emerges that relocation, measures are the main policy thrust proposed. This policy measure is normally implemented through: -

- ◆ Shifting the operators for a period while their former sites is redeveloped (like the bus stage currently under redevelopment).
- ◆ Moving the operators permanently from one site to another.

However, such efforts often run into problems due to high rates charged on the new sites, improper site allocation and the additional expenditure for the local authorities. Shifts in premise sites may be relatively cheap, but its success depends greatly upon the type of commodity being sold. Such shifts, even if only a block away may be very disruptive to certain types of businesses.

In addition, its established that the sector has very high space mobility. This conclusion is based on the fact that relatively few establishments (2%) reported having maintained the sites where the business was initiated. About 14% have changed three sites while 84% of the operators surveyed have been to more than four sites in less than ten years. This being the case, it means there are legal forces acting on the scene. The field survey data also indicate that the sites where the majority of premises are sited are often illegally acquired.

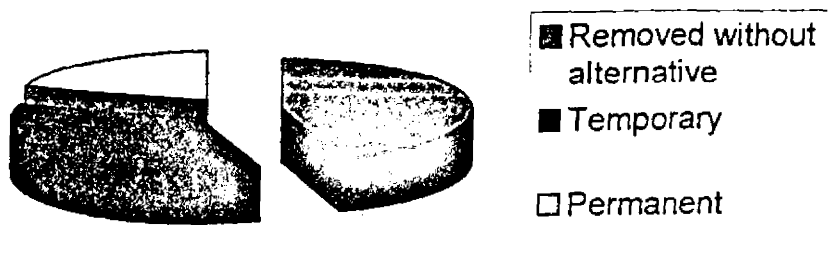
**Fig 5.3: Modes of acquisition of business sites.**



Source: (*Empirical Field Survey, Author, 2000*).

Due to plot invasion, the informal sector operators are often harassed and 35% of the informal sector workers have been relocated temporary over their business cycle as compared to 20% who have been relocated permanently. The majorities (45%) have been removed without being provided with alternative sites.

**Fig 5.4: Percentage of operators relocated during their business cycle.**



Source: (*Empirical Field Survey, Author, 2000*).

### 5.5: Study Findings and their Planning Implications.

This study established the following facts on the ISAs in Kisumu.

- (i) There has been a gradual expansion of the ISAs since 1960s, of which the majority emerged less than ten years ago. This puts a strong case for allocating more space to the ISAs.
- (ii) Despite the policy issues being addressed by the various Development Plans and the Sessional Papers, there is still persistent weaknesses and gaps in policy framework towards the ISAs. This is corroborated by the presence of external and internal problems in the sector such as financial, infrastructures and planning.
- (iii) Despite the availability of agencies interested in providing assistance to the informal sector workers, very few informal sector workers have contacted such agencies for assistance. This is attributed to inadequate information dissemination.
- (iv) Trade licensing and local Government Acts have remained the biggest obstacles to optimal development of ISAs. Municipal council to raise revenues while the council

provides very little basic services to the informal sector to merit the charges is because the Acts have mainly used this. This creates an impression that local authorities are more concerned with raising revenue rather than with encouraging the optimal development of ISAs. Therefore to promote ISAs, there is need to speed up the work already started of reviewing various legal constraints that restricts the development of the sector.

- (v) The negative view among the town planners and administrators on the informal sector has persisted in Kisumu. Therefore, when dealing with issues pertaining to site allocating, they give lip service to the sector. Often the sector has been neglected in the preparation of strategic structure plans. This has given rise to the informal sector workers invading plots consequently leading to their harassment. For sustainable development of the sector, this attitude should change.

#### **5.6: Conclusion.**

From this analysis it is evident that the law is not protecting the weak in terms of space allocation. Space being a communal property, it should be held in trust by the local authority for the common benefit of all. However, the various by-laws, which are in operation in the municipality, are meant at enforcing capitalistic tendencies, which alienate the poor from space use. This often leads to battles with the weak (informal sector operators). Therefore, to streamline the operation of ISAs and to end this battle, appropriate by-laws and regulations should be enacted as discussed in Chapter Six.

## CHAPTER SIX.

### TOWARDS SPATIAL REGULARISATION OF THE INFORMAL SECTOR ACTIVITIES: RECOMMENDATIONS AND CONCLUSION.

#### 6.0 Introduction.

It is widely recognized fact in Kenya that the promotion of ISAs is a viable and dynamic strategy for achieving national development goals such as employment creation and poverty alleviation. The development of ISAs has been recognized through various Government documents as forming a strong foundation for achieving the national dream of industrialization by the year 2020.

Indeed the question of the sector's regularisation has been a contentious issue over the years. This is corroborated by a number of sessional papers, which the Government has produced towards addressing the sector. Notwithstanding this effort, a number of policy constraints continue to inhibit the sector's growth due to inefficient trickle down effects. It is on this note that this study has come up with various recommendations to address the sector's optimal development. In this endeavor, this study does not ignore previous proposals, which have been made by other researchers and scholars towards this direction.

As earlier mentioned, the regularisation envisaged here entails both spatial as well as operational regularisation. The recommendations, which the author has come up with, are broadly categorized as: -

- (i) Proposals on the ISAs sites.
- (ii) Proposals on the land-use policies.
- (iii) Proposals on the management structure and site allocation.

- (iv) Proposals on the environmental policies to be incorporated
- (v) Proposals on the assistance programmes to be adopted towards improving the economic welfare of informal sector workers.
- (vi) Proposals on the improvement of legal and regulatory framework.

### 6.1: Proposed Main ISAs Sites.

Currently, the sites from which the ISAs, operate have inherent problems emanating from the failure of the urban structure plan which was prepared in 1984 and have since become obsolete to effectively address the siting of the informal enterprises. The major elements which were considered in the heuristic model to come up with the recommended optimal sites for this study are the sources of raw materials, proximity to market relative to place of residence and accessibility. Each sample area was examined with a view of establishing such optimal sites. Out of this, it emerged that Obaria site in the CBD, Kalolent site next to Kibuye market, a site in Nyalenda and Kondele presents optimal sites for the siting of the ISAs as shown on Map 6.0

Obaria site is very close to the CBD and currently has clusters of informal sector activities on it. The site has an area of about 3.5 hectares thus large enough to accommodate a significant number ISAs. Due to scarcity of space, it is recommended that each and every plot allocated in this area should be 35M<sup>2</sup>. If this spacing is implemented it will approximately accommodate 650 enterprises. The land is currently government owned therefore the process of acquiring it is not cumbersome. The specification for this area is arrived at based on the need of clustering of the activities. On this regard, it is recommended that this site should be allocated for metal works, carpentry, timber dealing, motor vehicle mechanics, and food restaurants. These activities require relatively large spaces, but due to



the fact that the value and demand for these spaces are high, the recommended space size should be convenient.

Kaloleni site is measuring 0.55 hectares and its adjacent to the populous Kaloleni informal housing and Ramogi rise road. It is less than 0.5 kilometers from the busy Kibuye market. This site is ideal for it presents an amicable solution to the current congestion experienced in Kibuye market. Like the Obaria site, this site is currently unoccupied because it is government owned thus the process of land acquisition once more should not be cumbersome.

Identification of optimal sites at Kondele and Nyalenda presents a difficult scenario. This is because unlike Obaria and Kaloleni, the land tenure for these areas are mixed. Further, the ISAs in these areas are not concentrated in one single area but are scattered throughout the settlements. In Kondele the issue is further complicated by the proposed Kisumu by-pass thus creating uncertainty on the future of the ISAs. However, optimal sites were identified as shown on Map 6.0.

#### **6.1.1: A Case for Clustering of the Activities.**

With a view of strengthening the linkages, its recommended that the clustering of activities in various sites should be adhered to. This will further enhance the collective efficiency of the ISAs. The proposed clustering should be centered on particular specialization such as metal workers, timber dealings and carpentry. The perceived advantages of clustering includes: - Gains arising from sharing of equipment, lending of tools, shared knowledge of new products, design and co-operation in fulfilling larger orders. In this study it was established that the main cooperation among the informal sector workers, more so in the manufacturing sub-sector, was the "borrowing back and forth of sophisticated and "not-so-

*common hand tools*" like lathes for payment. This recommendation was also arrived at by Livingston (1991), Ngau (1995) and Gichira (1993). This presents an amicable scenario based on the experience of Kamukunji informal sector site in Nairobi despite increasing competition among the informal sector workers.

The clustering of similar and related enterprises will serve as target for buyers who wish to place orders, greatly facilitating the marketing of informal sector products. This will further enhance the subcontracting opportunities and economies in the provision of infrastructure and services by Municipal authorities such as garbage collection. It is also an obvious vehicle for channeling promotional assistance of different kinds, including the dissemination of new products, training and credit schemes. The above being the case, Table 6.1 indicates the recommended clustering per site.

**Table. 6.1: Recommended Activities In Various Informal Sector Sites.**

Site.	Size of the plot	Activities.
Obaria	3.5 Hac	1. Metal works, carpentry workshops, timber dealings. 2. Motor vehicle mechanics and allied trade 3. Food restaurants
Kaloleni	0.55 Hac	1. Tailoring, Hair saloons. 2. Cobblers, shoe repair and bicycle repairs. 3. Food produces sale, wood and charcoal sale.
Nyalenda	3.85 Hac	1. Cooked food sales, and restaurants 2. Tailoring, hair saloons, second hand clothes sale and general merchandise.
Kondele	2.75 Hac	1. Metal works, carpentry,, timber sale 2. Petty trade, second hand clothes sale 3. Food produce sale and restaurants 4. Shoe repair and bicycle repair

Source: (Empirical survey, Author, 2000).

The design of this clustering should be done by the municipal authority in collaboration with the key *jua kali* associations in the town. Further, this clustering should be as flexible as much as possible to conform to the real situation.

### 6.2: Proposed Minor ISAs Sites.

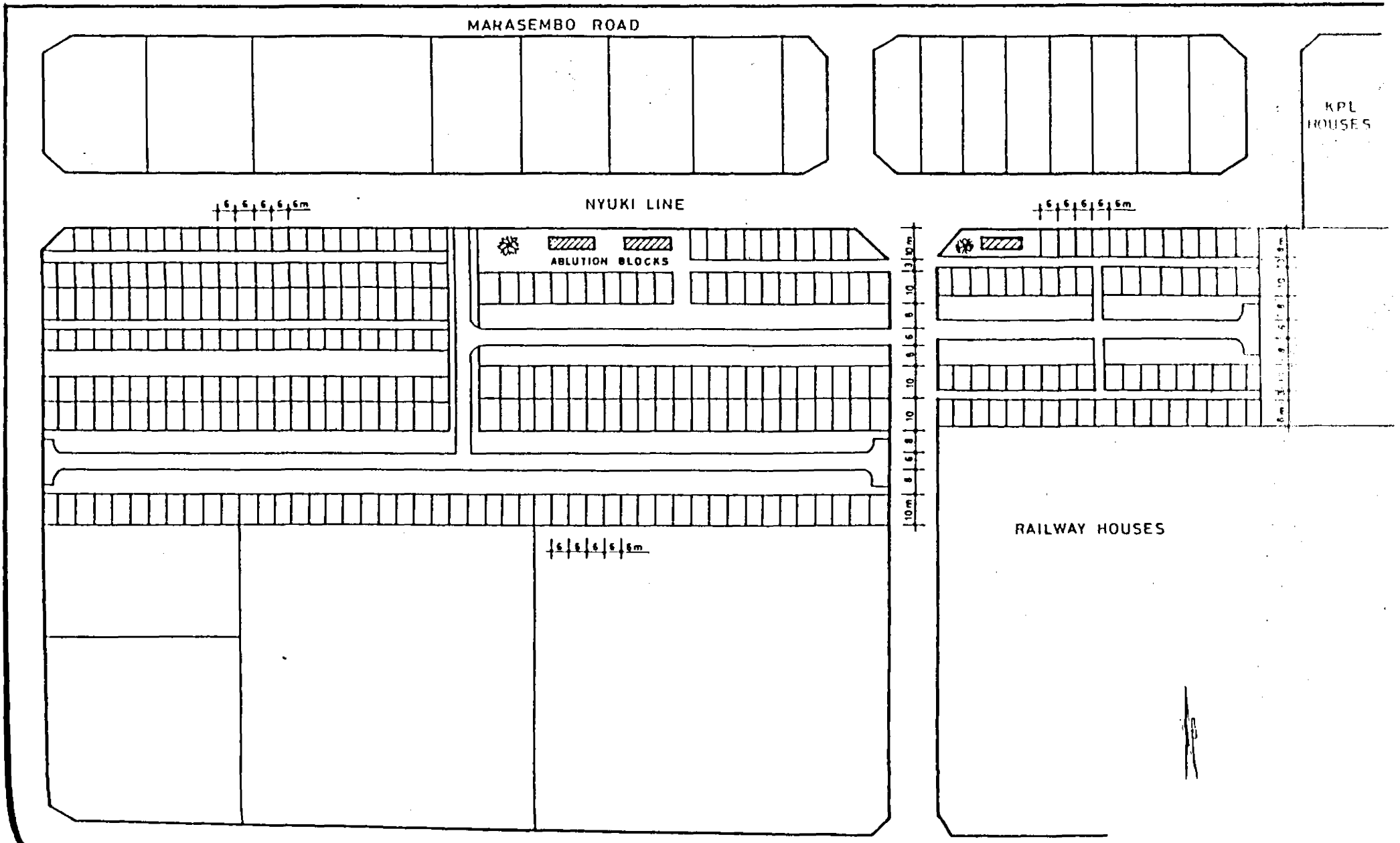
The informal sector being very dynamic, its important to take precautions of accommodating the activities in future should their number exceed the capacity of the main proposed sites.

Therefore, the following alternatives may be utilized.

- (i) Periodic use of public open spaces for (hawking) general merchandise.
- (ii) Closing different roads at certain days of the week to allow hawking activities in the CBD
- (iii) Use of car parks from 4.00 p.m. to 11.00 p.m.

When this approach is used, the advantage to space use will be economic maximization of the space use.

# MAP 7.0: PROPOSED OBARIA JUA-KALI SITE



### **6.3: Policies to be enacted by the Municipal Authority to Ensure that the ISAs remain in the Allocated Sites.**

Location strategies are likely to be successful when they are premised upon an understanding of the informal sector workers site preferences accompanied by positive policy measures such as land-use and institutional management structure.

#### **6.3.1: Land - use policies.**

The policy issues recommended here entail:-

- (i) Enhancing the security of tenure of the sites for the ISAs. This can be achieved through the site leases ranging between 3 years to 6 years with restrictions on use.
- (ii) Incorporating the ISAs zones into the future design of housing schemes along side the conventional shopping centers.
- (iii) Revision of development control and regulations to allow multi-storey structures in the CBD to be used by informal sector traders.
- (iv) Revoking of leases of private and public unutilized land for the development of ISAs sites.
- (v) Economic incentives to those who comply with the site regulations:-

These should include:-

- ◆ Rent breaks for those on the sites
  - ◆ Subcontract opportunities by the municipal council to those in the sites.
- (vi) Provision of infrastructure into the sites such as access roads and foot paths, water, drainage, power supply and garbage collection bins. This is proposed in recognition that such infrastructures are essential for supporting manufacturing activities. Other forms of infrastructure may include sheds, which must be designed in close consultation with the users.

Even though the land use policies recommended above are meant to promote the well - being of the informal sector workers, it is important for them to share costs, or at least pay nominal charges for various reasons. First, this will give increased rights to the informal sector workers, as they will no longer view the service as a gift but rather paid for, and secured. This will have an added advantage of moving the management of the project into the hands of the beneficiaries. Further, this approach will remove burden from the municipal authority and reduce paternalistic relations.

#### **6.4: Management structure and site allocation proposals.**

This study established that sole proprietorship is the major mode of enterprise ownership under the informal sector. The workers here are independent traders not affiliated to any organization. In as much as this mode of ownership is advantageous, the researcher contends that the informal sector workers should be organized into semi-formal groups. This will enhance the opportunities of the informal sector workers to have access to credit facilities as well as for effective capacity building.

It is therefore recommended that such organizations should be registered with the municipal authority. This should be done in such a way that members of an organization should be in similar trade and from the same neighbourhood. For instance, the carpentry and timber dealers from Kondele should be registered as one group.

Further, the registration should be made very simple to a level whereby each trader gets a number from the municipal authority which he or she displays on the stand, door of the premise or any other conspicuous place to show who he or she is as practiced in Kampala Uganda (Nyakaana, 1993).

#### 6.4.1: Allocation of Site.

It is envisaged that the above-recommended organizations should perform crucial role in site allocation in the following manner: -

- (i) The site should be allocated to *bona fide* members of an organization. The manufacturing and service sub-sectors should be given first preference.
- (ii) The business must have operated in the town for more than two years and therefore demonstrated record of success in business. The informal sector workers currently owning commercial plots in town should be illegible.
- (iii) The allottees must be willing to pay rents and other charges for site maintenance.

The allocation procedure should be done on the basis of applications. Appropriate arrangements should be made for local publication and advertisement through respective *Jua-kali* Associations. The application forms should be collected via the same *jua-kali* associations and submitted back to the municipal council via the same procedure. The form should contain the following details: -

- ◆ The name and identity card number of the applicant.
- ◆ Type of business he/she is applying for.
- ◆ Number of years in operation and number of employees of the enterprise among others.

The vetting of eligible businesses should be drawn up for each site. A committee, which includes, should do this: -

- ◆ Representatives of the *Jua-kali* Associations.
- ◆ Representatives of the municipal authority.
- ◆ Others including District Industrial Development Officer, District Trade Officer or District Development Officer as independent observers.

In the event where there are more qualified applicants than plots available, the applicants should be balloted whereby applicants for each sub-sector are balloted separately. This should be carried out publicly with representatives of all the selection committee present. The results should be posted to all the associations involved and communicated to all the applications. However, this process may appear cumbersome, but it is important that the allocation of resources be made as transparent as possible to avoid political manipulations.

#### **6.5: Environmental policies.**

Over the years, it has been realised that the informal sector has considerable impact on the environment both individually as well as collectively (Makau, 1999:159). Indeed, in terms of environmental impact per unit of production, the informal sector activities equal or, in many circumstances surpass bigger industries. Therefore, its environmental impact is as much a concern as is the environmental impact of the larger formal industries (Onyango, 1992:14). It has been suggested by other scholars such as Schumacher (1973) that while "*small is beautiful*"; small can turn out to be ugly. This means that environmental policies must be enacted to support the ISAs growth. Indeed the environmental impact is a concern, which should be addressed not only at the national policy level but also at the micro level of the enterprise management. It is thus recommended that the followings be put in place:-

- (i) Consultations: Rapid assessment should be conducted and environmental issues clarified through the support of Public Health Officer of the Municipality.
- (ii) Formation of the environmental management groups comprising all the stakeholders in the informal sector development.
- (iii) Integrating ISAs into environmental policy. This can be achieved through locating low cost collection facilities close to the informal sector sites. Further, the municipal council should come up with training workshops to the informal sector workers on the value of environmental conservation.



- (iv) Actively adhering to environmental conditions on the sites before allocating a plot to a particular informal sector worker.
- (v) Use of fiscal and financial incentives including:-
  - ◆ Extending tax relief and other benefits to encourage businesses to use environmentally friendly technologies while imposing penalties to polluters.
  - ◆ Providing soft loans for those installing pollution prevention equipment.

#### **6.6: Assistance Programmes.**

The assistance programmes recommended in this study are financial, training, business management, marketing, and technology and infrastructure provision. These were the main factors established to be the obstacles to informal sector development. The assistance programmes should vary among the sub-sectors because each has its own unique business requirements. In the tailoring sub-sector the appropriate assistance programme should focus on credit provision, technical training and equipment provision, while in shoe making and repair, the appropriate assistance recommended should be a combination of management, credit, marketing and technology.

The tinsmith and metal work, carpentry can enhance sales volume if they are adequately provided with credit, management, marketing and technical training. In the service sub-sectors like electrical repairs, hair saloons, and food restaurants extension of credit, management and infrastructure assistance should be considered the most appropriate.

From the above analysis, it is clear that different sub-sectors require different assistance programmes for their development. It is thus imperative that sectoral approach to the informal sector development be emphasized when formulating and designing assistance programmes as was recommended by Ondiege (1995) and Gichira (1993). It is the researcher's view that the assistance programmes should target the manufacturing sub-sector

first, followed by the service sub-sector as currently they are the major employers, relatively organized and to some extent well managed. Further, the assistance programmes should strive to be gender balanced by targeting female informal sector workers. From the survey, women entrepreneurs accounted for 28.11% of the total labour force in the informal sector enterprises. The females may be used as role models to other female entrepreneurs so as to actively incorporate females into active ISAs. However, its important to channel the assistance programmes through the various informal sector organizations.

#### **6.7: Legal and Regulatory Framework.**

The problem of the by - laws and regulations lies in the way they are interpreted and implemented, partly due to the informal sector operator's lack of awareness about the legal requirements and partly due to negative attitudes of policy makers and law enforcement officers on the informal sector. Therefore, there is a need of promoting conducive legal and policy environment towards the ISAs. This can optimally be achieved by putting the following in place: -

- (i) Existing administrative responsibilities for the informal sector spread over many government departments. They should be integrated under the municipal authority to form part of a larger department concerned with the ISAs.
- (ii) Provision should be made for the ISAs in the next town's strategic structure plan by institutionalizing a two-tiered system in which formal and informal sector activities can co-exists.
- (iii) While all administrations are concerned with law and order, a flexible system of control should be introduced through the use of flexible licensing system.
- (iv) The municipal authorities should be allowed by the central government to change by-laws to respond to the existing situation on the ISAs.

- (v) The municipal council should be strict in enforcing the by-laws pertaining to allocated sites, environmental matters as well as simplification of by-laws on minimum standards.

**6.8: The Programmes and Policy Issues which the Municipal Council should address for Optimal Development of the ISAs.**

In recognition of the crucial role the municipal authority play in the delivery of infrastructure for the ISAs, as well as being the main regulatory enforcement authority, it is recommended that the Kisumu Municipal Council should urgently consider: -

- (i) Formulating an integrated urban management strategy, which embodies long-term goals and short-term targets for ISAs. These should be designed in consultation with the main informal sector associations and the informal sector workers.
- (ii) The council should develop a network with various NGOs, Donor Agencies and other Government Departments which are capable of providing assistance, such as provision of infrastructure, training workshops, credit facilities and marketing assistance among others, to the informal sector. Through such networks, the municipal council can improve on methodologies and support for influencing change to the informal sector.
- (iii) Further, the municipal authority should consider organizing site meetings and policy seminars to raise awareness of urban administrators and planners. NGOs and informal sector associations on how to deal with ISAs.
- (iv) Establishment of a database on ISAs with information on participatory planning and research methodology.
- (v) Setting up of urban inter- agency committee on ISAs and establishing stakeholders dialogue and consensus building at site level.

- (vi) Promotion of participatory, site specific and inter-disciplinary field research on ISAs with siting policy and action orientation.
- (vii) Stimulation of documentation and exchange of experience at local, national, and regional level through networks and workshop.
- (viii) Increasing coordination with stakeholders and further considering construction of better roads which may periodically be used as informal sector sites for the hawkers.
- (ix) There should be constant project monitoring and evaluation meant at changing policies on ISAs over time.

### **6.9: Areas of Further Research and Data Collection**

The important role, which the informal sector plays in the economic development of Kenya, is now well established by researchers. Governments throughout the world now view small-scale enterprises as an important element in even and equitable economic development. However, it emerges that further studies are needed on the barriers to successful support of the enterprises. Researches on appropriate ways of support to the informal sector would provide government and other agencies with guidance on promotion of the sector. There are many areas of study, which are not explored by this study and are important to be understood for formulation of policies to ensure sustainable development of the informal sector.

Broadly, these areas can be categorized as:

- i) Education and training.
- ii) The rural informal sector.
- iii) Financing the informal sector.
- iv) Technology in the informal sector.
- v) Gender issues in the sector.
- vi) Policy strategies for the sector.

### **6.9.1: Education and Training**

At the official policy level, numerous programmes have been attempted to try and relate education and training to the informal sector enterprises. However, there are shortages of reliable information as to what happens to the category of school leavers with pre-vocational training but have not gone through the vocational training centers. This implies less knowledge on possible avenues towards work skill acquisition outside the official modes. Research would therefore document the whole range of unofficial training of traditional, modern as well as ways in which it could be incorporated into the formal training system. Such study will reveal that static stereotypes of formal and informal learning are inadequate. This approach would provide coherent data for future planning in education.

It is revealed in this study that there exist linkages between the formal and informal sector. In the area of training, there is a two-way flow of training between the two sectors. Research institutions should therefore try to identify the extent of flow of training between the two sectors, with a view of enhancing the positive aspects of the flow. In this connection, more researches should be undertaken with a view of assisting informal sector producers to identify marketing opportunities. The various research institutions should spear head this activity.

### **6.9.2: The Rural Informal Sector**

Using the dichotomy of the community of the poor versus the intermediate sector in the informal sector, Ryan (1986) noted that community of the poor who are highly mobile labour market or reservoir of labour and who are merely eking out subsistence living with a growing sense of despair and hopelessness accounts for 72% of the informal sector workers, while the in intermediate sector who are an entrepreneurial cadre undertaking small scale operations characterized by small scale investment accounts for 28% of the informal sector

workers. It is the intermediate sector or the manufacturing sector, which holds greater potential for the sector's development. Therefore, there is a need for determining the goods and services, methods of production used in this sector. This information is vital for strategizing on how to improve the sector, as well as finding out potentials for generating more employment opportunities in this sector. Although there is a linkage between rural-urban migration and the informal sector, not enough is known. Research should be conducted to establish a policy to take care of the two. Other areas of research would be seeing whether the linkages have an influence on savings and investments in the rural areas and which in turn would have an impact on growth and development of informal sector activities. This research should further discern the factors that drive the community of the poor into informal sector activities.

There is a significant specialization in the rural informal sector. Examples of specialization include basket weaving and pottery. There are also ethnicity (regional) based rural informal sector activities. A survey of rural sector activities is essential in revealing the distribution of goods and services for the purpose of gaining insights into the indigenous materials especially on the types and availability of the materials used.

### **6.9.3: Financing the informal sector**

A survey should be conducted into possible measures that ensure access of informal sector entrepreneurs to existing credit institutions. Credit guarantee scheme and loans with low interest rates and appropriate amortization (grace) periods should be amongst these measures. Further survey should be conducted into policies that tend to discriminate the informal sector in favour of the formal sector with a view of removing such discriminations.

#### **6.9.4: Technology in the Informal Sector**

There exist stiff competition between the informal sector and the formal sector with detriment to the latter. In some countries, some production are reserved for the informal sector. Possibilities of such a policy in Kenya should be investigated. Technology should be examined critically for their relevance to the social, economic, environmental and cultural aspects of the society. Examination of the available expertise to keep the technologies running should be done.

While much has been said about technological transfer and adaptation, implementation aspect is still inadequate. Research and development institutions should initiate technological dissemination and rebuilding programmes as a means of attaining higher technological threshold in the country. This can be achieved through the identification of appropriate technologies and contract an appropriate institution to spearhead the development of a given technology using the methodology. In this case, researches should be focused on technologies, which could be adopted in the informal sector. These researches should be extended to provision of design and prototypes for production by the informal sector.

Existing research institutions should support innovative informal sector operators by providing infrastructure and the theoretical basis of operation. Further, there is need to identify, develop and encourage innovative informal sector operators. Policies regarding their identification and development should include packages of facilities and the removal of hindrance to the innovative process.

#### **6.9.5: Gender Issues in the Sector**

There is a genuine concern to consider women in the informal sector, because they provide significant labour-force. Therefore, researches into the social and cultural factors that constraint women involvement in the sector should be done. There is a need to take a well

co-coordinated inventory of work done in this subject. Research into factors leading to and influencing rural-urban migration with reference to gender should be done. A study of both the push and pull factors of the rural-urban migration should be undertaken.

#### 6.9.6: Policy Strategies

In depth studies should be undertaken into the laws that discriminate against the informal sector with a view of removing them from the statutes. The paucity of data on the informal sector is a major problem in analyzing the nature and the scale of the informal sector activities. There is need to carry out research as well as bibliographic survey to determine gaps and the *status quo* of available informal sector data. Such survey should include:-

- Organisational form.
- Unpaid labour.
- Capital/output ratio,
- Rates of return.
- Types and sources of raw materials.
- Access to credit.
- Input/output tables for linkages.
- Location, type of training and apprenticeships,
- Problems and possible solutions, types of technologies used.

Systematic data is an indispensable pre-requisite for policy formulation. This is important for provision of supporting Capacity to analyze the issues and problems involved, especially on the choice of technological development per sub-sector of the informal sector. Evaluation of policies affecting the informal sector should be done and be based on broader technical, socio-economic criteria, that is, productivity, employment, incomes, capital and labour intensity. This would ensure introduction of new measures to suit the changing



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circumstances.

### **6.10: Conclusion.**

This study aimed at developing a model for spatial regularisation of the ISAs in Kisumu town. Further, the study has pointed out the structure and the environmental aspects of the sector. To come up with the envisaged model, the following specific objectives were set: -

- (i) To examine the major factors influencing the siting and spatial distribution of the informal sector activities in urban areas.
- (ii) To examine the inter and intra linkages existing between the informal sector and the formal sector, and how these linkages influence siting of the activities.
- (iii) To assess the environmental impact of the ISAs and how this information can be used in determining suitable sites for the sector.
- (iv) To evolve planning interventions which can enhance sustainable development of the sector.

Further, these objectives were to be met through analyzing the hypotheses, which were set at the beginning of the study. The main hypotheses here were: -

- (i) There is significant relationship between the informal sector's structures, the actual siting is the spatial distribution of the informal sector activities (ISAs) within the town.
- (ii) There are significant linkages between the informal sector activities and the formal sector in the town.

From the research findings, the following issues arise: -

- ◆ The trade sub-sector is the dominant form of informal enterprises in the town followed by service sub-sector, and finally the manufacturing sub-sector.

- ◆ Paradoxically, the manufacturing sub-sector is the major employer, because on average it employs 5 people while trade and service sub-sectors employ 2 and 3 people respectively.
- ◆ Genderwise, men dominated the enterprise ownership. For instance, the males accounted for 84.98% of the total manufacturing enterprise ownership and 77.5% in the service sub-sector. This scenario is reversed in the trade sub-sector where the females accounted for 53.92% of the enterprise ownership. Other scholars such as McCormick (1992), and Masinde and Nzioki (1991) and Atieno (1986) also came to this conclusion.
- ◆ The policy focus on the informal sector has not adequately addressed the problem of enterprise siting and premises provision. This is because the ISAs are still operating on open air, temporary sheds and street pavements.
- ◆ There is a significant linkage between the informal sector activities and the urban informal sector only in the case of the manufacturing sub-sector.
- ◆ Manufacturing activities has higher environmental degradation effect than either services or trade oriented activities.

These findings have implications on the operational and site regularisation based on the recommended strategies as stated in the above sections. For instance, it emerges that economic factors are the key factors influencing the siting of the enterprises. Therefore, for sustainable development of the sector the spatial regularisation should focus on these factors.

The above being the case, there is need for researchers, policy makers, trainers and the NGOs involved in the development of the strategies for business support to rethink about the relationship between informal and formal enterprises. In this case, there is a need for paradigm shift by policy makers and the private sector away from the past and the persistent

view that the informal enterprises are marginal, underclass, a drag on the economy and a disgrace to modernization, a source of illegality and environmental pollution. The paradigm shift should view the informal sector as a valuable source of entrepreneurship and growth.

For the policy makers, the central focus should be to create an environment, which helps rather than hinder growth of businesses because the informal sector has to overcome numerous constraints and controls arising from the bureaucratic procedures that have made the transition of the enterprises from informal to formal difficult. The policy makers and donors should not necessarily focus their attention on new start ups which are run by entrepreneurs with no or little experience as stated in the numerous studies such as Livingston (1991) and Mead *et al* (1993) because the attrition rates for new start - ups is extremely high.

The author supports the assertion by Mead *et al* (1993) that the limited resources available should be channeled to support growing businesses which are run by people with demonstrated entrepreneurial abilities and relevant experience in the field such as was recommended by various studies done by the World Bank and Ministry of Technical Training in Kenya.

Arising from these, its evident that structure and environmental factors should adequately be addressed in the sustainable development of the ISAs. This is because these are the parameters along which the sector has evolved and shaped its niche, and is expressing itself in terms of business site and mode of operation. This argument is not meant at advocating for maintaining the *status quo* but to enable planners and policy makers establish the intervention points if at all the envisaged positive change has to be realised in the sector.

Indeed the question as what is to be done with the informal sector is broad and often contentious. There is therefore a need to take an orientation either towards advocating their elimination, or promotion of the activities as part of the planned urban activity system (Mochache, 1990: 225). However, the informal sector will still be an important part of Kenya's economy, no matter how problem ridden that future may be. This is because the individuals who are already involved in it have developed it to an indispensable part of the urban economy due to many economic advantages it has. Many scholars and researchers have argued that this sector strengthens the regional linkages. This reasoning is in line with Kenya's strategy of planning from below. However, there is a need for articulate planning to improve the sector's productivity. In short, while not intending to portray the sector as a cure for all ills in the urban set-up, the researcher confidently asserts that the informal sector has valuable role to play in the national economy.

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**UNIVERSITY OF NAIROBI  
DEPARTMENT OF URBAN AND REGIONAL PLANNING  
APPENDIX I  
QUESTIONNAIRE TO THE INFORMAL SECTOR WORKERS**

**INTRODUCTION**

This study is carried out on the informal sector activities in Kisumu Town. The study's ultimate aim is to come up with policy(ies) on spatial regularisation of the informal sector activities within the town. Consequently, there arises a need for obtaining information on the sector's structure, factors that influence the sitting decision in the parts of the town and the spatial distribution of the activities, the linkages and finally the Environmental Impact Assessment. The information acquired in the study will be treated as strictly, confidential and will be used strictly for the academic purposes

1. Questionnaire No .....
2. Date of the interview.....
3. Sub-location.....
4. Road/Street.....
5. Name of the enterprise.....
6. Name of the respondent.....
7. Position.....
8. Home Area.....
9. Level of Education.....

**1.0: SECTORAL STRUCTURE**

1. Type of the activity .....

2. What is the mode of ownership of the enterprise?

- Sole (Private)                       Partnership                       Family  
 Co-operation                       Others (Specify)

*(Please tick as appropriate)*

3. What is the mode of ownership of the structure where the enterprise is located?

- Fully owned                       Partially owned                       Rental                       Estopael

*(Please tick as appropriate).*

4. If rented how much do you pay per month (Ksh)

5. What is the number and the categorisation as per sex and ages of the employees of this enterprise.

6. Number

Category	Male	Age	Female	Age
• Paid employment				
• Working Proprietor				
• Unpaid family worker				
• Apprehensible (Learner)				
• Casual labour				
• Others (specify)				

**2.0: SPATIAL (CAPITAL, PRODUCTION, AND SUBCONTRACTING) LINKAGES.**

**2.1: Production**

2. Please list the products you engage in producing their quantity and cost per unit quantity

Product	Quantity	Cost/ quantity
Total		



**2.2: Subcontracting. Arrangements.**

1. Do you produce the whole products here or is it started and finished by someone, somewhere else?  
 All made here                       started by someone else not working here  
 (Please tick as appropriate)

2. Where is the person/enterprise you subcontract or subcontracting you?

Person	Firm subcontracted	Components	Firms subcontracting	Components
1				
2				
3				
4				
5				
6				
7				

**2.3: Labour**

1. Where do you get your labour from within Kisumu Town, Kisumu Rural, Nyanza and Western Provinces and others?

	Kisumu Town	Kisumu Rural	Nyanza and Western Province	Others (Specify)
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

2. Do you experience labour recruitment problems?

- Yes, always                       Yes, sometimes                       No, never      (Please tick as appropriate)

3. If yes, what are the difficulties

Difficulty.....  
 .....  
 .....  
 .....

**2.4: Equipment**

1. Please list the types of machinery in your enterprise, their costs, and how they are run

Type	How run	Cost	Source (Region)
1			
2			
3			
4			
5			
6			
7			

**2.5: Raw materials**

1. List the raw materials utilised in the production indicating the cost and source (as Kisumu Town, Kisumu Rural, Nyanza and Western Province, Others) and the name of the firm in the municipality.

	Raw Material	Source	Cost	Name of the firm if in Kisumu Town	Its status (e.g. Parastatal or Private)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

**2.6: Marketing.**

1. Please, indicate where you sell your produce and the cost

	Produce	Where do you sell	Cost
1			
2			
3			
4			
5			
6			

**3.0: SITE FACTORS**

1 Approximately what is the distance from the site of the enterprise to the town centre? \_\_\_\_\_ (kms).

2. Why is the enterprise located at its present sites (Rank in order of importance.)

Factor	VI	I	FI	LI	NI
• Adequate land for industrial expansion					
• Lower land prices and rates					
• Availability of transport					
• Access to major street					
• Availability of electricity					
• Accessibility to source of water					
• Nearness to town centre					
• Nearness to residential unit					
• Proprietor lives here					
• Proximity to markets					
• Industrial estate					
• Social status/prestige					
• Personal contacts for business information					
• Psychic preference					
• Influence of local politics					
• Lack of alternative planned zone for the sector					
• Possible evasion of tax					
• Availability of raw materials					
• Prohibitive regulations and high standards					
• Enterprise already at the site					
• Availability of local capital for investment					
• Air transport facilities close by					

• Access to major street					
• Availability of wholesale stores					
• Lack of competition					
• Government policy					
• Lack of authority incentives					
• General environmental features					
• Trading incense not required here					
• Regional centre of sponsors					
• Availability of machines for renting					
• Site allowed by owner					
• Nearness to home hence familiarity with the site					
• Industrial zone for particular product					

#### 4.0: POLICY ISSUES.

##### 4.1: The role of the government and non-governmental organisations (Ngos) in the informal sector development.

1. Have you heard of any government programmes assisting the small enterprises?  
 Yes       No (Please tick as appropriate)
2. If yes, have you tried to benefit from any?  
 Yes, successfully       Yes, unsuccessfully       No (Please tick as appropriate)
3. If yes what assistance did you get  
 Assistance.....  
 .....  
 .....

4. Do any institution assist you in marketing your produce?

5. If yes have the institutions and indicate the ways they assist you in marketing?

	Name of institution	Assistance
1		
2		
3		
4		
5		
6		
7		
8		
9		

6. Have you ever been harassed by any representative of local authority, central government of Kenya.

7. If yes, please describe the circumstances

##### 4.2: Factors influencing business expansion

1. What was the initial source of finance for the initial investment

Source	Amount	Proportion
• Own savings		
• Borrowings from friends/ relatives		
• Commercial Banks/other financial institutions		
• Government lending society		
• Others (specify)		
<b>TOTAL</b>		

2. What kind of license does your business have and how much does it cost you to renew?

Type of license.....

Cost of renewal (Ksh/month) .....

3. Other than licenses do you pay other taxes?

Yes       No (Please tick as appropriate)  
 4. If yes, specify .....

5. How did you acquire this space?  
 Invasion     From government    From municipal council    Purchased    Purchased    Inherited from family.    Others.

6. Space occupied by the activity (m<sup>2</sup>) .....  
 7. Type of working space definition .....  
 8. Preferred working space requirement (m<sup>2</sup>) .....  
 9. For how long has the activity been located in the site .....

10. What is the state of the activity location?
- Permanent but illegal occupation of the space
  - Mobile
  - Permanent and in legal occupation of the space
  - Temporary and in illegal occupation of the space
  - Permanent but without properly defined tenancy

(Please tick as appropriate)

11 When did you establish this business and how many times has the activity-changed site over the years?  
 .....

12. State the reasons for the change of the location  
 Reasons .....

13. Is the activity now settled in the present location?  Yes       No (Please tick as appropriate)

14. If no, why is not settled?  
 Reasons .....

14. Where do you prefer locating your activity within the town? .....

17. In order of importance, please list the major obstacles to your business expansion

Obstacles	Rank	Causes
1		
2		
3		
4		
5		
6		

18. What are you doing currently to improve on them  
 .....

19. General comments  
 .....

**THANKS FOR YOUR PATIENCE AND TIME SPENT IN ANSWERING THESE QUESTIONS.**

**UNIVERSITY OF NAIROBI  
DEPARTMENT OF URBAN AND REGIONAL PLANNING  
APPENDIX II  
(CONFIDENTIAL)**

**QUESTIONNAIRE FOR THE TOWN CLERK/PHYSICAL PLANNER/CHAIRMAN JUA-KALI  
ASSOCIATION AND MINISTRY OF TRADE OFFICIALS.**

**INTRODUCTION**

This study is carried out on the informal sector activities in Kisumu Town. The study's ultimate aim is to come up with policy(ies) on spatial regularisation of the informal sector activities within the town. Consequently, there arises a need for obtaining information on the sector's structure, factors that influence the sitting decision in the parts of the town and the spatial distribution of the activities, the linkages and finally the Environmental Impact Assessment. The information acquired in the study will be treated as strictly, confidential and will be used strictly for the academic purposes.

- 1.Name of the respondent .....
- 2.Designation Dept..... Ministry.....
- 3.What is the level of informal sector activities in the town?

	Type	Number	Association Membership (for chairman)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

4. What is the council doing to support the informal sector?  
Assistance .....

.....

.....

.....

5. Do you license the informal sector activities  
 Yes       No (Please tick as appropriate)

6. If yes under which type(s) of licensing type(s)

7. If no, then why  
Reasons .....

.....

.....

8. Is there potential of growth of the informal sector activities in this town?  
 Yes       No (Please tick as appropriate)

9. How does the council benefit from the activities?

Benefits .....

.....

.....

10. Has the council designated a zone in town for the informal sector activities  
 Yes                       No (Please tick as appropriate)

11. If yes, can you enumerate the zones?

	Zones	Plot Area	Adequacy
1			
2			
3			
4			
5			
6			
7			
8			

12. If No, in (8) above, then why?

Reasons .....

.....

.....

13. It is noted that the informal sector activities do spread out of the designated (legal) zones, then if this is the case, why do you think it is so?

Reasons .....

.....

.....

14. In your opinion what factors did the council consider or should consider in designating a zone for the informal sector activities

Factors .....

.....

.....

15. What are the major constraints facing the informal sector operators in the town

Problems.....

.....

.....

16. In your opinion, how best do you think those problems can be solved and by who.

Solutions (suggested)	By who?
1	
2	
3	
4	
5	
6	
7	
8	

17. What is the future policy of your organization towards the informal sector in the town

Policies .....

.....

.....

.....  
18. General comments.....  
.....  
.....  
.....

*THANKS FOR YOUR VALUABLE TIME AND CO-OPERATION.*

## APPENDIX III.

## EIGEN VALUES FOR THE INFORMAL SECTOR ACTIVITIES.

Variable	Communality	Factor	Eigen value	Pct of var	Cumulative pct
V01	1.000	1	5.033	21.0	21.0
V02	1.000	2	2.648	11.0	32.0
V03	1.000	3	1.851	7.7	39.7
V04	1.000	4	1.673	7.0	46.7
V05	1.000	5	1.563	6.5	53.2
V06	1.000	6	1.269	5.3	58.5
V07	1.000	7	1.075	4.5	63.0
V08	1.000	8	1.018	4.2	67.2
V09	1.000	9	.996	4.1	71.3
V11	1.000	10	.870	3.6	74.9
V12	1.000	11	.755	3.1	78.1
V13	1.000	12	.693	2.9	81.0
V17	1.000	13	.640	2.7	83.6
V18	1.000	14	.585	2.4	86.1
V19	1.000	15	.538	2.2	88.3
V20	1.000	16	.502	2.1	90.4
V21	1.000	17	.452	1.9	92.3
V22	1.000	18	.406	1.7	94.0
V23	1.000	19	.349	1.5	95.4
V24	1.000	20	.302	1.3	96.7
V25	1.000	21	.254	1.1	97.8
V26	1.000	22	.233	1.0	98.7
V27	1.000	23	.189	0.8	99.5
V28	1.000	24	.115	0.5	100.0

Source (Authorr, 2000).



## APPENDIX IV.

## VARIMAX ROTATED MATRIX FOR THE INFORMAL SECTOR ACTIVITIES.

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
V01	-.1623	.5017	.0755	.2611	.4180	.2019	-.0233	-.2635
V02	.1339	.0564	-.0120	.1044	.7663	-.0373	-.2062	.0921
V03	.0636	.0232	.7148	-.0311	-.2007	.3266	-.2123	.1262
V04	-.0836	-.3957	.1515	.0527	.4821	.2976	.2109	.2914
V05	.0153	-.1124	.1633	-.0705	.0588	-.1823	-.8060	-.0354
V06	.0738	.7922	.2054	-.0389	-.0267	.1423	-.1616	.2082
V07	.0281	-.1611	.1462	.0035	-.0491	-.1558	.7642	.0405
V08	-.0812	-.1683	-.0888	-.0762	-.1778	-.0774	-.0553	-.6888
V09	-.2147	.7722	.1631	.2567	.0353	-.1713	.0816	.0820
V11	-.1665	.3263	.6012	-.0160	.0744	-.0512	.1672	.2057
V12	.1702	-.0607	.1771	-.1642	.2267	.6454	.2013	-.3030
V13	.3252	.2129	.5009	.2511	.0194	-.0799	.1065	.3332
V17	.3860	.4342	.0360	.3463	.2711	-.1399	.0694	.0506
V18	.7273	.0527	.2609	.2024	.0833	.0008	.0182	.0159
V19	.2465	.1067	.7014	.2422	.1324	-.0149	-.0275	-.2321
V20	.3073	.0529	.3390	.5207	-.1343	.3568	.0901	-.1308
V21	.3786	.3585	-.0863	.0677	.5552	.0067	.0882	.1688
V22	-.0461	.2003	.0718	.7476	.0537	-.0381	-.0135	-.0474
V23	.7214	.1013	.3879	.1286	.2104	-.0643	.2054	-.0089
V24	.5506	.5428	.2394	.0229	.3077	-.0984	.0150	.0997
V25	.1284	-.0348	.0320	.7022	.1829	.0506	.0593	.2791
V26	.0367	.0089	-.0151	.1246	-.0644	.8307	-.0953	.2394
V27	.7470	-.1247	-.0608	-.2959	-.0619	.1145	-.0781	.0642
V28	.6817	-.1656	-.2079	.1440	.0510	.2610	-.1103	.0291

Source: (Author, 2000).

## MULTI-ATTRIBUTE UTILITY THEORY: PERFORMANCE PROFILE FOR VARIOUS INFORMAL SECTOR ACTIVITIES NYALENDA

ENVIRONMENTAL ATTRIBUTES AND DESIRED UTILITY VALUES											
SUB-SECTORS	Flora UV = 0.9	Fauna UV = 0.8	Aesthetics UV = 0.5	Amenity UV = 0.5	Space (land) use UV = 0.4	Chemical hazard UV = 0.7	Water Pollu- tion UV = 0.7	Air Pollu- tion UV = 0.7	Noise UV = 0.5	Health hazard UV = 0.7	Aggre- gated EQ 1
<b>MANUFACTURING</b>											
Tailoring	(2) 1.80	(2) 1.60	(3) 1.50	(3) 1.50	(2) 0.80	(2) 1.40	(2) 1.40	(2) 1.40	(2) 1.00	(2) 1.40	13.80
Carpentry	(2) 1.80	(2) 1.60	(3) 1.50	(3) 1.50	(3) 1.20	(3) 1.40	(2) 1.40	(3) 2.10	(3) 1.50	(3) 2.10	16.10
Metal works / Tinsmithing	(3) 2.70	(2) 1.60	(3) 1.50	(3) 1.50	(4) 1.60	(4) 2.80	(4) 2.80	(3) 2.10	(4) 2.00	(3) 2.10	20.70
Posho mills	(3) 2.70	(2) 1.60	(2) 1.00	(3) 1.50	(2) 0.80	(2) 2.10	(3) 2.10	(3) 2.10	(2) 1.00	(2) 1.40	16.30
<b>SERVICES</b>											
Electrical repair	(2) 1.80	(2) 1.60	(2) 1.00	(2) 1.00	(2) 0.80	(3) 1.40	(3) 2.10	(2) 1.40	(2) 1.00	(3) 2.10	14.20
Shoe repair / Leather works	(2) 1.80	(2) 1.60	(3) 1.50	(3) 1.50	(2) 0.80	(3) 2.10	(2) 1.40	(2) 1.40	(2) 1.00	(2) 1.40	14.50
Hair saloon	(2) 1.80	(2) 1.60	(2) 1.00	(2) 1.00	(2) 0.80	(3) 2.10	(2) 1.40	(2) 1.40	(2) 1.00	(3) 2.10	14.20
Food restaurant	(3) 2.70	(5) 4.00	(3) 1.50	(3) 1.50	(3) 1.20	(3) 1.40	(3) 2.10	(3) 2.10	(2) 1.00	(3) 2.10	19.60
Bicycle repair	(2) 1.80	(2) 1.60	(3) 1.50	(3) 1.50	(3) 1.20	(3) 2.10	(2) 1.40	(2) 1.40	(3) 1.50	(2) 1.40	15.40
Goods store	(3) 2.70	(2) 1.60	(2) 1.00	(2) 1.50	(2) 0.80	(2) 1.40	(2) 1.40	(2) 1.40	(2) 1.00	(2) 1.40	13.70
<b>TRADE</b>											
Timber dealing	(3) 2.70	(2) 1.60	(3) 1.50	(3) 1.50	(4) 1.60	(2) 1.40	(2) 1.40	(2) 1.40	(3) 1.50	(2) 1.40	16.00
Hardware	(2) 1.80	(2) 1.60	(2) 1.00	(2) 1.00	(2) 0.80	(2) 1.40	(2) 1.40	(2) 1.40	(2) 1.00	(2) 1.40	12.80
Food produce	(2) 1.80	(4) 3.20	(3) 1.50	(3) 1.50	(2) 0.80	(2) 1.40	(2) 1.40	(3) 2.10	(3) 1.50	(3) 2.10	17.30
Second hand clothes	(2) 1.80	(2) 1.60	(3) 1.50	(3) 1.00	(2) 0.80	(2) 1.40	(2) 1.40	(2) 1.40	(3) 1.50	(2) 1.40	13.80
Petty trade (Hawking)	(2) 1.80	(2) 1.60	(3) 1.50	(3) 1.50	(2) 0.80	(2) 1.40	(2) 1.40	(2) 1.40	(3) 1.50	(2) 1.40	14.30
Wood / Charcoal sale	(2) 1.80	(2) 1.60	(3) 1.50	(3) 1.50	(2) 0.80	(2) 1.40	(2) 1.40	(2) 1.40	(2) 1.00	(3) 2.10	14.50

UV: Accepted utility values of the attributes  
( ): Number in bracket is the scaling factor (R)

## MULTI-ATTRIBUTE UTILITY THEORY: PERFORMANCE PROFILE FOR VARIOUS INFORMAL SECTOR ACTIVITIES IN KONDELE

ENVIRONMENTAL ATTRIBUTES AND DESIRED UTILITY VALUES											
Sub-Sectors	Flora U <sub>v</sub> = 0.9	Fauna U <sub>v</sub> = 0.4	Aesthetics U <sub>v</sub> = 0.85	Amenity U <sub>v</sub> = 0.75	Space (Land-Use) U <sub>v</sub> = 0.85	Chemical Hazard U <sub>v</sub> = 0.75	Water Pollu- Tion U <sub>v</sub> = 0.7	Air Pollu- Tion U <sub>v</sub> = 0.9	Noise U <sub>v</sub> = 0.7	Health Hazard U <sub>v</sub> = 0.7	Aggre- Gated Eq 1
<b>MANUFACTURING</b>											
Tailoring	(4) 3.6	(2) 0.8	(4) 3.4	(4) 3.40	(3) 2.55	(2) 1.50	(2) 1.40	(2) 1.80	(2) 1.40	(2) 1.80	21.65
Carpentry	(3) 2.7	(2) 0.8	(4) 3.4	(4) 3.40	(4) 3.40	(2) 1.50	(2) 1.40	(4) 3.60	(4) 2.80	(3) 2.70	25.70
Metal works and tinsmithing	(4) 3.6	(2) 0.8	(5) 4.25	(5) 4.25	(4) 3.40	(3) 2.25	(2) 1.40	(4) 3.60	(5) 3.50	(4) 3.60	30.65
Posho mills	(3) 2.7	(2) 0.8	(4) 3.4	(5) 4.25	(4) 3.40	(3) 2.25	(3) 2.10	(4) 3.60	(5) 3.50	(4) 3.60	29.60
<b>SERVICES</b>											
Electrical repair	(3) 2.7	(2) 0.8	(3) 2.55	(3) 2.55	(2) 1.70	(2) 1.50	(2) 1.40	(2) 1.80	(3) 2.10	(3) 2.70	19.80
Shoe repair / Leather works	(3) 2.7	(2) 0.8	(4) 3.4	(3) 2.55	(2) 1.70	(2) 1.50	(2) 1.40	(3) 2.70	(3) 2.10	(3) 2.70	21.55
Hair saloon	(3) 2.7	(2) 0.8	(2) 1.7	(2) 1.7	(2) 1.70	(2) 1.50	(2) 1.40	(2) 1.80	(2) 1.40	(2) 1.80	16.50
Food restaurant	(3) 2.7	(4) 1.6	(5) 4.25	(5) 4.25	(3) 2.55	(2) 1.50	(3) 2.10	(3) 2.70	(3) 2.10	(4) 3.60	27.35
Bicycle repair	(4) 3.6	(2) 0.8	(2) 1.7	(4) 3.4	(4) 3.40	(3) 2.25	(3) 2.10	(2) 1.80	(4) 3.50	(3) 2.70	30.1
Good store	(4) 3.6	(2) 0.8	(4) 3.4	(3) 2.55	(4) 3.40	(2) 1.50	(2) 1.40	(2) 1.80	(2) 1.40	(2) 1.80	21.65
<b>TRADE</b>											
Timber dealing	(4) 3.6	(2) 0.8	(4) 3.4	(3) 2.55	(4) 3.40	(2) 1.50	(2) 1.40	(2) 2.70	(4) 2.80	(3) 2.70	24.85
Hardware	(4) 3.6	(2) 0.8	(4) 3.4	(2) 1.70	(3) 2.55	(2) 1.50	(2) 1.40	(2) 1.80	(3) 2.10	(3) 2.70	16.70
Food produce	(3) 2.7	(4) 1.6	(3) 2.55	(4) 3.40	(3) 2.55	(2) 1.50	(3) 2.10	(4) 3.60	(4) 2.80	(4) 3.60	27.25
Second hand clothes	(3) 2.7	(2) 0.8	(4) 3.40	(3) 2.55	(4) 3.40	(2) 1.50	(2) 1.40	(2) 1.80	(4) 2.80	(2) 1.80	22.15
Petty trade (Hawking)	(3) 2.7	(2) 0.8	(4) 3.40	(4) 3.40	(3) 2.55	(2) 1.50	(2) 1.40	(3) 3.60	(4) 2.80	(3) 2.70	24.15
Wood / Charcoal sale	(3) 2.7	(2) 0.8	(4) 3.40	(4) 3.40	(4) 3.40	(2) 1.50	(2) 1.40	(3) 2.70	(3) 2.10	(3) 2.70	24.10

U<sub>v</sub>: Accepted utility values of the attributes

( ) : Number in bracket is the scaling factor (R)

## APPENDIX VII

## MULTI-ATTRIBUTE UTILITY THEORY: PERFORMANCE PROFILE FOR VARIOUS INFORMAL SECTOR ACTIVITIES IN CENTRAL BUSINESS DISTRICT (CBD)

## ENVIRONMENTAL ATTRIBUTES AND DESIRED UTILITY VALUES

SUB-SECTORS	FLORA UV = 0.95	FAUNA UV = 0.2	AESTHETICS UV = 0.95	AMENITY UV = 0.95	SPACE (LAND-USE) UV = 0.95	CHEMICAL HAZARD UV = 0.9	WATER POLLU TION UV = 0.85	AIR POLLU TION UV = 0.95	NOISE UV = 0.8	HEALTH HAZARD UV = 0.9	AGGRI - GATED FOI
<b>MANUFACTURING</b>											
Tailoring	(3) 2.85	(2) 0.4	(4) 3.8	(4) 3.80	(3) 2.85	(2) 1.80	(2) 1.70	(2) 1.90	(2) 1.60	(2) 1.80	22.50
Carpentry	(3) 2.85	(2) 0.4	(5) 4.75	(5) 4.75	(5) 4.75	(2) 1.80	(2) 1.70	(4) 3.80	(4) 3.20	(4) 3.60	31.60
Metal works and tinsmithing	(3) 2.85	(2) 0.4	(5) 4.75	(5) 4.75	(5) 4.75	(4) 3.60	(3) 2.55	(4) 3.80	(3) 2.40	(4) 3.60	33.15
Posho mills	(3) 2.85	(2) 0.4	(5) 4.75	(5) 4.75	(4) 3.80	(4) 3.60	(4) 3.40	(5) 4.75	(3) 2.40	(3) 2.70	33.10
<b>SERVICES</b>											
Electrical repair	(2) 1.90	(2) 0.40	(2) 1.90	(2) 1.90	(2) 1.90	(4) 3.60	(3) 2.55	(3) 2.85	(2) 1.60	(4) 3.60	22.20
Shoe repair / Leather works	(2) 1.90	(2) 0.40	(4) 3.80	(4) 3.80	(3) 2.85	(2) 1.80	(2) 1.70	(3) 2.85	(2) 1.60	(2) 1.80	25.50
Hair saloon	(2) 1.90	(2) 0.40	(2) 1.90	(2) 1.90	(2) 1.90	(3) 2.70	(2) 1.70	(2) 1.90	(2) 1.60	(2) 1.80	17.70
Food restaurant	(3) 2.85	(4) 0.8	(4) 3.80	(4) 3.80	(4) 3.80	(2) 1.80	(3) 2.55	(3) 2.85	(3) 2.40	(4) 3.60	28.25
Bicycle repair	(2) 1.90	(2) 0.40	(5) 4.75	(5) 4.75	(4) 3.80	(3) 2.70	(2) 1.70	(2) 1.90	(3) 2.40	(2) 1.80	26.10
Good store	(3) 2.85	(2) 0.40	(5) 4.75	(5) 4.75	(4) 3.80	(2) 1.80	(2) 1.70	(2) 1.90	(3) 2.40	(2) 1.80	26.15
<b>TRADE</b>											
Timber dealing	(3) 2.85	(2) 0.40	(5) 4.75	(5) 4.75	(5) 4.75	(2) 1.80	(2) 1.70	(2) 1.90	(3) 2.40	(3) 2.70	28.00
Hardware	(2) 1.90	(2) 0.40	(2) 1.90	(2) 1.90	(3) 2.85	(2) 1.80	(2) 1.70	(2) 1.90	(2) 1.60	(2) 1.80	17.75
Food produce	(3) 2.85	(4) 0.80	(5) 4.75	(5) 4.75	(5) 4.75	(2) 1.80	(3) 2.55	(4) 3.80	(3) 2.40	(4) 3.60	32.05
Second hand clothes	(2) 1.80	(2) 0.40	(5) 4.75	(5) 4.75	(4) 3.80	(2) 1.80	(2) 1.70	(2) 1.90	(3) 2.40	(2) 1.80	25.10
Petty trade (Hawking)	(2) 1.80	(2) 0.40	(5) 4.75	(5) 4.75	(4) 3.80	(2) 1.80	(2) 1.70	(3) 2.85	(4) 3.20	(3) 2.70	27.75
Wood / Charcoal sale	(2) 1.80	(2) 0.40	(5) 4.75	(5) 4.75	(5) 4.75	(2) 1.80	(2) 1.70	(3) 2.85	(3) 2.40	(3) 2.70	27.90

## MULTI-ATTRIBUTE UTILITY THEORY: PERFORMANCE PROFILE FOR VARIOUS INFORMAL SECTOR ACTIVITIES IN KIBUYE

ENVIRONMENTAL ATTRIBUTES AND DESIRED UTILITY VALUES											
SUB-SECTORS	FLORA UV = 0.90	FAUNA UV = 0.4	AESTHETICS UV = 0.5	AMENITY UV = 0.7	SPACE (LAND-USE) UV = 0.4	CHEMICAL HAZARD UV = 0.5	WATER POLLU- TION UV = 0.7	AIR POLLU- TION UV = 0.9	NOISE UV = 0.3	HEALTH HAZARD UV = 0.7	AGGREGATE UTILITY EQ 1
<b>MANUFACTURING</b>											
Tailoring	(2) 1.80	(2) 0.80	(4) 2.00	(4) 2.80	(2) 0.80	(2) 1.00	(2) 1.40	(3) 2.7	(3) 0.90	(2) 1.40	14.90
Carpentry	(2) 1.80	(2) 0.80	(4) 2.00	(4) 2.80	(4) 1.60	(2) 1.00	(2) 1.40	(4) 3.60	(4) 1.20	(3) 2.10	18.30
Metal works and tinsmithing	(3) 2.70	(2) 0.80	(5) 2.50	(5) 3.50	(5) 2.00	(4) 2.00	(2) 1.40	(3) 2.70	(5) 1.50	(4) 2.80	24.90
Posho mills	(3) 2.70	(3) 1.20	(4) 2.00	(4) 2.80	(4) 1.60	(4) 2.00	(4) 2.80	(4) 3.60	(5) 1.50	(4) 2.80	23.00
<b>SERVICES</b>											
Electrical repair	(2) 1.80	(2) 0.80	(3) 1.50	(3) 2.10	(2) 0.80	(4) 2.00	(2) 1.40	(3) 2.70	(3) 0.90	(4) 2.80	16.80
Shoe repair / Leather works	(2) 1.80	(2) 0.80	(3) 1.50	(3) 1.50	(3) 1.20	(3) 1.50	(2) 1.40	(3) 2.70	(3) 0.90	(3) 2.10	15.40
Hair saloon	(2) 1.80	(2) 0.80	(3) 1.50	(3) 1.50	(3) 1.30	(3) 1.50	(2) 1.40	(3) 2.70	(2) 0.60	(2) 1.40	14.50
Food restaurant	(2) 1.80	(3) 1.20	(5) 2.50	(5) 3.50	(3) 1.20	(2) 1.00	(3) 2.10	(4) 3.60	(3) 0.90	(4) 2.80	20.60
Bicycle repair	(2) 1.80	(2) 0.80	(4) 2.00	(4) 2.80	(4) 1.60	(3) 1.50	(2) 1.40	(3) 2.70	(5) 1.50	(3) 2.10	18.20
Good store	(4) 2.80	(2) 0.80	(4) 2.00	(4) 2.80	(4) 1.60	(2) 1.00	(2) 1.40	(2) 1.80	(2) 0.60	(2) 1.40	15.20
<b>TRADE</b>											
Timber dealing	(4) 2.80	(2) 0.80	(4) 2.00	(5) 3.50	(5) 2.00	(2) 1.00	(2) 1.40	(2) 1.80	(3) 0.90	(2) 1.40	17.50
Hardware	(2) 1.80	(2) 0.80	(3) 1.50	(3) 2.10	(4) 1.60	(3) 1.50	(2) 0.70	(2) 1.80	(3) 0.90	(2) 1.40	14.10
Food produce	(2) 1.80	(3) 1.20	(5) 2.50	(5) 3.50	(3) 1.20	(2) 1.00	(3) 2.10	(3) 2.70	(3) 0.90	(4) 2.80	19.70
Second hand clothes	(2) 1.80	(2) 0.80	(5) 2.50	(5) 3.50	(4) 1.60	(2) 1.00	(2) 1.40	(2) 1.80	(4) 1.20	(2) 1.40	17.00
Petty trade (Hawking)	(3) 2.70	(2) 0.80	(5) 2.50	(5) 3.50	(5) 2.00	(2) 1.00	(2) 1.40	(2) 1.80	(5) 1.50	(2) 1.40	18.60
Wood / Charcoal sale	(3) 2.70	(2) 0.80	(5) 2.50	(5) 3.50	(5) 2.00	(2) 1.00	(2) 1.40	(4) 3.60	(3) 0.90	(3) 2.10	19.10

UV: Accepted utility values of the attributes.

( ): Number in bracket is the scaling factor (R).